SCA
School Construction Authority

NYC
Department of Education

Lorraine Grillo
President & CEO

lgrillo@nycsca.org

March 10, 2011

The Honorable Christine C. Quinn
Speaker of the City Council
City Hall
New York, New York 10007

Dear Speaker Quinn:

The New York City School Construction Authority (the Authority) has undertaken its site selection process for the following proposed school:

- New, Approximately 750-Seat Primary/Intermediate School Facility, Brooklyn
- Block 5342, Lots 6, 8, 10, 17, 19, 26, 28 and 30
- Coney Island Avenue, between Turner Place and Hinckley Place
- Community School District No. 22
- Brooklyn Community Board No. 12

The project site contains a total of approximately 44,783 square feet (1.02 acres) of lot area located on the block bounded by Turner Place, Coney Island Avenue, Hinckley Place and East 8th Street in the Prospect Park South section of Brooklyn. The privately owned site is occupied by two two-story semi-detached residential buildings, a used car sales lot, an automotive repair facility, two vacant lots, a vacant three-story multi-family residence and a vacant two-story two-family residence. Under the proposed project, the Authority would acquire the privately-owned property, would demolish the existing on-site structures, and would construct a new, approximately 750-seat primary/intermediate school facility serving students in Community School District No. 22.

The Notice of Filing of the Site Plan was published in the New York Post and the City Record on October 19, 2010. Brooklyn Community Board No. 12 was notified on October 19, 2010, and was asked to hold a public hearing on the proposed Site Plan. Brooklyn Community Board No. 12 held its public hearing on November 23, 2010 and submitted written comments dated November 30, 2010 that recommended against the proposed Site Plan. The City Planning Commission was also notified on October 19, 2010, and in a letter dated December 3, 2010 recommended in favor of the proposed site.

30-30 Thomson Avenue
Long Island City, NY 11101-3045

718 472 8003 T
718 472 8009 F

SCA
School Construction Authority

The Authority considered all comments received on the proposed project and affirms the proposed Site Plan pursuant to §1731.4 of the Public Authorities Law. The Authority now proposes to acquire and develop the site with a new, approximately 750-seat primary/intermediate school facility. In accordance with §1732 of the Public Authorities Law, the Authority is submitting the enclosed Site Plan to the Mayor and the Council for consideration. Enclosed also are copies of the Environmental Assessment and Negative Declaration that have been prepared for this project.

The Authority looks forward to your favorable consideration of the proposed Site Plan. If you have any questions regarding this Site Plan or would like further information, please contact me at (718) 472-8001 at your convenience.

Thank you for your attention to this matter.

Sincerely,

Lorraine Grillo
President & CEO

Encl.

c: Hon. Michael R. Bloomberg (w/o attachments)
Hon. Leroy Comrie, Land Use Committee
Hon. Bradford Lander, Subcommittee on Landmarks, Public Siting and Maritime Uses
Hon. Mathieu Eugene, District Councilmember
Kathleen Grimm, Deputy Chancellor for Operations

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March 10, 2011

The Honorable Michael R. Bloomberg
Mayor
City Hall
New York, New York 10007

Dear Mayor Bloomberg:

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Thank you for your attention to this matter.

Sincerely,

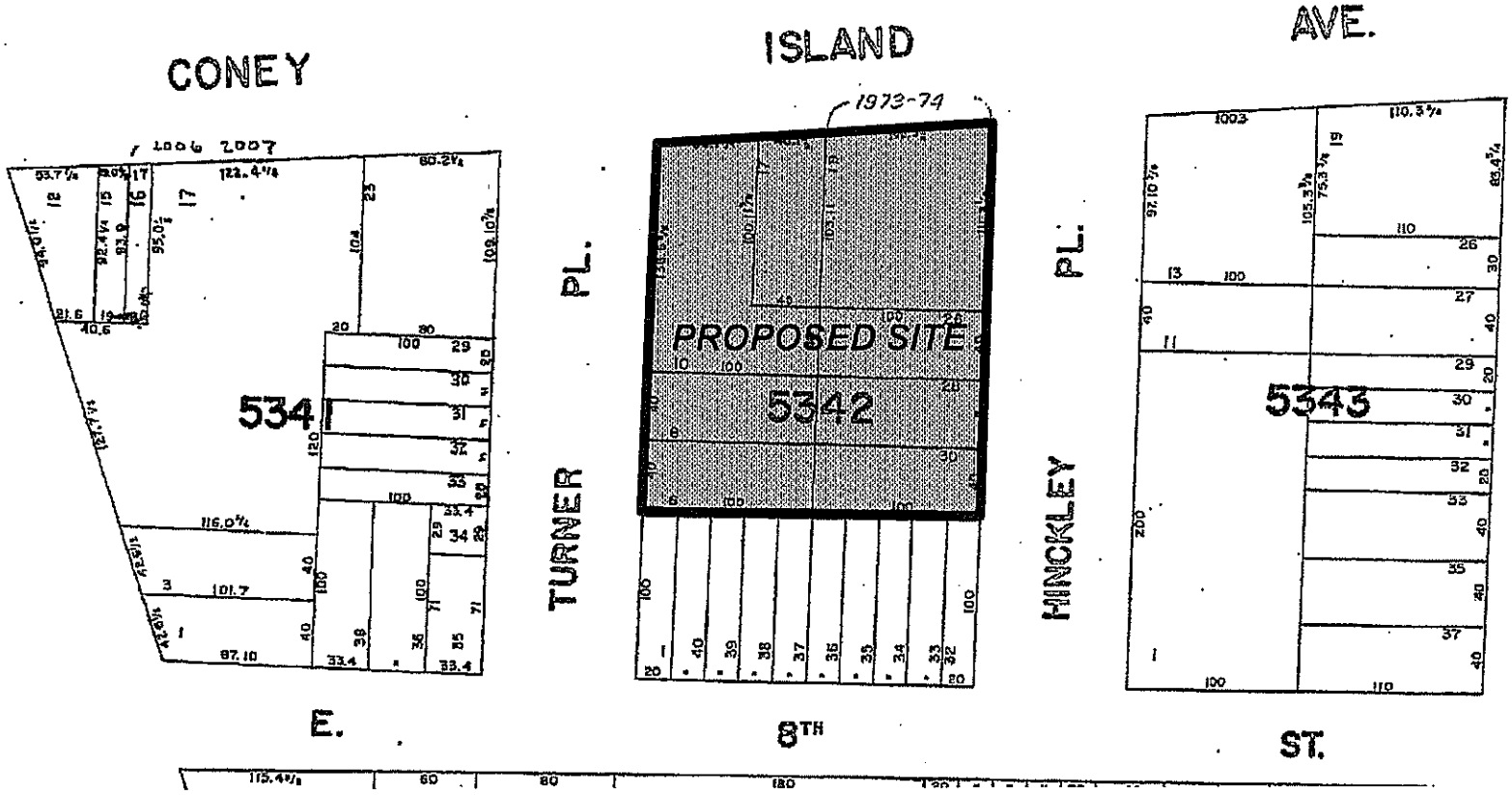
Lorraine Grillo
President & CEO

Encl.

c: Hon. Christine C. Quinn (w/o attachments)
Hon. Dennis M. Walcott
Kathleen Grimm, Deputy Chancellor for Operations

SITE PLAN FOR AN APPROXIMATELY 738-SEAT PRIMARY/INTERMEDIATE SCHOOL
Brooklyn Block 5342 – Lots 6, 8, 10, 17, 19, 26, 28, 30
Proposed New School for Community School District No. 22

50



NOTICE OF FILING

NEW YORK CITY SCHOOL CONSTRUCTION AUTHORITY

Pursuant to §1731 of the New York City School Construction Authority Act, notice has been filed for the proposed site selection of Block 5342, Lots 6, 8, 10, 17, 19, 26, 28 and 30, and any other property in the immediate vicinity which may be necessary for the proposed project, located in the Borough of Brooklyn, for the development of a new, approximately 735-seat primary/intermediate school facility for Community School District No. 22.

The proposed site consists of eight privately owned lots and is bounded by Coney Island Avenue to the east, Turner Place to the north, Hinckley Place to the south and dwellings fronting on East 8th Street to the west. Under the proposed project, the New York City School Construction Authority would acquire all of the lots comprising the site and would demolish all existing on-site structures to construct the proposed new public school facility.

Site plans and a summary thereof for the proposed action are available at:

New York City School Construction Authority
30-30 Thomson Avenue
Long Island City, New York 11101

Attention: Ross J. Holden

Comments on the proposed actions are to be sent to the New York City School Construction Authority at the above address and will be accepted until December 3, 2010.

For publication in the New York Post (5 Borough Edition) and the City Record on Tuesday, October 19, 2010.

CITY PLANNING COMMISSION
CITY OF NEW YORK

OFFICE OF THE CHAIR

December 3, 2010

Lorraine Grillo
President and CEO
New York City School Construction Authority
30-30 Thomson Avenue
Long Island City, NY 11101-3045

Dear Ms. Grillo,

This is in response to the SCA's letter of October 19, 2010 in which notice was given to the City Planning Commission of the proposed site selection of Block 5342 (Lots 6, 8, 10, 17, 19, 26, 28, and 30) in the borough of Brooklyn (Community District 12) for the construction of an approximately 735-seat Primary/Intermediate school facility for Community School District 22.

In view of the need for additional primary/intermediate school capacity in this school district, the City Planning Commission recommends in favor of the proposed site for a new school facility for CSD 22.

Very sincerely,

Amanda M. Burden

C: Kathleen Grimm
Ross Holden
Sarah Goldywn
Purnima Kapur

Amanda M. Burden, FAICP, Chair
22 Reade Street, New York, NY 10007-1216
(212) 720-3200 FAX (212) 720-3219
nyc.gov/planning

THE CITY OF NEW YORK

COMMUNITY BOARD 12

5910 - 13 Avenue, Brooklyn, N.Y. 11219

(718) 851-0800 FAX # (718) 851-4140 email: zsender@aol.com

Marty Markowitz
Borough President

Alan J. Dubrow
Chairperson

Wolf Sender
District Manager

Moshe Wieder, First Vice Chairman
Martin Katz, Second Vice Chairman
Roberta Feinstein, Secretary
Larry Jayson, Sergeant-at-Arms

November 30, 2010

Lorraine Grillo, Acting President & CEO
School Construction Authority
NYC Dept. of Education
30-30 Thomson Avenue
Long Island City, N.Y. 11101

Re: New Approximately 735 – Seat Primary Intermediate School, Brooklyn
Community School District No. 22

Dear Acting President Grillo:

Pursuant to your letter of October 19th relative to the above captioned project, please be advised that the Variance Committee met jointly with the Education Committee with approximately 32 members of the community present at a public hearing regarding the proposal by the School Construction Authority for a school on Coney Island between Hinckley Place and Turner Place. Community Board 12 encompasses school Districts 20 and 15; however the proposed intermediate school is to serve District 22.

Therefore, this school which would be in our District would not serve one single student from our District.

Therefore both the joint Committees along with the full Board voted to **DENY** this proposal.
VOTE TAKEN TO DENY:

IN FAVOR: 33 OPPOSED: 0 ABSTENTIONS: 1

If you have any questions, please do not hesitate to call our Office.

Very truly yours,

WOLF SENDER
District Manager

C: Kathleen Grimm, Chancellor for Operations

SCA
School Construction Authority

NYC
Department of Education

STATE ENVIRONMENTAL QUALITY REVIEW
NEGATIVE DECLARATION
NOTICE OF DETERMINATION OF NON-SIGNIFICANCE

DATE: March 7, 2011

SEQR PROJECT NO.: 11-002

LEAD AGENCY: New York City School Construction Authority
30-30 Thomson Avenue
Long Island City, New York 11101-3045

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law. Pursuant to §1730.2 of the Public Authorities Law, the New York City School Construction Authority (SCA) is SEQR Lead Agency.

The SCA, as Lead Agency, has determined that the proposed action described below will not have a significant effect on the quality of the environment, and a Draft Environmental Impact Statement (DEIS) will not be prepared.

NAME OF ACTION: P.S./I.S. 338, Brooklyn
New, Approximately 757-Seat
Primary and Intermediate School Facility

LOCATION: 510 Coney Island Avenue, Brooklyn, New York
Tax Block 5342, Lots 6, 8, 10, 17, 19, 26, 28, 30

SEQR STATUS: Unlisted

NEGATIVE DECLARATION

Description of Action:

On behalf of the New York City Department of Education (DOE), the SCA proposes the site selection, acquisition, acceptance of construction funding and construction of a new, approximately 757-seat primary and intermediate school facility in the Prospect Park South section of Brooklyn. The proposed school facility would serve students in grade levels pre-kindergarten through eight. Acquisition, design and construction of this proposed facility would be conducted pursuant to DOE's Five-Year Capital Plan for Fiscal Years 2010-2014.

30-30 Thomson Avenue
Long Island City, NY 11101
718 472 8000 T
718 472 8840 F

The proposed school site is located on the block bounded by Turner Place, Hinckley Place, Coney Island Avenue, and East 8th Street, and possesses frontage on Turner Place, Hinckley Place, and Coney Island Avenue. The portion of the site without street frontage adjoins the rear yards of residential buildings that front East 8th Street.

Construction of the proposed new school facility would require the acquisition of eight lots consisting of Lots 6, 8, 10, 17, 19, 26, 28, and 30 on Block 5342. The assemblage contains a total of approximately 44,783 square feet and is currently occupied by two two-story semi-detached residential buildings (Lots 6 and 8), a used car sales lot (Lot 10), an automotive repair facility (Lot 17), a vacant lot (Lot 19), a vacant three-story multi-family residence (Lot 26), a vacant two-story two-family residence (Lot 28), and a vacant lot (Lot 30).

The purpose of the proposed project is to provide additional long-term capacity in the area to meet needs identified in DOE's Five-Year Capital Plan. According to the Capital Plan (as amended in June 2010), a total of 1,154 additional seats at the primary and intermediate school levels are required for District No. 22 in order to address existing localized overcrowding, and also to support DOE's policies to implement class-size reduction. During the 2009-2010 school year, District No. 22's existing primary and intermediate school facilities collectively operated at 95 percent of their target capacity.

Under the proposed project, the SCA would acquire the assemblage, demolish the existing on-site structures, and construct a new five-story (plus cellar) primary and intermediate school facility on the site. The proposed new facility would contain approximately 107,162 gross square feet and would also provide a 19,030 play yard on the northwestern portion of the site, including a 3,215 square foot Early Childhood playground for younger children. The new building's main entrance would be located on Hinckley Place, and it would contain general education classrooms, special education classrooms, a library, a gymatorium (gymnasium/auditorium), a kitchen and cafeteria, a gymnasium, music and art rooms, science rooms, reading and speech resource rooms, a nurse's office, administrative and support spaces, and storage. Construction is anticipated to begin in 2011, with student occupancy of the new facility scheduled to begin in 2014.

Reasons Supporting This Determination:

A comprehensive Environmental Assessment Form (EAF) and Supplemental Environmental Studies for this action were completed and issued on March 7, 2011. Based upon those documents (which are appended hereto), the SCA has determined that the proposed project will have no significant adverse impacts on environmental conditions related to the following areas: land use, zoning and

public policy; socioeconomic conditions; community facilities; open space and recreational facilities; shadows; cultural resources; urban design and visual resources; neighborhood character; natural resources; soil and groundwater conditions; infrastructure; solid waste and sanitation; energy; traffic and transportation; pedestrians and parking; air quality; noise; and, construction-related impacts.

The key findings related to the analyses of the following three environmental impact areas are discussed in greater detail below.

Soil and Groundwater Conditions

As part of the evaluation of the site's soil and groundwater conditions, two Phase I Environmental Site Assessments (ESAs) and a Phase II Environmental Site Investigation (ESI) were completed for the project site between November 2009 and April 2010 to evaluate the environmental conditions. Both Phase I ESAs identified recognized environmental conditions (RECs) associated with the presence of a an active vehicle repair facility with an abandoned waste oil underground storage tank (UST) at 520 Coney Island Avenue, a carpet cleaning facility followed by a former gasoline filling station and automotive repair facility with historic petroleum spills at 524 Coney Island Avenue, a used car lot at 510 Coney Island Avenue, and potential soil impacts associated with a fire in 2007 and an abandoned fuel oil tank at 33 Hinckley Place. Several off-site RECs were also identified, including current and historical use of adjoining and surrounding properties as filling stations, vehicle repair facilities, manufacturing facilities, dry cleaners; historical spills, petroleum storage, and hazardous waste disposal associated with adjoining and surrounding properties. In addition, environmental concerns identified at the proposed project site included potential elevated radon concentrations, suspect LBP on interior and exterior painted surfaces, and suspect ACM and PCB-containing building materials. Finally, suspect buried structures were identified as a REC and an environmental concern due to the potential presence of buried construction debris, and suspect LBP, ACM, and PCB-containing material. A Phase II ESI was completed in April 2010 to assess the RECs identified in both Phase I ESAs.

The Phase II ESI included ambient air, indoor air, soil, soil vapor and groundwater sampling. The sampling results indicated that a large majority of the collected samples were reported at concentrations below the applicable standards or guidelines. The solvent tetrachloroethene (PCE) was reported in soil vapor at one location within the active automotive repair shop at a concentration above the applicable State air guideline value. The other 16 soil vapor sampling locations did not detect any volatile organic compounds above the applicable State air guideline value. In addition, the solvent acetone, total PCBs, selected semi volatile organic compounds, and selected metals were detected at isolated locations within the encountered fill material at

concentrations slightly above the applicable guidance values. These compounds in soil are related to the presence of historic fill material at the site. One volatile organic compound was detected in groundwater at one of the 16 sampled locations above the applicable State standard, and the presence of this parameter is attributed to an off-site source. The results of the due diligence process also indicated the presence of two USTs, three suspect dry wells, and three underground hydraulic lifts at the site.

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, and any exposed areas would be covered with two feet of environmentally clean soil. All subsurface structures such as USTs, dry wells, and hydraulic lift access pits, and their contents would be removed in accordance with the applicable regulations and guidelines. In addition, any asbestos-containing material, lead-based paint, and/or PCB-containing building components affected by demolition of the site buildings would be identified and properly managed during such activities. During construction, the SCA's contractor would properly manage excavated soil in accordance with all applicable local, State and Federal regulations. For areas of the site where exposed soils may exist (i.e., landscaped areas), a twenty-four inch thick layer of certified-clean fill would be placed over the soils. In addition, to minimize the potential for construction workers' exposure, standard industry practices, including appropriate health and safety measures, would be utilized. Since all of these measures would be implemented as part of the proposed project, no adverse impacts due to the identified soil and groundwater conditions would occur.

Traffic and Transportation, Pedestrians, and Parking

The analysis of future conditions with the project in place required 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. The analyses were performed for two scenarios related to a possible street-direction change to the one-block section of Turner Place between East 8th Street and Coney Island Avenue. The SCA is considering the street reversal proposal with the New York City Department of Transportation as it would allow parents to drop off students easily and safely on the southern sidewalk of Turner Place in front of the school. Two scenarios were tested: "Scenario 1" would maintain the current one-way westbound operations; "Scenario 2" would reverse this one block to one-way eastbound. Technical analysis performed for the signalized intersections in the study area revealed that significant impacts related to traffic would occur as a result of the assignment of school-generated vehicle trips through the study area. For Scenario 1, traffic improvements along Coney Island Avenue at Church Avenue, Beverly Road, and

18th Avenue could be achieved through signal timing shifts, implementing additional signal phases, and curb parking modifications during the AM and PM peak hours. Similarly, the same traffic measures would be needed for Coney Island Avenue intersections at Church Avenue, Beverly Road, and 18th Avenue for Scenario 2; in addition to the installation of new signal controls at the intersection of Turner Place at Coney Island Avenue to improve traffic conditions. With these traffic improvements, no significant adverse impacts would occur.

Based on the project trip generation, parking demands within walking distance of the proposed school would increase by 32 staff vehicles during the week. This increase in parking demand would result in a parking shortfall during periods when the most restrictions on curbside parking are in effect. This shortfall could be avoided by altering the parking restrictions along nine block faces in the quarter-mile radius parking study area from Monday, when most parking restrictions are in effect and a parking-space shortfall exists, to Friday, when there is an excess of available on-street capacity. The time period for the regulations (11:30 AM to 1 PM) would remain the same. The following block faces were observed to have a surfeit of unoccupied curb spaces on Fridays, and are proposed for this mitigation: North side of Beverly Road between Ocean Parkway and Rugby Road; West side of East 8th Street between Beverly Road and Avenue C. The parking-shortfall impacts of the project during regulation periods within the quarter-mile radius parking study area would be eliminated with this measure in place. Although the added parking demand by the project would exceed more than half the available on-street capacity in the quarter-mile radius on non-regulation days when compared to No Build conditions, as per the guidance in the *CEQR Technical Manual*, the sufficiency of parking within a half-mile (rather than a quarter-mile) of the project site to accommodate the projected shortfall was considered in determining significant impacts. A comparison of the No Build on-street parking supply and demand versus Build demand with the proposed parking restrictions in the half-mile area shows that the parking shortfall resulting from the project would be fully mitigated, while a parking surplus would be maintained during non-regulation periods.

Noise

A comprehensive analysis was completed to assess the potential for the proposed new school facility to result in noise impacts attributable either to additional vehicular traffic generated by the school or to the on-site play areas. That analysis determined that the proposed play yard could result in a noticeable increase in noise levels (i.e., increase in noise levels greater than five dBA) during the midday time period at ten private residences along East 8th Street between Turner Place and Hinckley Place that adjoin the school site and would have a direct line of sight to the new play yard.

The new school facility's play yard is expected to increase noise levels over the No Build condition by more than 10 dB. This change in noise levels would exceed SCA's criterion of significance of a five dBA increase over the No Build condition. To avoid significant schoolyard noise impacts, the SCA would make available to the owners of all ten homes on the project block whose rear yards adjoin the proposed school play yard (located at 211, 213, 215, 217, 219, 221, 223, 225, 227 and 229 East 8th Street), sound-attenuating windows and alternative ventilation for the windows fronting the proposed school play yard. Since these measures would be implemented as part of the proposed project, no significant adverse playground noise impacts would occur.

The maximum L_{10} noise exposure experienced by the proposed school would be 71.3 dBA. This noise level includes the effect of traffic noise from local streets. 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) would be incorporated into the new school building's design and construction. Standard double-glazed windows are available which would result in the required attenuation value of 28 dBA. As a result, the proposed school would not experience any noise exposure impacts.

The proposed project would have the beneficial impact of providing approximately 757 additional seats of permanent public school capacity at the primary and intermediate levels for Community School District No. 22.

For further information contact:

Contact: Ross J. Holden
Vice President and General Counsel

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

Telephone: (718) 472-8220

Lorraine Grillo
President and CEO

March 7, 2011
Date

617.20
Appendix A
State Environmental Quality Review
FULL ENVIRONMENTAL ASSESSMENT FORM

Purpose: The full EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasurable. It is also understood that those who determine significance may have little or no formal knowledge of the environment or may not be technically expert in environmental analysis. In addition, many who have knowledge in one particular area may not be aware of the broader concerns affecting the question of significance.

The full EAF is intended to prove a method whereby applicants and agencies can be assured that the determination process has been orderly, comprehensive in nature, yet flexible to allow introduction of information to fit a project or action.

Full EAF Components: The full EAF is comprised of three parts:

Part 1: Provides objective data and information about a given project and its site. By identifying basic project data, it assists a reviewer in the analysis that takes place in Parts 2 and 3.

Part 2: Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially large impact. The form also identifies whether an impact can be mitigated or reduced.

Part 3: If any impact in Part 2 is identified as potentially large, then Part 3 is used to evaluate whether or not the impact is actually important.

THIS AREA FOR LEAD AGENCY USE ONLY
DETERMINATION OF SIGNIFICANCE – Type 1 and Unlisted Actions

Identify the Portions of EAF completed for this project: ■ Part 1 ■ Part 2 ■ Part 3

Upon review of the information recorded in this EAF (Parts 1 and 2 and 3, if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the lead agency that:

■ A. The project will not result in any large and important impact(s) and, therefore, is one which **will not** have a significant impact on the environment, therefore **a negative declaration will be prepared.**

☐ B. Although the project could have a significant effect on the environment, there will not be a significant effect for this Unlisted Action because the mitigation measures described in PART 3 have been required, therefore **a CONDITIONED negative declaration will be prepared. ***

☐ C. The project may result in one or more large and important impacts that may have a significant impact on the environment, therefore **a positive declaration will be prepared.**

* A Conditioned Negative Declaration is only valid for Unlisted Actions

Proposed PS/IS 338, Brooklyn
Name of Action

New York City School Construction Authority
Name of Lead Agency

Kenrick Ou
Print or ~~Type~~ Name of Responsible Officer in Lead Agency

Director, Real Estate Services
Title of Responsible Officer

Signature of Responsible Officer in Lead Agency

Signature of Preparer *(if different from responsible officer)*

March 7, 2011
Date

PART 1 – PROJECT INFORMATION
Prepared by Project Sponsor

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

Proposed PS/IS 338, Brooklyn
NAME OF ACTION

510 Coney Island Avenue, Brooklyn, New York, 11218 (Kings County)
LOCATION OF ACTION (Include Street Address, Municipality and County)

New York City School Construction Authority
NAME OF APPLICANT / SPONSOR

30-30 Thomson Avenue
ADDRESS

Long Island City | New York | 11101-3045
CITY / PO | STATE | ZIP CODE

(718) 472-8000
BUSINESS TELEPHONE

Block 5342, Lot 6 - Mr. Abraham Safiev, 14 Turner Place, Brooklyn, New York 11218
Block 5342, Lot 8 - Mr. Aaron Hargrove, Mrs. Cherry Hargrove, 18 Turner Place, Brooklyn, New York 11218
Block 5342, Lot 10 - Simon Galapo, 510 Coney Island Avenue, Brooklyn, New York 11218
Block 5342, Lot 17 – Grace Caiati, 520 Coney Island Avenue, Brooklyn, New York 11218
Block 5342, Lot 19 - 524 Coney Island Avenue Associates, LLC, 524 Coney Island Avenue, Brooklyn, New York 11218
Block 5342, Lot 26 - Emporium Management Corp., 33 Hinckley Place, Brooklyn, New York 11218
Block 5342, Lot 28 - Emporium Management Corp., 21 Hinckley Place, Brooklyn, New York 11218
Block 5342, Lot 30 - Emporium Management Corp., 13 Hinckley Place, Brooklyn, New York 11218
NAME OF OWNER (If different)

ADDRESS

CITY / PO | STATE | ZIP CODE

BUSINESS TELEPHONE

DESCRIPTION OF ACTION

On behalf of the New York City Department of Education (DOE), the New York City School Construction Authority (SCA) proposes to construct a new approximately 757-seat primary and intermediate school facility, to be known as PS/IS 338, located at 510 Coney Island Avenue in the Prospect Park South section of Brooklyn. Construction of the new PS/IS 338 has been proposed by DOE to provide additional public school capacity for Community School District No. 22.

Under the proposed action, the SCA would acquire Lots 6, 8, 10, 17, 19, 26, 28, and 30 on Block 5342 to assemble an approximately 44,783-square-foot (sf) site. As such, the proposed action would entail the demolition of four residential buildings (two are unoccupied) and an automotive repair facility. According to the selected design

scheme, the proposed new school facility would be a five-story building, plus cellar, and would contain approximately 107,162 gross square feet. A 19,030 sf play yard, including a 3,215 sf Early Childhood playground, would be developed on the northwestern portion of the project site. The main entrance to the new school would be located on Hinckley Place. The new PS/IS 338 would provide approximately 757 seats for grade levels pre-kindergarten through eight, and would include classrooms, a library, a gymatorium (gymnasium/auditorium), a kitchen and cafeteria, a gymnasium, music and art rooms, science rooms, reading and speech resource rooms, a nurse's office, general office space, and storage. Approximately 76 teachers and staff would be estimated to work at the new school facility. PS/IS 338 is expected to open September 2014.

Please Complete Each Question – Indicate N.A. if not applicable

A. Site Description

Physical setting of overall project, both developed and underdeveloped areas.

1. Present Land Use: ■ Urban ☐ Industrial ■ Commercial ■ Residential ☐ Rural (non-farm)
   ☐ Forest ☐ Agriculture ■ Other Mixed-use

2. Total acreage of project area: 1.03 acres.

APPROXIMATE ACREAGE	PRESENTLY		AFTER COMPLETION	
Meadow or Brushland (Non-agricultural)	0	acres	0	acres
Forested	0	acres	0	acres
Agricultural (Includes orchards, cropland, pasture, etc.)	0	acres	0	acres
Wetland (Freshwater or tidal as per Articles 24, 25 of ECL)	0	acres	0	acres
Water Surface Area	0	acres	0	acres
Unvegetated (Rock, earth or fill)	0	acres	0	acres
Roads, buildings and other paved surfaces	0.72	acres	1.03	acres
Other (Indicate type) **overgrown lot, incl. remnant lawn**	0.31	acres	0	acres

3. What is predominant soil type(s) on project site? Fill material and outwash plain soils (Flatbush-Riverhead complex)
   a. Soil Drainage: ■ Well drained 100 % of site ☐ Moderately well drained ___% of site
      ☐ Poorly drained _____ % of site
   b. If any agricultural land is involved, how many acres of soil are classified within soil groups 1 through 4 of the NYS Land Classification System? N/A acres (See 1 NYCRR 370).

4. Are there bedrock outcroppings on project site? ☐ Yes ■ No
   a. What is depth to bedrock? approx. 200 (in feet)

5. Approximate percentage of proposed project site with slopes: ■ 0-10% 100 % ☐ 10-15% ___% ☐ 15% or greater___%

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or National Registers of Historic Places? ☐ Yes ■ No

7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks? ☐ Yes ■ No

8. What is the depth of the water table? approx. 38-42 below ground surface (in feet)

9. Is site located over a primary, principal, or sole source of aquifer? ■ Yes ☐ No All of Brooklyn is located over an aquifer identified by USEPA as a sole source aquifer: it is not used for drinking purposes within the City of New York.

10. Do hunting, fishing or shell fishing opportunities presently exist in the project area? ☐ Yes ■ No

11. Does project site contain any species of plant or animal life that is identified as threatened or endangered? ☐ Yes ■ No
    According to: _____

    Identify each species:
    _____

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, other geological formations)?
☐ Yes ■ No Describe: _____

13. Is the project site presently used by the community or neighborhood as an open space or recreation area?
☐ Yes ■ No If yes, explain: _____

14. Does the present site include scenic views known to be important to the community? ☐ Yes ■ No

15. Streams within or contiguous to project area: N/A
a. Name of Stream and name of River to which it is tributary: _____

16. Lakes, ponds, wetland areas within or contiguous to project area: N/A
a. Name _____ b. Size (in acres) _____

17. Is the site served by existing public utilities? ■ Yes ☐ No
a. If **Yes**, does sufficient capacity exist to allow connection? ■ Yes ☐ No
b. If **Yes**, will improvements be necessary to allow connection? ■ Yes ☐ No

18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ■ No

19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617? ☐ Yes ■ No

20. Has the site ever been used for the disposal of solid or hazardous wastes? ☐ Yes ■ No

B. Project Description

1. Physical dimensions and scale of project (fill in dimensions as appropriate).
a. Total contiguous acreage owned or controlled by project sponsor: 0 acres.
b. Project acreage to be developed: 1.03 acres initially; 1.03 acres ultimately.
c. Project acreage to remain undeveloped: 0 acres.
d. Length of project, in miles: N/A (if appropriate)
e. If the project is an expansion, indicate percent of expansion proposed: N/A %
f. Number of off-street parking spaces existing 0 proposed 0
g. Maximum vehicular trips generated per hour: AM peak hour- 184; PM peak hour- 159 (upon completion of project)
h. If residential: Number and type of housing units: N/A

	One Family	*Two Family*	*Multiple Family*	*Condominium*
Initially				
Ultimately				

i. Dimension (in feet) of largest proposed structure: 77′ height; 168′ width; 190′ length.
j. Linear feet of frontage along a public thoroughfare project will occupy is? approx. 190′ along Coney Island Avenue and 168′ along Hinckley Place

2. How much natural material (i.e., rock, earth, etc.) will be removed from the site? TBD tons/cubic yards

3. Will disturbed areas be reclaimed? ☐ Yes ☐ No ■ N/A
   a. If yes, for what intended purposes is the site being reclaimed? _____
   b. Will topsoil be stockpiled for reclamation? ☐ Yes ■ No
   c. Will upper subsoil be stockpiled for reclamation? ☐ Yes ■ No

4. How many acres of vegetation (trees, shrubs, and ground covers) will be removed from site? 0.31 acres

5. Will any mature forest (over 100 years old) or other locally important vegetation be removed by this project?
   ☐ Yes ■ No

6. If single phase project: Anticipated period of construction: 36 months, (including demolition)

7. If multi-phased: N/A
   a. Total number of phases anticipated: ____ (number)
   b. Anticipated date of commencement phase 1: ____ month _____ year, (including demolition)
   c. Approximate completion date of final phase: _____ month _____ year
   d. Is phase 1 functionally dependent on subsequent phases? ☐ Yes ☐ No

8. Will blasting occur during construction? ☐ Yes ■ No

9. Number of jobs generated: during construction +/- 50; after project is complete +/- 76 faculty and staff.

10. Number of jobs eliminated by this project approx. 8-10.

11. Will project require relocation of any project or facilities? ■ Yes ☐ No
    If yes, explain: The sites of a used car sales lot (Lot 10) and an automotive repair facility (Lot 17) would be acquired to accommodate the new primary/intermediate school facility.

12. Is surface liquid waste disposal involved? ☐ Yes ■ No
    a. If yes, indicate type of waste (sewage, industrial, etc.) and amount _____
    b. Name of water body into which effluent will be discharged _____

13. Is subsurface liquid waste disposal involved? ☐ Yes ■ No Type _____

14. Will surface area of an existing water body increase or decrease by proposal? ☐ Yes ■ No
    If yes, explain: _____

15. Is project or any portion of project located in a 100-year flood plain? ☐ Yes ■ No

16. Will the project generate solid waste? ■ Yes ☐ No
    a. If yes, what is the amount per month? 15,591 pounds
    b. If yes, will an existing solid waste facility be used? ■ Yes ☐ No
    c. If yes, give name DSNY; location All waste is collected and sent to designated disposal facilities.
    d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? ☐ Yes ■ No
    e. If yes, explain: _____

17. Will the project involve the disposal of solid waste? ☐ Yes ■ No
    a. If yes, what is the anticipated rate of disposal? _____ tons/months.
    b. If yes, what is the anticipated site life? _____ years.

18. Will project use herbicides or pesticides? ☐ Yes ■ No

19. Will project routinely produce odors (more than one hour per day)? ☐ Yes ■ No

20. Will project produce operating noise exceeding the local ambient noise levels? ☐Yes ■ No

21. Will project result in an increase in energy use? ■ Yes ☐ No
    If yes, indicate type(s) Mechanical systems, elevator, heating fuel (oil and gas) and electricity.

22. If water supply is from wells, indicate pumping capacity: N/A gallons/minutes.

23. Total anticipated water usage per day 26,548 gallons/day.

24. Does project involve Local, State or Federal Funding? ■ Yes ☐ No
    If yes, explain: Funding to construct the proposed school facility is provided by the DOE's Five-Year Capital Plan for Fiscal Years 2010-2014. The school's operations would be funded by DOE's operating funds.

25. **Approvals Required:**

			Type	*Submittal Date*
City, Town, Village Board	☐ Yes	■ No		
City, Town, Village Planning Board	☐ Yes	■ No		
City, Town Zoning Board	☐ Yes	■ No		
City, County Health Department	☐ Yes	■ No		
Other Local Agencies	☐ Yes	■ No		
Other Regional Agencies	☐ Yes	■ No		
State Agencies	☐ Yes	■ No		
Federal Agencies	☐ Yes	■ No		

C. Zoning and Planning Information

1. Does proposed action involve a planning or zoning decision? ☐ Yes ■ No
   If yes, indicate decision required:

   ☐ Zoning Amendment ☐ Zoning Variance ☐ New/revision of master plan ☐ Subdivision

   ☐ Site plan ☐ Special use permit ☐ Resource management plan ■ Other

   Zoning overrides for zoning non-conformities required from Deputy Mayor for Education and Community Development

2. What is the zoning classification(s) of the site? R5 (Residential), C8-2 (Commercial)

3. What is the maximum potential development of the site if developed as permitted by the present zoning?
Lots 10, 17, 19, and 26 (zoned C8-2): 28,783 sf X 2.0 FAR = 57,566 zsf
Lots 6, 8, 28, and 30 (zoned R5): 16,000 sf X 2.0 FAR = 32,000 zsf

4. What is the proposed zoning of the site? No change in zoning is proposed.

5. What is the maximum potential development of the site if developed as permitted by the proposed zoning? N/A

6. Is the proposed action consistent with the recommended uses in adopted local land use plans?
■ Yes ☐ No

7. What are the predominant land use(s) and zoning classifications within a 1/4-mile radius of proposed action?
Zoning: Lower Density and Medium Density Residential (R1-2, R3X, R5, R5B, R6A, R6B, and R7A) and Commercial (C8-2 and Commercial Overlays C1-3, C2-2, and C2-3); Special Ocean Parkway District (OP).
Land Uses: residential, commercial, and mixed-use.

8. Is the proposed action compatible with adjoining/surrounding land uses within a 1/4-mile? ■ Yes ☐ No

9. If the proposed action is the subdivision of land, how many lots are proposed? N/A
a. What is the minimum lot size proposed? _____

10. Will proposed action require any authorization(s) for the formation of sewer or water districts? ☐ Yes ■ No

11. Will the proposed action create a demand for any community provided services (recreation, education, police, and fire protection)? ■ Yes ☐ No
a. If yes, is existing capacity sufficient to handle the projected demand? ■ Yes ☐ No

12. Will the proposed action result in the generation of traffic significantly above present levels? ☐ Yes ■ No
a. If yes, is the existing road network adequate to handle the additional traffic. ☐ Yes ☐ No

D. Informational Details

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with your proposal, please discuss such impacts and the measures which you propose to mitigate or avoid them.

E. Verification

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

Applicant/Sponsor Name Molly MacQueen Date 3/4/11

Signature _____

Title Vice President, STV Incorporated

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

Part 2 – PROJECT IMPACTS AND THEIR MAGNITUDE
Responsibility of Lead Agency

General Information (Read carefully)

- In completing the form the reviewer should be guided by the question: Have my responses and determinations been **reasonable**? The reviewer is not expected to be an expert environmental analyst.
- The **Examples** provided are to assist the reviewer by showing types of impacts and wherever possible the threshold of magnitude that would trigger a response in column 2. The examples are generally applicable throughout the State and for most situations. But, for any specific project or site other examples and/or lower thresholds may be appropriate for a Potential Large Impact response, thus requiring evaluation in Part 3.
- The impacts of each project, on each site, in each locality, will vary. Therefore, the examples are illustrative and have been offered as guidance. They do not constitute an exhaustive list of impacts and thresholds to answer each question.
- The number of examples per question does not indicate the importance of each question.
- In identifying impacts, consider long term, short term and cumulative effects.

Instructions (Read carefully)

a. Answer each of the 20 questions in PART 2. Answer **Yes** if there will be **any** impact.
b. **Maybe** answers should be considered as **Yes** answers.
c. If answering **Yes** to a question then check the appropriate box (column 1 or 2) to indicate the potential size of the impact. If impact threshold equals or exceeds any example provided, check column 2. If impact will occur but threshold is lower than example, check column 1.
d. Identifying that an Impact will be potentially large (column 2) does not mean that it is also necessarily **significant.** Any large impact must be evaluated in PART 3 to determine significance. Identifying an impact in column 2 simply asks that it be looked at further.
e. If reviewer has doubt about size of the impact then consider the impact as potentially large and proceed to PART 3.
f. If a potentially large impact checked in column 2 can be mitigated by change(s) in the project to a small to moderate impact, also check the **Yes** box in column 3. A **No** response indicates that such a reduction is not possible. This must be explained in Part 3.

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
IMPACT ON LAND			
1. Will the Proposed Action result in a physical change to the project site? ☐ No ■ Yes			
Examples that would apply to column 2			
• Any construction on slopes of 15% or greater, (15 foot rise per 100 foot of length), or where the general slopes in the project area exceed 10%.	☐	☐	☐ Yes ☐ No
• Construction on land where the depth to the water table is less than 3 feet.	☐	☐	☐ Yes ☐ No
• Construction of paved parking area for 1,000 or more vehicles.	☐	☐	☐ Yes ☐ No
• Construction on land where bedrock is exposed or generally within 3 feet of existing ground surface.	☐	☐	☐ Yes ☐ No
• Construction that will continue for more than 1 year or involve more than one phase or stage.	■	☐	☐ Yes ☐ No
• Excavation for mining purposes that would remove more than 1,000 tons of natural material (i.e., rock or soil) per year.	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
• Construction or expansion of a sanitary landfill.	☐	☐	☐ Yes ☐ No
• Construction in a designated floodway.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
2. Will there be an effect to any unique or unusual land forms found on the site (i.e., cliffs, dunes, geological formations, etc.) ■ No ☐ Yes			
• Specific land forms: _____	☐	☐	☐ Yes ☐ No
IMPACT ON WATER			
3. Will Proposed Action affect any water body designated as protected? (Under Articles 15, 24, 25 of the Environmental Conservation Law, ECL) ■ No ☐ Yes			
Examples that would apply to column 2			
• Developable area of site contains a protected water body.	☐	☐	☐ Yes ☐ No
• Dredging more than 100 cubic yards of material from channel of a protected stream.	☐	☐	☐ Yes ☐ No
• Extension of utility distribution facilities through a protected water body.	☐	☐	☐ Yes ☐ No
• Construction in a designated freshwater or tidal wetland.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
4. Will proposed action affect any non-protected existing or new body of water? ■ No ☐ Yes			
Examples that would apply to column 2			
• A 10% increase or decrease in the surface area of any body of water or more than a 10-acre increase or decrease.	☐	☐	☐ Yes ☐ No
• Construction of a body of water that exceeds 10 acres of surface area.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
5. Will proposed Action affect surface or groundwater quality or quantity? ☐ No ■ Yes			
Examples that would apply to column 2			
• Proposed Action will require a discharge permit.	☐	☐	☐ Yes ☐ No
• Proposed Action requires use of a source of water that does not have approval to serve proposed (project) action.	☐	☐	☐ Yes ☐ No
• Proposed Action requires water supply from wells with greater than 45 gallons per minute pumping capacity.	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
• Construction or operation causing any contamination of a water supply system.	☐	☐	☐ Yes ☐ No
• Proposed Action will adversely affect groundwater.	☐	☐	☐ Yes ☐ No
• Liquid effluent will be conveyed off the site to facilities which presently do not exist or have inadequate capacity.	☐	☐	☐ Yes ☐ No
• Proposed Action would use water in excess of 20,000 gallons per day. Proposed school building would have an estimated water usage of 8,330 gallons per day (gpd); however, it would consume an additional 18,218 gpd for air conditioning for a total of 26,548 gpd during the cooling season.	■	☐	☐ Yes ☐ No
• Proposed Action will likely cause siltation or other discharge into an existing body of water to the extent that there will be an obvious visual contrast to natural conditions.	☐	☐	☐ Yes ☐ No
• Proposed action will require the storage of petroleum or chemical products greater than 1,100 gallons.	☐	☐	☐ Yes ☐ No
• Proposed Action will allow residential uses in areas without water and/or sewer services.	☐	☐	☐ Yes ☐ No
• Proposed Action locates commercial and/or industrial uses which may require new or expansion of existing waste treatment and/or storage facilities.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
6. Will Proposed Action alter drainage flow or patterns, or surface water runoff? ■ No ☐ Yes			
Examples that would apply to column 2			
• Proposed Action would change flood water flows.	☐	☐	☐ Yes ☐ No
• Proposed Action may cause substantial erosion.	☐	☐	☐ Yes ☐ No
• Proposed Action is incompatible with existing drainage patterns.	☐	☐	☐ Yes ☐ No
• Proposed Action will allow development in a designated floodway.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON AIR			
7. Will proposed action affect air quality? ■ No ☐ Yes			
Examples that would apply to column 2			
• Proposed Action will include 1,000 or more vehicle trips in any given hour.	☐	☐	☐ Yes ☐ No
• Proposed Action will result in the incineration of more than 1 ton of refuse per hour.	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
• Emission rate of total contaminants will exceed 5 lbs. per hour or a heat source producing more than 10 million BTU's per hour.	☐	☐	☐ Yes ☐ No
• Proposed Action will allow an increase in the amount of land committed to industrial use.	☐	☐	☐ Yes ☐ No
• Proposed Action will allow an increase in the density of industrial development within existing industrial areas.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON PLANTS AND ANIMALS			
8. Will proposed action affect any threatened or endangered species? ■ No ☐ Yes			
Examples that would apply to column 2			
• Reduction of one or more species listed on the New York or Federal list, using the site, over or near the site, or found on the site.	☐	☐	☐ Yes ☐ No
• Removal of any portion of a critical or significant wildlife habitat.	☐	☐	☐ Yes ☐ No
• Application of pesticide or herbicide more than twice a year, other than for agricultural purposes.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
9. Will Proposed Action substantially affect non-threatened or non-endangered species? ■ No ☐ Yes			
Examples that would apply to column 2			
• Proposed Action would substantially interfere with any resident or migratory fish, shellfish or wildlife species.	☐	☐	☐ Yes ☐ No
• Proposed Action requires the removal of more than 10 acres of mature forest (over 100 years or age) or other locally important vegetation.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON AGRICULTURAL LAND RESOURCES			
10. Will Proposed Action affect agricultural land resources? ■ No ☐ Yes			
Examples that would apply to column 2			
• The proposed action would sever, cross or limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc.).	☐	☐	☐ Yes ☐ No
• Construction activity would excavate or compact the soil profile of agricultural land.	☐	☐	☐ Yes ☐ No
• The proposed action would irreversibly convert more than 10 acres of agricultural land or, if located in an Agricultural District, more than 2.5 acres of agricultural land.	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
• The proposed action would disrupt or prevent installation of agricultural land management systems (e.g., subsurface drain lines, outlet ditches, strip cropping); or create a need for such measure (e.g., cause a farm field to drain poorly due to increased runoff).	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON AESTHETIC RESOURCES			
11. Will proposed action affect aesthetic resources? (If necessary, use the Visual EAF Addendum in Section 617.20, Appendix B.) ■ No ☐ Yes			
Examples that would apply to column 2 • Proposed land uses, or project components obviously different from or in sharp contrast to current surrounding land use patterns, whether man-made or natural.	☐	☐	☐ Yes ☐ No
• Proposed land uses, or project components visible to users of aesthetic resources which will eliminate or significantly reduce their enjoyment of the aesthetic qualities of that resource.	☐	☐	☐ Yes ☐ No
• Project components that will result in the elimination or significant screening of scenic views known to be important to the area.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES			
12. Will Proposed Action impact any site or structure of historic, prehistoric or paleontological importance? ■ No ☐ Yes			
Examples that would apply to column 2 • Proposed Action occurring wholly or partially within or substantially contiguous to any facility or site listed on the State or National Registers of Historic Places.	☐	☐	☐ Yes ☐ No
• Any impact to an archaeological site or fossil bed located within the project site.	☐	☐	☐ Yes ☐ No
• Proposed Action will occur in an area designated as sensitive for archaeological sites on the NYS Site Inventory.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON OPEN SPACE AND RECREATION			
13. Will Proposed Action affect the quantity or quality of existing or future open spaces or recreational opportunities? ■ No ☐ Yes			
Examples that would apply to column 2 • The permanent foreclosure of a future recreational opportunity.	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
• A major reduction of an open space important to the community.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON CRITICAL ENVIRONMENTAL AREAS			
14. Will Proposed Action affect the exceptional or unique characteristics of a critical environmental area (CEA) established pursuant to subdivision 6NYCRR 617.14 (g)? ■ No ☐ Yes List the environmental characteristics that caused the designation of the CEA. _____			
Examples that would apply to column 2			
• Proposed Action to locate within the CEA?	☐	☐	☐ Yes ☐ No
• Proposed Action will result in a reduction in the quantity of the resource?	☐	☐	☐ Yes ☐ No
• Proposed Action will result in a reduction in the quality of the resource?	☐	☐	☐ Yes ☐ No
• Proposed Action will impact the use, function or enjoyment of the resource?	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON TRANSPORTATION			
15. Will there be an effect to existing transportation systems? ☐ No ■ Yes			
Examples that would apply to column 2			
• Alteration of present patterns of movement of people and/or goods.	☐	☐	☐ Yes ☐ No
• Proposed Action will result in major traffic problems.	☐	☐	☐ Yes ☐ No
• Other impacts: <u>Traffic impacts will be less than significant with improvements. With a change to the parking regulations, no significant adverse impacts to parking capacity will occur.</u>	■	☐	☐ Yes ☐ No
IMPACT ON ENERGY			
16. Will Proposed Action affect the community's sources of fuel or energy supply? ■ No ☐ Yes			
Examples that would apply to column 2			
• Proposed action will cause a greater than 5% increases in the use of any form of energy in the municipality.	☐	☐	☐ Yes ☐ No
• 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 major commercial or industrial use.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
NOISE AND ODOR IMPACT			
17. Will there be objectionable odors, noise, or vibration as a result of the Proposed Action? ☐No ■ Yes	☐	☐	☐ Yes ☐ No
Examples that would apply to column 2 • Blasting within 1,500 feet of a hospital, school or other sensitive facility.	☐	☐	☐ Yes ☐ No
• Odors will occur routinely (more than one hour per day).	☐	☐	☐ Yes ☐ No
• Proposed Action will produce operating noise exceeding the local ambient noise levels for noise outside of structures.	☐	☐	☐ Yes ☐ No
• Proposed Action will remove natural barriers that would act as a noise screen.	☐	☐	☐ Yes ☐ No
• Other impacts: <u>The proposed play yard could generate noise, but the noise level would not be significant due to measures the SCA is incorporating into the project.</u>	■	☐	☐ Yes ☐ No
IMPACT ON PUBLIC HEALTH			
18. Will Proposed Action affect public health and safety? ■ No ☐ Yes			
Examples that would apply to column 2 • Proposed Action may cause a risk of explosion or release of hazardous substances (i.e., oil, pesticides, chemicals, radiation, etc.) in the event or accident or upset conditions, or there may be a chronic low level discharge or emission.	☐	☐	☐ Yes ☐ No
• Proposed Action may result in the burial of "hazardous wastes" in any form (i.e., toxic, poisonous, highly reactive, radioactive, irritating, infectious, etc.)	☐	☐	☐ Yes ☐ No
• Storage facilities for one million or more gallons of liquefied natural gas or other flammable liquids.	☐	☐	☐ Yes ☐ No
• Proposed Action may result in the excavation or other disturbance within 2,000 feet of a site used for the disposal of solid or hazardous waste.	☐	☐	☐ Yes ☐ No
• Other impacts: _____	☐	☐	☐ Yes ☐ No
IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD			
19. Will Proposed Action affect the character of the existing community? ☐ No ■ Yes			
Examples that would apply to column 2 • The permanent population of the city, town or village in which the project is located is likely to grow by more than 5%.	☐	☐	☐ Yes ☐ No
• The municipal budget for capital expenditures or operating services will increase by more than 5% per year as a result of this project.	☐	☐	☐ Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
• Proposed Action will conflict with officially adopted plans or goals.	☐	☐	☐ Yes ☐ No
• Proposed Action will cause a change in the density of land use.	☐	☐	☐ Yes ☐ No
• Proposed Action will replace or eliminate existing facilities, structures or areas of historic importance to the community.	☐	☐	☐ Yes ☐ No
• Development will create a demand for additional community services (e.g. schools, police and fire, etc.)	☐	☐	☐ Yes ☐ No
• Proposed Action will set an important precedent for future projects.	☐	☐	☐ Yes ☐ No
• Proposed Action will create or eliminate employment. Employment at existing businesses, estimated at approximately 8-10 positions, would be displaced. However, the businesses are not dependent upon their location at the project site, and may be relocated to other sites. Impacts are not expected to be significant. In addition, the new school is expected to generate approximately 76 direct new positions.	■	☐	☐ Yes ☐ No
• Other impacts: The proposed project will not result in significant adverse impacts related to traffic, air or noise conditions. With a change to the parking regulations, no significant adverse impacts to parking capacity will occur.	■	☐	☐ Yes ☐ No

20. Is there, or is there likely to be, public controversy related to potential adverse environmental impacts?

■ No ☐ Yes

If Any Action in Part 2 Is Identified as a Potential Large Impact or If You Cannot Determine the Magnitude of Impact, Proceed to Part 3

Part 3 – EVALUATION OF THE IMPORTANCE OF IMPACTS
Responsibility of Lead Agency

Part 3 must be prepared if one or more impact(s) is considered to be potentially large, even if the impact(s) may be mitigated.

Instructions (If you need more space, attach additional sheets)
Discuss the following for each impact identified in Column 2 of Part 2:

1. Briefly describe the impact.
2. Describe (if applicable) how the impact could be mitigated or reduced to a small to moderate impact by project change(s).
3. Based on the information available, decide if it is reasonable to conclude that this impact is **important.**

To answer the question of importance, consider:
- The probability of the impact occurring
- The duration of the impact
- Its irreversibility, including permanently lost resources of value
- Whether the impact can or will be controlled
- The regional consequence of the impact
- Its potential divergence from local needs and goals
- Whether known objections to the project relate to this impact

(Continue on Attachments)

See Attached Report - "Supplemental Environmental Studies for the Proposed PS/IS 338, Brooklyn, New York"

SUPPLEMENTAL ENVIRONMENTAL STUDIES

for the

Proposed PS/IS 338

510 Coney Island Avenue

Brooklyn, New York

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APPENDICES

Proposed PS/IS 338
510 Coney Island Avenue
Brooklyn, New York

SUPPLEMENTAL ENVIRONMENTAL STUDIES

EXECUTIVE SUMMARY

INTRODUCTION

The New York City School Construction Authority (SCA) proposes to construct a new primary and intermediate school (PS/IS) facility, to be known as PS/IS 338, located at 510 Coney Island Avenue in the Prospect Park South section of Brooklyn. The proposed school would provide approximately 757 seats for students in grade levels pre-kindergarten through eight from Community School District (CSD) No. 22.

In order to develop the new school facility, SCA would acquire and assemble an approximately 44,783-square-foot (sf) site comprised of eight lots (Lots 6, 8, 10, 17, 19, 26, 28, and 30) on Block 5342. These lots include two two-story semi-detached residential buildings (Lots 6 and 8), a used car sales lot (Lot 10), an automotive repair facility (Lot 17), a vacant lot (Lot 19), a vacant three-story multi-family residence (Lot 26), a vacant two-story two-family residence (Lot 28), and a vacant lot (Lot 30). In total, the eight lots comprising the proposed school site contain approximately 1.03 acres (44,783 sf).

According to the current design scheme that has been selected by the SCA, the proposed new school facility would be a five-story building, plus cellar, and would contain approximately 107,162 gross square feet (gsf). The school's main entrance would be located on Hinckley Place. The design program for the proposed school facility includes classrooms for grade levels pre-kindergarten through eight, special education classrooms, a library, a gymatorium (gymnasium/auditorium), a kitchen and cafeteria, a gymnasium, music and art rooms, science rooms, reading and speech resource rooms, a nurse's office, general office space, and storage. A 19,030 sf play yard, including a 3,215 sf Early Childhood playground, would be provided on the northwestern portion of the project site. The play yard would serve as an area for the congregation of children and parents during school arrival and dismissal times. Approximately 76 teachers and staff would be estimated to work at the new school facility.

The project site is located on the block bounded by Turner Place to the north, Hinckley Place to the south, Coney Island Avenue to the east, and East 8th Street to the west; it fronts Turner Place, Hinckley Place, and Coney Island Avenue. The portion of the site without street frontage adjoins the rear yards of residential buildings that front East 8th Street.

The proposed school site is located in both a R5 residential zoning district, in which schools are permitted as-of-right, and a C8-2 commercial zoning district, in which schools are not permitted as-of-right, within Brooklyn Community District 12. The entire site is also within a designated

Special Purpose District, known as the Special Ocean Parkway District (OP), in which schools are permitted as-of-right; however, the regulations of the underlying districts remain in force.

Funding for site acquisition, design and construction of the proposed school facility would be provided by the New York City Department of Education's (DOE's) Five-Year Capital Plan for Fiscal Years 2010-2014. It is expected that the proposed PS/IS 338 would open in 2014.

The new public school facility would be located within the geographic boundaries of CSD No. 15, whose border with CSD No. 22 is Coney Island Avenue. However, the new school facility would serve primary and intermediate school students and special education students from the adjacent CSD No. 22. Construction of the new approximately 757-seat PS/IS 338 has been proposed by DOE to provide additional seating capacity for CSD No. 22 in order to address existing localized overcrowding, and also to support DOE's policies to implement class-size reduction.

This report examines the environmental effects expected to result from the construction and operations of the new PS/IS 338. 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 involves the acquisition of eight lots and demolition of four residential buildings (two are unoccupied) and an automotive repair facility. After the site is cleared for construction, the proposed school building, which would be a five-story structure with a cellar, would be built on the site. The new school would contain approximately 107,162 gsf, with its main entrance on Hinckley Place. The project would also include a 19,030 sf play yard, with a 3,215 sf Early Childhood playground, on the northwestern portion of the project site. The new school facility would provide space for approximately 757 primary and intermediate school students. The site and the surrounding residential, commercial, and mixed-uses would not be adversely affected by the proposed project, nor would land use trends be affected.

ZONING AND PUBLIC POLICY

The proposed school facility would conform to the requirements of the R5 zoning district and the OP special district with respect to use, as schools are permitted as-of-right in both districts. However, as the proposed school is not a permitted use in the C8-2 zoning district, a zoning override would be required to allow the school (community facility) within the portion of the site in the C8-2 zoning district (Lots 10, 17, 19 and 26). In addition, zoning overrides for bulk would be required for non-compliance with bulk regulations within the portion of the site in the R5 zoning district (Lots 6, 8, 28, and 30) and the underlying bulk regulations in the OP special district for all lots. These variances for zoning non-conformities would be necessary from the Deputy Mayor for Education and Community Development. As the zoning overrides

would pertain only to the project site, no significant adverse impact to zoning pattern and public policy would occur.

B. SOCIOECONOMIC CONDITIONS

The proposed school facility would result in some displacement of residents and businesses, as the proposed project site would be acquired by SCA and the existing buildings on the site demolished. However, there is a limited number of employees at the existing on-site businesses that would be displaced and, in addition, the existing businesses are not dependent upon their location at the project site and may be relocated to other sites. The proposed project would introduce approximately 757 primary and intermediate school students and a total of approximately 76 teachers, administrators, and support staff to the project site. Although the proposed project would be a change of land use, it would not introduce activities that are incompatible with surrounding existing uses. Additional jobs for teachers, administrators, and support staff would be created and this displacement is not significant considering the number of residents and workers affected. 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.

C. COMMUNITY FACILITIES

The proposed project would not introduce new residents to the area, and would not create substantial new demand for community facilities and services (i.e., public or publicly-funded facilities such as fire protection, police protection, schools, hospitals and other health care facilities, libraries, and day care centers). The proposed PS/IS 338 would provide additional seating capacity for CSD No. 22; however, the new facility would not introduce new school-aged population to the school district or change its service area. The proposed facility would not impinge on the abilities of the New York City Police Department and Fire Department to provide services to the project site or their respective service areas. Therefore, no significant impacts to community facilities would result.

D. OPEN SPACE AND RECREATIONAL FACILITIES

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 19,030 sf play yard, including a 3,215 sf Early Childhood playground, which would be developed on the northwestern portion of the project site. The proposed PS/IS 338 would not result in any significant adverse impacts to open space resources.

E. SHADOWS

The proposed project would result in a five-story school building which would be over 50 feet in height. With a proposed height of approximately 77 feet, the proposed school building's maximum shadow would extend approximately 331 feet. There are no buildings or open spaces that would fall in the shadow of the proposed PS/IS 338 that are considered historic or possess significant sunlight-sensitive features. Therefore, because the proposed school would not cast a shadow over any historic buildings or landscapes, significant adverse shadow impacts would not result.

F. CULTURAL RESOURCES

The project site has a low sensitivity for both precontact and historic 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 site would not result in significant adverse impacts to archaeological resources.

The project site is not located within a historic district and does not share direct visual connectivity with the landscaped public areas of the Prospect Park South Historic District, which extends into the eastern edge of the study area to about 200 feet from the site at the nearest point. Only a few residences within the district are marginally visible to/from the site, across Coney Island Avenue. Therefore, no impacts to historic resources would result from the construction of the proposed PS/IS 338.

G. URBAN DESIGN AND VISUAL RESOURCES

The project site is currently host to small-scale commercial buildings set amid parking lots and areas overgrown with grasses and weeds. As such, the portion of the site along Coney Island Avenue detracts from the commercial streetscape and serves as an unattractive gateway to the residential neighborhood to the west. The site also contains several houses, some in poor repair and/or vacant, further diminishing the urban form of the residential neighborhood in particular. Mature trees along the street near the western end of the site and in surrounding yards are among the more attractive streetscape elements in the area. By introducing a new structure on Coney Island Avenue, the commercial streetscape will be better defined. The scale and massing of the PS/IS 338 building will resemble surrounding apartment buildings, thus reinforcing an existing urban form characteristic of the neighborhood. Further, the contribution of the new PS/IS 338 to each of its surrounding streetscapes in the form of landscaping and decorative fencing will greatly improve the pedestrian experience in the vicinity of the site.

H. NEIGHBORHOOD CHARACTER

The construction of the new PS/IS 338 would be an appropriate land use, and its design would contribute to the visual quality of the area. The new use of the site would contribute to the contextual scale of the Coney Island Avenue commercial corridor, while also providing a transition to the residential neighborhood to the west. By improving the Turner Place and Hinckley Place streetscapes the PS/IS 338 would contribute to the residential vitality of the neighborhood. Furthermore, technical analyses have concluded that with mitigation in place,

the proposed school at this location would not result in significant adverse impacts related to traffic, air or noise conditions, although there would be significant adverse impacts to parking capacity, which would alter the character of the neighborhood.

I. 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 fully disturbed and is located within a well-developed residential and commercial 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. The site of the proposed PS/IS 338 was reviewed by the New York State Department of Environmental Conservation (NYSDEC) which determined that the project site has no known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of the project site. Therefore, significant adverse impacts to natural resources would not result.

J. HAZARDOUS MATERIALS

Two Phase I Environmental Site Assessments (ESAs) and a Phase II Environmental Site Investigation (ESI) were completed for the proposed project site, 510-524 Coney Island Avenue, 13-33 Hinckley Place, and 14-18 Turner Place in Brooklyn, New York, between November 2009 and April 2010, respectively. The Phase I ESAs and Phase II ESI were completed to evaluate the environmental conditions of the site. The site is comprised of eight lots (Block 5342, Lots 6, 8, 10, 17, 19, 26, 28, and 30) with a combined area of 44,783 square feet. The site contains a used car sales lot, an auto repair facility, a former gasoline filling station, two vacant residential dwellings, and two occupied residences.

Based on the Phase II ESI, the proposed project site is underlain by historic urban fill material consisting of fine to coarse-grained sand with occasional silt or gravel layers and minor amounts of clay, brick, concrete, and miscellaneous debris. The depth of fill ranged from approximately five (5) feet across much of the site to 20 feet below grade surface (bgs) on the southeastern portion of the site. Native material underlies fill and consists of sand with silt and gravel to the maximum boring depth (50 feet bgs). Groundwater was encountered at depths ranging from approximately 38 feet to 42 feet bgs with an anticipated flow direction towards the east.

The Phase II ESI included ambient air, indoor air, soil, soil vapor and groundwater sampling. The sampling results indicated that a large majority of the collected samples were reported at concentrations below the applicable standards or guidelines. The solvent tetrachloroethene (PCE) was reported in soil vapor at one location within the active auto repair shop at a concentration above the applicable State air guideline value. The other 16 soil vapor sampling locations did not detect any volatile organic compounds above the applicable State air guideline value. In addition, the solvent acetone, total PCBs, selected semi volatile organic compounds, and selected metals were detected at isolated locations within the encountered fill material at concentrations slightly above the applicable guidance values. These compounds in soil are related to the presence of historic fill material at the site. One volatile organic compound was

detected in groundwater at one of the 16 sampled locations above the applicable State standard, and the presence of this parameter is attributed to an off-site source. The results of the due diligence process also indicated the presence of two underground storage tanks (USTs), three suspect dry wells, and three underground hydraulic lifts at the site.

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, and any exposed areas would be covered with two feet of environmentally clean soil. All subsurface structures such as USTs, dry wells, and hydraulic lift access pits, and their contents would be removed in accordance with the applicable regulations and guidelines. In addition, any asbestos-containing material, lead-based paint, and/or PCB-containing building components affected by demolition of the site buildings would be identified and properly managed during such activities.

K. INFRASTRUCTURE

The project site is located in the Owls Head Water Pollution Control Plant (WPCP) drainage area. This WPCP is permitted to treat 120 million gallons per day (mgd). The proposed PS/IS 338 would contain approximately 757 seats and 76 staff, and thus, daily water usage would be approximately 7,570 gpd for students and 760 gpd for staff, for a total of 8,330 gpd. The proposed school building would contain approximately 107,162 gsf, and thus, would consume an additional 18,218 gpd for air conditioning, for a total of 26,548 gpd during the cooling season. No significant adverse impacts related to infrastructure would result.

L. SOLID WASTE AND SANITATION

The new school facility, with a total of approximately 757 students and 76 staff, would generate a total of approximately 3,638 pounds of solid waste per week, or 15,591 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 to fifteen tons of waste material per truck. Therefore, with 3,638 pounds of solid waste per week, or 15,591 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.

M. 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 construction of the new approximately 107,162 gsf school building would require approximately 148.5 billion BTUs. Following construction, the estimated annual usage of energy for the proposed school facility would be approximately 26.9 billion BTUs or 20.1 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.

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.

N. TRAFFIC AND TRANSPORTATION, PEDESTRIANS, AND PARKING

Traffic. The identification of potential significant traffic impacts was based on criteria for signalized intersections defined in the *CEQR Technical Manual,* and for vehicle trip thresholds. The proposed PS/IS 338 would generate 184 vehicle trip ends in the AM and 159 vehicle trip ends in the PM peak hours, thus exceeding the 50-trip end threshold specified in the *CEQR Technical Manual.* Technical analysis performed for the nearby signalized intersections revealed significant impacts related to traffic would occur as a result of the assignment of these school-generated vehicle trips through the study area.

As a means of allowing school buses to open their doors on the school block itself, SCA proposed to the New York City Department of Transportation (NYCDOT) to reverse the direction of traffic flow of vehicles currently traveling along the one block of westbound Turner Place to eastbound toward Coney Island Avenue. The reversal of traffic flow would change vehicle trip assignments through the study network, and the projected volume of school-related trips through certain intersections within the study area. Therefore, to determine the effect each scenario would have on the study area intersections, two scenarios were tested. "Scenario 1" would maintain the current one-way westbound operations; "Scenario 2" would reverse this one block to one-way eastbound.

Traffic improvements along Coney Island Avenue at Church Avenue, Beverly Road, and 18th Avenue could be achieved through signal timing shifts, implementing additional signal phases, and curb parking modifications during the AM and PM peak hours for both Scenarios 1 and 2. The proposed stop-controlled approach along eastbound Turner Place at Coney Island Avenue could be improved by installing new signal controls at the intersection in Scenario 2.

Parking. The proposed project would result in a significant parking impact (i.e., shortfall) during regulation periods. This impact could be mitigated by altering the parking restrictions along nine block faces in the quarter-mile radius parking study area from Monday, when most parking restrictions are in effect and a parking-space shortfall exists, to Friday, when there is an excess of available on-street capacity. The time period for the regulations (11:30 AM to 1 PM) would remain the same. The following block faces were observed to have a surfeit of unoccupied curb spaces on Fridays, and are proposed for this mitigation:

- North side of Beverly Road between Ocean Parkway and Rugby Road
- West side of East 8th Street between Beverly Road and Avenue C

The parking-shortfall impacts of the project during regulation periods within the quarter-mile radius parking study area would be eliminated with this mitigation measure in place. However,

the added parking demand by the project would exceed more than half the available on-street capacity on non-regulation days, when compared to No Build conditions.

CEQR indicates that the sufficiency of parking within a half-mile (rather than a quarter-mile) of the project site to accommodate the projected shortfall could also be considered in determining significant impacts. A comparison of the No Build on-street parking supply and demand versus Build demand with the proposed parking restrictions in the half-mile area shows that the parking shortfall resulting from the project would be fully mitigated, while a parking surplus would be maintained during non-regulation periods.

Transit and Pedestrians. The potential for transit and pedestrian impacts is determined by comparing school-generated transit and pedestrian trips to respective thresholds specified in the *CEQR Technical Manual*. Approximately 63 and 58 new transit trips would be generated by the new PS/IS 338 during each of the respective AM and PM peak school hours, which is substantially less than the 200 peak-hour bus rider threshold; therefore, no further analysis is required, and no transit-related impact would result. Likewise, the new facility would not meet the threshold for potential pedestrian impacts, as no individual street element would carry more than 200 new pedestrians per hour; therefore, no further analysis of pedestrian conditions is required, and no significant adverse impacts related to pedestrians would result from the proposed PS/IS 338 facility.

O. AIR QUALITY

Based on the mobile source screening procedures described in the *CEQR Technical Manual,* the additional traffic generated by the proposed school facility would have no adverse effect on surrounding 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.

P. NOISE

The increase in the future traffic-related project noise level for the AM and PM periods would not exceed the 5dBA SCA impact criteria. However, increases in noise from the proposed play yard would exceed the 5 dBA SCA impact during the midday time period. As a result, the operation of the proposed school project could result in an adverse noise impact for the affected noise receptors at ten private residences along East 8th Street between Turner Place and Hinckley Place that adjoin the school site.

The new school facility's play yard is expected to increase noise levels over the No Build condition by more than 10 dB. This change in noise levels would exceed SCA's criterion of significance of a 5 dBA increase over the No Build condition. To address the potential playground noise impacts, the SCA would make available to the owners of the affected residences immediately adjacent to the project site, sound-attenuating windows and alternative ventilation for the windows fronting the proposed school play yard. This scenario would reduce the playground noise experienced by adjoining residences to less than significant levels.

The *CEQR Technical Manual* recommends a detailed technical assessment of potential traffic-related noise impacts if a potential action would involve the doubling of existing passenger car equivalent (PCE) values at any intersection during the peak hour. PCEs are used to account for the different types of motor vehicles (i.e., cars, trucks) and their varying levels of sound. Based on the data obtained from the traffic studies associated with this project, it was determined that the number of PCEs generated by this project would double the existing PCE values at two locations. A detailed assessment however, did not result in the prediction of any impacts at sensitive neighborhood locations.

The maximum L_{10} noise exposure experienced by the proposed school would be 71.3 dBA. 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) would be incorporated into the new school building's design and construction. Standard double-glazed windows are available which would result in the required attenuation value of 28 dBA. As a result, the proposed school 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.

Q. CONSTRUCTION-RELATED IMPACTS

The anticipated construction period for the proposed school is expected to be approximately 36 months. 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 the construction of the proposed project.

CHAPTER 1: PROJECT DESCRIPTION

A. INTRODUCTION

The New York City School Construction Authority (SCA) proposes to construct a new primary and intermediate school (PS/IS) facility, to be known as PS/IS 338, located at 510 Coney Island Avenue in the Prospect Park South section of Brooklyn. The proposed school would provide approximately 757 seats for students in grade levels pre-kindergarten through eight from Community School District (CSD) No. 22. In order to develop the new school facility, SCA would acquire Lots 6, 8, 10, 17, 19, 26, 28, and 30 on Block 5342 for the proposed school site.

Funding for site acquisition, design and construction of the proposed school facility would be provided by the New York City Department of Education's (DOE's) Five-Year Capital Plan for Fiscal Years 2010-2014. It is expected that the proposed PS/IS 338 would open in 2014.

B. PURPOSE AND NEED

The new public school facility would be located within the geographic boundaries of CSD No. 15, whose border with CSD No. 22 is Coney Island Avenue. However, the new school facility would serve primary and intermediate school students and special education students from the adjacent CSD No. 22. Construction of the new approximately 757-seat PS/IS 338 has been proposed by DOE to provide additional seating capacity for CSD No. 22. According to the Capital Plan, a total of 1,154 additional seats at the primary and intermediate school levels are required for CSD No. 22 in order to address existing localized overcrowding, and also to support DOE's policies to implement class-size reduction. During the 2008-2009 school year, CSD No. 22's existing primary and intermediate school facilities collectively operated at 94 percent of their target capacity.

C. PROJECT SITE

The project site is located in the Prospect Park South section of Brooklyn, within Brooklyn Community District 12 (see Figure 1-1). The project site is located on the block bounded by Turner Place to the north, Hinckley Place to the south, Coney Island Avenue to the east, and East 8th Street to the west; it fronts Turner Place, Hinckley Place, and Coney Island Avenue. The portion of the site without street frontage adjoins the rear yards of residential buildings that front East 8th Street. The project site contains approximately 1.03 acres (44,783 sf).

The proposed school site is located in both a R5 residential zoning district, in which schools are permitted as-of-right, and a C8-2 commercial zoning district, in which schools are not permitted as-of-right. The entire site is also within a designated Special Purpose District, known as the Special Ocean Parkway District (OP), in which schools are permitted as-of-right; however, the regulations of the underlying districts remain in force.

D. PROPOSED ACTION

The proposed action involves the acquisition of eight lots containing two two-story semi-detached residential buildings (Lots 6 and 8), a used car sales lot (Lot 10), an automotive repair facility (Lot 17), a vacant lot (Lot 19), a vacant three-story multi-family residence (Lot 26), a vacant two-story two-family residence (Lot 28), and a vacant lot (Lot 30). As such, the proposed action would entail the demolition of two two-story semi-detached residential buildings, an automotive repair facility, a vacant three-story single-family residence, and a vacant two-story single-family residence.

According to the current design scheme that has been selected by the SCA, the proposed new school facility would be a five-story building, plus cellar, and would contain approximately 107,162 gross square feet (gsf). The school's main entrance would be located on Hinckley Place (see Figure 1-2). The new PS/IS 338 would provide approximately 757 seats for grade levels pre-kindergarten through eight, and would contain classrooms for grade levels pre-kindergarten through eight, special education classrooms, a library, a gymatorium (gymnasium/auditorium), a kitchen and cafeteria, a gymnasium, music and art rooms, science rooms, reading and speech resource rooms, a nurse's office, general office space, and storage. A 19,030 sf play yard, including a 3,215 sf Early Childhood playground, would be provided on the northwestern portion of the project site. The play yard would serve as an area for the congregation of children and parents during school arrival and dismissal times.

Approximately 76 teachers and staff would be estimated to work at the new school facility. PS/IS 338 would operate during normal school hours, from September to June.

Legend

Project Site

1,000 500 0 1,000 2,000 Feet

N

Source: USGS Topographic Map, quad o40073f8

Figure 1-1: Project Location

Proposed PS/IS 338
510 Coney Island Avenue, Brooklyn

New York City
School Construction Authority

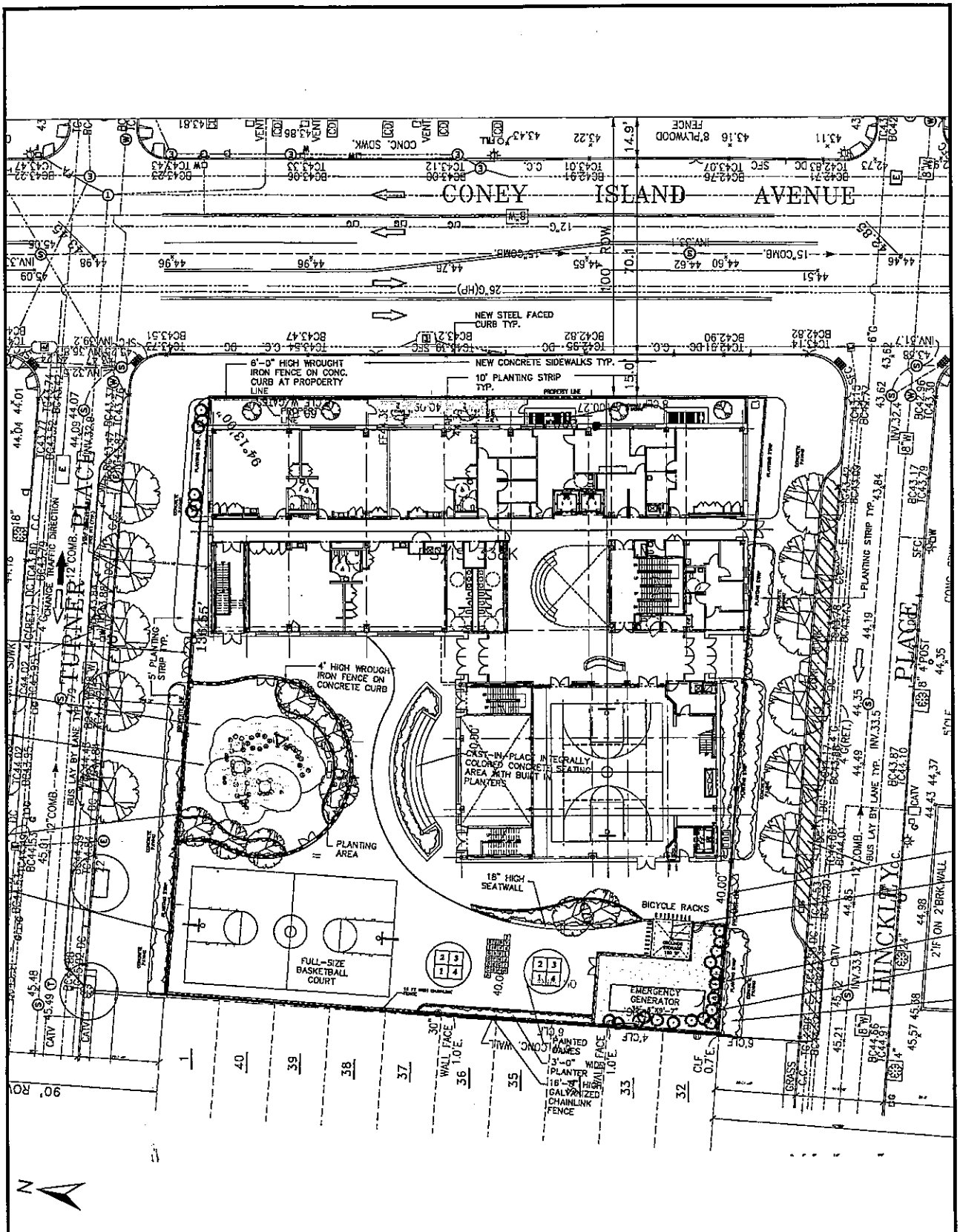


Figure 1-2: Site Plan

Proposed PS/IS 338
510 Coney Island Avenue, Brooklyn

Scale: NTS
Source: NYC SCA October 21, 2010

New York City
School Construction Authority

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.

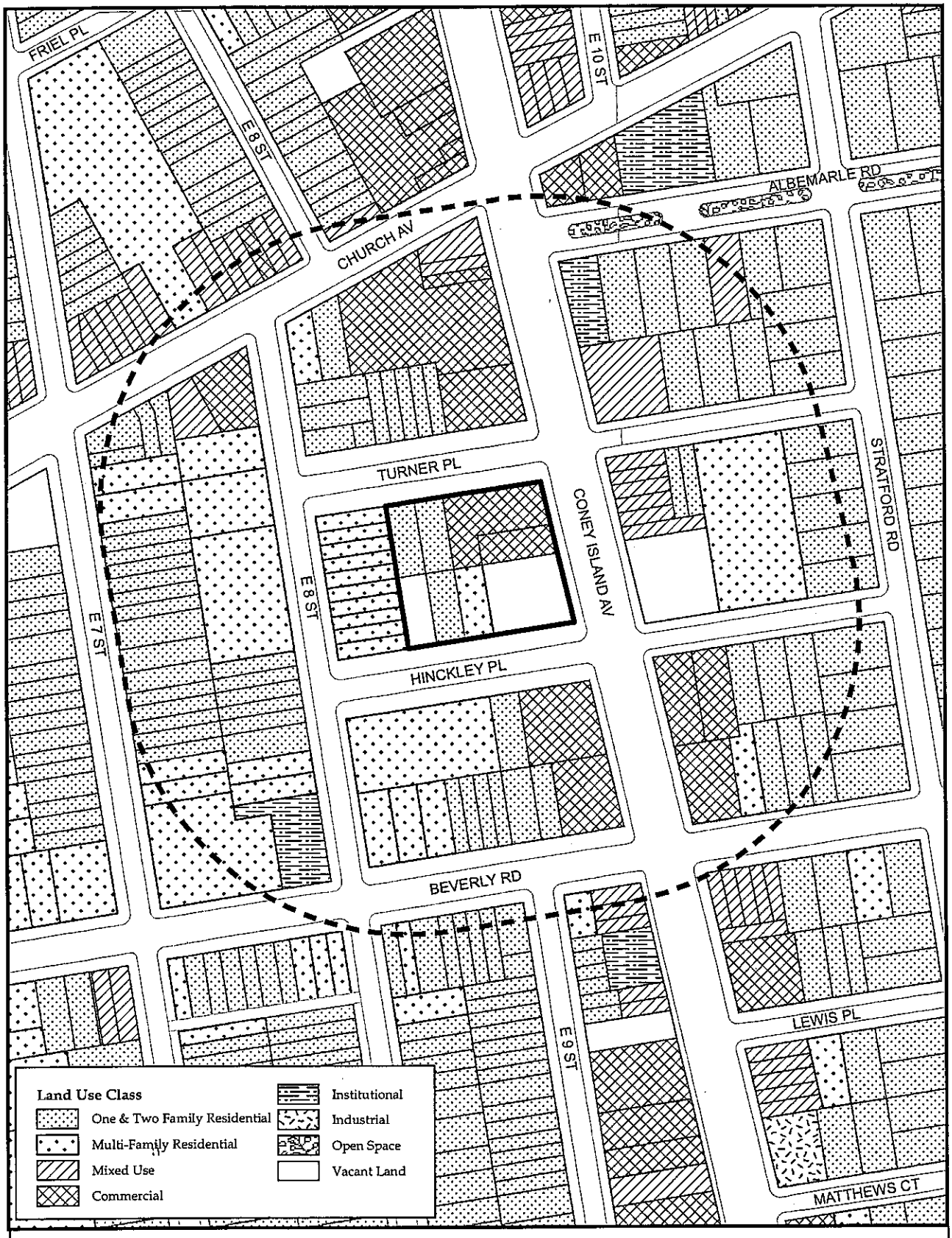
A. EXISTING CONDITIONS

LAND USE

The proposed new public school facility would be constructed on a site comprised of eight lots on Block 5342 (Lots 6, 8, 10, 17, 19, 26, 28, and 30) in the Prospect Park South section of Brooklyn. The proposed school site contains a two-story two-family semi-detached residential building (Lot 6), a two-story single-family semi-detached residential building (Lot 8), a used car sales lot (Lot 10), an automotive repair facility (Lot 17), a vacant lot (Lot 19), a vacant three-story multi-family residence (Lot 26), a vacant two-story two-family residence (Lot 28), and a vacant lot (Lot 30). The proposed project site is bounded by Turner Place to the north, Hinckley Place to the south, and Coney Island Avenue to the east; the western border of the project site adjoins the rear yards of three-story rowhouses that front East 8th Street.

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 2-1, the study area boundary is generally defined by Church Avenue to the north, Beverly Road to the south, Stratford Road to the east, and East 7th Street to the west.

The land uses within the study area are predominantly residential, including one and two-family detached buildings and rowhouses, generally two- to three-stories in height, and six-story apartment buildings. Commercial uses are primarily located along Coney Island Avenue; these uses consist of automobile repair businesses, a gas station, and a fast food restaurant. Institutional and mixed-use buildings are interspersed throughout the study area. Institutional uses include the Beverly Presbyterian Church and The Brooklyn Hospital Center - Women, Infants and Children (WIC) Center. A large vacant lot (currently under construction) is located directly opposite the project site on the east side of Coney Island Avenue at Hinckley Place.



Legend

Project Site

400' Study Area Radius

100 0 100 200 Feet

N

Source: NYC Department of City Planning MapPLUTO 2009;
STV Incorporated Field Observation 5/10

Figure 2-1: Land Use

Proposed PS/IS 338
510 Coney Island Avenue, Brooklyn

New York City
School Construction Authority

ZONING AND PUBLIC POLICY

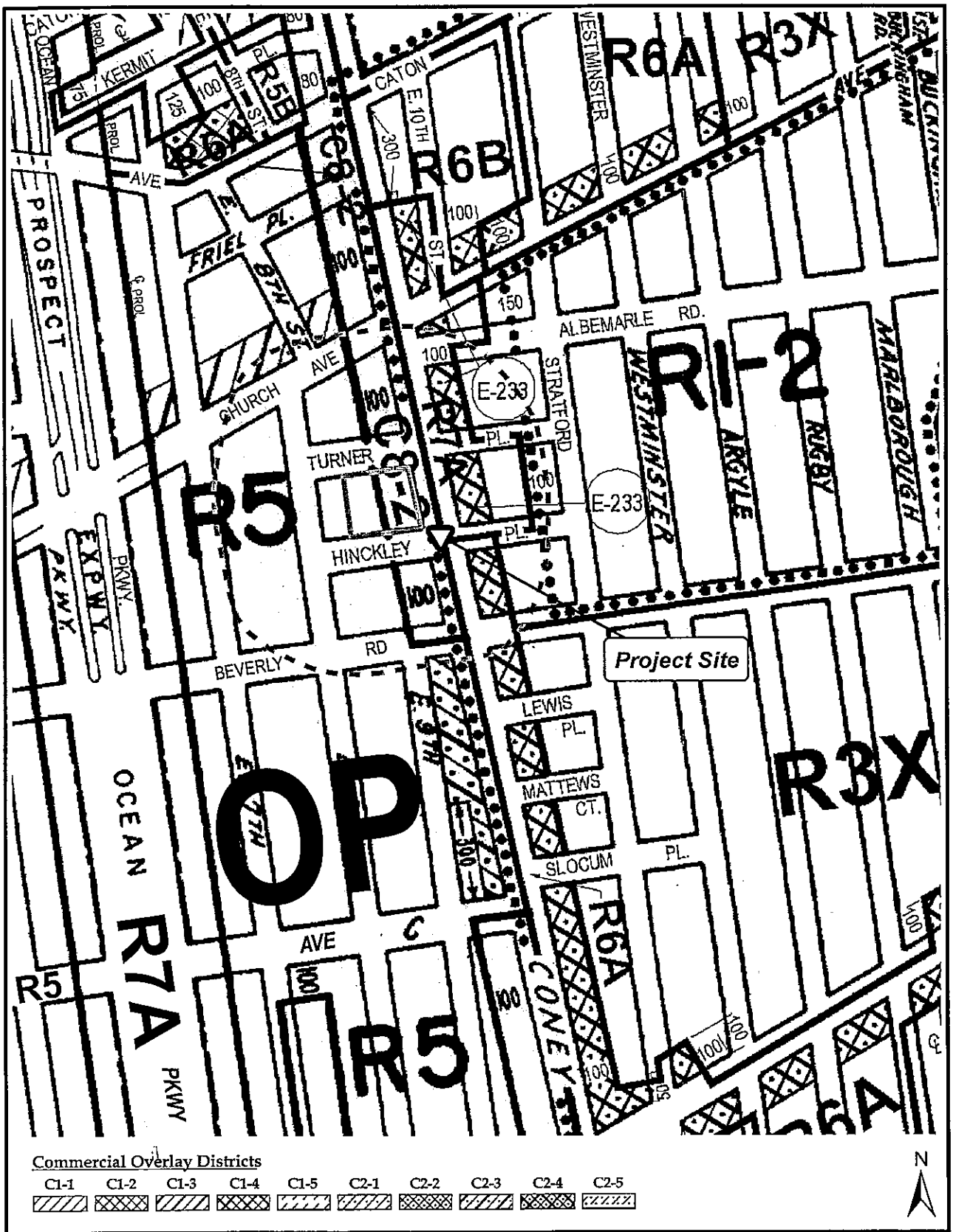
The proposed project site is located within two zoning districts and one special purpose district. As shown on Figure 2-2, the eastern portion of the proposed project site is located in a C8-2 commercial zoning district, in which schools are not permitted as-of-right, and the western portion of the proposed project site is located in an R5 residential zoning district, where schools are permitted as-of-right. The entire project site also lies within a designated Special Purpose District known as the Special Ocean Parkway District (OP), in which schools are permitted as-of-right; however, pursuant to § 113-02 of the *Zoning Resolution* (Article XI: Special Purpose Districts), the regulations of the underlying districts remain in force.

The eastern portion of the project site, zoned C8-2, includes Lots 10, 17, 19, and 26. The C8-2 commercial district allows for automotive and other heavy commercial services that often require large amounts of land. This district is mainly mapped 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.

The western portion of the project site, zoned R5, includes Lots 6, 8, 28, and 30. The R5 residential district typically produces three-story rowhouses and small apartment buildings. Per R5 regulations, the maximum permitted FAR for community facilities is 2.0, and buildings may cover up to 55 percent of an interior or corner lot. One front yard of no less than 10 feet and a rear yard depth of no less than 30 feet is required. Two side yards shall be provided each with a minimum required width of five feet and a total width of 13 feet. The maximum permitted height is 40 feet and the maximum street wall height is 30 feet. Parking requirements vary by type of community facility; for schools, no accessory off-street parking is required.

The purpose of the OP special district, encompassing a band of blocks east and west of Ocean Parkway between Prospect Park and Brighton Beach, is to enhance the character and quality of Ocean Parkway, which is a designated scenic landmark, and to encourage large single-family or two-family detached and semi-detached residences.

Within the study area, the C8-2 zoning district is mapped along the west side of Coney Island Avenue, the R5 zoning district is mapped over the western portion of the study area, and the OP special district covers the entire study area west of Coney Island Avenue. The Flatbush Rezoning, adopted by the New York City Council on July 29, 2009, provided new zoning for the area east of Coney Island Avenue to match the existing built character, which includes areas of detached homes, rowhouses, and apartment buildings. Residential zoning districts (R1-2, R6A, and R7A) are located within this portion of the study area (east of the project site and Coney Island Avenue). A C2-4 commercial overlay, which allows for neighborhood commercial uses within residential districts, is mapped along the east side of Coney Island Avenue within the R6A and R7A zoning districts.



Legend

- Project Site
- 400' Study Area Radius

Major Zoning Classifications

- R - Residential District
- C - Commercial District
- M - Manufacturing District
- OP - Special Ocean Parkway District

Scale: NTS
Source: New York City Zoning Map 22c

Figure 2-2: Zoning

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

Waterfront Revitalization Program. As the proposed project 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.

B. THE FUTURE WITHOUT THE PROJECT

LAND USE

If the proposed PS/IS 338 is not built, no changes to the project site are expected to occur by the 2014 Build Year. The existing eight lots would remain as four residential buildings (two are unoccupied), a used car sales lot, an automotive repair facility, and two vacant lots.

As part of the recently approved Flatbush Rezoning, there are two projected development sites within the study area (Sites 5 and 6). Although these projected development sites have an analysis year of 2019, it appears from recent field reconnaissance that Site 6 is currently in the process of redevelopment. Site 6 is east of and directly across the street from the project site located at 531 Coney Island Avenue (Block 5113, Lot 24) at the intersection of Hinckley Place and Coney Island Avenue. As described in the Flatbush Rezoning Environmental Assessment Statement (EAS), Site 6 could be developed with an eight-story, 58,742 sf building with 10,216 sf of commercial space on the ground floor and 49 dwelling units on the upper floors. The 26 required parking spaces could be accommodated on one underground level. The other projected development site, Site 5, is northeast of the project site located at 904 Albemarle Road (Block 5112, Lot 1) at the intersection of Albemarle Road and Coney Island Avenue. This site is currently developed as a one-story community facility (The Brooklyn Hospital Center - WIC Center). As described in the Flatbush Rezoning EAS, Site 5 could be developed in the future with an eight-story, 25,507 sf building with 4,436 sf of commercial space on the ground floor and 21 dwelling units on the upper floors. There would be no required parking spaces.

The Brooklyn Office of the New York City Department of City Planning (DCP) was contacted to identify other major projects planned for completion in the vicinity of the project site by the build year of the proposed school. No additional development projects or rezonings were identified by DCP.

ZONING AND PUBLIC POLICY

No changes to zoning or public policy are expected to occur by the 2014 build year; zoning and public policy currently in effect for the project site and study area will remain in effect in 2014.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

LAND USE

The proposed project involves the acquisition of eight lots and demolition of a two-story two-family semi-detached residential building, a two-story single-family semi-detached residential building, a vacant three-story multi-family residence, a vacant two-story two-family residence, and an automotive repair facility. After the site is cleared for construction, the proposed school building, which would be a five-story structure with a cellar, would be built on the site. The new school would contain approximately 107,162 gsf, with its main entrance on Hinckley Place. The project would also include a 19,030 sf play yard, with a 3,215 sf Early Childhood playground, on the northwestern portion of the project site. The new school facility would provide space for approximately 757 primary and intermediate school students.

The proposed school would be consistent with the well established general land use pattern of the study area, which comprises residential, commercial, institutional, and mixed uses. The project would replace underutilized automotive-related commercial uses and residential uses (two are currently vacant) with a school use. The proposed school would provide an appropriate transitional use between commercial uses on Coney Island Avenue and residential uses to the east and west. No significant adverse impacts to land use would result from the proposed PS/IS 338.

ZONING AND PUBLIC POLICY

The project site is divided by a district boundary line between a C8-2 commercial zoning district on the eastern portion of the project site and an R5 residential zoning district on the western portion of the project site. Within the C8-2 zoning district (which includes Lots 10, 17, 19, and 26), schools are not permitted as-of-right. Within the R5 zoning district (which includes Lots 6, 8, 28, and 30), schools are permitted as-of-right.

The entire project site lies within the OP special district, in which schools are permitted as-of-right; however, the regulations of the underlying districts remain in force. Pursuant to §113-11 of the *Zoning Resolution* (Article XI: Special Purpose Districts), all community facility developments and enlargements shall be subject to the applicable underlying district bulk regulations for residential buildings in residence districts. Within the OP special district, a new community facility development may be allowed to exceed the bulk regulations of §113-11 when located on a corner and a wide street (as is the project site) provided that the community facility building will comply with the bulk regulations for community facility buildings in residence districts, as described in §113-41 of the *Zoning Resolution* (Article XI: Special Purpose Districts).

According to the current design scheme, the proposed new building would be approximately 90,130 sf (excluding cellar area). The school site, comprised of Lots 6, 8, 10, 17, 19, 26, 28, and 30 on Block 5342, is approximately 44,783 sf. This would result in an FAR of approximately 2.01. Using the selected scheme, the maximum lot coverage of the proposed school facility would be 21,443 sf. The proposed school building would have a height of approximately 77 feet.

The proposed school facility would conform to the requirements of the R5 zoning district and the OP special district with respect to use, as schools are permitted as-of-right in both districts. However, as the proposed school is not a permitted use in the C8-2 zoning district, a zoning override would be required to allow the school (community facility) within the portion of the site in the C8-2 zoning district (Lots 10, 17, 19 and 26). In addition, zoning overrides for bulk would be required for non-compliance with bulk regulations within the portion of the site in the R5 zoning district (Lots 6, 8, 28, and 30) and the underlying bulk regulations in the OP special district for all lots. These zoning overrides for zoning non-conformities would be necessary from the Deputy Mayor for Education and Community Development. As the zoning overrides would pertain only to the project site, no significant adverse impact to zoning pattern and public policy would occur.

D. SUSTAINABILITY

Under 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 757-seat public school to address localized school overcrowding, 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.

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 square feet of commercial space. Under CEQR, if an action could affect 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 meet projected demand. Therefore, no detailed socioeconomic analysis is required.

A. EXISTING CONDITIONS

The proposed school site is currently comprised of both occupied and vacant residential buildings, a used car sales lot, an automotive repair facility, and vacant lots. The existing businesses on the project site, including the used car sales lot (Lot 10) and the automotive repair facility (Lot 17), are estimated to employ approximately eight to ten workers.

B. THE FUTURE WITHOUT THE PROJECT

If the proposed PS/IS 338 is not built, no changes to the project site are expected to occur by the 2014 Build Year. As part of the recently approved Flatbush Rezoning, there are two projected development sites (Sites 5 and 6) within the study area with a Build Year of 2019. Site 6 is located at 531 Coney Island Avenue (Block 5113, Lot 24) and is currently undergoing redevelopment. As described in the Flatbush Rezoning EAS, Site 6 could be developed with an eight-story, 58,742 sf building with 10,216 sf of commercial space on the ground floor and 49 dwelling units on the upper floors. The 26 required parking spaces could be accommodated on one underground level. The other projected development site is Site 5, located at 904 Albemarle Road (Block 5112, Lot 1). This site is currently developed as a one-story community facility (The Brooklyn Hospital Center - WIC Center). As described in the Flatbush Rezoning EAS, Site 5 could be developed in the future with an eight-story, 25,507 sf building with 4,436 sf of commercial space on the ground floor and 21 dwelling units on the upper floors. There would be no required parking spaces. It is estimated that these two sites could add approximately 14 employees to the study area. No other developments are anticipated for the study area by the 2014 build year, and socioeconomic conditions are generally expected to resemble existing conditions.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed school facility would result in some displacement of residents and businesses, as the proposed project site would be acquired by SCA and the existing buildings on the site demolished. However, there is a limited number of employees at the existing on-site businesses that would be displaced and, in addition, the existing businesses are not dependent upon their location at the project site and may be relocated to other sites. The proposed project would introduce approximately 757 primary and intermediate school students and a total of approximately 76 teachers, administrators, and support staff to the project site. Although the proposed project would be a change of land use, it would not introduce activities that are incompatible with surrounding existing uses. Additional jobs for teachers, administrators, and support staff would be created and this displacement is not significant considering the number of residents and workers affected. 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. This analysis, therefore, focuses on police and fire protection services, described below.

A. EXISTING CONDITIONS

Police Services. Police protection is provided by the City of New York Police Department (NYPD) 66th Police Precinct, which has jurisdiction over the project site. Its headquarters are located at 5822 16th Avenue, approximately 2.4 miles southwest 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 281 and Ladder Company 147, located approximately 0.5 miles south of the school site at 1210 Cortelyou Road; Engine Company 240, located approximately 0.7 miles north of the school site at 1307 Prospect Avenue; and Engine Company 250, located approximately 1.5 miles south of the school site at 126 Foster Avenue.

B. THE FUTURE WITHOUT THE PROJECT

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

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

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed action would create a new public school facility on a site currently comprised of both occupied and vacant residential buildings, a used car sales lot, an automotive repair facility, and vacant lots. The proposed PS/IS 338 would serve approximately 757 students in grades pre-kindergarten through eight from CSD No. 22.

Police Protection. No significant change in demand for police services is expected to occur due to the proposed project. A letter, dated June 23, 2010, was received from the NYPD indicating that the NYPD would be able to provide police protection to the proposed school site (see Appendix A).

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 Fire Department. A letter, dated July 1, 2010, from the FDNY states that the proposed project would not adversely impact the FDNY's ability to provide fire protection to its service area (see Appendix A).

The proposed project would not introduce new residents to the area, creating little new demand for community facilities and services. The proposed new school facility would provide additional seating capacity for CSD No. 22; however, the new facility would not introduce new school-aged population to the school district or change its service area. None of the CEQR criteria for detailed community facility analyses are met, and no significant adverse impacts to community facilities would occur as a result of the proposed project.

CHAPTER 5: OPEN SPACE AND RECREATIONAL FACILITIES

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

Neither the project site nor the 400-foot study area contains any publicly accessible open space; however, a portion of Flatbush Malls, a landscaped median centered on Albemarle Street, is located within the study area northeast of the project site. The closest publicly accessible open space to the proposed project site is Prospect Park, located to the north of and within a ½ mile of the project site. Prospect Park is approximately 585 acres and contains a forest, the 90-acre Long Meadow, the 60-acre Prospect Lake, Prospect Park Zoo, and the Prospect Park Parade Ground.

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. PROBABLE IMPACTS 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 19,030 sf play yard, including a 3,215 sf Early Childhood playground, which would be developed on the northwestern portion of the project site. The Early Childhood playground would be separate and enclosed by fencing and planting areas. The area of the play yard for older children would include planted seating areas, a full-size basketball court, bicycle racks, and children's games. Therefore, the proposed 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. Under CEQR, 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 proposed project site is currently occupied by residential and commercial structures ranging in height between one and three stories. As noted in the land use and open space analyses, there are no open space areas located within the study area. A historic district, Prospect Park South Historic District, comprises the eastern boundary of the study area and extends to within about 200 feet of the site at the nearest point. There are no historic buildings located in the vicinity of the project site or within the study area.

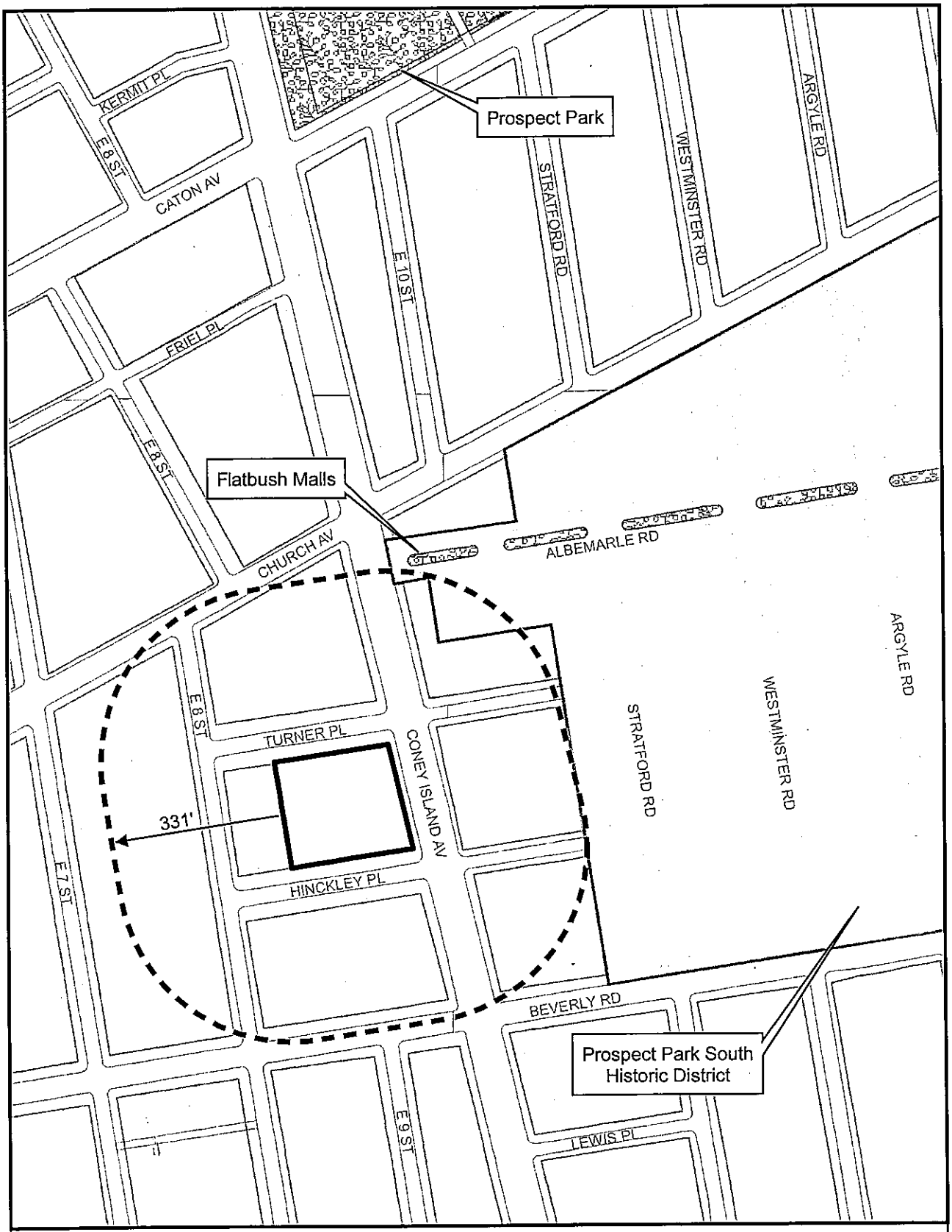
B. THE FUTURE WITHOUT THE PROJECT

If the new PS/IS 338 is not built, then it is expected that the shadows from the existing structures on the project site would remain the same and no changes would occur on the site.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would result in a five-story school building which would be over 50 feet in height. Therefore, a screening for shadow impacts was performed.

With an estimated height of approximately 77 feet, the proposed school building's maximum shadow would extend approximately 331 feet (see Figure 6-1). There are no buildings or open spaces that would fall in the shadow of the proposed PS/IS 338 that are considered historic or possess significant sunlight-sensitive features. Therefore, because the proposed school would not cast a shadow over any historic buildings or landscapes, significant adverse shadow impacts would not result.



Legend

Project Site

Maximum Potential Shadow Study Area Boundary

Source: STV Incorporated

Figure 6-1: Maximum Potential Shadow Study Area

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New York City School Construction Authority

CHAPTER 7: CULTURAL RESOURCES

This section considers the potential impact of the construction of the proposed PS/IS 338 on archaeological and historic resources on or near the project site. Please refer to Appendix B for a Preliminary Assessment/Disturbance Record study of the proposed project site.

A. EXISTING CONDITIONS

ARCHAEOLOGICAL RESOURCES

Precontact Sensitivity. From what is known of precontact period settlement patterns on Long Island (including Kings County), most habitation and processing sites are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water. Based on the combination of a general lack of documented precontact period sites in the general vicinity, the lack of fresh water in the vicinity, and the level of known disturbance to the property, the project site is considered to have a low potential for hosting precontact cultural remains. Therefore, further research and study concerning precontact archaeological resources is not recommended (see Appendix B).

Historical Sensitivity. Historic maps indicate that the project site was undeveloped until the late 1870s and/or 1880s. During the last decades of the nineteenth century, all of the dwellings on the project site fronted Coney Island Avenue, which had been supplied with piped city water by the 1880s and city sewers soon thereafter. The buildings fronting Turner Place and Hinckley Place during this period were ancillary buildings such as barns or sheds. It is unlikely that any of these structures would have relied on backyard shaft features such as wells or privies. Thus, historical archaeological sensitivity is low, and further research and study concerning historic period archaeological resources is not recommended (see Appendix B).

HISTORICAL RESOURCES

A portion of the Prospect Park South Historic District comprises the eastern boundary of the study area. The historic district is bounded by Church Avenue to the north, Beverly Road to the south, the BMT Brighton Line (B/Q) to the east, and between Stratford Road and Coney Island Avenue to the west. It was designated a historic district by the New York City Landmarks Preservation Commission (NYCLPC) on February 8, 1979. It extends to within about 200 feet of the site at the nearest point (see Figure 6-1). Only a few residences within the district are marginally visible to/from the site, across Coney Island Avenue, and there are no other historic buildings located in the vicinity of the project site or within the study area. The project site does not share direct visual connectivity with the landscaped public areas of the Prospect Park South Historic District.

B. THE FUTURE WITHOUT THE PROJECT

In the absence of the proposed construction of the proposed PS/IS 338, there would be no new construction on the project site and no excavation that could disturb any archaeological resources. No potential cultural resources would be affected.

No historic resources, either on the project site or nearby, 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 on or near the project site.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

No further research and study of archaeological resources is warranted, based on a low sensitivity for both precontact and historic 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 site would not result in significant adverse impacts to archaeological resources.

The project site is not located within a historic district and does not share direct visual connectivity with the landscaped public areas of the Prospect Park South Historic District. Only a few residences within the district are marginally visible to/from the site, across Coney Island Avenue, and their context would not be changed by this new development outside the designated historic district. Therefore, no impacts to historic resources would result from the construction of the proposed PS/IS 338.

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, streetscape elements, street hierarchy 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

PROJECT SITE

The site represents a transition between two distinct areas, in terms of building use and form: commercial corridor and residential neighborhood. The site contains automotive-related commercial uses on the eastern portion of the site, similar to neighboring uses along Coney Island Avenue, and residential uses on the western portion of the site, like the remainder of the site-block.

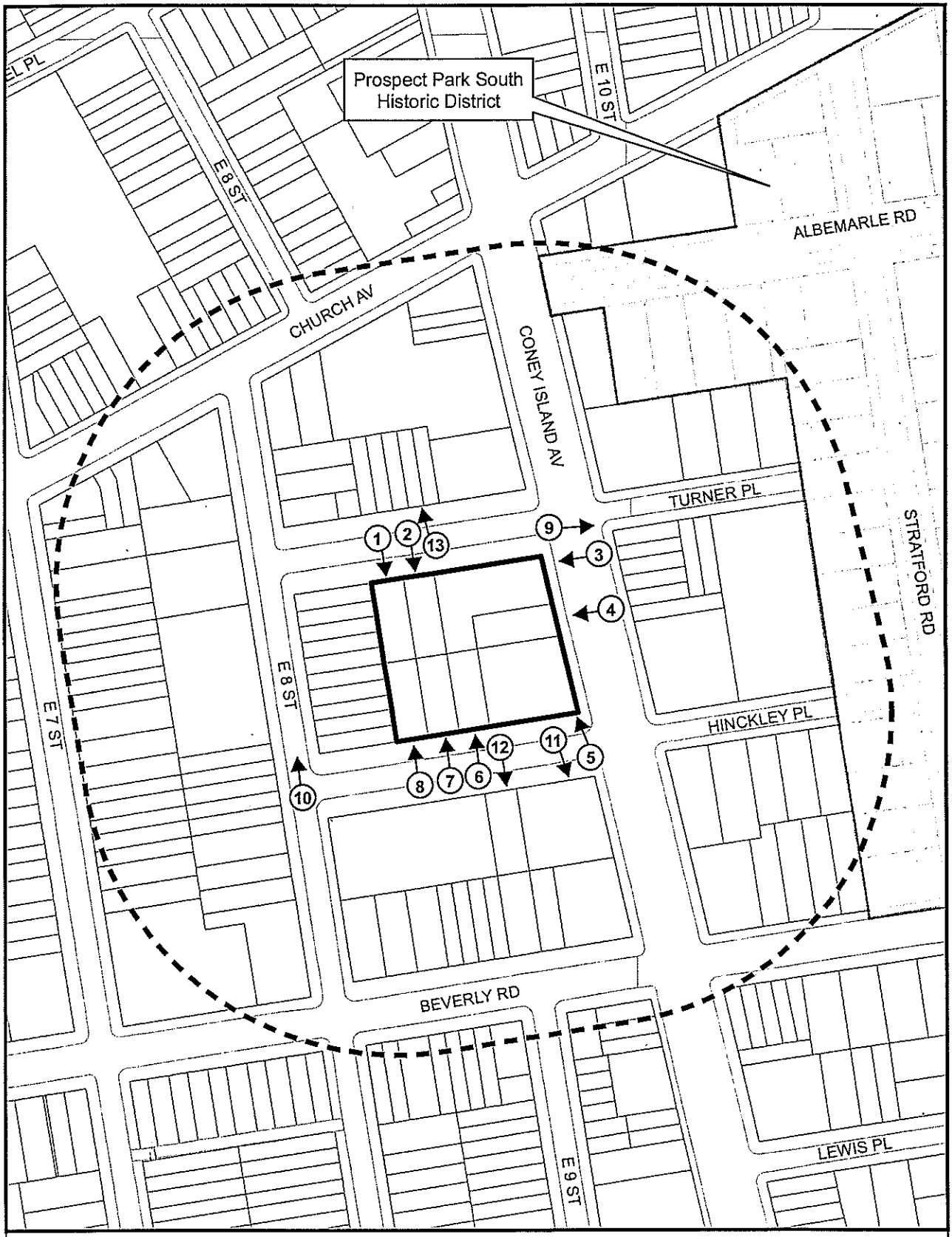
As described in Chapter 2, "Land Use, Zoning, and Public Policy," two two-story, semi-detached houses are located on the northwestern portion of the project site (see Figure 8-1, Photos 8-1 and 8-2). Both houses are occupied and in fair- to good condition. They are set back from the street and have front, side, and rear yards as well as detached garages in back. Street trees line both sides of Turner Place in front of the residences from mid-block west to East 8th Street.

The Vigal SouSou Auto Sales lot occupies the northeastern corner of the site, with frontage on Turner Place and Coney Island Avenue (see Photo 8-3). It is accessed from Turner Place and consists of an office trailer set to the rear (i.e., western boundary) of a paved lot. In similar use and form, a one-story building containing two businesses—Mohsan Auto Repair Center and Tri-State Auto Sales, Inc.—is located midblock on Coney Island Avenue just to the south (see Photo 8-4).

There are no structures on the vacant lot comprising the southeast corner of the site, though the extant foundation of a building that once occupied the lot is visible; about half of the lot is paved, with the unpaved portion overgrown with grasses and weeds (see Photo 8-5). There are two curb cuts for driveways onto Coney Island Avenue. The lot is enclosed with a gated chain link fence.

The remainder of the project site along Hinckley Place includes two vacant, detached single-family residences. One stands three stories tall and has boarded-up windows on the first and

second floors (see Photograph 8-6). It has a front yard, side yards, and a back yard. To its west, stands a vacant two-story house, with a side yard and large back yard (see Photograph 8-7). It appears to be in fair- to poor condition, its windows on the first and second floors boarded-up. Adjacent, to the west, is a vacant lot, overgrown with vegetation (see Photograph 8-8).



Legend

Project Site

400' Study Area Radius

1 → Photograph

100 0 100 200 Feet

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Source: STV Incorporated Field Observation 5/10

Figure 8-1: Photograph Key

Proposed PS/IS 338
510 Coney Island Avenue, Brooklyn

New York City
School Construction Authority

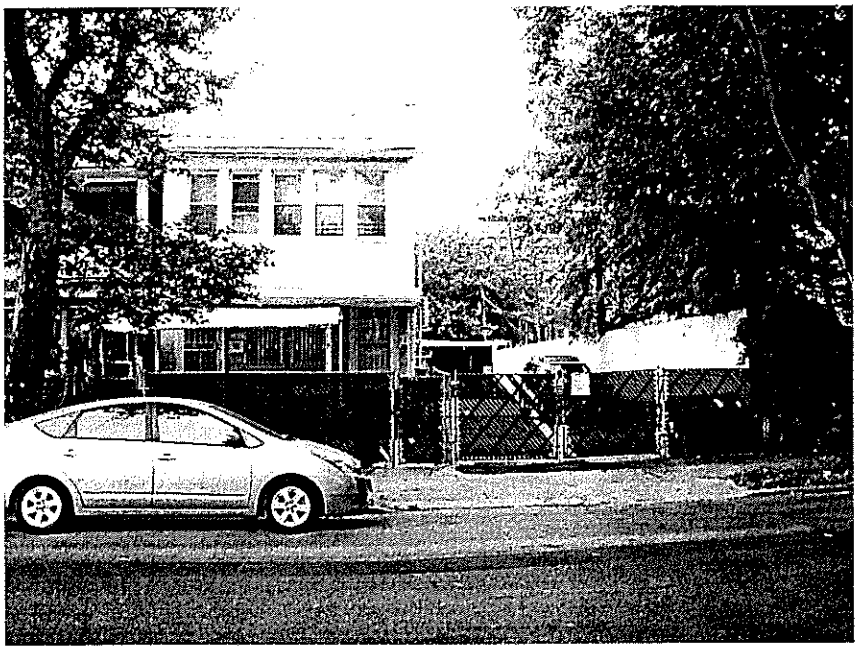


Photo 8-1: Occupied residence on northwestern corner of the site, view facing south across Turner Place.

Photo 8-2: Occupied residence on northwestern corner of the site, view facing south across Turner Place.

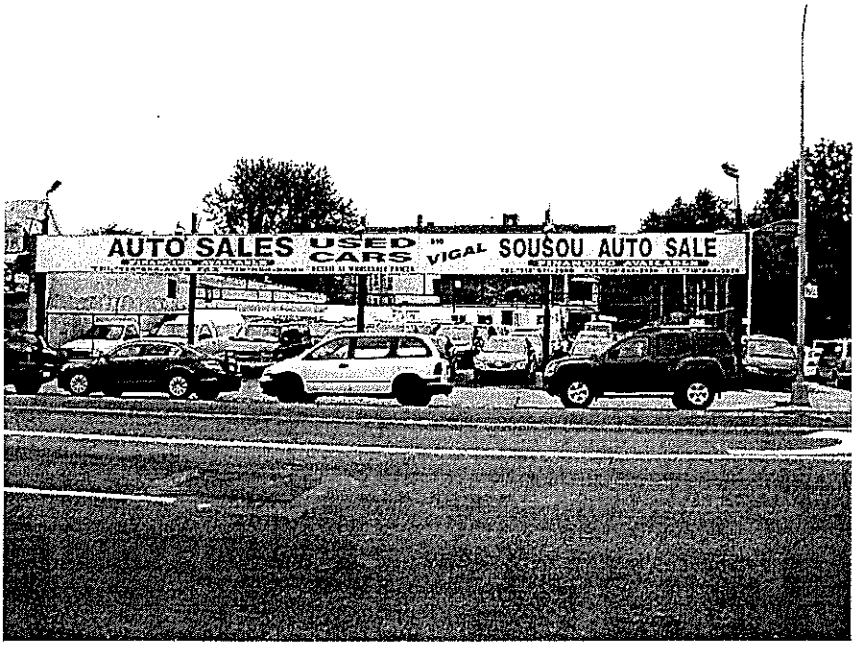


Photo 8-3: View of northeastern corner of project site, facing west across Coney Island Avenue.

Photo 8-4: Automotive repair establishment on east side of project site, view facing west across Coney Island Avenue.

Photo 8-5: Southeastern corner of project site, view facing north from Hinckley Place.

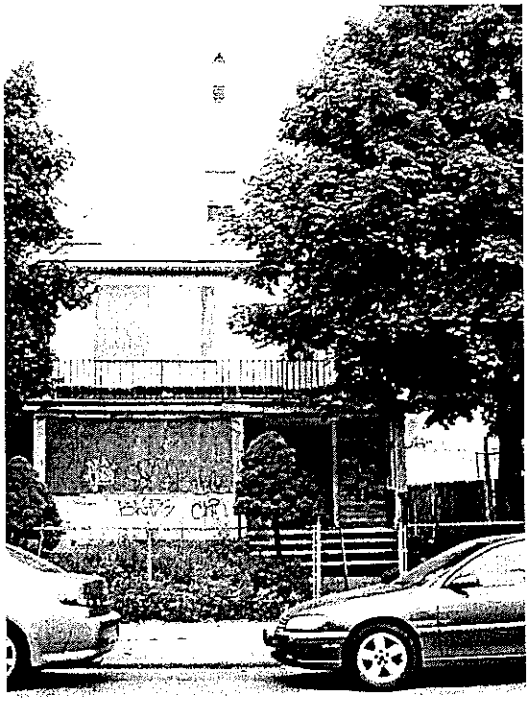


Photo 8-6: Vacant residence on southern edge of project site, view facing north across Hinckley Place.

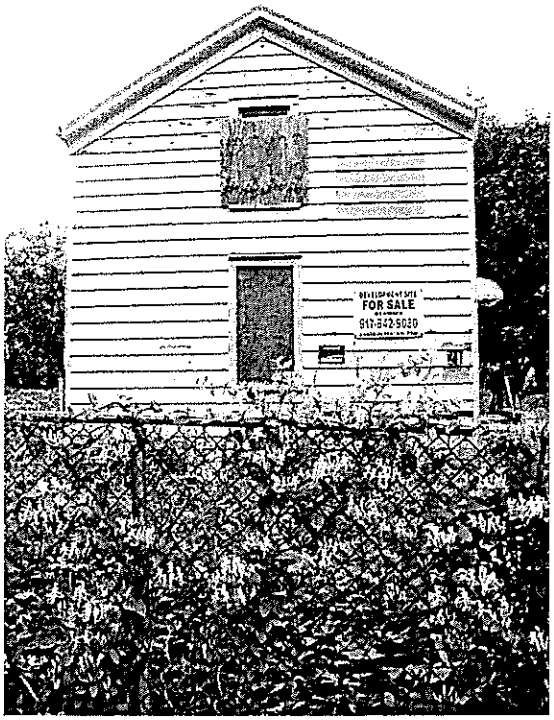


Photo 8-7: Vacant residence on southern side of project site, view facing north from Hinckley Place.

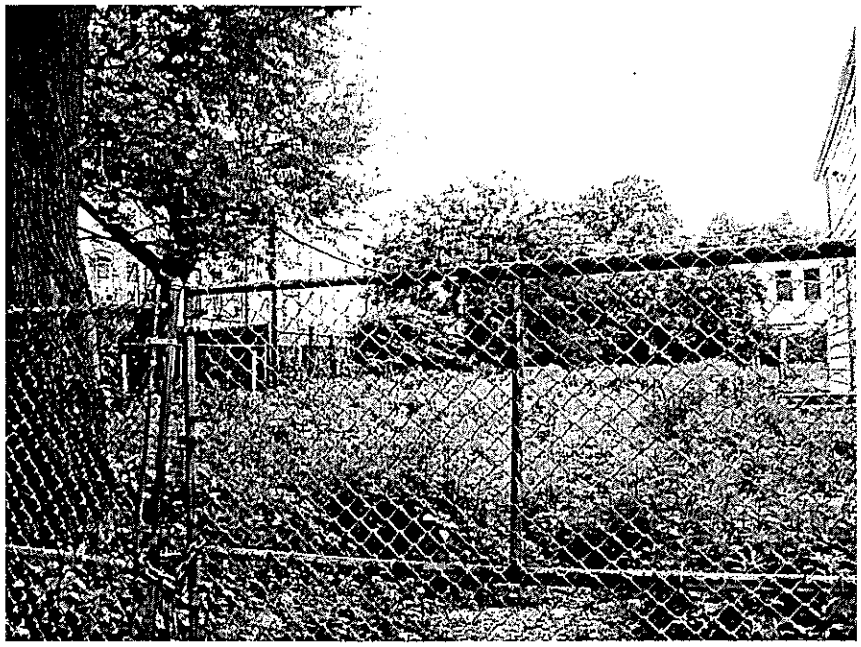


Photo 8-8: Vacant lot at southwest corner of project site, view facing north from Hinckley Place.

STUDY AREA

Building bulk, use and type. One- to six-story commercial uses comprise a low-density streetscape form along Coney Island Avenue around the project site. In terms of building bulk, use, and type, the Coney Island Avenue streetscape contrasts with the more intimate, tree-lined residential streets of the areas to the west and east.

The west side of Coney Island Avenue between Church Avenue and Beverly Road, including the site, generally comprises single-story uses oriented toward the automobile, such as a car wash, several automotive repair and equipment shops, an automotive sales dealer, a gas station, and a fast food restaurant with drive-through service, directly south of the site. The fast food restaurant is typical, with its signature building design and placement within its lot to provide for parking and drive-through service. Similarly, the gas station and other automotive service enterprises also provide for onsite parking and vehicular circulation.

Buildings along the east side of Coney Island Avenue in the study area stand one-, three- and six-stories tall, and the uses are more varied than on the west side. Three-story, mixed-use buildings directly east of the site provide retail on the ground floor and residential uses above (see Photograph 8-9). Larger buildings include The Brooklyn Hospital Center - WIC Center (to the northeast) and a six-story mixed use apartment building with ground floor retail. On the northeast corner of Coney Island Avenue and Hinckley Place, opposite the project site, is a large, vacant lot currently under construction.

Residential neighborhoods stretch west and east beyond the commercial uses lining Coney Island Avenue. Large, detached houses characterize the historic residential district to the east of Coney Island Avenue, mostly beyond the study area, while the neighborhood west of the site and including the site block is characterized by a mix of three-story rowhouses and six-story apartment buildings. Ten three-story rowhouses stand adjacent to the western boundary of the project site, facing onto East 8th Street (see Photograph 8-10). Elevator buildings located on East 8th Street, Hinckley Place, and Turner Place are six stories, with limited or no surrounding yards. A six-story brick apartment building stands on the south side of Hinckley Place, opposite the site, next to a three-story detached frame house (see Photographs 8-10 and 8-11). North of the site, three-story attached residences line Turner Place (see Photograph 8-12).

Building arrangement. The building arrangements along the west side of Coney Island Avenue, including the site, are low-coverage, with extensive lot area devoted to parking and automobile circulation. In contrast, the buildings along the east side of Coney Island Avenue are built up to the lot line.

Residences west of the project site are generally set back from the lot lines and have front and back yards. The rowhouses on the west end of the project site block have back yards abutting the project site; together, they establish well-defined streetwalls along East 8th Street. In contrast, single-family detached houses east of Coney Island Avenue are centered on lots two- to three-times the size of the rowhouse lots just west of the site.

Street hierarchy, block form, and street pattern. The study area includes two local commercial corridors, Coney Island Avenue and Church Avenue, which intersect one block northeast of the site. Both Coney Island Avenue and Church Avenue are wide two-way streets with two travel lanes in each direction. Other streets (Turner Place, Hinckley Place, and Beverly Road) are narrower local streets, serving the residential neighborhoods surrounding the site (see Figure 2-1).

Coney Island Avenue and Church Avenue run askew to one another and to the otherwise fairly regular grid established by local streets throughout the remainder of the study area. Turner Place and Hinckley Place, north and south of the site, respectively, parallel one another and run almost perpendicular to Coney Island Avenue. East 8th Street runs north-south west of the site, approximately parallel to Coney Island Avenue. Both Turner Place and Hinckley Place end west of the site at "T" intersections into East 8th Street, while East 8th Street reaches a similar "T" intersection at Church Avenue to the north.

Though varied in size and orientation, the blocks in the study area are nearly rectangular. The six blocks lining the east and west sides of Coney Island Avenue in the study area, including the site block, are shorter than surrounding blocks and oriented perpendicular to Coney Island Avenue. Surrounding blocks are longer and generally aligned with longer sides paralleling Coney Island Avenue.

The sizes of the lots in the study area vary, with large lots common to all blocks; these large lots typically host commercial uses (especially along Coney Island Avenue) and apartment buildings. The smallest lots in the study area generally host rowhouses, while lots double or triple the size host single family residences in the neighborhood east of Coney Island Avenue.

Streetscape elements. The most notable streetscape elements in the study area are the large, mature street trees along the residential streets. At the project site, two trees are located on the sidewalk at the northwestern portion of the site. Street trees are also found along the western halves of the site block, along Turner Place and Hinckley Place nearing East 8th Street, as well as along the entire segment of East 8th Street within the study area boundary.

Residential yards feature plantings and trees, though levels of maintenance vary throughout the study area. Commercial uses generally contribute little or no landscaping to the streetscape, an exception being the car wash located on the south side of Church Avenue east of East 8th Street, which has planters along the sidewalk. In the northeastern periphery of the study area is the landscaped median, "Flatbush Malls," within Albemarle Street, leading into the historic district. It is lushly landscaped with perennials, shrubs, and ornamental and shade trees.

Bishop-crook style street lights line the streets in the historic district, while street lighting fixtures throughout the rest of the study area are utilitarian, rather than decorative. There is no street furniture, within the study area, aside from mail boxes or bus stops.

Curbside parking is present and utilized throughout the study area; parking meters are present along the east side of Coney Island Avenue (between Turner Place and Albemarle Road) and along the north side of Church Avenue.

Commercial signage is the typical streetscape element of Coney Island Avenue in the vicinity of the project site. Many of the businesses along Coney Island Avenue have awnings with large typefaces or tall free standing signs oriented toward passing automobiles. Signage is generally present and in good condition at each business.

Photo 8-9: Mixed use buildings along east side of Coney Island Avenue, facing east from project site along Turner Place. Six-story apartment building at left in photo.

Photo 8-10: Six-story apartment building and three-story rowhouses west of site; view looking north along East 8th Street from Hinckley Place.

Photo 8-11: Six-story apartment building across Hinckley Place, facing south from the project site.

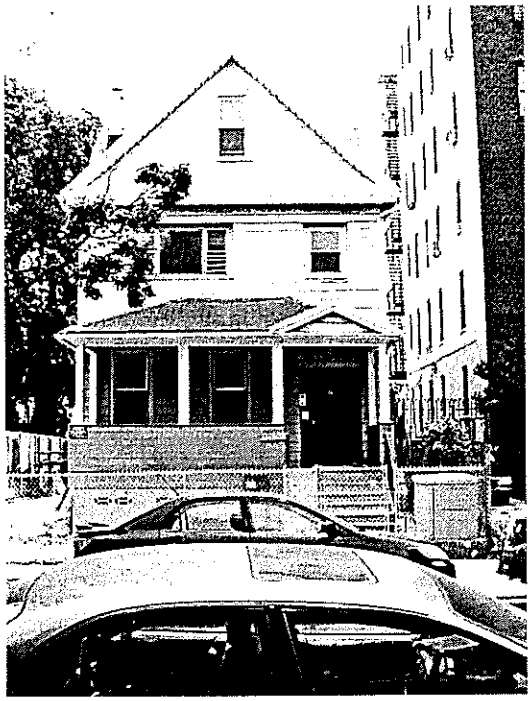


Photo 8-12: View of house on south side of Hinckley Place, facing south from the project site.

Photo 8-13: View of three-story attached houses on north side of Turner Place, facing north from the project site.

Visual Resources. A small portion of the Prospect Park South Historic District extends to within 400 feet of the site, along Albemarle Road, east of Coney Island Avenue. Houses within the district were built on 50-foot by 100-foot lots and set back 30 feet from the curb. Landscaped malls are centered along Albemarle Road and Buckingham Road (beyond the study area), featuring perennials, shrubs, and ornamental and shade trees.

As noted previously, the Albemarle Road, Turner Place, and Stratford Road streetscapes of the district are marginally visible to/from the sidewalks surrounding the project site, looking across Coney Island Avenue. However, the Albemarle Malls landscaping does not share visibility with the site. Only a few residences within the district are marginally visible to/from the site, across Coney Island Avenue.

B. THE FUTURE WITHOUT THE PROJECT

If the proposed PS/IS 338 is not built, no changes to the project site are expected to occur by the 2014 Build Year. As part of the recently approved Flatbush Rezoning, there are two projected development sites (Sites 5 and 6) within the study area with a Build Year of 2019. Site 6 is located at 531 Coney Island Avenue (Block 5113, Lot 24) and is currently undergoing redevelopment. As described in the Flatbush Rezoning EAS, Site 6 could be developed with an eight-story, 58,742 sf building with 10,216 sf of commercial space on the ground floor and 49 dwelling units on the upper floors. The 26 required parking spaces could be accommodated on one underground level. The other projected development site is Site 5, located at 904 Albemarle Road (Block 5112, Lot 1). This site is currently developed as a one-story community facility

(The Brooklyn Hospital Center - WIC Center). As described in the Flatbush Rezoning EAS, Site 5 could be developed in the future with an eight-story, 25,507 sf building with 4,436 sf of commercial space on the ground floor and 21 dwelling units on the upper floors. There would be no required parking spaces. No other developments are anticipated for the study area by the 2014 build year, and urban design and general visual quality are generally expected to resemble existing conditions. The school site, itself, would remain unoccupied, and future conditions without the project would generally resemble existing conditions.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Building bulk, use and type. The proposed PS/IS 338 would not fully comply with zoning regulations with respect to use and bulk. It would introduce a new type of use to the area (school), but one in keeping with the institutional presence on Coney Island Avenue. The massing of the structure would be divided between a larger five-story structure on Coney Island Avenue, extending the full width of the block, and an attached four-story structure behind it, along Hinckley Place, which would containing the gymnasium within a smaller built volume. The bulk of the school would resemble that of commercial buildings found along Coney Island Avenue apartment buildings near the site.

Building arrangement. The proposed school would be developed at the block end, nearing the lot line at Coney Island Avenue and parts of Turner Place and Hinckley Place. Its placement would resemble other buildings along Coney Island Avenue, including commercial, residential, and institutional buildings. It would be afforded visual prominence on its Coney Island Avenue face, though its main entrance would be on Hinckley Place. The school building would be separated from other rowhouses on the western end of the site block by the school yard, including a basketball court and playground area.

Block form and street pattern. The proposed PS/IS 338 would not alter the arrangement or configuration of blocks, nor would it alter the surrounding streets from the current pattern and prevailing form.

Streetscape elements. New street trees would be planted long the Turner Place and Hinckley Place sidewalks, while additional planting strips would line the edges of the built structure, separating it from the sidewalks. Additional school yard plantings would include areas incorporating seating and within the enclosed garden-like playground area on the northern edge of the site. The proposed PS/IS 338 would be enclosed with fencing designed to combine wrought iron and brick piers along the sidewalks of Coney Island Avenue, Turner Place, and Hinckley Place. Galvanized chainlink fence would be utilized at the western edge of the site, separating the school grounds from the abutting rear yards of East 8th Street rowhouses.

Street hierarchy. The proposed project would not alter the street hierarchy of the study area, nor would it affect the street hierarchy of the broader area.

Visual Resources. No visual resources, such as parks or historic structures exist on the site, and the historic district and its landscaped medians east of Coney Island Avenue do not share visual connectivity with the school site. Therefore, the proposed project would not result in visual resources impacts.

As a result of the proposed PS/IS 338, the project site would become more densely developed than it is currently. The arrangement and bulk of the school would resemble the commercial and mixed-use buildings lining Coney Island Avenue in the study area as well as apartment buildings common to the residential neighborhood to the west. Thus, the form of the building and the ample landscaping would coherently tie the site into the residential fabric to the west while attractively contributing to the Coney Island Avenue streetscape. Overall, the proposed PS/IS 338 would contribute positively to the urban design of the area, enhancing the pedestrian experience in the vicinity of the site. Therefore, no significant adverse impacts related to urban design would result.

CHAPTER 9: 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

The project site is situated along Coney Island Avenue, a busy and wide commercial corridor separating a low-density residential neighborhood to the east from a medium-density residential neighborhood to the west. Coney Island Avenue, which runs north-south through the study area, intersects with a similar commercial corridor, Church Avenue, approximately one block north of the site.

The project site currently contains occupied and unoccupied properties, both commercial and residential. Some lots contained within the site, as well as some structures, are in fair- to poor condition, with areas being overgrown by grass and weeds.

Coney Island Avenue effects a utilitarian atmosphere. It has some neighborhood retail uses, but because many of the commercial uses on Coney Island Avenue are oriented to the automobile, it lacks pedestrian activity characteristic of Church Avenue to the north, where the commercial uses are generally neighborhood retail.

The automobile-oriented uses on the site are not unusual for Coney Island Avenue, either in use or form. These automotive sales lots, however, filled with parked cars do not contribute to an attractive streetscape, as noted in the previous chapter, "Urban Design and Visual Resources." Moreover, the vacant lots and vacant residential structures on the site detract from the more intimate residential streets west of Coney Island Avenue.

The side streets in the residential neighborhood west of Coney Island Avenue have a consistent visual character due to the presence of street trees. Building heights range from two to three stories for attached and detached homes and up to six stories for the apartment buildings that are interspersed throughout the study area. Apart from the vacant houses on the site, the homes in the neighborhood are well maintained, typically with front yard lawns or plantings, as well as mature street trees, many of which are approximately 30 or 40 feet tall, further enhancing the residential character of the streetscape.

B. THE FUTURE WITHOUT THE PROJECT

If the proposed PS/IS 338 were not built, no changes to the project site are expected to occur by the 2014 build year. Construction currently underway across Coney Island Avenue to the east of the site would be complete; it would not be expected to change the visual character of the streetscape substantially, nor would it be expected to introduce substantial new pedestrian activity to the area. Therefore, the character of the site, its adjacent streetscapes, and surrounding neighborhoods would be expected to resemble existing conditions. Regarding residential neighborhood character, in particular, the site would continue to detract from the residential Turner Place and Hinckley Place streetscapes.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The construction of the proposed PS/IS 338 would be an appropriate land use, and its design would contribute to the visual quality of the area. Its massing would be consistent with both the commercial uses on Coney Island Avenue, and also the apartment buildings common to the area. The new landscaping and site design would contribute positively to both the commercial and the residential streetscapes, effecting an attractive transition between the Coney Island Avenue commercial corridor and the less trafficked, tree-lined streets of the residential neighborhood to the west.

Furthermore, technical analyses have concluded that with mitigation in place, the proposed school at this location would not result in significant adverse impacts related to traffic, air or noise conditions, although there would be significant adverse impacts to parking capacity, which would alter the character of the neighborhood.

CHAPTER 10: 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. As the project site is located in an unprinted panel area, a FEMA map was not available for the project site. No significant natural resources exist within the disturbed project site, or within the surrounding area.

B. THE FUTURE WITHOUT THE PROJECT

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

C. PROBABLE IMPACTS 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 located within a well-developed residential and commercial 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 June 16, 2010, was received from the New York State Department of Environmental Conservation (NYSDEC) Division of Fish, Wildlife and Marine Resources, stating that the project site has no known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of the project site (see Appendix A).

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 11: HAZARDOUS MATERIALS

CEQR assessment of hazardous materials is concerned with determining whether the proposed project could lead to increased exposure of people or the environment to hazardous materials and whether the increased exposure would result in significant public health impacts or environmental damage. The results of the hazardous materials investigation and related analyses conducted for the site, and the assessment of potential for on-site presence, is provided in this section, and where applicable, recommended remedial actions are described.

This section addresses environmental conditions at the location of the proposed public school located at 510-524 Coney Island Avenue (Lots 10,17 and 19), 13-33 Hinckley Place (Lots 26, 28 and 30), and 14-18 Turner Place (Lots 6 and 8), hereafter referred to as the proposed project site. Langan Engineering and Environmental Services, P.C. (Langan) completed a Phase I Environmental Site Assessment (ESA) for the lots at the 510-524 Coney Island Avenue and 13-33 Hinckley Place portions of the proposed project site in November 2009. A second Phase I ESA was prepared for the 14-18 Turner Place portion of the site in January 2010. Both Phase I ESAs were prepared on behalf of SCA. The main objective of the Phase I ESAs was to identify the presence or likely presence, use, or release of hazardous substances or petroleum products, which are defined in American Society of Testing and Materials (ASTM) Standard Practice E 1527-05 as recognized environmental conditions (RECs). In addition, other environmental issues or conditions such as radon, asbestos-containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB) containing equipment or materials were evaluated. Both Phase I ESAs included a site inspection, review of the existing data on geology and hydrology of the area, and review of historical maps, local agency records, and other documents to assess past and current uses of the proposed project site and adjacent areas.

Several RECs were identified with current and historic activities associated with the proposed project site and surrounding areas. The identified on-site RECs included, but were not limited to, an active vehicle repair facility with an abandoned waste oil underground storage tank (UST) at 520 Coney Island Avenue, a carpet cleaning facility followed by a former gasoline filling station and automotive repair facility with historic petroleum spills at 524 Coney Island Avenue, a used car lot at 510 Coney Island Avenue, and potential soil impacts associated with a fire in 2007 and an abandoned fuel oil tank at 33 Hinckley Place. Several off-site RECs were also identified, including current and historical use of adjoining and surrounding properties as filling stations, vehicle repair facilities, manufacturing facilities, dry cleaners; historical spills, petroleum storage, and hazardous waste disposal associated with adjoining and surrounding properties. In addition, environmental concerns identified at the proposed project site included potential elevated radon concentrations, suspect LBP on interior and exterior painted surfaces, and suspect ACM and PCB-containing building materials. Finally, suspect buried structures were identified as a REC and an environmental concern due to the potential presence of buried construction debris, and suspect LBP, ACM, and PCB-containing material. Langan subsequently completed a Phase II Environmental Site Investigation (ESI) in April 2010 to assess the RECs identified in both Phase I ESAs.

A. EXISTING CONDITIONS

The proposed project site is located at 510-524 Coney Island Avenue, 13-33 Hinckley Place, and 14-18 Turner Place (Block 5342, Lots 6, 8, 10, 17, 19, 26, 28 & 30) in Brooklyn, New York and occupies a 44,783-square-foot rectangular parcel. The site contains a used car sales lot (Lot 10), a vehicle repair facility (Lot 17), vacant properties (Lots 19 & 30), and four residential properties (Lots 6, 8, 26 & 28). A portable office trailer is located at the used car facility on Lot 10 and a one-story structure with two garage bays is located on Lot 17. Since 1893, site improvements have included residential dwellings, stores, stables, multiple vehicle repair facilities (Lots 17 & 19), and a gasoline filling station (Lot 19). An auto repair facility was located on Lot 19 until 2007 when the current owner cleared the lot for development. Lot 30 contained multiple private garages until the late 1970s.

A Phase II was conducted to determine if the RECs identified in the Phase I ESA have affected the proposed project site's suitability for construction of a public school facility. Phase II ESI field activities included three (3) geophysical surveys, three (3) asbestos floor core and asphalt surveys, 10 exploratory test pits, and the completion of 30 soil borings, 16 temporary monitoring wells and 17 soil vapor sampling points. A total of 30 grab soil samples, seven (7) composite soil samples, 16 groundwater samples, 17 soil vapor samples, five (5) sediment samples, two (2) indoor air radon samples, and two (2) ambient air samples were collected for laboratory analysis.

Based on the Phase II ESI, the proposed project site is underlain by historic urban fill material containing minor amounts of clay, brick, concrete, and miscellaneous debris. The thickness of historic fill ranged from five (5) feet across much of the site to approximately 20 feet below grade surface (bgs) in the southeastern portion of the proposed project site (Lot 19). Concrete blocks, bricks, piping, metal fragments, asphalt fragments, and wiring were encountered in the upper seven (7) feet of fill in the Lot 19 portion of the proposed project site. Native material underlies fill and consists of fine to coarse-grained sand with silt and fine to coarse-grained gravel to the maximum boring depth (50 feet bgs). Groundwater was encountered at depths ranging from approximately 38 feet to 42 feet bgs in the temporary monitoring wells with an anticipated flow direction towards the east. The regional groundwater flow is assumed to be to the east with a change in direction down-gradient of the site to the southeast towards Jamaica Bay, which is located approximately five (5) miles southeast of the site.

The geophysical surveys identified one apparent abandoned fuel oil UST on Lot 26 and confirmed the presence of an inactive waste oil UST on Lot 17. Based on the historical presence of a filling station and vehicle repair facilities, five (5) suspect USTs and associated ancillary piping are assumed to be located on the Lot 19 portion of the proposed project site.

Field indications of contamination were not observed during the Phase II ESI. All soil vapor, soil, sediment, and groundwater samples were field screened for organic vapors with a photoionization detector (PID). No PID readings were reported above 1 part per million (ppm) at the completed test pits, soil borings, and temporary monitoring wells. A slightly elevated PID reading of 20 ppm was measured in a sediment sample collected from an abandoned hydraulic lift access trench on Lot 17.

Thirty (30) grab soil samples were analyzed for Target Compound List (TCL) VOCs and TCL semi-volatile organic compounds (SVOCs), and 27 grab soil samples were analyzed for PCBs and Resource Conservation and Recovery Act (RCRA) metals. Four (4) soil samples were analyzed for lead via the Toxicity Characteristic Leaching Procedure (TCLP). Seven (7) composite waste characterization samples were analyzed for total petroleum hydrocarbons (TPH) diesel-range organics (DRO), TPH gasoline-range organics (GRO), pesticides, hexavalent chromium, and total cyanide.

With the exception of acetone at one location, all of the VOC analytical results for soil were below the New York State Department of Environmental Conservation (NYSDEC) Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs). Acetone was detected in the historic fill material at test pit (TP10) on the southeastern portion of the site marginally above the corresponding Unrestricted Use SCO.

No SVOCs were detected above the corresponding Unrestricted Use SCOs in 27 of the 30 analyzed soil samples. Selected SVOCs analytical results in soil were above the corresponding NYSDEC Unrestricted Use SCOs in three (3) of the 30 analyzed samples. The SVOCs detected above the corresponding NYSDEC Unrestricted Use SCOs in one or more locations include benzo*(a)*anthracene, benzo*(a)*pyrene, benzo*(b)*fluoranthene, benzo*(k)*fluoranthene, chrysene, dibenzo*(a,h)*anthracene, and indeno*(1,2,3-cd)*pyrene. These SVOCs are attributed to historic fill at the proposed project site. In addition, total PCBs were not detected above the corresponding Part 375 Unrestricted Use SCO in 26 of the 27 analyzed soil sample locations. The total PCB concentration within fill material at one location in the Lot 19 portion of the proposed project site exceeded the corresponding Part 375 Unrestricted Use SCO. No TCL pesticides, TPH GRO or TPH DRO were detected at a level indicative of environmental concern during the Phase II ESI.

Only the RCRA metals lead and mercury were detected in the analyzed soil samples at concentrations above the corresponding Unrestricted Use SCOs. Lead and/or mercury were detected in ten (10) of the soil sampling locations above the Unrestricted Use SCOs. Neither lead nor mercury was detected in soil at a concentration indicative of a characteristic hazardous waste. The presence of lead and mercury above the corresponding Unrestricted Use SCOs at selected locations is attributed to historic fill material at the proposed project site.

The three (3) sub-slab soil vapor samples, 14 sub-surface soil vapor samples, and two (2) ambient air samples were analyzed for VOCs via United States Environmental Protection Agency (USEPA) Method TO-15. A review of the soil vapor sample analytical results indicates that eight (8) of the 26 analyzed VOCs were detected in sub-slab and sub-surface soil vapor samples above the anticipated background conditions. These VOCs included 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, ethylbenzene, *m,p*-xylenes, *o*-xylene, tetrachloroethene (PCE), and toluene. The detected VOC in soil vapor and sub-slab soil vapor were within an order of magnitude of the anticipated background concentrations except for PCE detected in sample SV-5 within the active auto repair facility (Lot 17). PCE was detected in sub-slab soil vapor sample (SV-5) at a concentration of 495.03 micrograms per cubic meter ($\mu g/m^3$), which exceeds the corresponding New York State Department of Health Air Guideline Value (AGV) of 100 $\mu g/m^3$. The presence of PCE in soil vapor at a concentration above the State

AGV indicates that engineering controls are recommend to prevent potential soil vapor intrusion.

Ground water samples were collected and analyzed for TCL VOCs, PCBs, and RCRA metals (filtered) for the 16 temporary monitoring wells. Analyses for TCL SVOCs were also conducted for 14 of the temporary monitoring wells. Groundwater sample analysis revealed the presence of the VOC, 1,2-dichloroethane, in groundwater at the up-gradient perimeter of the site (Lot 30) above the corresponding State Groundwater Quality Standard. The VOC 1,2-dichloroethane was not detected in the analyzed soil and soil vapor samples and it is attributable to an off-site source. PCBs were not detected in any of the groundwater samples. In addition, no analyzed SVOCs or metals were detected at a concentration of potential environmental concerns in the any groundwater sampling locations.

Sediments in the three suspect dry wells, a pit associated with a former hydraulic lift, and another pit within the active auto repair facility (Lot 17) were analyzed for RCRA metals, TCL PCBs, SVOCs and VOCs. The analyzed sediments exhibit concentrations of metals, PCBs, SVOCs, and VOCs, above the corresponding NYSDEC Unrestricted Use SCOs. The detected concentrations of these parameters are not indicative of a characteristic hazardous waste. The presence of these parameters in sediment is attributed to auto maintenance activities at the active auto repair shop on the Lot 17 portion of the proposed project site.

Indoor air within the vacant residential structures and two ambient air samples at the proposed project site were analyzed for radon and VOCs, respectively as part of the Phase II ESI. The recorded radon levels were below the USEPA action level. A review of the ambient air sample analytical results indicates that several VOCs were detected in the ambient air above the anticipated background conditions adjacent to the active auto repair facility on the Lot 17 portion of the site. These VOCs included PCE and the following petroleum-related VOCs: 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, ethylbenzene, naphthalene, *m,p*-xylenes and *o*-xylene. The detected VOCs are not representative of ambient air anticipated after completion of the proposed project. The presence of the above listed VOCs in ambient air is attributed to the active vehicle repair facility (i.e., vehicle exhaust and chemical storage and usage) which is scheduled for demolition as part of the proposed project.

B. THE FUTURE WITHOUT THE PROJECT

This analysis assumes that without the proposed project, the subject property would remain the same and would not be redeveloped as a New York City school.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would not result in impacts from contaminated media and building materials. All soil excavated during building construction would be properly managed in accordance with all applicable local, State and Federal regulations. All known and suspected USTs, dry wells, relict structures associated with the underground hydraulic lifts along with any associated petroleum-impacted soil, would be removed and transported to an appropriately permitted off-site disposal facility. As a preventative measure, a sub-slab vapor barrier and sub-slab depressurization system (SSDS) would also be incorporated into the

proposed school building. Suspect buried structures and debris in the Lot 19 portion of the proposed project site would be evaluated for potential ACM, LBP, and PCBs. Any suspect ACM, LBP, and PCB-containing materials affected by the proposed development of the site would be identified and properly managed during construction activities. For areas of the site where exposed soil may exist after building construction (i.e., landscaped areas), a twenty-four (24) inch thick layer of environmentally clean fill would be placed over the soil. In addition, to minimize the potential for exposure by construction workers and the surrounding public, standard industry practices, including appropriate health and safety measures, would be utilized.

CHAPTER 12: 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. Survey maps obtained from the New York City Department of Environmental Protection (NYCDEP) indicate that 8-inch water mains run around the project site along Turner Place, Hinckley Place, Coney Island Avenue, and East 8th Street.

These mains currently 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.

Storm/Sanitary Sewers. The site is located within the Owls Head Water Pollution Control Plant (WPCP) drainage area, which serves portions of Brooklyn. The Owls Head WPCP is permitted to treat 120 million gallons per day (mgd). Effluent from the plant is regulated by the New York State Department of Environmental Conservation (NYSDEC) under the State Pollution Discharge Elimination System (SPDES).

Sanitary wastewaters generated at the project site are currently discharged to the New York City sewer system, which carries wastewaters to the Owls Head WPCP. According to the most recently available NYCDEP maps, a system of combined sanitary and storm sewer mains service the project site as follows:

- One 12-inch combined sewer runs along Turner Place;
- One 12-inch combined sewer runs along Hinckley Place; and
- One 15-inch combined sewer runs along Coney Island Avenue.

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. PROBABLE IMPACTS 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 757 seats and 76 faculty and staff, and thus, daily water usage would be approximately 7,570 gpd for students and 760 gpd for staff, for a total of 8,330 gpd. The proposed school building would contain approximately 107,162 gsf, and thus, would consume an additional 18,218 gpd for air conditioning, for a total of 26,548 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 8,330 gpd, and would be minimal in comparison to the treatment plant's permitted capacity; no adverse impacts are expected.

CHAPTER 13: SOLID WASTE AND SANITATION

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 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.

Currently, the project site generates approximately 913 pounds per week based on an estimate of three households (Lots 6 and 8) and a rate of 41 pounds per week, and 8 to 10 retail employees at both the used car sales lot (Lot 10) and the automotive repair facility (Lot 17) and a rate of 79 pounds per week. As the remaining four lots consist of vacant lots and unoccupied structures, there is currently no solid waste generated on these lots.

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.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Using the solid generation rates for a public primary school use and a public intermediate school use, which is 3.5 pounds per pupil per week (average of the two rates) and 13 pounds per employee (office building rate), the proposed school would generate approximately 3,638 pounds of solid waste per week, or 15,591 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 to fifteen tons of waste material per truck. Therefore, with 3,638 pounds of solid waste per week, or 15,591 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 14: 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 project site contains two occupied residential buildings and two commercial buildings. These buildings were constructed prior to 1979, when the New York State Energy Conservation Construction Code became effective. In the existing condition, energy usage on the project site is approximately 1.3 billion British Thermal Units (BTUs) per year. The remaining four lots on the project site consist of vacant lots and unoccupied structures and create 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.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Electrical utility service would continue to be purchased from 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. The construction of the new approximately 107,162 gsf school building would require approximately 148.5 billion BTUs. Following construction, the new school is expected to consume approximately 250,700 BTUs per square foot per year. The estimated annual usage of energy for the proposed school facility would be approximately 26.9 billion BTUs or 20.1 BTUs for the nine-month academic year. The proposed PS/IS 338 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 15: TRAFFIC AND TRANSPORTATION, PEDESTRIANS AND PARKING

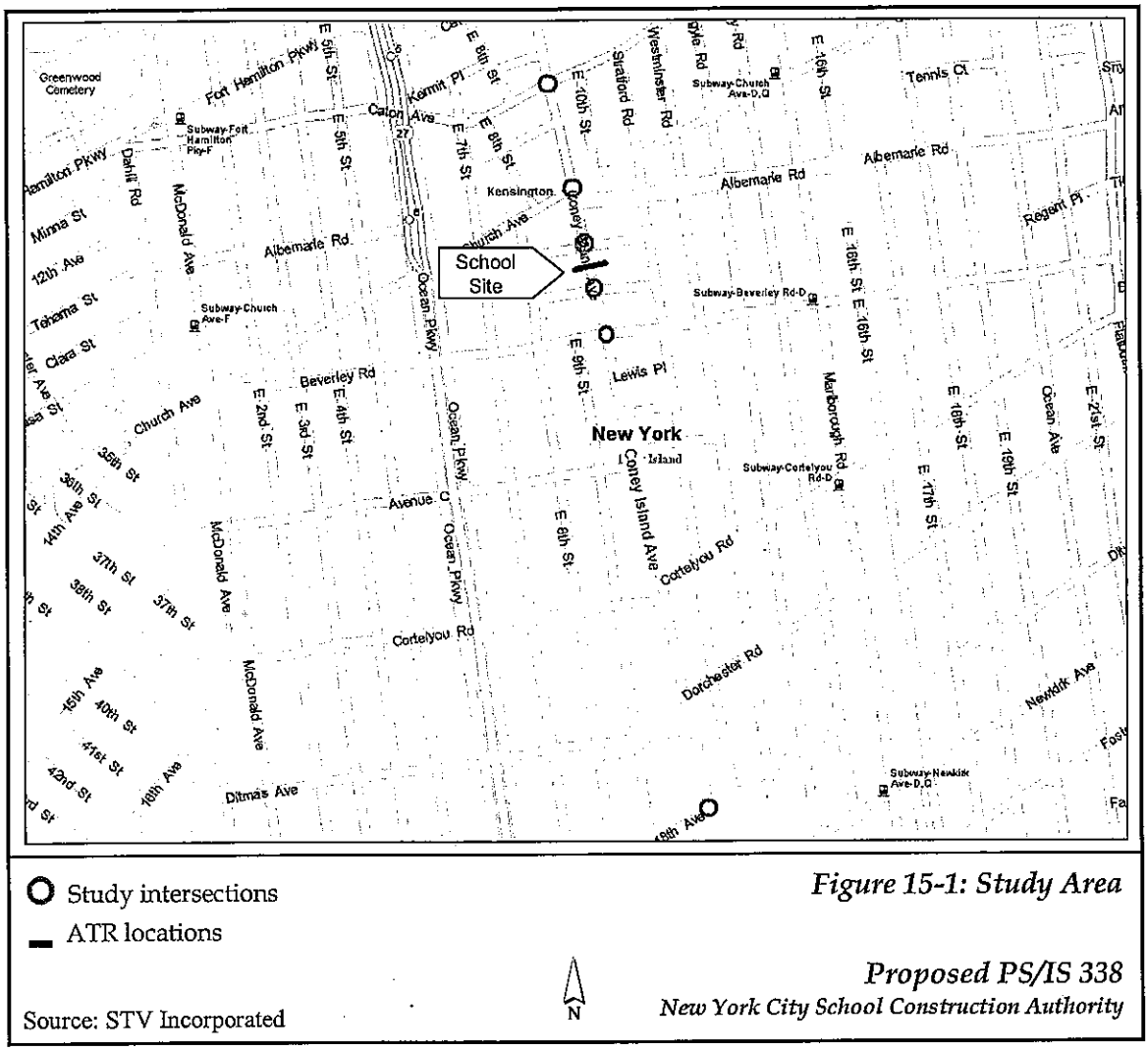
This chapter analyzes the potential traffic, transit, parking, and pedestrian impacts of the proposed PS/IS 338 located at 510 Coney Island Avenue. The new public school facility would be located within the geographic boundaries of CSD No. 15, whose border with CSD No. 22 is Coney Island Avenue. However, the new school facility would serve students from the adjacent CSD No. 22. 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 six intersections (four signalized and two unsignalized) along Coney Island Avenue in the Prospect Park South area of Brooklyn (see Figure 15-1). These include:

- Coney Island and Caton avenues
- Coney Island and Church avenues
- Coney Island Avenue and Turner Place
- Coney Island Avenue and Hinckley Place
- Coney Island Avenue and Beverly Road
- Coney Island and 18th/Ditmas avenues

The street networks in Brooklyn are a series of regular grids that are, in places, irregularly set such that intersections often meet at odd angles. In the neighborhood of Prospect Park South, the grid network is rotated such that streets are at diagonals to true north. Most arterials, collectors, and major local streets in the vicinity of the proposed school are two-way northeast-southwest roadways, while the more minor local streets in the area are typically an alternating series of one-way northwest and southeast roadways. For purposes of the transportation and pedestrian analyses, the northwest-southeast and northeast-southwest roadways are considered east-west and north-south roadways, respectively, and will be referred to as such for the remainder of this document.



Study intersections

ATR locations

Source: STV Incorporated

N

Figure 15-1: Study Area

Proposed PS/IS 338

New York City School Construction Authority

The following analysis considers the intersections near the site that are most likely to be affected by the project-generated traffic. The main travel routes in the study area are:

- Coney Island Avenue is a north-south arterial (lined mostly with commercial uses) that carries traffic extending from Brightwater Court in the Brighton Beach section of Brooklyn to Parkside Avenue in Prospect Park South. In the project area, Coney Island Avenue provides two travel lanes with an exclusive left-turn bay at each study intersection and predominantly contains metered curbside parking in each direction.
- 18th/Ditmas Avenue serves as an east-west collector in the project study area that extends from Belt Parkway in the Bath Beach area of Brooklyn to Flatbush Avenue in Prospect Park South. In the vicinity of the project area, 18th/Ditmas Avenue provides one travel lane and primarily curbside parking in each direction.

- Beverly Road is an east-west collector that extends from Church Avenue in Prospect Park South to Ralph Avenue in the East Flatbush section of Brooklyn. Within the study area, Beverly Road provides one travel lane in each direction and curbside parking.
- Hinckley and Turner Places are local unsignalized roadways with single traffic lanes and curbside parking on both sides. The direction of travel along both streets is one-way away from Coney Island Avenue (i.e., westbound west of Coney Island Avenue and eastbound east of Coney Island Avenue).
- Church Avenue is an east-west collector extending between 38th Street in Kensington to East 98th Street in East Flatbush, Brooklyn. In the project area, eastbound Church Avenue provides two travel lanes west of Coney Island Avenue and one travel lane west of Coney Island Avenue, while the westbound direction provides one travel lane. Church Avenue predominantly contains metered curbside parking in each direction.
- Caton Avenue is an east-west collector that processes traffic from Fort Hamilton Parkway in Kensington to Bedford Avenue in Flatbush, Brooklyn. In the vicinity of the project area, the number of travel lanes along Caton Avenue varies between one and two lanes, with curbside parking primarily allowed in both directions.

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 along Coney Island Avenue between Hinckley and Turner places, were conducted during the week of May 24, 2010 while schools were in session. 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 7:45 and 8:45 AM in the morning, and between 3 and 4 PM in the afternoon.

Overall, traffic volumes throughout the study area during both peak periods are moderate (see Figures 15-2 and 15-3), as the highest traffic volumes are carried along northbound Coney Island Avenue during the AM peak hour, ranging between 1,180 and 1,310 vehicles per hour (vph) and between 380 and 700 vph in the southbound direction. Conversely, the highest volumes during the PM peak hour are processed southbound along Coney Island Avenue, with volumes approaching between 530 and 1,110 vph and from 550 to 770 vph in the northbound direction. The east-west collectors handle relatively balanced bi-directional volumes from 190 to 530 vph during both peak periods. The lowest volumes typically occur along the residential east-westbound streets of Turner and Hinckley places, with volumes ranging between ten and 45 vph during the AM and PM peak periods.

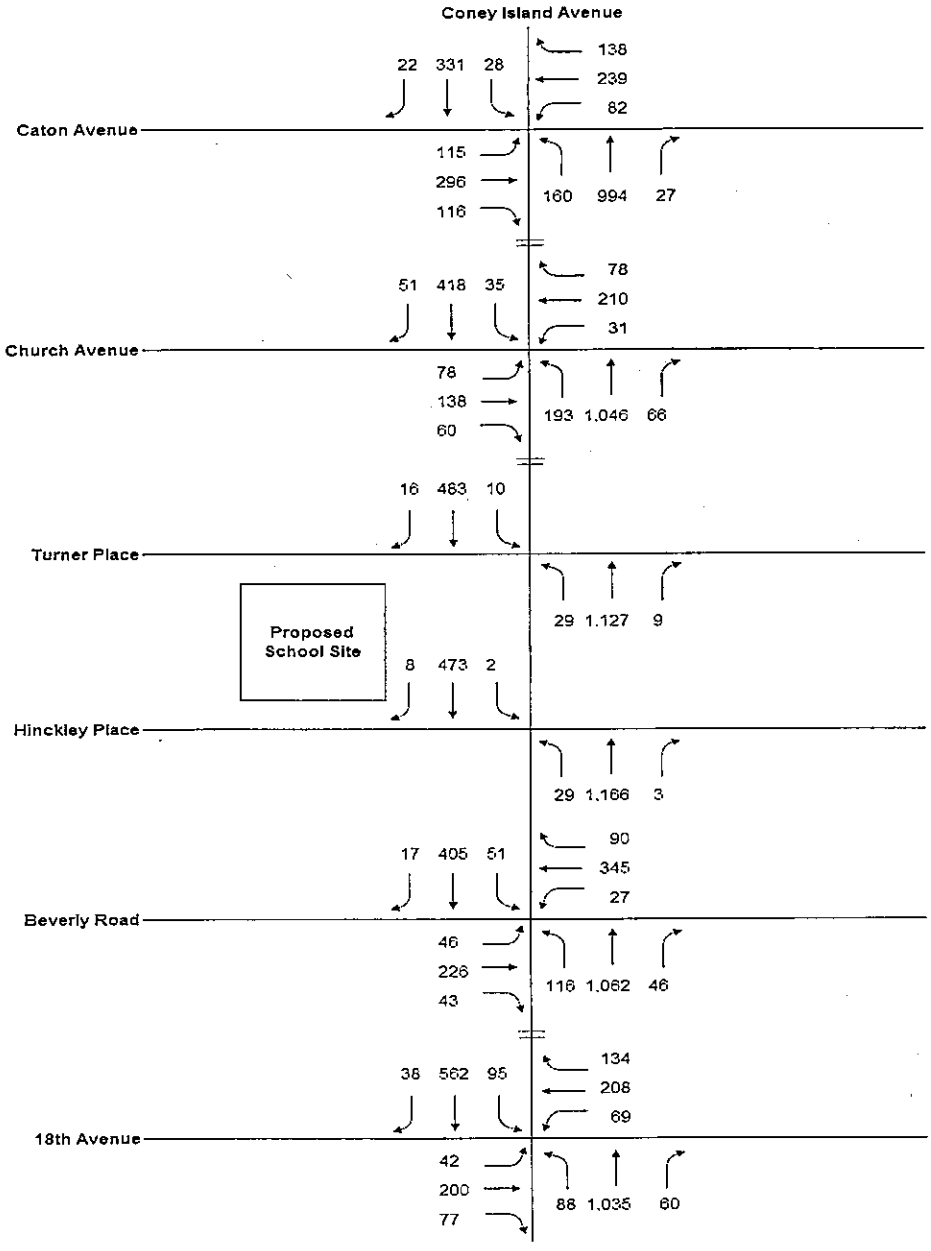


Figure 15-2: 2010 Existing Conditions AM Peak Hour Traffic Volumes

Proposed PS/IS 338
New York City School Construction Authority

Source: STV Incorporated

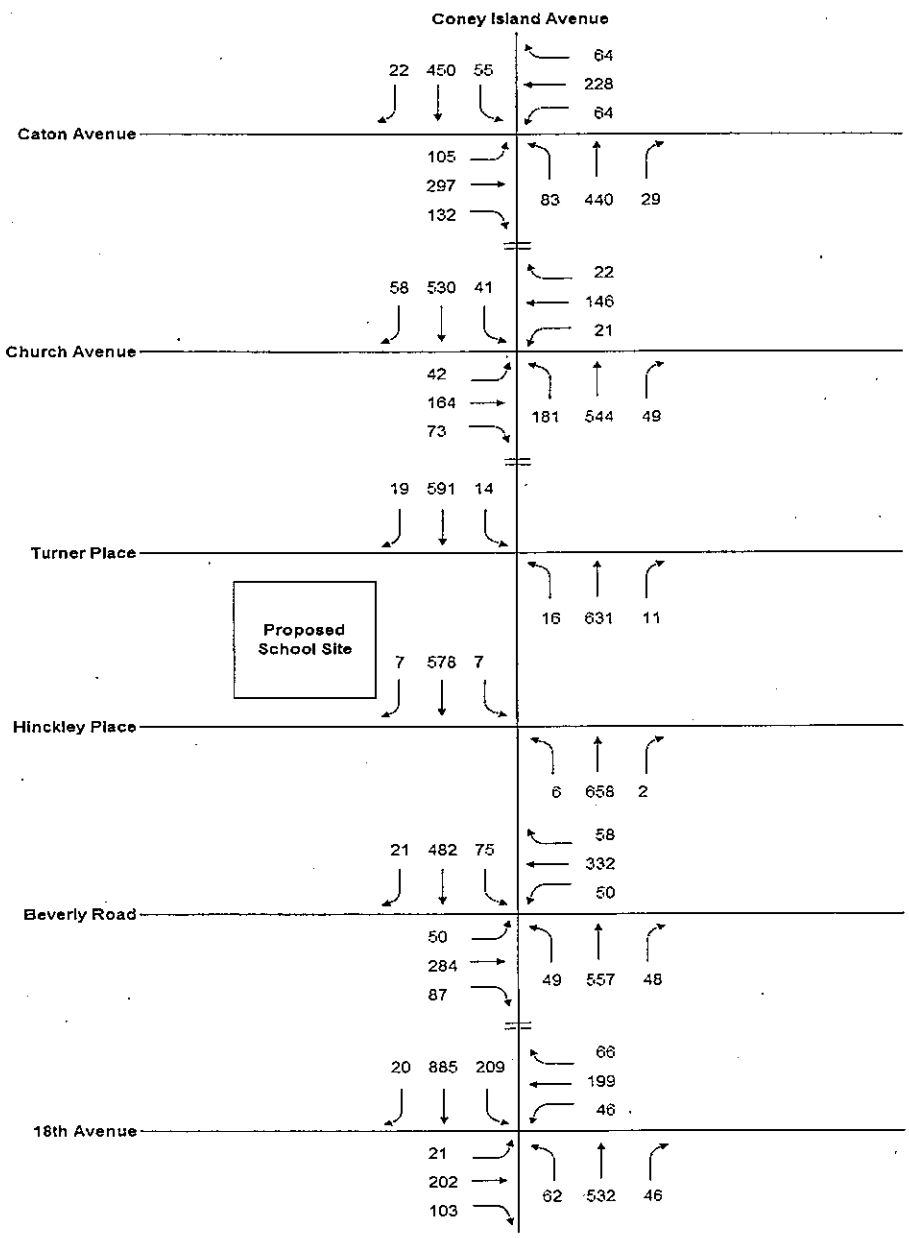


Figure 15-3: 2010 Existing Conditions PM Peak Hour Traffic Volumes

Proposed PS/IS 338
New York City School Construction Authority

Source: STV Incorporated

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. These higher delays may result from fair progression and/or longer cycle lengths. 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. 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 15-1); however, the following movements operate with some congestion:

- Westbound Caton Avenue's shared through-right movement onto northbound Coney Island Avenue operates beyond LOS mid-D with approximately 46 seconds of delay during the AM peak hour. The unacceptable delay could be attributed to the slow process rate of vehicles through the approach as vehicles carefully maneuver past left-turning vehicles.
- Beverly Road's east and westbound approaches function beyond LOS mid-D and F during the AM peak hour, respectively. The short green time allotted to the minor street (approximately 33 percent) is a contributing factor for the poor levels of service at these approaches. During the PM peak hour, both approaches operate at beyond LOS mid-D with an increased green time allotment of approximately 38 percent.
- Coney Island Avenue's southbound left-turn movement onto 18th/Ditmas Avenue operates at LOS E during the AM peak hour. The lack of an exclusive left-turn phase and the high northbound volume during the AM peak, which significantly reduces the available gaps in traffic for vehicles to turn, typically causes vehicles to wait until the end of the green phase to turn.
- 18th/Ditmas Avenue's east and westbound approaches at Coney Island Avenue function beyond LOS mid-D during the PM peak hour. A potential cause of the unacceptable LOS is the reduction in allotted green time from about 43 percent in the AM to approaximately 33 percent in the PM. In addition, these delays could be attributed to the slow process rate of vehicles through the approach as vehicles carefully maneuver past left-turning vehicles.

Table 15-1: 2010 Existing Conditions Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
Coney Island and Caton Avenues								
Caton Avenue	EB	L	0.58	40.9	D	0.44	33.6	C
		TR	0.65	35.8	D	0.68	36.7	D
	WB	L	0.51	40.0	D	0.48	39.1	D
		TR	0.79	45.8	D	0.66	37.7	D
Coney Island Avenue	NB	L	0.38	18.3	B	0.24	16.0	B
		TR	0.64	21.2	C	0.32	15.8	B
	SB	L	0.18	16.4	B	0.15	14.5	B
		TR	0.20	14.4	B	0.25	14.8	B
Overall Intersection		-		**27.3**	**C**		**25.0**	**C**
Coney Island and Church Avenues								
Church Avenue	EB	LT	0.39	29.2	C	0.47	37.8	D
		R	0.18	26.0	C	0.32	36.2	D
	WB	LTR	0.65	36.8	D	0.52	39.9	D
Coney Island Avenue	NB	L	0.69	39.9	D	0.61	29.6	C
		TR	0.81	34.9	C	0.37	18.4	B
	SB	L	0.22	22.4	C	0.11	10.1	B
		TR	0.34	16.0	B	0.36	11.4	B
Overall Intersection		-		**30.9**	**C**		**22.5**	**C**
Coney Island Avenue and Beverly Road								
Beverly Road	EB	LTR	0.74	48.2	D	0.78	45.4	D
	WB	LTR	1.03	89.9	F	0.87	53.9	D
Coney Island Avenue	NB	L	0.25	10.7	B	0.14	12.1	B
		TR	0.64	15.4	B	0.40	14.4	B
	SB	L	0.48	25.8	C	0.24	13.7	B
		TR	0.23	9.7	A	0.31	13.2	B
Overall Intersection		-		**34.1**	**C**		**28.9**	**C**
Coney Island and 18th Avenues								
18th Avenue	EB	LTR	0.54	31.6	C	0.72	46.9	D
	WB	LTR	0.81	44.8	D	0.75	51.1	D
Coney Island Avenue	NB	L	0.31	18.3	B	0.50	24.3	C
		TR	0.77	25.8	C	0.36	11.0	B
	SB	L	0.86	74.7	E	0.79	35.5	D
		TR	0.44	17.9	B	0.53	13.2	B
Overall Intersection		-		**29.3**	**C**		**24.2**	**C**
Unsignalized								
Coney Island Avenue and Turner Place								
Coney Island Avenue	NB	L	0.03	9.1	A	0.02	9.6	A
	SB	L	0.02	13.6	B	0.02	9.7	A
Coney Island Avenue and Hinckley Place								
Coney Island Avenue	NB	L	0.03	9.0	A	0.01	9.5	A
	SB	L	0.00	13.5	B	0.01	9.6	A

Notes:

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.

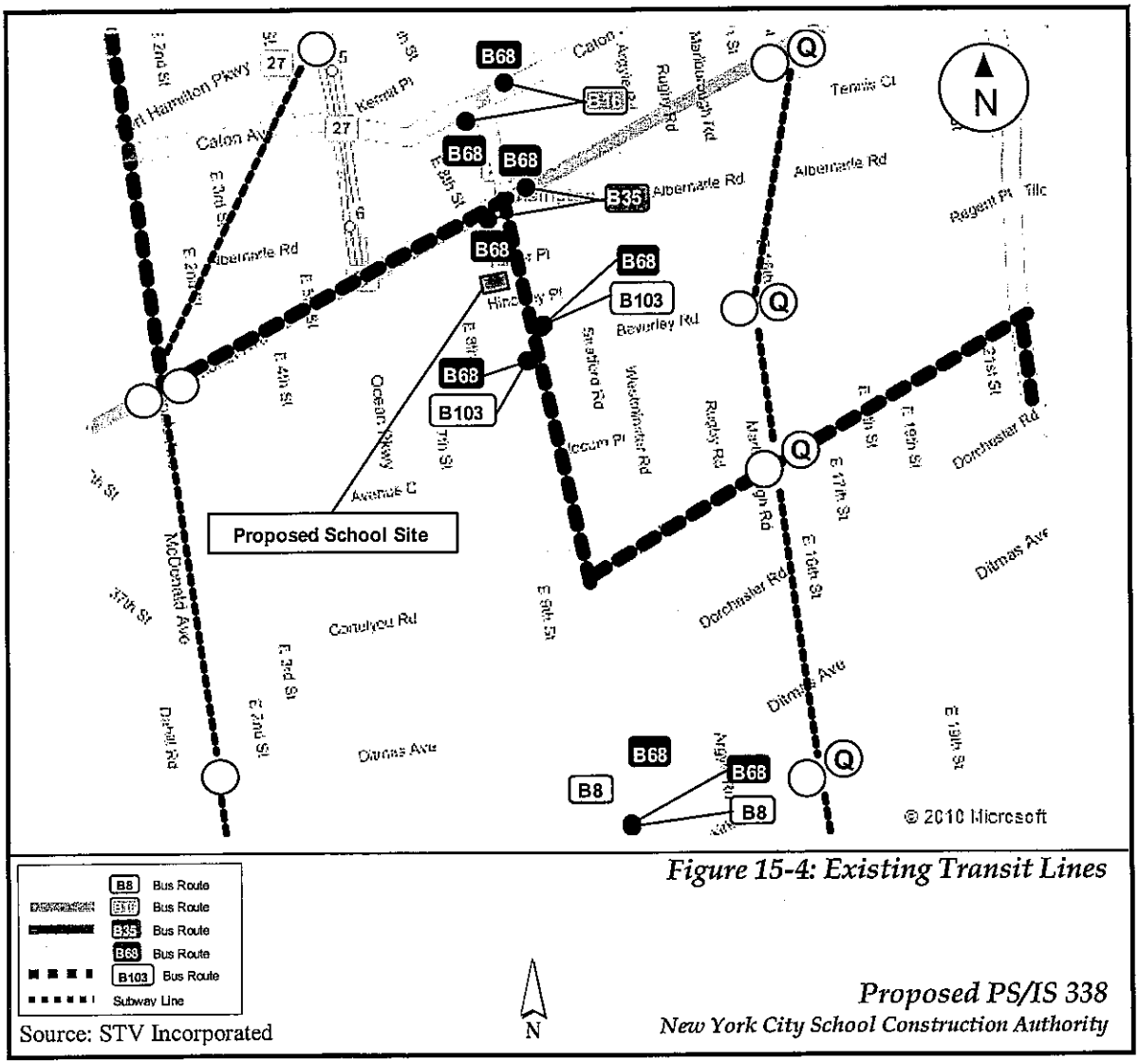
Parking. The parking study area is within a quarter-mile (a typical "walkable" radius) of the proposed school site. It is bounded by Kermit Place to the north, Avenue C to the south, Rugby Road to the east, and East Fifth Street to the west. Alternate-side curbside parking restrictions are posted throughout most of the study area, with metered curbside parking in effect along Coney Island and Church avenues. There is also a small segment along westbound Friel Place between Coney Island Avenue and East Eighth Street that has metered curbside parking. Curbside parking is reserved for school buses during school hours at a few locations at existing schools in the study area. All metered and restricted curbside parking spaces were assumed to be unavailable to school-generated traffic, since the allowable time in these spaces is typically limited to two hours or less.

On-street parking surveys were conducted on two representative midweek days to determine the number of spaces within an acceptable walking distance (i.e., a quarter-mile radius) of the proposed school site. Two surveys were conducted – one on Monday, when most parking restrictions are in effect and the other on Friday, when most regulations are not in effect. Based on the surveys, there are approximately 1,944 on-street, non-metered parking spaces within a reasonable walking distance of the project site. On Fridays, the supply for on-street parking spaces has an available capacity of 107 spaces (about six percent). On Mondays, when the alternate-side regulations are most restrictive, the number of available on-street parking spaces is reduced to 1,205, resulting in a 227-space shortfall (about 19 percent) (see Table 15-2).

Table 15-2: 2010 Existing On-Street Parking Supply and Demand

Parking Parameter	w/Regs	w/o Regs
Parking-Space Supply	1,205	1,944
Demand (Occupancy Rate)	1,432 (119%)	1,837 (94%)
Spaces Available (Rate)	-227 (-19%)	107 (6%)

Transit and Pedestrians. The area is served by New York City Transit (NYCT), with five bus routes and four subway lines (see Figure 15-4).



The local B8 bus route serves passengers from Bay Ridge to Brownsville, Brooklyn. Brownsville-bound service is provided every ten minutes during the AM peak hour and eight minutes during the PM peak hour. Bay Ridge-bound service provides a frequency ranging between five and eight minutes during the AM and PM peak hours, respectively. The B16 bus route provides local service from Prospect-Lefferts Gardens and Fort Hamilton, Brooklyn. The frequency of operation for the B16 during the AM and PM peak periods range between ten and 15 minutes in both directions. The local and limited-stop B35 bus route serves passengers between Sunset Park and Brownsville, Brooklyn. The local service provides operational frequencies between six and ten minutes in either direction during both peak periods, while the limited-stop provides service every six to eight minutes in the Brownsville-bound direction and every four to eight minutes in the Sunset Park-bound direction during the AM and PM peak hours.

The B68 bus route provides local service primarily along Coney Island Avenue between Coney Island and Park Slope, Brooklyn. The frequency of operation is in the range of seven to nine minutes during the AM and PM peak hours in both directions. The B103 Limited bus route provides local limited-stop service between Downtown Brooklyn and Canarsie, Brooklyn, with an average frequency between six and 15 minutes in the northbound direction and from 15 to eight minutes in the southbound direction during the AM and PM peak periods, respectively.

Weekday bus boarding and alighting counts were conducted for the north/southbound B68 and B103 Limited bus stops along the Coney Island Avenue corridor at the Beverly Road intersection that students and staff would most likely use to access the proposed school. The location of the bus stop is approximately 400 feet south of the site. The next closest bus stop, which is also served by the B68, in addition to the east/westbound B35/B35 Limited route, is located about 450 feet north of the proposed school at Coney Island and Church avenues.

The counts at the northbound bus stop indicate that in the AM peak hour, a maximum number of 15 passengers board and only four passengers alight upon each B68 arrival. Conversely, the B103 Limited serves a maximum of two boarding passengers and 16 alighting passengers during the AM peak hour. During the PM peak hour, fewer than five passengers board/alight the B68 and B103 Limited at any one stop interval.

The counts at the southbound bus stop indicate that a maximum of seven passengers board and five passengers alight the B68 bus, while only two passengers board and no one alights the B103 Limited bus during the AM peak hour. During the PM peak hour, fewer than eight passengers board/alight the B68, while a maximum of 26 passengers board the B103 Limited with one passenger alighting.

The nearest subway station is the BMT B/Q station at Beverly and Marlborough roads, which is approximately 2,000 feet from the proposed school site. The B line provides service between Brighton Beach, Brooklyn, and Bedford Park Boulevard in the Bronx, while the Q line runs from Stillwell Avenue in Brooklyn to Ditmars Boulevard, Queens. The next nearest subway line is the BMT F and G station at Church and McDonald avenues, located approximately ½-mile from the proposed school site, with the F line providing service from Stillwell Avenue in Brooklyn to Jamaica-179th Street in Queens, and the G line operating between Church Avenue in Brooklyn and Court Square in Queens.

Pedestrian flow operating conditions were evaluated using *HCM2000* methodologies. 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 the intersections of Coney Island Avenue at Turner and Hinckley places, which are located adjacent to the proposed school site. Both intersections are unsignalized, contain a one-way away configuration from Coney Island Avenue, provide no crosswalks, and are not desirable to pedestrian crossings. Consequently, field observations of pedestrian conditions at these two intersections indicate that existing volumes are very low (i.e., less than 20 pedestrians per hour) during the peak study periods. Additional pedestrian counts were performed during the AM and PM peak periods at the two nearest signalized intersections along Coney Island Avenue at Church Avenue and Beverly Road, located north and south of the project site, respectively. These two signalized intersections are within close proximity to many residential, retail, and bus transit opportunities, and are the only two locations near the proposed school site where pedestrians are able to cross Coney Island Avenue safely with the aid of a traffic signal.

During both AM and PM peak 15-minute periods, the north and south crosswalks at Coney Island and Church avenues were the most utilized, both processing a bi-directional volume ranging from 30 to 50 pedestrians. The south crosswalk at Coney Island Avenue and Beverly Road processed the highest volumes at the intersection, which handled an average of ten to 30 pedestrians per direction during the AM and PM 15-minute peak periods, while all other crosswalks handled fewer volumes. All crosswalks and corners at both signalized intersections are currently operating at LOS A conditions (see Table 15-3).

Table 15-3: 2010 Existing Pedestrian Conditions

INTERSECTION and ELEMENT	AM Peak		PM Peak	
	Average Space (sf/ped)	LOS	Average Space (sf/ped)	LOS
Coney Island and Church Avenues				
Northeast Corner	216	A	206	A
Southeast Corner	152	A	112	A
Northwest Corner	445	A	429	A
Southwest Corner	125	A	93	A
North Crosswalk	215	A	166	A
South Crosswalk	207	A	106	A
East Crosswalk	416	A	418	A
West Crosswalk	631	A	637	A
Coney Island Avenue and Beverly Road				
Northeast Corner	1,344	A	1,274	A
Southeast Corner	728	A	555	A
Northwest Corner	1,145	A	1,698	A
Southwest Corner	221	A	234	A
North Crosswalk	669	A	1,015	A
South Crosswalk	353	A	345	A
East Crosswalk	2,340	A	1,460	A
West Crosswalk	1,193	A	2,048	A

Note: Average space and delay are based on the assumption that pedestrians distribute themselves uniformly throughout the effective crosswalk and corner space. LOS designations for corner analyses are based on average space per pedestrian (sf/ped). LOS designations for crosswalk analyses at signalized intersections are based on average space per pedestrian (sf/ped).

Safety. A review of the accident data provided from New York State Department of Transportation for the most recent three-year period from February 2007 to January 2010 indicated that most locations within a ½-mile radius of the study area experienced five or fewer pedestrian/bicycle-type accidents within a given year, and consequently, would not be considered high-accident locations according to *CEQR* guidelines. However, the intersection of Church Avenue at Ocean Parkway experienced a total of five pedestrian and two bicycle accidents in 2007, with varying contributing factors that included alcohol involvement, pedestrian error/confusion, and improper vehicular turning. In addition, the Church Avenue/East 5th Street intersection experienced one pedestrian fatality in 2008 due to the driver's failure to yield the right of way, although this intersection experienced fewer than five accidents during that same year.

B. THE FUTURE WITHOUT THE PROJECT

The analysis of the future traffic conditions of the proposed school (i.e., the future No Build condition) 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 to major real-estate developments, and roadway system changes scheduled to be occupied or implemented by the 2014 Build Year. A background growth rate of ½ percent per year, resulting in an overall growth of approximately two percent by 2014, was assumed for this area of Brooklyn, per *CEQR* standards.

According to DCP, an Environmental Assessment Statement (EAS) was completed in March 2009 for a planned rezoning of the Flatbush section of Brooklyn and was approved in July 2009. The analysis year for the proposed action is 2019. The document cites an amendment to the zoning map, as well as amendments to the zoning text, affecting 180 blocks in two areas in Flatbush's Community District 14. It is important to note that the EAS cites what *could* be developed as a result of the Flatbush rezoning amendments, and is not reflective of what would actually be built in the rezoned areas by 2019.

The proposed rezoning action is anticipated to result in the development on 17 sites with a net increase of 180 residential units and 70,167 square feet of commercial space, a net decrease of 198,070 square feet of community facility space, and a net increase of 95 parking spaces. A total of 17 projected development sites and 72 potential development sites have been identified in the area.

Five of the 17 projected development sites are located within ½ mile of the proposed school site study intersections (see Figure 15-5). Below is a brief description of these five locations.

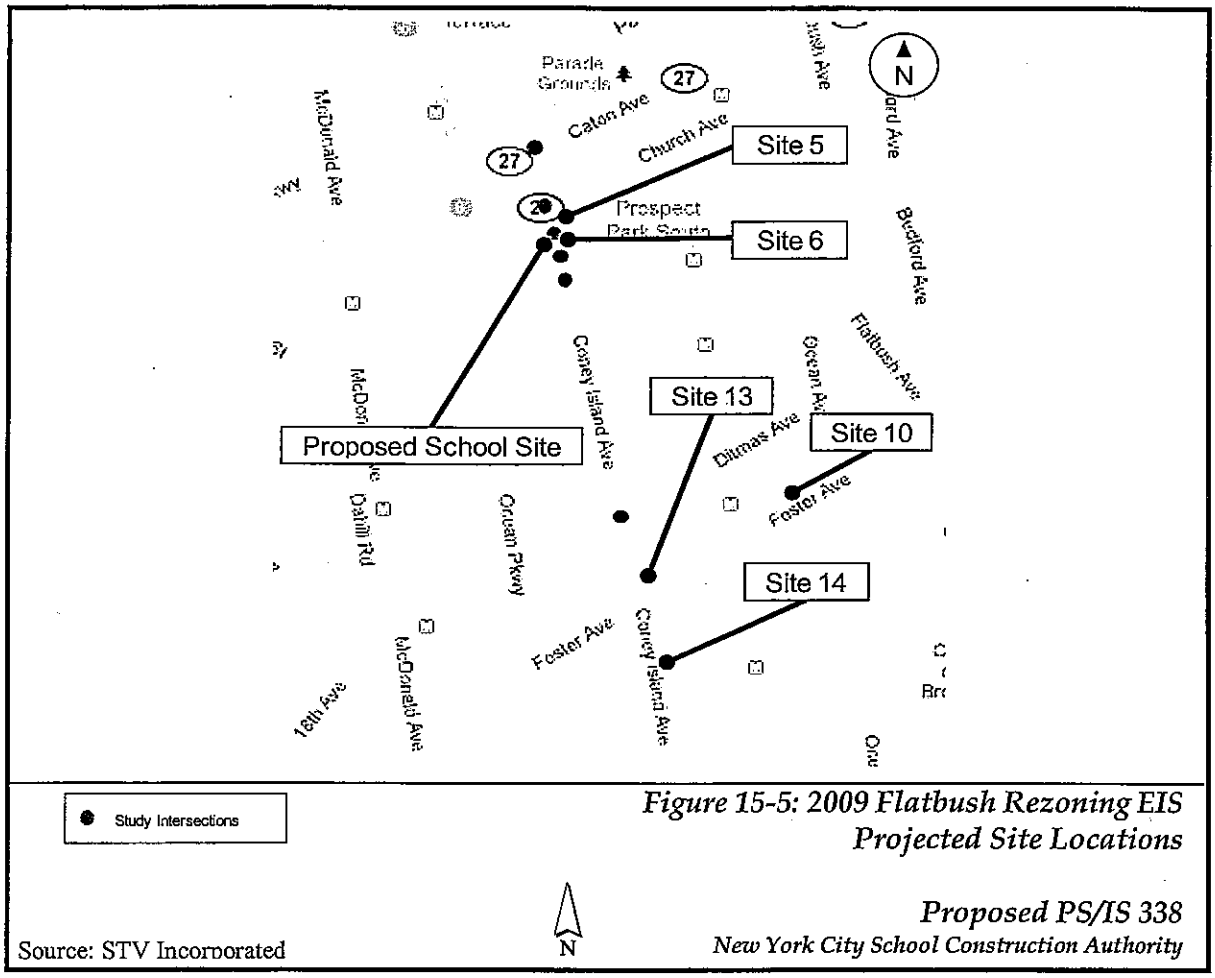


Figure 15-5: 2009 Flatbush Rezoning EIS
Projected Site Locations

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1) *Site 5 (Block 5112, Lot 1)* is located at 904 Albemarle Road, at the intersection of Albemarle Road and Coney Island Avenue. The site comprises one 5,545 square-foot lot, which is currently built with a one-story building used as a community facility, with an FAR of 0.92. In the Future With-Action condition, the site could be developed with a eight-story 25,507 square foot building with 4,436 square feet of commercial space on the ground floor, and 21 dwelling units on the upper floors. There would be no required parking spaces.

2) *Site 6 (Block 5113, Lot 24)* is located at 531 Coney Island Avenue at the intersection of Hinckley Place and Coney Island Avenue. This vacant site comprises one 12,770 square-foot lot. In the Future With-Action condition, the site could be developed with one, eight-story 58,742 square foot building with 10,216 square feet of commercial space on the ground floor, and 49 dwelling units on the upper floors. The 26 required parking spaces could be accommodated on one underground level.

3) *Site 10 (Block 5218, Lot 33)* is located at 631 East 18th Street at the northeast corner of the intersection of East 18th Street and Foster Avenue. The site comprises one 5,200 square-foot lot, which is currently built with a two-and-a-half-story building used as a residence and commercial building, with an FAR of 0.76. In the Future With-Action condition, the site could be developed with one eight-story 23,920 square-foot building with 24 dwelling units on the upper floors. There would be no required parking spaces.

4) *Site 13 (Block 5232, Lot 37)* is located at 1041 Coney Island Avenue, on the east side between Newkirk and Foster avenues. The site comprises one 16,375 square-foot lot, which is currently built with a one-story building used as gas station, with an FAR of 0.16. In the Future With-Action condition, the site could be developed with one eight story 75,325 square-foot building with 13,100 square feet of commercial space on the ground floor, and 62 dwelling units on the upper floors. The 34 required parking spaces could be accommodated on one underground level.

5) *Site 14 (Block 6686, Lot 48)* is located at 1139 Coney Island Avenue, on the east side between Glenwood Road and Avenue H. The site comprises one 10,000 square-foot lot, which is currently built with a one-story building used as a gas station, with an FAR of 0.18. In the Future With-Action condition, the site could be developed with one seven story 30,000 square-foot building with 5,000 square feet of commercial space on the ground floor, and 25 dwelling units on the upper floors. The 13 required parking spaces could be accommodated on one underground level.

The Flatbush EAS concludes that *all* projected development sites would collectively generate fewer than 50 net vehicle trips during all peak hours throughout the study area; thus, based upon the *CEQR Technical Manual* guidelines, no further traffic or parking analysis is required. Additionally, the proposed action would produce fewer bus, subway, and pedestrian trips than the *CEQR Technical Manual* threshold of 200 net trips for each component, during the AM, midday, and PM peak hours, respectively. Consequently, no further analysis is necessary.

Recent field reconnaissance of the surrounding study area revealed that Site 6 appears to be the only location of the five projected sites that is currently in the build-out stage of development (see Figure 15-6).

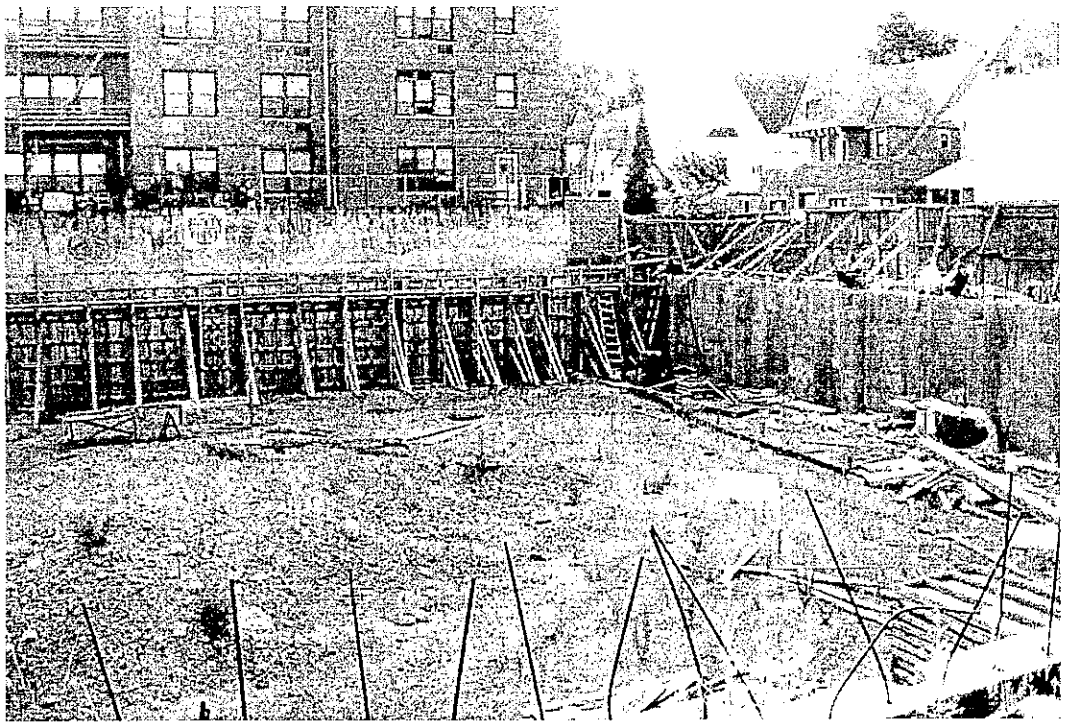

Figure 15-6: Projected Site Location 6
June 2010

Proposed PS/IS 338
New York City School Construction Authority

Source: STV Incorporated

N

Future No Build Traffic Conditions. Based on the two percent background growth, there would be a minimal increase in traffic volumes along the roadways included in the project study area (see Figures 15-7 and 15-8).

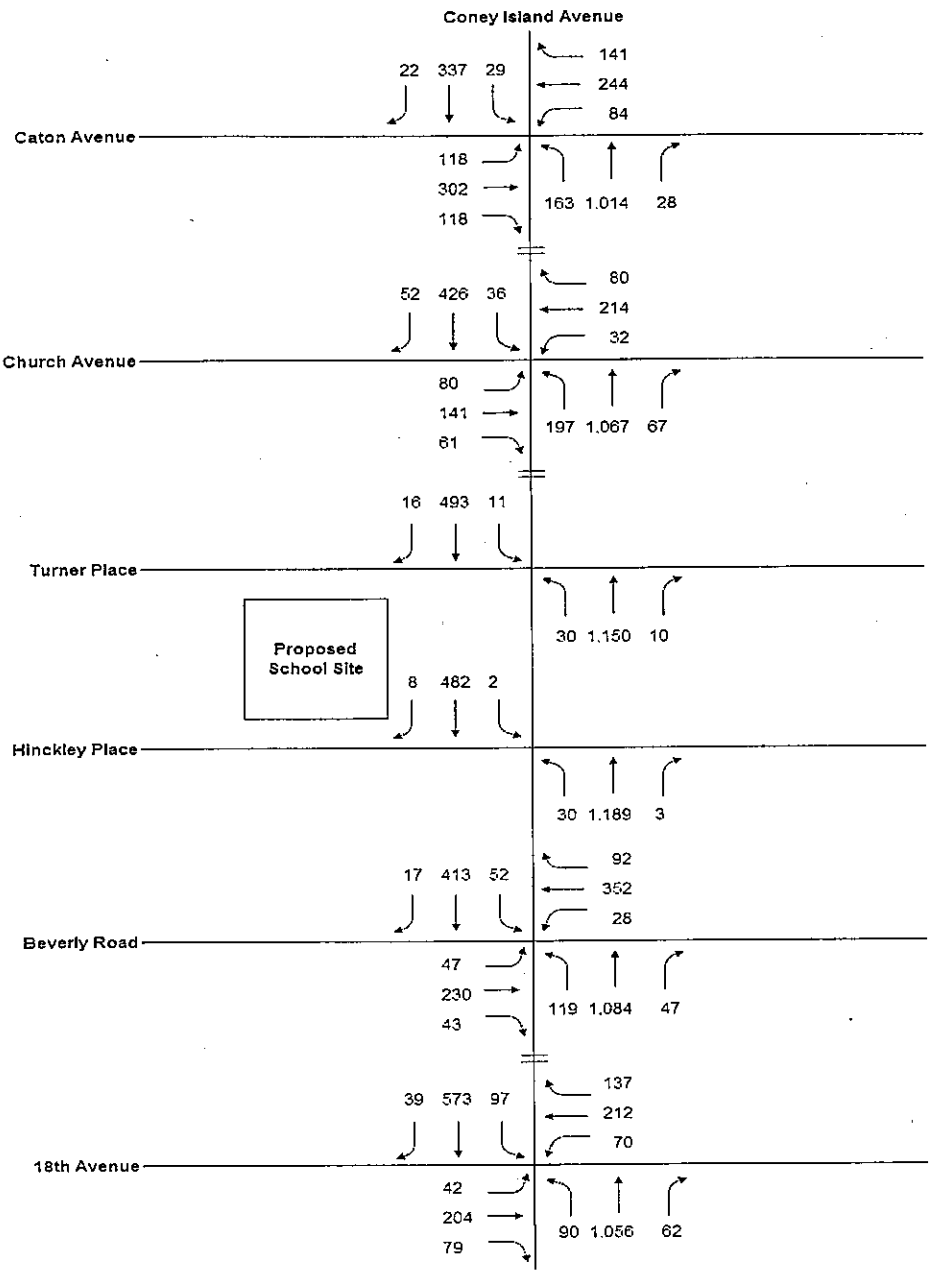

Figure 15-7: 2014 No Build Conditions AM Peak Hour Traffic Volumes

Source: STV Incorporated

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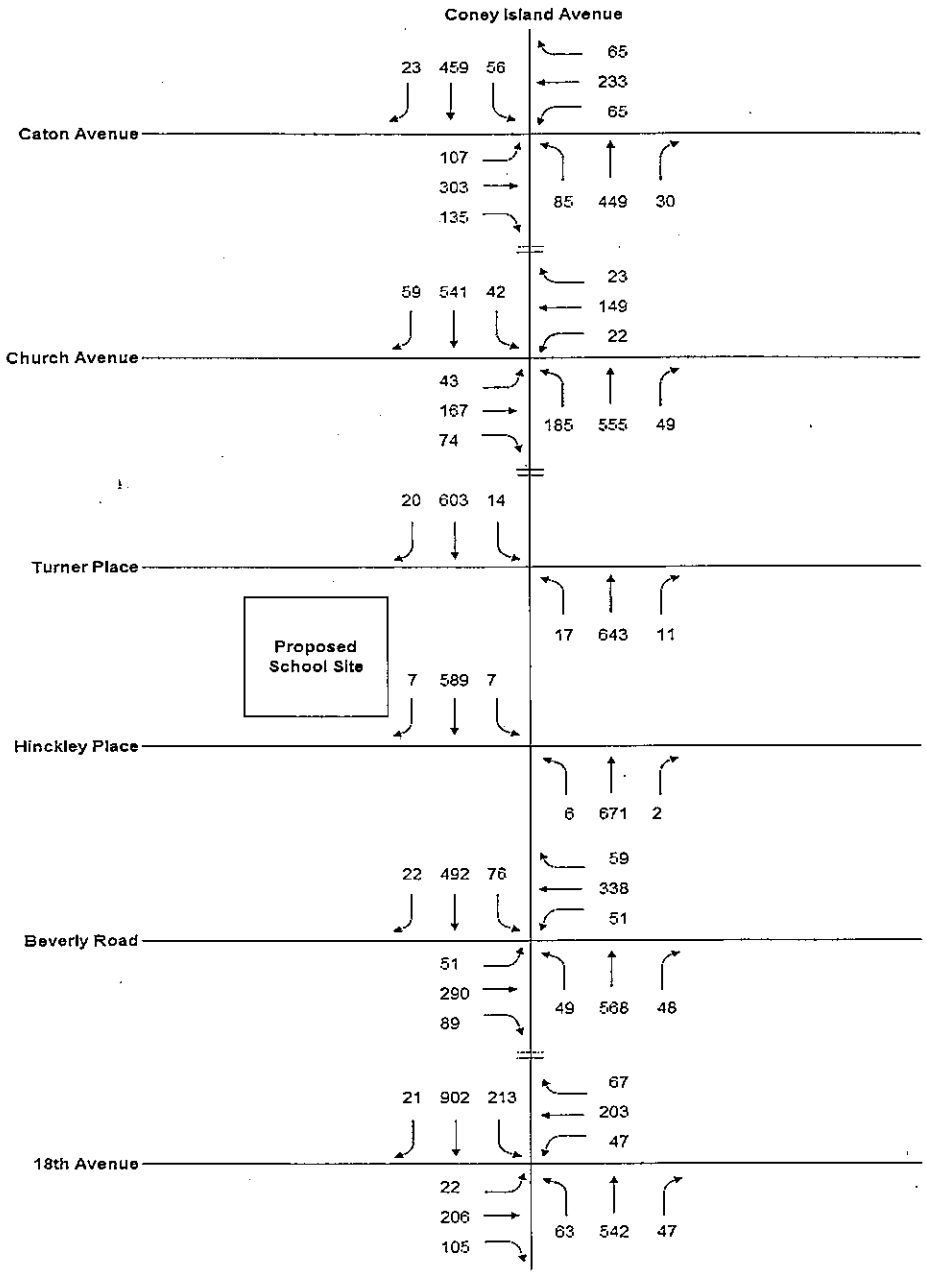

Figure 15-8: 2014 No Build Conditions PM Peak Hour Traffic Volumes

Source: STV Incorporated

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New York City School Construction Authority

All study intersections would continue to operate at acceptable levels with overall operations at LOS mid-D or better (see Table 15-4); however, the following movements would continue to operate with congestion:

- Westbound Caton Avenue's shared through-right movement onto northbound Coney Island Avenue would continue to function beyond LOS mid-D with approximately 47 seconds of delay during the AM peak hour.
- Beverly Road's east and westbound approaches would continue to function beyond LOS mid-D and F during the AM peak hour, respectively. During the PM peak hour, the eastbound approach would continue to operate at beyond LOS mid-D, while the westbound approach would worsen to LOS E.
- Coney Island Avenue's southbound left-turn movement onto 18th/Ditmas Avenue would deteriorate from LOS E to F during the AM peak hour.
- 18th/Ditmas Avenue's westbound approach would worsen to beyond the acceptable LOS mid-D threshold during the AM peak hour. Both the east and westbound approaches at Coney Island Avenue would continue to function beyond LOS mid-D during the PM peak hour.

Table 15-4: 2014 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								
Coney Island and Caton Avenues								
Caton Avenue	EB	L	0.60	42.9	D	0.46	34.3	C
		TR	0.66	36.2	D	0.69	37.3	D
	WB	L	0.52	40.7	D	0.50	41.0	D
		TR	0.81	47.3	D	0.67	38.4	D
Coney Island Avenue	NB	L	0.39	18.6	B	0.25	16.2	B
		TR	0.65	21.5	C	0.33	15.9	B
	SB	L	0.20	16.8	B	0.15	14.6	B
		TR	0.21	14.4	B	0.25	14.9	B
Overall Intersection		-		**27.9**	**C**		**25.4**	**C**
Coney Island and Church Avenues								
Church Avenue	EB	LT	0.40	29.4	C	0.48	38.1	D
		R	0.18	26.1	C	0.32	36.3	D
	WB	LTR	0.67	37.5	D	0.54	40.7	D
Coney Island Avenue	NB	L	0.71	41.4	D	0.63	30.7	C
		TR	0.82	35.7	D	0.37	18.5	B
	SB	L	0.23	23.0	C	0.12	10.2	B
		TR	0.34	16.1	B	0.36	11.5	B
Overall Intersection		-		**31.5**	**C**		**22.7**	**C**

Table 15-4: 2014 No Build Conditions Traffic Operations, cont'd

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
Coney Island Avenue and Beverly Road								
Beverly Road	EB	LTR	0.75	48.8	D	0.79	46.5	D
	WB	LTR	1.05	96.7	F	0.88	55.7	E
Coney Island Avenue	NB	L	0.25	10.8	B	0.14	12.1	B
		TR	0.66	15.7	B	0.41	14.5	B
	SB	L	0.49	26.4	C	0.24	13.9	B
		TR	0.23	9.8	A	0.32	13.3	B
Overall Intersection		-		**35.7**	**D**		**29.6**	**C**
Coney Island and 18th Avenues								
18th Avenue	EB	LTR	0.55	31.9	C	0.73	47.6	D
	WB	LTR	0.83	46.5	D	0.78	53.0	D
Coney Island Avenue	NB	L	0.32	18.6	B	0.51	24.7	C
		TR	0.78	26.4	C	0.37	11.1	B
	SB	L	0.93	92.7	F	0.80	37.0	D
		TR	0.44	18.1	B	0.54	13.4	B
Overall Intersection		-		**30.6**	**C**		**24.8**	**C**
Unsignalized								
Coney Island Avenue and Turner Place								
Coney Island Avenue	NB	L	0.04	9.1	A	0.02	9.7	A
	SB	L	0.03	13.9	B	0.02	9.8	A
Coney Island Avenue and Hinckley Place								
Coney Island Avenue	NB	L	0.03	9.0	A	0.01	9.5	A
	SB	L	0.00	13.7	B	0.01	9.7	A

Parking. Demand for parking was assumed to increase proportionally to the traffic growth in the study area, or by ½ percent per year. Based on population growth alone, the on-street parking-space shortfall would increase from 227 to 256 spaces (an increase from an existing 19 percent shortfall to 21 percent) during the most restrictive regulation periods. During the non-regulation periods, there would be fewer available spaces, from 107 to 70 on-street spaces (a decrease in supply from six to four percent) (see Table 15-5).

Table 15-5: 2014 No Build On-Street Parking Supply and Demand

Parking Parameter	w/Regs	w/o Regs
Parking-Space Supply	1,205	1,944
Demand	1,461	1,874
(Occupancy Rate)	(121%)	(96%)
Spaces Available	-256	70
(Rate)	(-21%)	(4%)

Transit and Pedestrians. The number of transit riders and pedestrians in the study area were also assumed to increase by ½ percent per year in proportion to traffic volumes. Transit service and operational conditions are expected to remain similar to the current conditions since there are no major planned developments in the area, and the applied growth factor would not significantly alter conditions from the existing. Pedestrian activity near the project site and in the study area is also anticipated to remain similar to existing conditions (see Table 15-6).

Table 15-6: 2013 No Build Pedestrian Conditions

INTERSECTION and ELEMENT	AM Peak		PM Peak	
	Average Space (sf/ped)	LOS	Average Space (sf/ped)	LOS
Coney Island and Church Avenues				
Northeast Corner	211	A	202	A
Southeast Corner	149	A	110	A
Northwest Corner	436	A	420	A
Southwest Corner	123	A	91	A
North Crosswalk	210	A	163	A
South Crosswalk	202	A	103	A
East Crosswalk	407	A	408	A
West Crosswalk	617	A	622	A
Coney Island Avenue and Beverly Road				
Northeast Corner	1,317	A	1,249	A
Southeast Corner	713	A	544	A
Northwest Corner	1,122	A	1,665	A
Southwest Corner	216	A	229	A
North Crosswalk	655	A	994	A
South Crosswalk	346	A	337	A
East Crosswalk	2,290	A	1,428	A
West Crosswalk	1,166	A	2,004	A

C. PROBABLE IMPACTS 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.

Trip Generation. The proposed primary school would provide a total capacity of approximately 757 students. For trip generation purposes, it was assumed that the new school would be filled to capacity from pre-kindergarten through grade eight. To obtain trip generation rates, modal splits, and directional distribution estimates, surveys were distributed to students and staff attending nearby PS 139, located at 330 Rugby Road, approximately ½ mile from the proposed school. The total project trip generation rates and modal splits are discussed below, and summarized in Tables 15-7 and 15-8.

Table 15-7: AM Modal Split and Total Trip Generation Data

Travel Mode	% K-8 Students	% Staff	K-8 Student Person-Trips (1)	Staff Person-Trips	Student Vehicle-Trips	Staff Vehicle-Trips
Walk	71	5	538 (2)	4	N/A	N/A
Auto	19	58	146	44	166 (3)	54 (4)
General Education School Bus	2	N/A	13	N/A	4 (5)	N/A
Public Transit / Other	8	37	60	28	N/A	N/A
TOTAL	**100**	**100**	**757**	**76**	**170**	**54**

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 percentage of grades K-4 students walking to school is 67 percent versus 76 percent for grades 5-8.
3. The total number of student auto trips consist of 83 arrivals and 83 departures, assuming a vehicle occupancy of 1.8 and 1.7 students per auto for grades K-4 and grades 5-8, respectively. The percentage of grades K-4 students being driven to school is 23 percent versus 15 percent for grades 5-8.
4. The total number of staff auto trips consist of 43 arrivals and eleven departures to and from the area, assuming a vehicle occupancy rate of 1.1 persons per auto. This includes 32 teachers driving/carpooling to the school and eleven teachers being dropped off at the school.
5. The general education school bus trips consist of two arrivals and two departures, assuming an occupancy rate of seven students per bus.

Table 15-8: PM Modal Split and Total Trip Generation Data

Travel Mode	% K-8 Students	% Staff	K-8 Student Person-Trips [1]	Staff Person-Trips	Student Vehicle-Trips	Staff Vehicle-Trips
Walk	74	5	558 [2]	4	N/A	N/A
Auto	17	58	128	44	144 [3]	54 [4]
General Education School Bus	2	N/A	15	N/A	4 [5]	N/A
Public Transit / Other	7	37	56	28	N/A	N/A
TOTAL	**100**	**100**	**757**	**76**	**148**	**54**

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 percentage of grades K-4 students walking to school is 68 percent versus 81 percent for grades 5-8.
3. The total number of student auto trips consist of 72 arrivals and 72 departures, assuming a vehicle occupancy of 1.8 and 1.7 students per auto for grades K-4 and grades 5-8, respectively. The percentage of grades K-4 students being driven to school is 21 percent versus 12 percent for grades 5-8.
4. The total number of staff auto trips consist of eleven arrivals and 43 departures to and from the area, assuming a vehicle occupancy rate of 1.1 persons per auto. This includes 32 teachers driving/carpooling to the school and eleven teachers being dropped off at the school.
5. The general education school bus trips consist of two arrivals and two departures, assuming an occupancy rate of eight students per bus.

The surveys questioned students and staff in terms of trip origin, travel mode, vehicle occupancy, and school arrival/departure times. According to the data, students would arrive at and depart from school by a number of travel modes, including private autos, transit buses, subways, general education school buses, and walking from nearby residences. The data indicate that a majority of children attending the school would live in nearby residential areas, within a ½-mile distance to the school. Consequently, the majority of students (71 percent) would walk to school, while approximately 19 percent would be driven to school by their parents. The remaining ten percent of the students would commute to school by public transit (i.e., local buses, subways) and yellow school buses.

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. Vehicle occupancy rates of 1.8 and 1.7 students per auto from school surveys were applied to grades K through four and grades five through eight, respectively.

It is estimated that the new school facility would employ approximately 76 staff members. Based on the survey data, 37 percent of the staff would utilize public transit, 58 percent would travel in private automobiles at an occupancy rate of 1.1 persons per vehicle, and the remaining five percent would walk to school.

Temporal Distribution: The trip generation rates have been adjusted to reflect the traffic conditions for the 7:45-8:45 AM and 3-4 PM peak analysis hours (see Tables 15-9 and 15-10). All student trips would arrive during the 7:45-8:45 AM peak analysis hour, while approximately 89 percent depart during 3-4 PM peak analysis hour, resulting in 85 student vehicle arrivals/departures (autos and buses) during the AM peak hour and 65 student vehicle arrivals/departures during the PM peak hour. Approximately 28 percent of all staff trips

arrive during the 7:45-8:45 AM peak analysis hour, while nearly 54 percent depart during 3-4 PM peak analysis hour, resulting in eleven arrivals and three departures during the AM peak hour and six arrivals and 23 departures during the PM peak hour.

Table 15-9: AM Modal Split and Trip Generation Data (7:45-8:45 AM)

Travel Mode	% K-8 Students	% Staff	K-8 Student Person-Trips [1]	Staff Person-Trips	Student Vehicle-Trips	Staff Vehicle-Trips
Walk	71	5	538 [2]	2	N/A	N/A
Auto	19	58	146	11	166 [3]	14 [4]
General Education School Bus	2	N/A	13	N/A	4 [5]	N/A
Public Transit / Other	8	37	60	8	N/A	N/A
TOTAL	**100**	**100**	**757**	**21**	**170**	**14**

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 percentage of grades K-4 students walking to school is 67 percent versus 76 percent for grades 5-8.
3. The student auto trips consist of 83 arrivals and 83 departures during the 7:45-8:45 AM analysis hour, assuming a vehicle occupancy of 1.8 and 1.7 students per auto for grades K-4 and grades 5-8, respectively. The percentage of grades K-4 students being driven to school is 23 percent versus 15 percent for grades 5-8.
4. The staff auto trips consist of eleven arrivals and three departures to and from the area during the 7:45-8:45 AM analysis hour, assuming a vehicle occupancy rate of 1.1 persons per auto. This includes eight teachers driving/carpooling to the school and three teachers being dropped off at the school.
5. The general education school bus trips consist of two arrivals and two departures during the 7:45-8:45 AM analysis hour, assuming an occupancy rate of seven students per bus.

Table 15-10: PM Modal Split and Trip Generation Data (3-4 PM)

Travel Mode	% K-8 Students	% Staff	K-8 Student Person-Trips [1]	Staff Person-Trips	Student Vehicle-Trips	Staff Vehicle-Trips
Walk	74	5	492 [2]	2	N/A	N/A
Auto	17	58	113	23	126 [3]	29 [4]
General Education School Bus	2	N/A	13	N/A	4 [5]	N/A
Public Transit / Other	7	37	50	15	N/A	N/A
TOTAL	**100**	**100**	**668**	**40**	**130**	**29**

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 percentage of grades K-4 students walking to school is 68 percent versus 81 percent for grades 5-8.
3. The student auto trips consist of 63 arrivals and 63 departures during the 3-4 PM analysis hour, assuming a vehicle occupancy of 1.8 and 1.7 students per auto for grades K-4 and grades 5-8, respectively. The percentage of grades K-4 students being driven to school is 21 percent versus 12 percent for grades 5-8.
4. The staff auto trips consist of six arrivals and 23 departures to and from the area during the 3-4 PM analysis hour, assuming a vehicle occupancy rate of 1.1 persons per auto. This includes 17 teachers driving/carpooling to the school and six teachers being dropped off at the school.
5. The general education school bus trips consist of two arrivals and two departures during the 3-4 PM analysis hour, assuming an occupancy rate of seven students per bus.

Total Project Vehicle Trips Generated: The total number of new project-generated vehicle trips (autos and school buses) is projected to be 96 arrivals and 88 departures during the AM and 71 arrivals and 88 departures during the PM peak hours.

Project Vehicle Assignment: While the proposed school is located in CSD No. 15, it is expected to service students residing in adjacent CSD No. 22 (see Figure 15-9).

As a means of allowing school buses to open their doors on the school block itself, SCA proposed to the New York City Department of Transportation (NYCDOT) to reverse the direction of traffic flow of vehicles currently traveling along the one block of westbound Turner Place to eastbound toward Coney Island Avenue. The reversal of traffic flow would change vehicle trip assignments through the study network, and the projected volume of school-related trips through certain intersections within the study area. Therefore, to determine the effect each scenario would have on the study area intersections, two scenarios were tested:

- Scenario 1: Build condition with Turner Place's existing one-way westbound traffic flow configuration;
- Scenario 2: Build condition with Turner Place's proposed one-way eastbound traffic flow configuration with stop control at eastbound Turner Place approach to Coney Island Avenue.

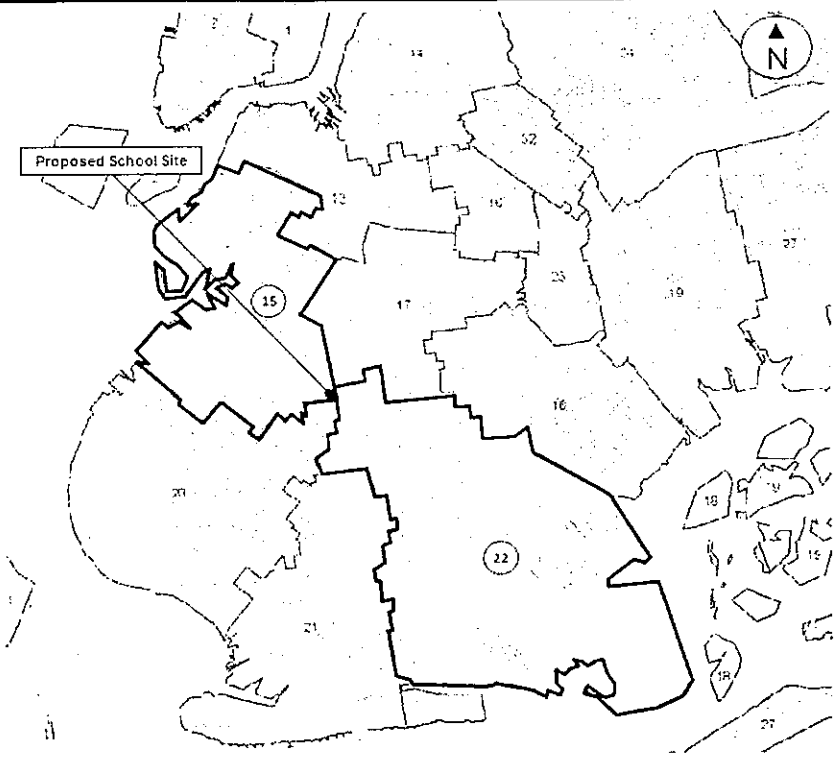

Figure 15-9: CSD 15 and 22 Boundaries

Source: STV Incorporated

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The following assignments for Scenarios 1 and 2 for student vehicle trips were derived accordingly: six percent would approach from the north using Coney Island Avenue; five percent would approach from the south via Coney Island Avenue; 46 percent would approach from the east along Caton and Church avenues, Beverly Road, and 18th Avenue, and 43 percent would approach from the west via Caton and Church avenues. The distribution of new student trips to the school was developed based on the concentration of residential developments within the school's catchment area, as well as the existing distribution of traffic along the main approach routes to the school.

The following assignments for Scenarios 1 and 2 for staff vehicle trips were derived accordingly: 22 percent would approach from the north using Coney Island Avenue; ten percent would approach from the south via Coney Island Avenue; 36 percent would approach from the east along Caton and Church avenues, Beverly Road, and 18th Avenue, and 32 percent would approach from the west via Caton and Church avenues. The distribution of new staff trips to the school was developed based on the origin data derived from the nearby school surveyed (P.S. 139).

Figures 15-10 to 15-13 show the respective volumes of all vehicle trips (students and teachers) that would be generated by the proposed school during the AM and PM peak hours for Scenarios 1 and 2. Figures 15-14 and 15-15 for Scenario 1 and Figures 15-16 and 15-17 for Scenario 2 indicate the total Build volumes during the AM and PM peak hours, respectively.

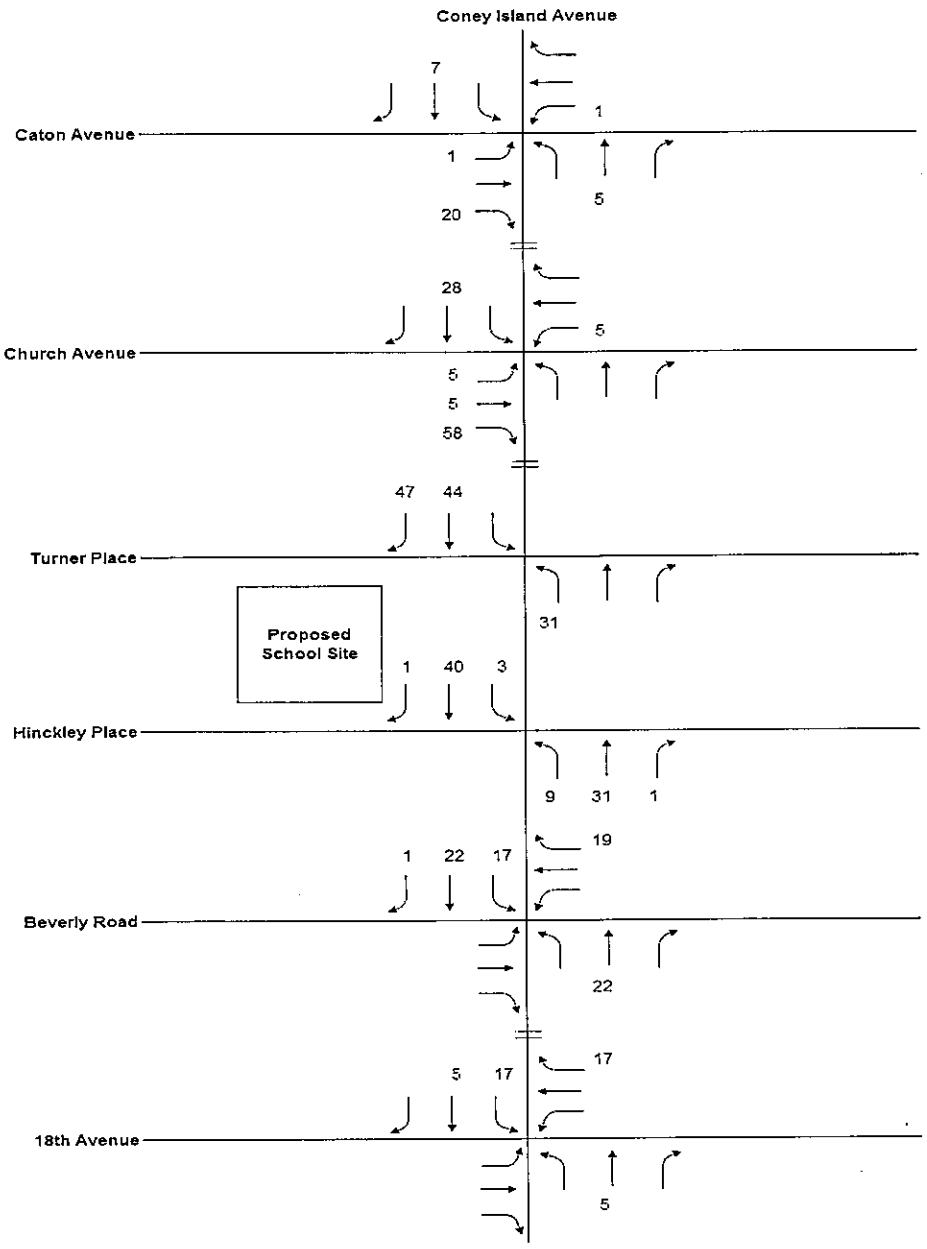

Figure 15-10: 2014 Build Increment (Op. 1) AM Peak Hour Traffic Volumes

N

Proposed PS/IS 338
New York City School Construction Authority

Source: STV Incorporated

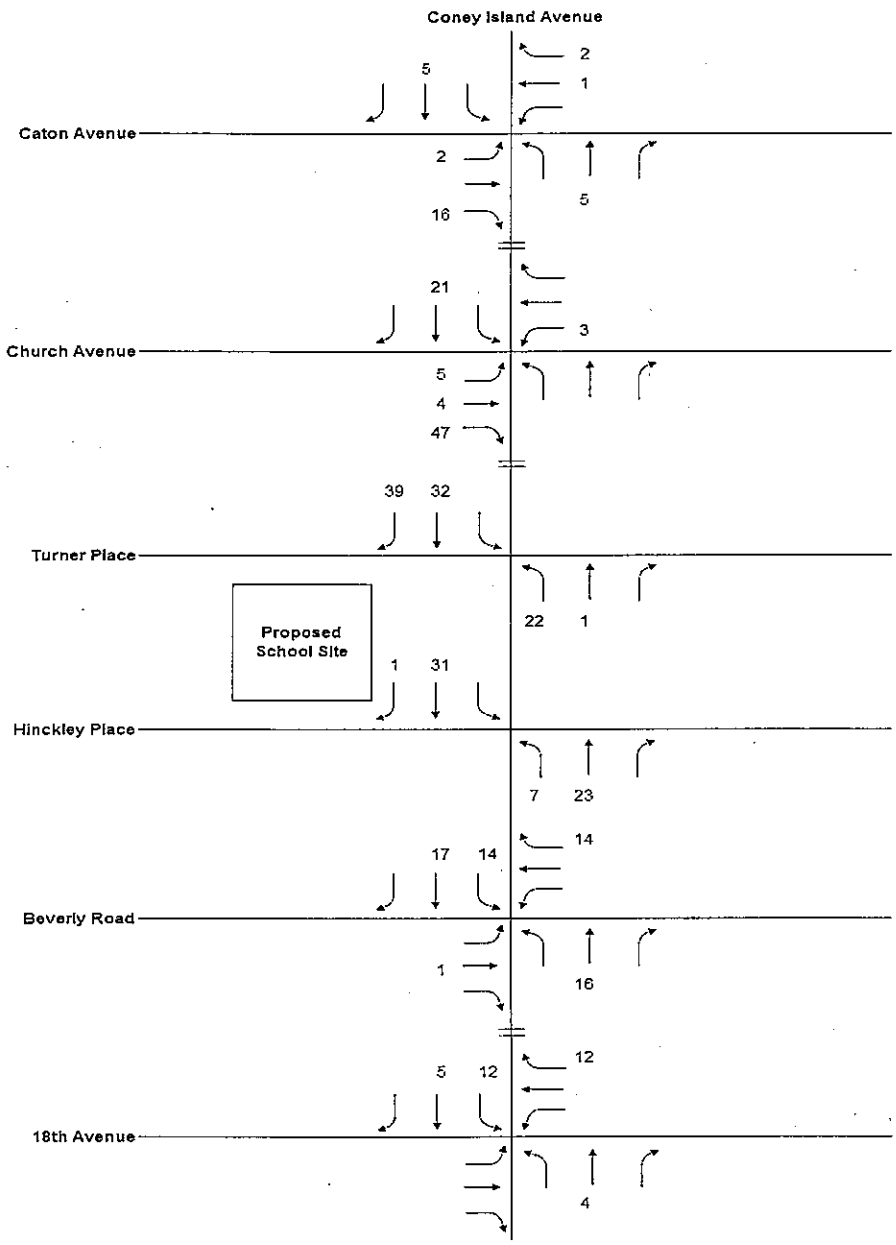

Figure 15-11: 2014 Build Increment (Op. 1) PM Peak Hour Traffic Volumes

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Source: STV Incorporated

Proposed PS/IS 338
New York City School Construction Authority

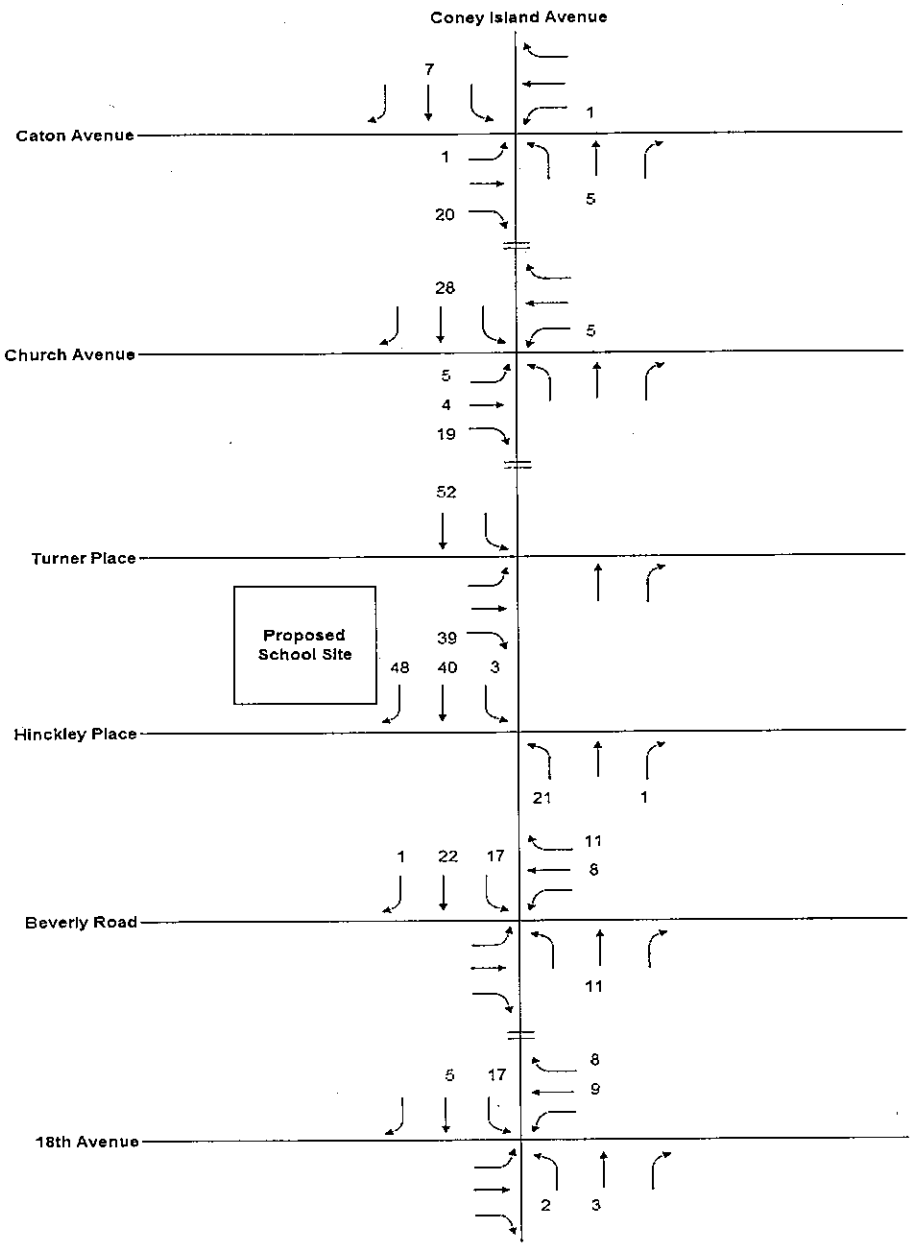

Figure 15-12: 2014 Build Increment (Op. 2) AM Peak Hour Traffic Volumes

N

Source: STV Incorporated

Proposed PS/IS 338
New York City School Construction Authority

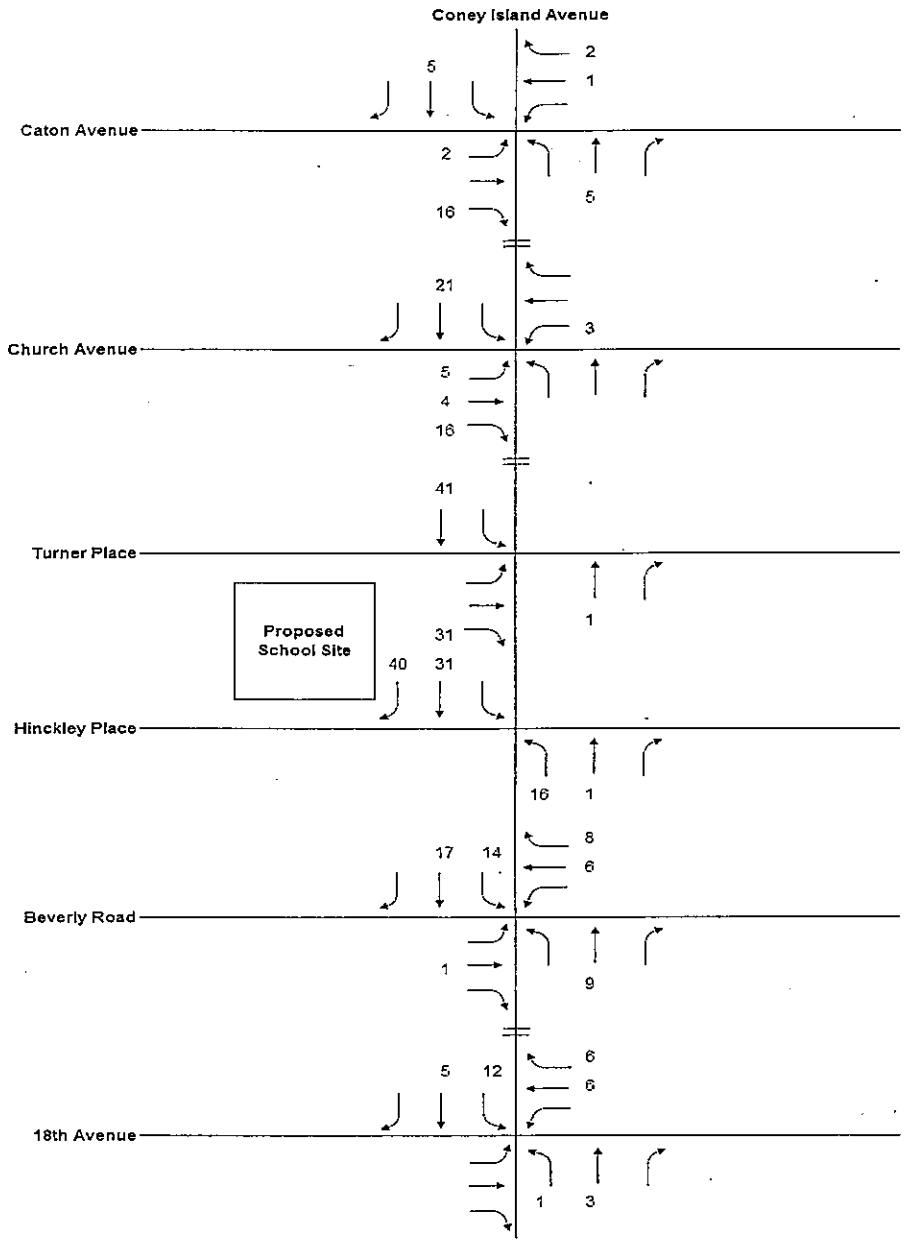

Figure 15-13: 2014 Build Increment (Op. 2) PM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS/IS 338
New York City School Construction Authority

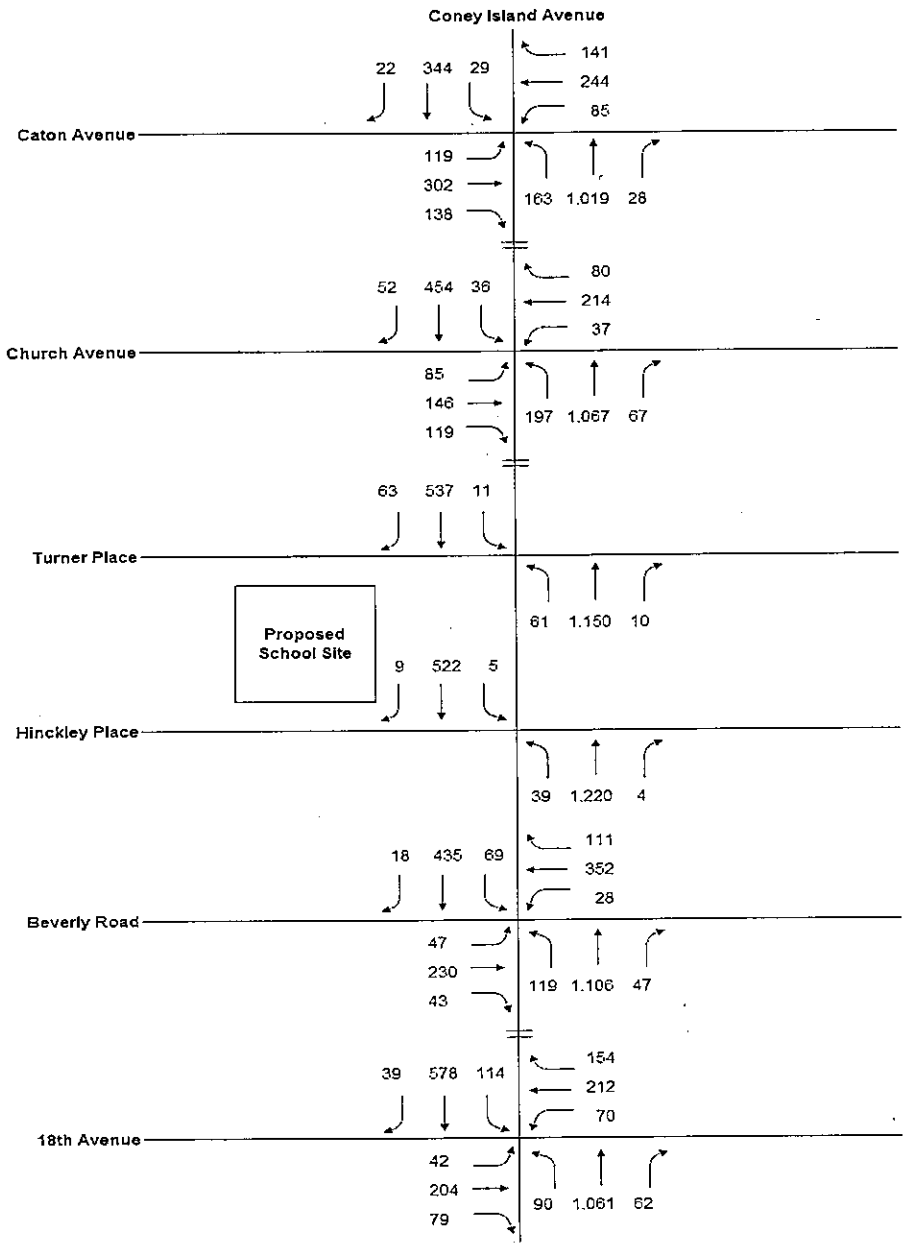

Figure 15-14: 2014 Build Conditions (Op. 1) AM Peak Hour Traffic Volumes

Source: STV Incorporated

Proposed PS/IS 338
New York City School Construction Authority

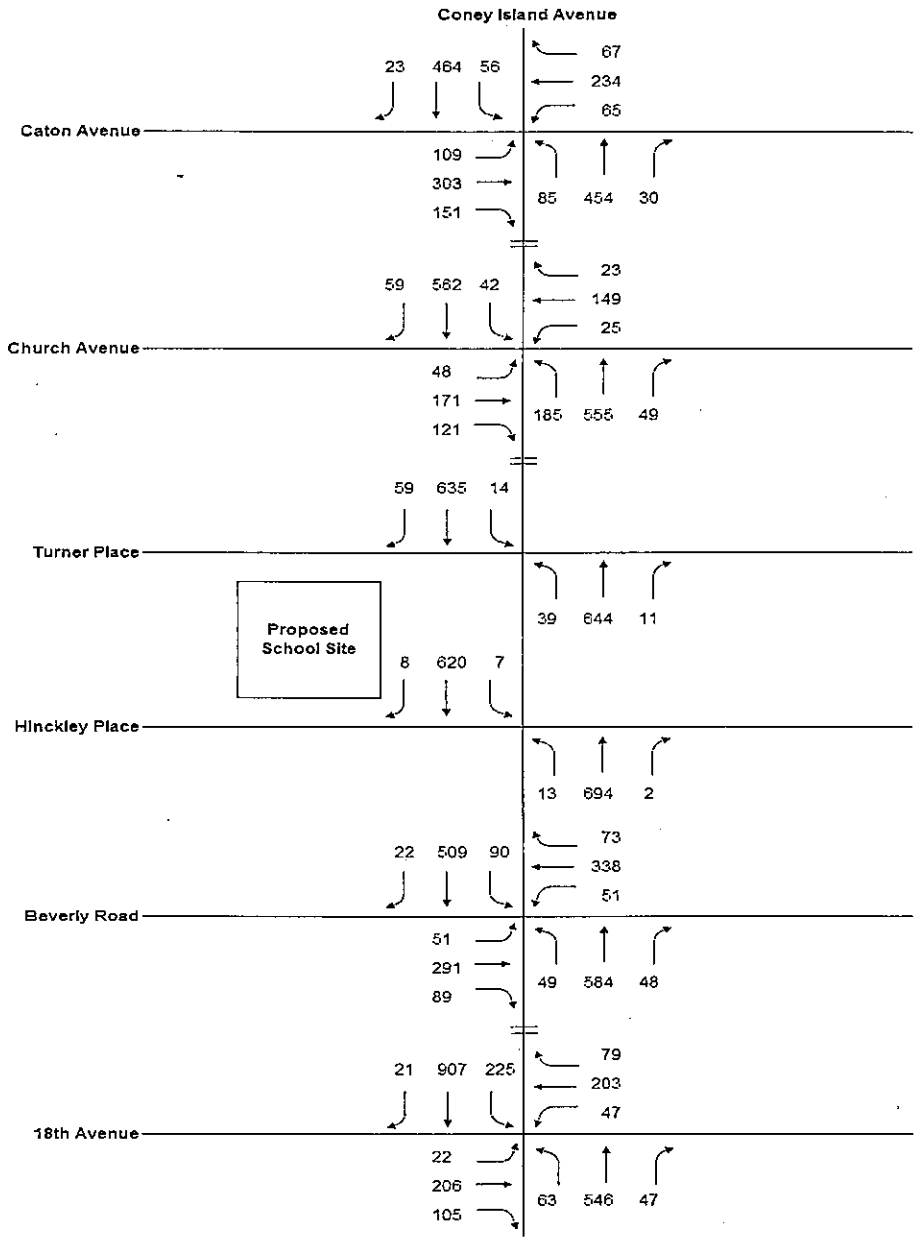

Figure 15-15: 2014 Build Conditions (Op. 1)
PM Peak Hour Traffic Volumes

Proposed PS/IS 338K
New York City School Construction Authority

Source: STV Incorporated

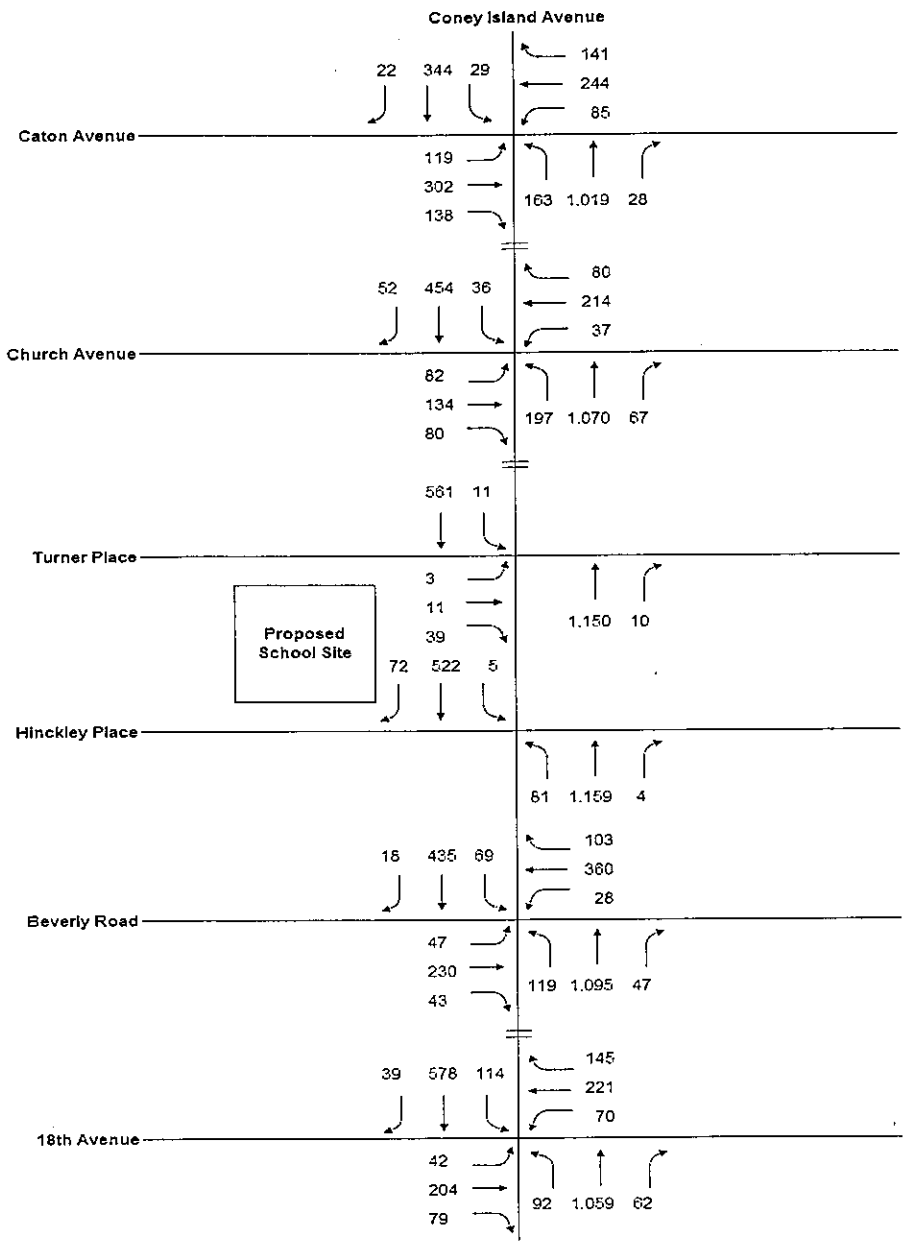

Figure 15-16: 2014 Build Conditions (Op. 2) AM Peak Hour Traffic Volumes

N

Source: STV Incorporated

Proposed PS/IS 338
New York City School Construction Authority

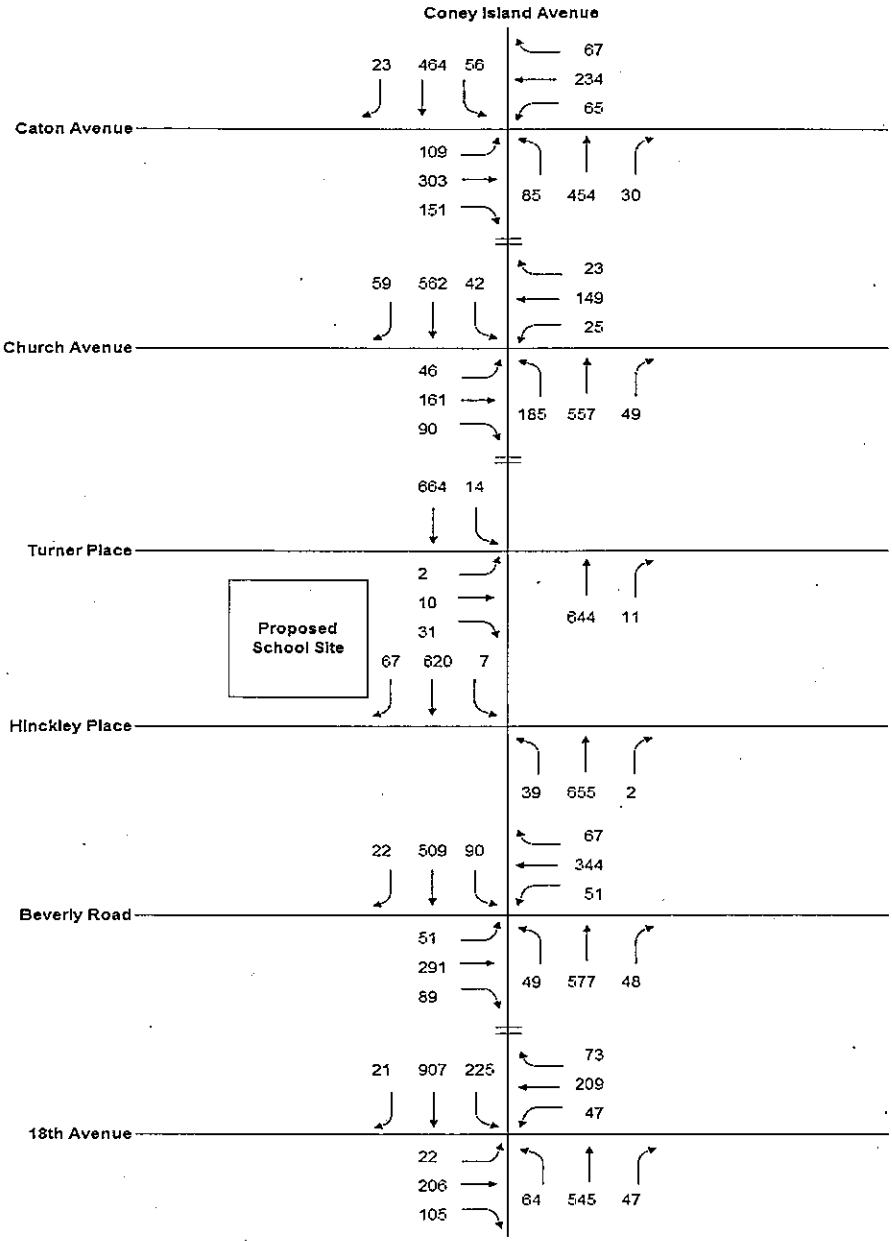

Figure 15-17: 2014 Build Conditions (Op. 2)
PM Peak Hour Traffic Volumes

Proposed PS/IS 338
New York City School Construction Authority

Source: STV Incorporated

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 car equivalents (PCEs) must be identified in the future Build condition. 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 condition for Scenario 1 indicated that significant traffic impacts would be expected at the following locations during the weekday AM and PM peak hours (see Table 15-11):

- Coney Island Avenue's northbound left-turn movement onto westbound Church Avenue would incur a 5.2-second increase in delay, thereby worsening beyond acceptable LOS mid-D conditions during the AM peak hour.
- Beverly Road's westbound approach would incur a 24.1- and 6.6-second increase in delay, thereby worsening the No Build LOS F and E conditions during the AM and PM peak hours, respectively.
- Coney Island Avenue's southbound left-turn movement onto 18th Avenue would incur a 47.9-second increase in delay, causing conditions to worsen the No Build LOS F conditions during the AM peak.

The level-of-service analysis for the Build condition for Scenario 2 indicated that significant traffic impacts would be expected at the following locations during the weekday AM and PM peak hours (see Table 15-12):

- Coney Island Avenue's northbound left-turn movement onto westbound Church Avenue would incur a 5.2-second increase in delay, thereby worsening beyond acceptable LOS mid-D conditions during the AM peak hour.
- Beverly Road's westbound approach would incur a 23.1- and 6.3-second increase in delay, thereby worsening the No Build LOS F and E conditions during the AM and PM peak hours, respectively.
- Coney Island Avenue's southbound left-turn movement onto 18th Avenue would incur a 44.5-second increase in delay, causing conditions to worsen the No Build LOS F conditions during the AM peak.

- The proposed stop-controlled approach at eastbound Turner Place and Coney Island Avenue would operate at unacceptable LOS F and E during the AM and PM peak hours, respectively.

Table 15-11: 2014 Build Conditions Traffic Operations (Scenario 1)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Coney Island and Caton Avenues								
Caton Avenue	EB	L	0.61	43.2	D	0.47	34.8	C
		TR	0.69	37.4	D	0.72	38.4	D
	WB	L	0.53	40.8	D	0.54	44.3	D
		TR	0.81	47.3	D	0.68	38.7	D
Coney Island Avenue	NB	L	0.40	18.8	B	0.26	16.4	B
		TR	0.66	21.6	C	0.33	15.9	B
	SB	L	0.20	16.9	B	0.16	14.7	B
		TR	0.21	14.5	B	0.25	14.9	B
Overall Intersection		-		**28.2**	**C**		**25.9**	**C**
Coney Island and Church Avenues								
Church Avenue	EB	LT	0.42	29.8	C	0.50	38.7	D
		R	0.35	29.4	C	0.54	43.3	D
	WB	LTR	0.72	40.4	D	0.60	42.9	D
Coney Island Avenue	NB	L	0.76	46.6	D	0.67	33.5	C
		TR	0.82	35.9	D	0.37	18.5	B
	SB	L	0.23	23.0	C	0.12	10.2	B
		TR	0.37	16.4	B	0.38	11.7	B
Overall Intersection		-		**32.3**	**C**		**24.1**	**C**
Coney Island Avenue and Beverly Road								
Beverly Road	EB	LTR	0.75	49.0	D	0.80	46.7	D
	WB	LTR	1.12	120.8	F	0.93	62.3	E
Coney Island Avenue	NB	L	0.27	11.2	B	0.15	12.3	B
		TR	0.67	16.0	B	0.42	14.7	B
	SB	L	0.65	40.0	D	0.30	15.1	B
		TR	0.25	9.9	A	0.33	13.4	B
Overall Intersection		-		**41.1**	**D**		**31.0**	**C**
Coney Island and 18th Avenues								
18th Avenue	EB	LTR	0.55	31.9	C	0.73	47.6	D
	WB	LTR	0.86	49.8	D	0.81	55.4	E
Coney Island Avenue	NB	L	0.33	18.7	B	0.51	24.7	C
		TR	0.79	26.6	C	0.37	11.1	B
	SB	L	1.10	140.6	F	0.85	42.8	D
		TR	0.45	18.1	B	0.54	13.4	B
Overall Intersection		-		**33.7**	**C**		**25.8**	**C**
Unsignalized								
Coney Island Avenue and Turner Place								
Coney Island Avenue	NB	L	0.10	11.4	B	0.08	12.2	B
	SB	L	0.03	14.0	B	0.02	9.9	A
Coney Island Avenue and Hinckley Place								
Coney Island Avenue	NB	L	0.07	11.5	B	0.03	12.3	B
	SB	L	0.01	14.0	B	0.01	9.8	A

Table 15-12: 2014 Build Conditions Traffic Operations (Scenario 2)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
Coney Island and Caton Avenues								
Caton Avenue	EB	L	0.61	43.2	D	0.47	34.8	C
		TR	0.69	37.4	D	0.72	38.4	D
	WB	L	0.53	40.8	D	0.54	44.3	D
		TR	0.81	47.3	D	0.68	38.7	D
Coney Island Avenue	NB	L	0.40	18.8	B	0.26	16.4	B
		TR	0.66	21.6	C	0.33	15.9	B
	SB	L	0.20	16.9	B	0.16	14.7	B
		TR	0.21	14.5	B	0.25	14.9	B
Overall Intersection		-		**28.2**	**C**		**25.9**	**C**
Coney Island and Church Avenues								
Church Avenue	EB	LT	0.39	29.2	C	0.47	38.0	D
		R	0.24	27.1	C	0.40	38.5	D
	WB	LTR	0.70	39.4	D	0.58	42.3	D
Coney Island Avenue	NB	L	0.76	46.6	D	0.67	33.5	C
		TR	0.83	36.0	D	0.38	18.5	B
	SB	L	0.23	23.0	C	0.12	10.2	B
		TR	0.37	16.4	B	0.38	11.7	B
Overall Intersection		-		**32.1**	**C**		**23.3**	**C**
Coney Island Avenue and Beverly Road								
Beverly Road	EB	LTR	0.75	49.0	D	0.80	46.7	D
	WB	LTR	1.12	119.8	F	0.93	62.0	E
Coney Island Avenue	NB	L	0.27	11.2	B	0.15	12.3	B
		TR	0.66	15.9	B	0.42	14.6	B
	SB	L	0.65	40.0	D	0.30	15.0	B
		TR	0.25	9.9	A	0.33	13.4	B
Overall Intersection		-		**41.0**	**D**		**31.0**	**C**
Coney Island and 18th Avenues								
18th Avenue	EB	LTR	0.55	31.9	C	0.73	47.6	D
	WB	LTR	0.86	49.4	D	0.80	55.0	D
Coney Island Avenue	NB	L	0.33	18.9	B	0.52	25.1	C
		TR	0.78	26.5	C	0.37	11.1	B
	SB	L	1.09	137.2	F	0.85	42.8	D
		TR	0.45	18.1	B	0.54	13.4	B
Overall Intersection		-		**33.5**	**C**		**25.7**	**C**
Unsignalized								
Coney Island Avenue and Turner Place								
Turner Place	EB	LTR	0.48	58.6	F	0.36	36.7	E
Coney Island Avenue	SB	L	0.03	14.0	B	0.02	9.9	A
Coney Island Avenue and Hinckley Place								
Coney Island Avenue	NB	L	0.16	12.6	B	0.09	13.2	B
	SB	L	0.01	13.5	B	0.01	9.6	A

Parking. According to CEQR, a parking shortfall that exceeds the number of off-street parking spaces and more than half the available on-street spaces within a ¼-mile of the site in a residential area is considered a significant parking impact, but the possibility also exists that very small shortfalls could be deemed insignificant. Based on the project trip generation, parking demands within walking distance of the proposed PS/IS 338 would increase by 32 staff vehicles during the week (see Table 15-13). This increase would represent an increased shortfall from 21 to 24 percent during regulation periods. This added parking demand by the new school would not be met since there are no off-street parking facilities (i.e., municipal lots, parking garages) within the study area to alleviate the increased parking shortfall during both regulation and no-regulation periods. Though the shortfall percent increase is small, the 32-space increase in parking demand during regulation periods would constitute a significant parking impact.

Table 15-13: 2014 Build Parking Supply and Demand

Parking Parameter	w/Regs	w/o Regs
	On-Street	On-Street
Parking-Space Supply	1,205	1,944
Demand	1,493	1,906
(Occupancy Rate)	(124%)	(98%)
Spaces Available	-288	38
(Rate)	(-24%)	(2%)

Transit and Pedestrians. It is expected that seven percent of students and 32 percent of staff members bound for school would utilize public transit, resulting in approximately 63 arriving and 58 departing transit trips during the respective morning and afternoon analysis peak hours. According to general thresholds used by *CEQR* and NYCT, if the proposed action is projected to result in fewer than 200 peak hour bus transit riders, the action is considered unlikely to create a significant transit impact. Thus, no further technical analyses are needed.

Approximately 71 percent of students and five percent of the staff would be expected to walk to the proposed school during the AM peak hour, resulting in 540 pedestrian trips. In addition, 58 students and staff that would utilize public transit would walk from the bus/train stops to the school door.

During the PM peak hour, approximately 74 percent of students and five percent of the staff would be anticipated to walk from the proposed school, resulting in 494 pedestrian trips. Additionally, 58 student and staff members that would walk from the school door would use public transit. Staff members that would walk from their parked vehicles to the school were also counted during both analysis peak hours. These trips were assigned within the study area based on existing pedestrian movements.

According to the *CEQR Technical Manual,* an increase of 200 or more pedestrians per hour at any pedestrian element would typically be considered a significant impact. When the expected

pedestrian trips to be generated by the proposed PS/IS were assigned to the study area network, it was found that no single pedestrian element would likely experience an increase of 200 people or more. In addition, CEQR guidelines further dictate that, for corner and crosswalk analyses, the proposed action should not create a significant impact unless analyses resulted in average occupancies of less than 20 sf/ped (mid-LOS D). As shown in Table 15-14, all crosswalks and corners would continue to function acceptably at LOS C or better, and no further technical analyses are required.

Table 15-14: 2014 Build Pedestrian Conditions

INTERSECTION and ELEMENT	AM Peak		PM Peak	
	Average Space (sf/ped)	LOS	Average Space (sf/ped)	LOS
Coney Island and Church Avenues				
Northeast Corner	101	A	106	A
Southeast Corner	83	A	65	B
Northwest Corner	141	A	132	A
Southwest Corner	47	B	28	C
North Crosswalk	114	A	77	A
South Crosswalk	134	A	71	A
East Crosswalk	153	A	166	A
West Crosswalk	79	A	76	A
Coney Island Avenue and Beverly Road				
Northeast Corner	117	A	133	A
Southeast Corner	118	A	125	A
Northwest Corner	163	A	148	A
Southwest Corner	38	C	32	C
North Crosswalk	55	B	71	A
South Crosswalk	79	A	85	A
East Crosswalk	115	A	103	A
West Crosswalk	75	A	70	A

Safety. The magnitudes of the vehicular and pedestrian volumes that would be generated by the proposed school are not anticipated to adversely affect safety in the area. However, it is recommended that a school crossing guard be stationed at the Coney Island Avenue/Turner Place intersection to enhance pedestrian safety.

D. PROPOSED TRAFFIC AND PARKING IMPROVEMENTS

Coney Island Avenue and Church Avenue: The operation of Coney Island Avenue's northbound left-turn movement at Church Avenue could be improved by shifting one second of green time from Coney Island Avenue's southbound exclusive lead phase to Coney Island Avenue's north/southbound lag phase during the weekday AM peak hour, which would

restore the northbound left-turn movement LOS to the No Build condition. This improvement would be applicable for both Scenarios 1 and 2 (see Tables 15-15 and 15-16).

Coney Island Avenue and Beverly Road: The operation of Beverly Road's westbound approach at Coney Island Avenue could be improved by shifting two seconds of green time from north/southbound Coney Island Avenue to east/westbound Beverly Road, and shifting an additional eleven seconds of green time from north/southbound Coney Island Avenue and providing an exclusive north/southbound left-turn phase. Implementing these signal timing modifications would improve Beverly Road's westbound approach to No Build conditions during the AM and PM peak hours. This improvement would be applicable for both Scenarios 1 and 2 (see Tables 15-15 and 15-16).

Coney Island Avenue and 18th Avenue: The operation of Coney Island Avenue's southbound left-turn movement at 18th Avenue could be improved by prohibiting curb parking along northbound Coney Island Avenue, shifting eleven seconds of green time from north/southbound Coney Island Avenue and providing an exclusive north/southbound left-turn phase, which would return the impacted movement to No Build LOS during the AM peak hour. This improvement would be applicable for both Scenarios 1 and 2 (see Tables 15-15 and 15-16).

Coney Island Avenue and Turner Place: The operation of Turner Place's eastbound approach for Scenario 2 could be improved by installing new signal controls at the intersection, in lieu of the current stop controls (see Table 15-16). The 2003 edition of the *Manual on Uniform Traffic Control Devices (MUTCD)* was used to determine whether or not the intersection of Coney Island Avenue and Turner Place would warrant a traffic signal. Warrant 5, the School Crossing warrant, was chosen to ascertain whether a signal is warranted at this intersection since it applies to locations where traffic conditions are such that:

- Condition #1: The number of adequate gaps in the traffic stream during the period when the children are using the crossing is less than the number of minutes in the same period; and
- Condition #2: There are a minimum of 20 students during the highest crossing hour.

Alternate gaps and blockages are inherent in the traffic stream and are different at each crossing location. For safety, students need to wait for a gap in traffic that is of sufficient duration to permit reasonably safe crossing. When the delay between the occurrence of adequate gaps becomes excessive, students might become impatient and endanger themselves by attempting to cross the street during an inadequate gap.

Coney Island Avenue is a wide and heavily traveled arterial that provides very few traffic gaps for pedestrians to cross. Field observations indicate that the optimal moment for crossing is when the upstream and downstream traffic signals along Coney Island Avenue at Church Avenue and Beverly Road are red, which allow for the traffic stream to subside and provide adequate gaps to cross. Each of these two traffic signals has a 120-second cycle length, thus providing a maximum of only 30 gaps per peak analysis hour for school children to cross. Since the number of gaps (approximately 30) is less than the number of minutes during each analysis period (60 minutes), Condition #1 of the School Crossing Warrant is met.

Table 15-15: 2014 Improved Build Conditions Traffic Operations (Scenario 1)

INTERSECTION & APPROACH		Mvt.	No Build V/C	No Build Control Delay	No Build LOS	Mvt.	Build V/C	Build Control Delay	Build LOS	Mvt.	Mitigated Build V/C	Mitigated Build Control Delay	Mitigated Build LOS	Improvement Measures
AM Peak														
Coney Island and Church Avenues														
Church Avenue	EB	LT	0.40	29.4	C	LT	0.42	29.8	C	LT	0.42	29.8	C	- Shift 1.0 second of green time from Coney Island Avenue's southbound exclusive lead phase to Coney Island Avenue's north/southbound lag phase.
		R	0.18	26.1	C	R	0.35	29.4	C	R	0.35	29.4	C	
	WB	LTR	0.67	37.5	D	LTR	0.72	40.4	D	LTR	0.72	40.4	D	
Coney Island Avenue	NB	L	0.71	41.4	D	L	0.76	46.6	D	L	0.74	44.3	D	
		TR	0.82	35.7	D	TR	0.82	35.9	D	TR	0.81	34.4	C	
	SB	L	0.23	23.0	C	L	0.23	23.0	C	L	0.25	23.4	C	
		TR	0.34	16.1	B	TR	0.37	16.4	B	TR	0.36	16.4	B	
	Overall Intersection	-		**31.5**	**C**	-		**32.3**	**C**	-		**31.5**	**C**	
Coney Island Avenue and Beverly Road														
Beverly Road	EB	LTR	0.75	48.8	D	LTR	0.75	49.0	D	LTR	0.71	45.1	D	- Shift 2.0 seconds of green time from north/southbound Coney Island Avenue to east/westbound Beverly Road.
	WB	LTR	1.05	96.7	F	LTR	1.12	120.8	F	LTR	1.06	96.1	F	
Coney Island Avenue	NB	L	0.25	10.8	B	L	0.27	11.2	B	L	0.29	11.7	B	
		TR	0.66	15.7	B	TR	0.67	16.0	B	TR	0.81	28.4	C	- Shift 11.0 seconds of green time from north/southbound Coney Island Avenue to provide an exclusive north/southbound left-turn phase. Exclusive left-turn green = 6 seconds Yellow + all-red time = 3 + 2 seconds
	SB	L	0.49	26.4	C	L	0.65	40.0	D	L	0.57	43.3	D	
		TR	0.23	9.8	A	TR	0.25	9.9	A	TR	0.30	16.5	B	
	Overall Intersection	-		**35.7**	**D**	-		**41.1**	**D**	-		**42.1**	**D**	
Coney Island and 18th Avenues														
18th Avenue	EB	LTR	0.55	31.9	C	LTR	0.55	31.9	C	LTR	0.55	31.9	C	- Shift 11.0 seconds of green time from north/southbound Coney Island Avenue to provide an exclusive north/southbound left-turn phase. Exclusive left-turn green = 6 seconds Yellow + all-red time = 3 + 2 seconds - Prohibit parking along northbound Coney Island Avenue
	WB	LTR	0.83	46.5	D	LTR	0.86	49.8	D	LTR	0.86	49.8	D	
Coney Island Avenue	NB	L	0.32	18.6	B	L	0.33	18.7	B	L	0.32	18.1	B	
		TR	0.78	26.4	C	TR	0.79	26.6	C	TR	0.90	40.3	D	
	SB	L	0.93	92.7	F	L	1.10	140.6	F	L	0.91	79.4	E	
		TR	0.44	18.1	B	TR	0.45	18.1	B	TR	0.54	26.2	C	
	Overall Intersection	-		**30.6**	**C**	-		**33.7**	**C**	-		**38.6**	**D**	
PM Peak														
Coney Island Avenue and Beverly Road														
Beverly Road	EB	LTR	0.79	46.5	D	LTR	0.80	46.7	D	LTR	0.76	42.8	D	- Shift 2.0 seconds of green time from north/southbound Coney Island Avenue to east/westbound Beverly Road.
	WB	LTR	0.88	55.7	E	LTR	0.93	62.3	E	LTR	0.88	54.0	D	
Coney Island Avenue	NB	L	0.14	12.1	B	L	0.15	12.3	B	L	0.16	13.4	B	
		TR	0.41	14.5	B	TR	0.42	14.7	B	TR	0.52	23.5	C	- Shift 11.0 seconds of green time from north/southbound Coney Island Avenue to provide an exclusive north/southbound left-turn phase. Exclusive left-turn green = 6 seconds Yellow + all-red time = 3 + 2 seconds
	SB	L	0.24	13.9	B	L	0.30	15.1	B	L	0.31	16.0	B	
		TR	0.32	13.3	B	TR	0.33	13.4	B	TR	0.40	21.4	C	
	Overall Intersection	-		**29.6**	**C**	-		**31.0**	**C**	-		**32.9**	**C**	

Table 15-16: 2014 Improved Build Conditions Traffic Operations (Scenario 2)

INTERSECTION & APPROACH		No Build				Build				Mitigated Build				Improvement Measures
		Mvt.	V/C	Control Delay	LOS	Mvt.	V/C	Control Delay	LOS	Mvt.	V/C	Control Delay	LOS	
AM Peak														
Coney Island and Church Avenues														
Church Avenue	EB	LT	0.40	29.4	C	LT	0.39	29.2	C	LT	0.39	29.2	C	- Shift 1.0 second of green time from Coney Island Avenue's southbound exclusive lead phase to Coney Island Avenue's north/southbound lag phase.
		R	0.18	26.1	C	R	0.24	27.1	C	R	0.24	27.1	C	
	WB	LTR	0.67	37.5	D	LTR	0.70	39.4	D	LTR	0.70	39.4	D	
Coney Island Avenue	NB	L	0.71	41.4	D	L	0.76	46.6	D	L	0.74	44.3	D	
		TR	0.82	35.7	D	TR	0.83	36.0	D	TR	0.81	34.5	C	
	SB	L	0.23	23.0	C	L	0.23	23.0	C	L	0.25	23.4	C	
		TR	0.34	16.1	B	TR	0.37	16.4	B	TR	0.36	16.4	B	
Overall Intersection		-		**31.5**	**C**	-		**32.1**	**C**	-		**31.3**	**C**	
Coney Island Avenue and Turner Place														
Turner Place	EB	LTR	N/A	N/A	N/A	LTR	0.48	58.6	F	LTR	0.09	24.5	C	- Install new signal with 120-second cycle: Phase 1: East/westbound approaches Green time = 45 seconds Yellow + all-red time = 3 + 2 seconds Phase 2: North/southbound approaches Green time = 65 seconds Yellow + all-red time = 3 + 2 seconds
Coney Island Avenue	NB	L	0.04	9.1	A	L	N/A	N/A	N/A	TR	0.77	25.2	C	
	SB	L	0.03	13.9	B	L	0.03	14.0	B	LTR	0.12	16.0	B	
										T	0.35	16.2	B	
Overall Intersection		-		N/A	N/A	-		N/A	N/A	-		22.4	C	
Coney Island Avenue and Beverly Road														
Beverly Road	EB	LTR	0.75	48.8	D	LTR	0.75	49.0	D	LTR	0.71	45.1	D	- Shift 2.0 seconds of green time from north/southbound Coney Island Avenue to east/westbound Beverly Road.
	WB	LTR	1.05	96.7	F	LTR	1.12	119.8	F	LTR	1.06	96.1	F	
Coney Island Avenue	NB	L	0.25	10.8	B	L	0.27	11.2	B	L	0.29	11.7	B	
		TR	0.66	15.7	B	TR	0.66	15.9	B	TR	0.80	28.0	C	- Shift 11.0 seconds of green time from north/southbound Coney Island Avenue to provide an exclusive north/southbound left-turn phase. Exclusive left-turn green = 6 seconds Yellow + all-red time = 3 + 2 seconds
	SB	L	0.49	26.4	C	L	0.65	40.0	D	L	0.56	41.6	D	
		TR	0.23	9.8	A	TR	0.25	9.9	A	TR	0.30	16.5	B	
Overall Intersection		-		35.7	D	-		41.0	D	-		42.0	D	

Table 15-16: 2014 Improved Build Conditions Traffic Operations (Scenario 2), cont'd

INTERSECTION & APPROACH		No Build				Build				Mitigated Build			Improvement Measures
	Mvt.	V/C	Control Delay	LOS	Mvt.	V/C	Control Delay	LOS	Mvt.	V/C	Control Delay	LOS	
AM Peak													
Coney Island and 18th Avenues													
18th Avenue EB	LTR	0.55	31.9	C	LTR	0.55	31.9	C	LTR	0.55	31.9	C	- Shift 11.0 seconds of green time from north/southbound Coney Island Avenue to provide an exclusive north/southbound left-turn phase. Exclusive left-turn green = 6 seconds Yellow + all-red time = 3 + 2 seconds - Prohibit parking along northbound Coney Island Avenue
WB	LTR	0.83	46.5	D	LTR	0.86	49.4	D	LTR	0.86	49.4	D	
Coney Island Avenue NB	L	0.32	18.6	B	L	0.33	18.9	B	L	0.33	18.2	B	
	TR	0.78	26.4	C	TR	0.78	26.5	C	TR	0.89	40.2	D	
SB	L	0.93	92.7	F	L	1.09	137.2	F	L	0.91	79.3	E	
	TR	0.44	18.1	B	TR	0.45	18.1	B	TR	0.54	26.2	C	
Overall Intersection	-		**30.6**	**C**	-		**33.5**	**C**	-		**38.4**	**D**	
PM Peak													
Coney Island Avenue and Turner Place													
Turner Place EB	LTR	N/A	N/A	N/A	LTR	0.36	36.7	E	LTR	0.12	31.7	C	- Install new signal with 120-second cycle: Phase 1: East/westbound approaches Green time = 35 seconds Yellow + all-red time = 3 + 2 seconds Phase 2: North/southbound approaches Green time = 75 seconds Yellow + all-red time = 3 + 2 seconds
Coney Island Avenue NB	L	0.02	9.7	A	L	N/A	N/A	N/A	TR	0.39	11.8	B	
SB	L	0.02	9.8	A	L	0.02	9.9	A	L	0.14	11.9	B	
									T	0.37	11.6	B	
Overall Intersection	-		**N/A**	**N/A**	-		**N/A**	**N/A**	-		**12.6**	**B**	
Coney Island Avenue and Beverly Road													
Beverly Road EB	LTR	0.79	46.5	D	LTR	0.80	46.7	D	LTR	0.76	42.8	D	- Shift 2.0 seconds of green time from north/southbound Coney Island Avenue to east/westbound Beverly Road. - Shift 11.0 seconds of green time from north/southbound Coney Island Avenue to provide an exclusive north/southbound left-turn phase. Exclusive left-turn green = 6 seconds Yellow + all-red time = 3 + 2 seconds
WB	LTR	0.88	55.7	E	LTR	0.93	62.0	E	LTR	0.88	53.8	D	
Coney Island Avenue NB	L	0.14	12.1	B	L	0.15	12.3	B	L	0.16	13.4	B	
	TR	0.41	14.5	B	TR	0.42	14.6	B	TR	0.52	23.4	C	
SB	L	0.24	13.9	B	L	0.30	15.0	B	L	0.31	15.9	B	
	TR	0.32	13.3	B	TR	0.33	13.4	B	TR	0.40	21.4	C	
Overall Intersection	-		**29.6**	**C**	-		**31.0**	**C**	-		**32.9**	**C**	

The total number of students anticipated to cross the north and south crosswalks of Coney Island Avenue at Turner Place during both the AM and PM peak hours are approximately 45, thereby satisfying Condition #2 of the School Crossing Warrant. A proposed signal timing plan for Coney Island Avenue and Turner Place is presented in Figures 15-18 and 15-19.

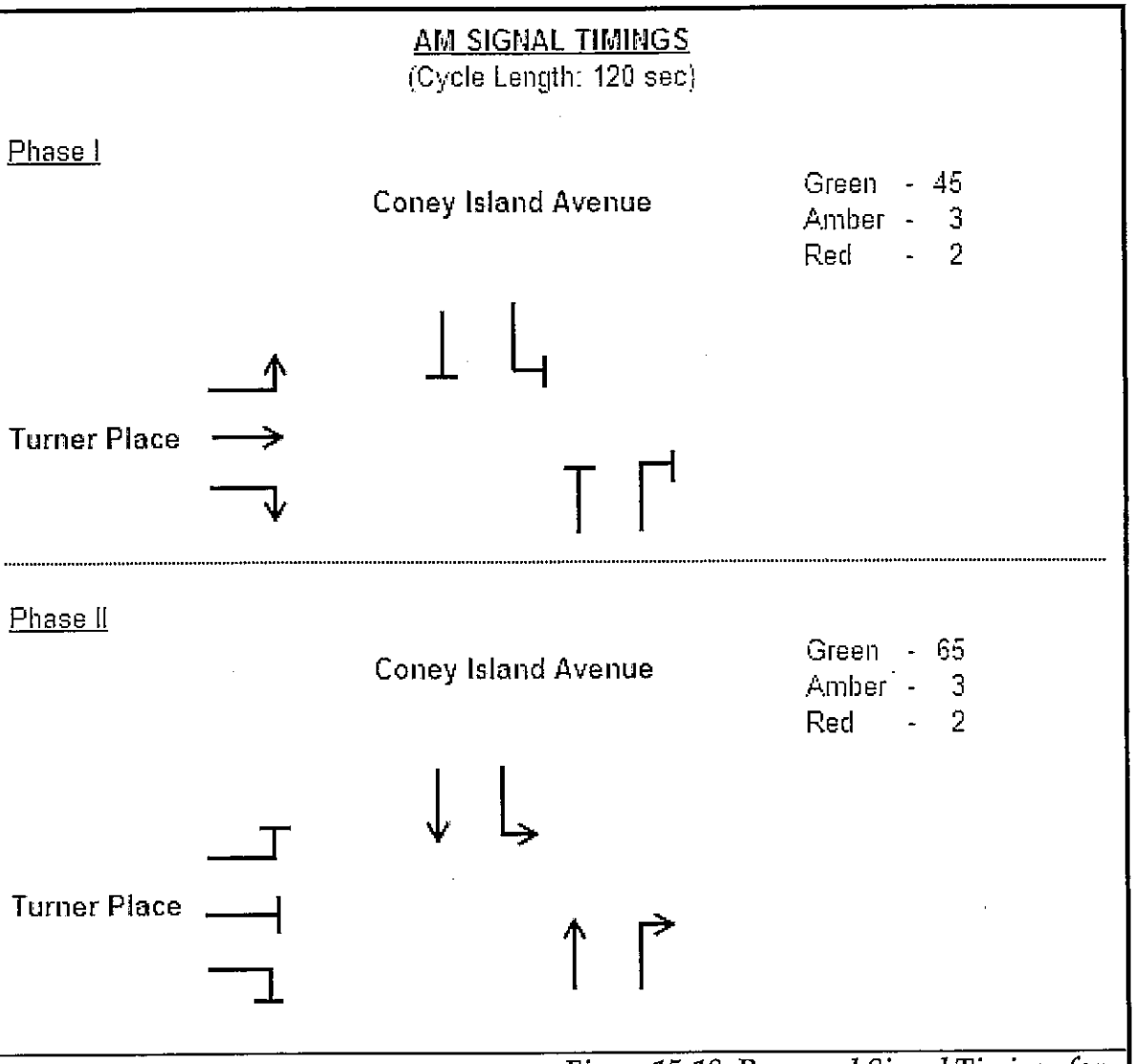

Figure 15-18: Proposed Signal Timings for Coney Island Avenue and Turner Place (Op. 2)

Source: STV Incorporated

Proposed PS/IS 338
New York City School Construction Authority

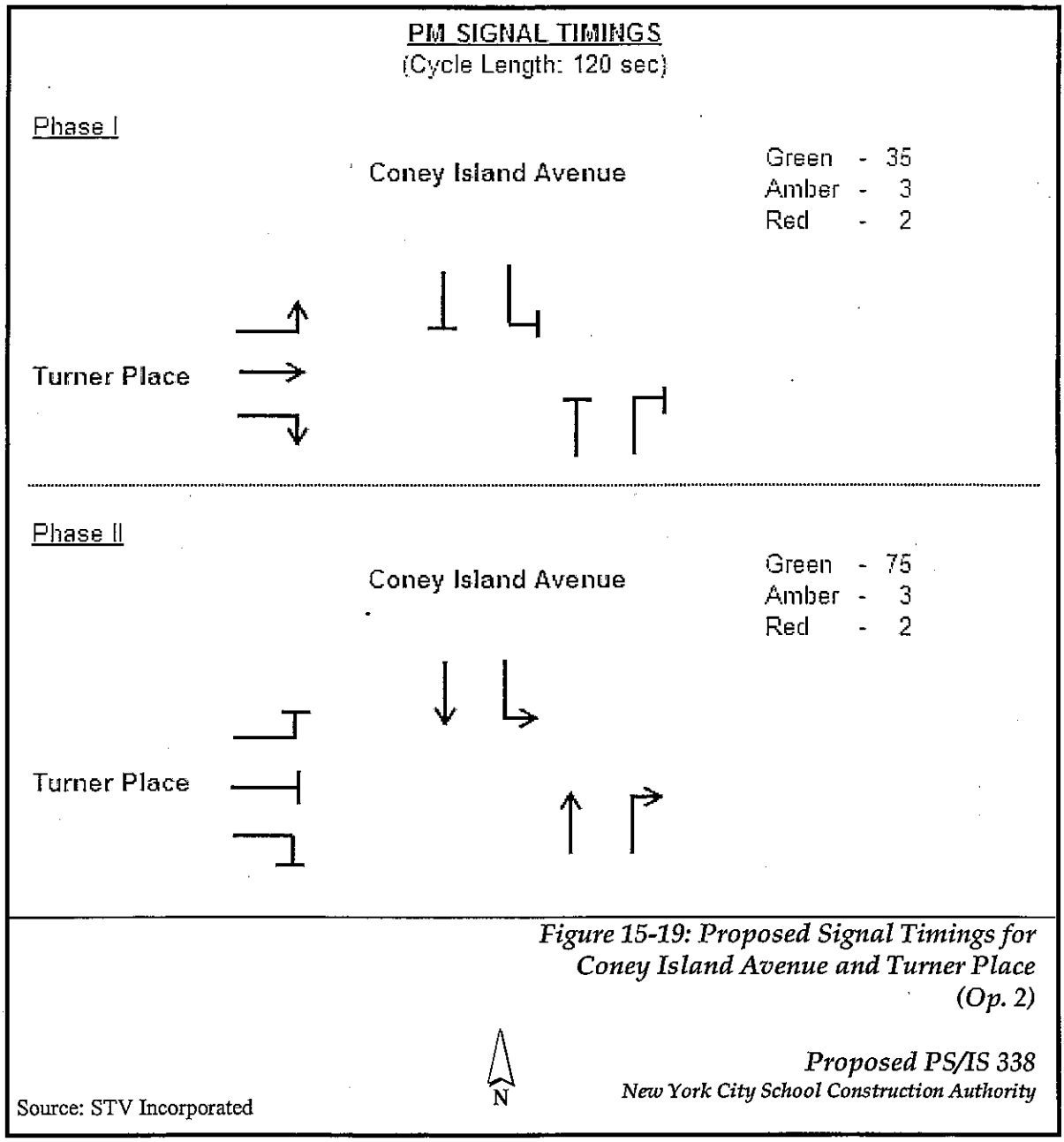

Figure 15-19: Proposed Signal Timings for Coney Island Avenue and Turner Place (Op. 2)

Parking. The proposed project would result in a significant parking impact (i.e., shortfall) during regulation periods. This impact could be mitigated by altering the parking restrictions along nine block faces in the quarter-mile radius parking study area from Monday, when most parking restrictions are in effect and a parking-space shortfall exists, to Friday, when there is an excess of available on-street capacity. The time period for the regulations (11:30 AM to 1 PM) would remain the same. The following block faces were observed to have a surfeit of unoccupied curb spaces on Fridays, and are proposed for this mitigation:

- North side of Beverly Road between Ocean Parkway and Rugby Road
- West side of East 8th Street between Beverly Road and Avenue C

The parking-shortfall impacts of the project during regulation periods within the quarter-mile radius parking study area would be eliminated with this mitigation measure in place. However, the added parking demand by the project would exceed more than half the available on-street capacity on non-regulation days, when compared to No Build conditions (see Table 15-17).

CEQR indicates that the sufficiency of parking within a half-mile (rather than a quarter-mile) of the project site to accommodate the projected shortfall could also be considered in determining significant impacts. A comparison of the No Build on-street parking supply and demand versus Build demand with the proposed parking restrictions in the half-mile area shows that the parking shortfall resulting from the project would be fully mitigated, while a parking surplus would be maintained during non-regulation periods (see Table 15-18).

Table 15-17: 2014 No Build and Build with Mitigation Parking Supply and Demand (¼-mile study area)

Parking Parameter	No Build		Build w/Mitigation	
	w/Regs	w/o Regs	w/Regs	w/o Regs
Parking-Space Supply	1,205	1,944	1,299	1,850
Demand	1,461	1,874	1,554	1,845
(Occupancy Rate)	(121%)	(96%)	(120%)	(100%)
Spaces Available	-256	70	-255+	5++
(Rate)	-(21%)	(4%)	-(20%)	(0%)

+ Parking shortfall reduced to No Build levels; impact mitigated.

++ Though unused spaces would be available, this regulation change would reduce the available parking-space capacity by more than half.

Table 15-18: 2014 No Build and Build with Mitigation Parking Supply and Demand (½-mile study area)

Parking Parameter	No Build		Build w/Mitigation	
	w/Regs	w/o Regs	w/Regs	w/o Regs
Parking-Space Supply	4,008	5,675	4,102	5,581
Demand	4,438	5,219	4,531	5,190
(Occupancy Rate)	(111%)	(92%)	(110%)	(93%)
Spaces Available	-430	456	-429+	391+
(Rate)	-(11%)	(8%)	-(10%)	(7%)

+Parking shortfall reduced to No Build levels; impact mitigated.

CHAPTER 16: AIR QUALITY

The procedures followed in this analysis are generally those of the *CEQR Technical Manual*. In addition, the air quality characteristics are identified and discussed within the context of the Clean Air Act of 1990 requirements and other applicable state and local air quality standards.

Pollutants of Concern. The United States Environmental Protection Agency (USEPA) has identified several criteria pollutants as being of concern nationwide: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2), and lead (Pb). As a result, the USEPA has established National Ambient Air Quality Standards (NAAQS) for all of these criteria pollutants and has categorized these standards as "primary" and "secondary." **Primary standards** are designed to establish limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. **Secondary standards** set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The NAAQS for all of the criteria pollutants are listed in Table 16-1. In addition to criteria pollutants, greenhouse gases are also of concern and are discussed below.

Table 16-1: National and New York State Ambient Air Quality Standards

Pollutant	Averaging Period	New York AAQS		NAAQS	
		Primary	Secondary	Primary	Secondary
Carbon Monoxide (CO)	1-hour[1]	35 ppm	35 ppm	35 ppm	35 ppm
	8-hour[1]	9 ppm	9 ppm	9 ppm	9 ppm
Ozone (O_3)	1-hour[1]	0.12 ppm	0.08 ppm	0.12 ppm	0.12 ppm
	8-hour[4] (2008 std)	-----	-----	0.075 ppm	0.075 ppm
	8-hour[4] (1997 std)	0.08 ppm	0.12 ppm		
Nitrogen Dioxide (NO_2)	Annual	0.05 ppm	0.05 ppm	0.05 ppm	0.05 ppm
Lead (Pb)	Quarterly	----	----	0.15 $\mu g/m^3$	0.15 $\mu g/m^3$
Particulates (PM_{10})	24-hour[1]	----	----	150$\mu g/m^3$	150 $\mu g/m^3$
Particulates ($PM_{2.5}$)	24-hour[3]	----	----	35 $\mu g/m^3$	35 $\mu g/m^3$
	Annual[2]	----	----	15 $\mu g/m^3$	15 $\mu g/m^3$
Sulfur Dioxide (SO_2)	3-hour[1]	-----	0.5 ppm	----	0.5 ppm
	24-hour[1]	0.14 ppm	0.10 ppm	0.14 ppm	-----
	Annual	0.03 ppm	0.02 ppm	0.03 ppm	-----

1 - Not to be exceeded more than once per year
2 - 3 year average of annual mean within an area must not exceed 15 $\mu g/m^3$
3 - 3 year average of 98th percentile of 24-hour concentrations at each monitor within an area must not exceed 35 $\mu g/m^3$
4 - 3 year average of the 4th highest daily maximum 8-hour average ozone concentrations, measured at each monitor within an area over each year, must not exceed 0.08 ppm.

Source: New York State Department of Environmental Conservation; US Environmental Protection Agency, 2008

A summary of the characteristics of the criteria pollutants are as follows.

Carbon Monoxide. Carbon monoxide (CO) is a colorless and odorless gas, which is associated with the incomplete combustion of vehicle fuel. Carbon monoxide is very reactive and its concentrations are limited to relatively short distances near crowded intersections and along slow moving, heavily traveled roadways. Under the Clean Air Act of 1990, each state is committed to offset any CO emissions resulting from Vehicle Miles Traveled (VMT) growth in non-attainment areas. New York City has recently been re-designated as a maintenance area. However, to assure that air quality conditions continue to improve within the New York City metropolitan area, it is important to monitor potential impacts of new traffic-generating projects. As a result, concentrations of CO are evaluated on a local or microscale basis.

Nitrogen Oxides. Nitrogen dioxide (NO_2) and ozone are linked in that the production of NO_2 is a precursor to the formation of ozone. NO_2 is formed from the burning of fossil fuels such as natural gas. It is considered a highly reactive gas that is also linked to the production of acid rain. Because the chemical reactions that form ozone occur slowly, the effects of the pollutants involved are usually analyzed on a regional level. Although New York City is designated as a non-attainment area for ozone, the small scale of this project does not warrant a regional assessment of this pollutant. However, because the proposed school facility would include a natural gas burning furnace for heating and hot water, a more localized assessment of this pollutant is warranted.

Lead. Lead emissions are associated with industrial uses and motor vehicles that use gasoline containing lead additives. Most U.S. vehicles available since 1975 and all after 1980 are designed to use unleaded fuel. As a result, as newer models have replaced these older vehicles, lead emissions have decreased significantly. Therefore, lead is not a pollutant of concern for the proposed school project.

Inhalable Particulates. Inhalable particulate matter is a respiratory irritant and is of most concern when classified as being less than 10 microns in diameter (PM_{10}). Particulate matter (PM) is primarily generated by stationary sources, such as industrial facilities and power plants, however, PM can also be produced by the combustion of diesel fuel used in some buses and trucks as well as residential and commercial HVAC systems using oil as fuel. As the proposed school project may induce heavy duty diesel (HDD) bus trips, PM from mobile sources is a pollutant of concern for this project. Therefore, PM_{10} emissions resulting from the operation of the proposed school facility are considered. PM also develops from the mechanical breakdown of coarse particulate matter (e.g., from building demolition or roadway surface wear as well as other construction-related activities).

The USEPA has also recently promulgated standards for PM less than 2.5 microns in diameter ($PM_{2.5}$). While $PM_{2.5}$ and PM_{10} both emanate from similar sources, $PM_{2.5}$ or "fine particulates" are considered the most damaging to human health because they penetrate and remain in the deepest passages of the lungs. In addition to health effects, it has been shown that fine particles are the major cause of visibility impairment within major urban landscapes. At present, while New York State has submitted a designation

recommendation to the USEPA, a final determination and direction on analysis techniques have not yet been issued. As a result, an analysis of $PM_{2.5}$ using NAAQS is not possible. However, NYCDEP, in conjunction with NYSDEC, has recently promulgated an interim guidance for the screening and assessment of these fine particulates (March 2008). The mobile source screening portion of the guidelines requires that if a proposed action would generate fewer heavy duty diesel vehicles (HDDV) per hour (or its equivalent in vehicular emissions) than listed below, the need for a detailed $PM_{2.5}$ analysis would be unlikely:

- 12 HDDV: for paved roads with < 5000 veh/day
- 19 HDDV: for collector type roads
- 23 HDDV: for principal and minor arterials
- 23 HDDV: for expressways and limited access roads

This guidance is therefore applied in the screening of potential $PM_{2.5}$ impacts.

Sulfur Dioxide. Oxides of sulfur (SO_2) are respiratory irritants associated with the combustion of sulfur-containing fuels (such as heating oil and coal). SO_2 is a precursor to acid rain and to $PM_{2.5}$, both of which create damage to individual health and the environment. This pollutant is typically associated with large industrial operations but can also result from much smaller sources. All NYSDEC sulfur dioxide monitoring sites have remained in compliance with the New York State/Federal annual mean standard for over twenty years consecutively. As the proposed school will use clean burning natural gas for its HVAC heating and hot water systems, SO_2 is not a pollutant of particular concern.

Greenhouse Gases. Greenhouse gases (GHGs) trap heat in the atmosphere, creating what is called the greenhouse effect. Some GHGs, such as carbon dioxide (CO_2), occur naturally and are emitted to the atmosphere through natural processes and human activities, while other GHGs are created and emitted solely through human activities. Levels of several important GHGs have increased by about 25 percent since large-scale industrialization began around 150 years ago. During the past 20 years, about ¾ of human-made CO_2 emissions were from burning fossil fuels. The principal GHGs that enter the atmosphere from human activities are CO_2, CH4 (methane), N2O (nitrous oxide), and fluorinated gases. Stationary sources, such as the propose project's HVAC system, can sometimes generate significant portions of GHGs into the atmosphere. While GHGs are necessary to life since they keep the planet's surface warmer than it otherwise would be, as concentrations of GHGs increase, the earth's temperature also continues to increase. This is commonly called the global warming effect. Therefore, because of the global nature of GHG emissions, GHGs are potential pollutants of concern.

De Minimus **Criteria.** In addition to the Federal and State CO standards, New York City has developed *de minimus* criteria to assess the significance of project related impacts on local air quality. These criteria set the minimum change in eight-hour average carbon monoxide concentration that constitutes a significant environmental impact. The criteria are defined as follows:

- An increase of 0.5 parts per million (ppm) or greater in the maximum eight hour concentration if the projected future baseline ambient concentration is between 8.0 and 8.5 ppm.

- An increase of more than half the difference between the baseline concentrations and the eight-hour standards when no action concentrations are below eight ppm.

Attainment Status/State Implementation Plan (SIP). The Clean Air Act (CAA), as amended in 1990, defines non-attainment areas as geographic regions that have not met one or more of the NAAQS. When an area within a state is designated as non-attainment by the USEPA, the state is required to develop and implement a State Implementation Plan (SIP), which describes how it will meet the NAAQS under deadlines established by the CAA. New York City has been designated as a non-attainment area for ozone and $PM_{2.5}$ but as an attainment area for CO. Violations of the CO standard have not been recorded at the NYSDEC monitoring sites for several years. As part of its ongoing effort to maintain its attainment designation for CO, New York State has committed to the implementation of area-wide and site-specific control measures to continue to reduce CO levels.

On February 13, 2004, New York State formally recommended that the USEPA designate New York City as non-attainment for $PM_{2.5}$; the USEPA made their final non-attainment designation for $PM_{2.5}$ on December 17, 2004. On September 8, 2005, the USEPA proposed specific requirements that state and local governments have to meet as they implement the national ambient air quality standards for $PM_{2.5}$. On September 21, 2006, the USEPA tightened the 24-hour fine particle standard from 65 micrograms per cubic meter ($\mu g/m^3$) to 35 $\mu g/m^3$, but retained the current annual fine particle standard at 15 $\mu g/m^3$. In addition, effective September 17, 2006, the USEPA revoked the current annual PM_{10} standard based on a lack of evidence that links health problems to long-term exposure to coarse particle pollution. On October 2009, USEPA issued a final Federal Register notice designating areas of "nonattainment" and "unclassifiable/attainment" of the 24-hour NAAQS for $PM_{2.5}$. These designations went into effect on December 14, 2009, 30 days after publication in the Federal Register on November 13, 2009. The NY-NJ-CT metropolitan area (22 counties across 3 states...population 19 million) was formally designated as a "nonattainment" area for the $PM_{2.5}$ NAAQS on January 6, 2010. Each state is required to submit its $PM_{2.5}$ SIP within three years of the effective designation date which is December 14, 2012. A state must demonstrate attainment of the NAAQS within five years of the effective designation date (December 14, 2014) unless it applies for a five year extension.

Ozone SIP revisions have been submitted to the USEPA over the past several years. A November 1992 NYSDEC submission to the USEPA provided SIP revisions which addressed the minimum air quality control requirements that were established by the CAA. In November 1993, a revision was submitted which documented how a 15% reduction in ozone precursors would be achieved by the end of 1996. Subsequent SIP revisions took into consideration the need to incorporate alternative procedures in order to reach a final ozone attainment status. On April 15, 2004, the USEPA officially designated the New York City portion of the NY-NJ-CT Metropolitan area as moderate non-attainment for the new 8-hour ozone standard (effective June 15, 2004). The USEPA revoked the 1-hour standard on June 15, 2005, so that New York State can focus attention on attaining the stricter 8-hour standard. However, the very specific control measures for the 1-hour standard included in the SIP will be required to stay in place until the 8-hour standard is attained. A new SIP for ozone was to be adopted by the state no later than June 15, 2007, with a target attainment deadline of June 15, 2010. However, on June 20, 2007, the USEPA proposed to strengthen the national ambient air quality standards for ground-level ozone. The proposed revisions reflect new scientific evidence about ozone and its effects on people and public welfare. The USEPA was to issue final standards by March 12, 2008 with the following estimated implementation schedule (this is offered for information, as the schedule has been delayed):

- By June 2009: States make recommendations for areas to be designated attainment and nonattainment.
- By June 2010: the USEPA makes final designations of attainment and nonattainment areas. Those designations would become effective 60 days after publication in the Federal Register.
- 2013: State Implementation Plans, outlining how states will reduce pollution to meet the standards, are due to the USEPA (three years after designations).
- 2013 to 2030: States are required to meet the standard, with deadlines depending on the severity of the problem.

On April 29, 2009, the USEPA signed seven Federal Register notices taking two separate types of action on State 1997 8-hour ozone nonattainment planning requirements. In six separate notices, the USEPA is proposing to disapprove seven ozone attainment demonstrations and, in one additional notice, the USEPA is making two findings of failure to submit ozone attainment demonstrations. The NY-NJ-CT Metropolitan area is included on this disapproval list but the State of New York is not included on the disapproval list because they requested a higher nonattainment classification for the New York City nonattainment area. A higher reclassification would change the attainment date to June 2013. The state concluded that the air quality data and the modeling in their SIP did not show attainment by the June 2010 attainment date. At this time, the multi-state New York City ozone nonattainment area cannot be reclassified until Connecticut and New Jersey also request the higher classification.

On January 2010, the USEPA extended the deadline to promulgate Ozone designations by one year to March 12, 2011.

In January 2010, the USEPA proposed strengthening the national ambient air quality standards for ground-level ozone. Ground-level ozone is a primary component of smog. The proposed revisions are based on scientific evidence about ozone and its effects on people and sensitive trees and plants. The USEPA will accept comments for 60 days following publication of the proposal in the Federal Register. The USEPA proposes that the level of the 8-hour primary standard, which was set at 0.075 ppm in the 2008 final rule, should instead be set at a lower level within the range of 0.060 to 0.070 parts per million (ppm).

A. EXISTING CONDITIONS

NYSDEC operates a network of monitoring stations throughout the state to measure ambient air quality with the results published on an annual basis. NYSDEC's 2009 Air Quality Report identifies existing air quality levels for the project area based on data from the monitoring stations nearest the proposed project. Background air quality levels for the project area are shown in Table 16-2. Selected locations represent available background sites closest to the project area.

Table 16-2: Monitored Ambient Air Quality Data

Pollutant	Location	Units	Period	Concentrations			Number of Exceedences of Federal Standard	
				Mean	Highest	Second Highest	Primary	Secondary
CO	Queens College 2	ppm	8-hour	-	1.9	1.7	0	0
			1-hour	-	3.1	2.8	0	0
SO_2	Queens College 2	ppm	Annual	0.0035	-	-	0	-
			24-hour	-	0.020	0.019	0	-
			3-hour	-	0.035	0.034	-	0
Respirable Particulates (PM_{10})	Queens College 2	µg/m³	24-hour	-	56	46	0	0
Respirable Particulates ($PM_{2.5}$)	PS 314	µg/m³	Annual	11.3	-	-	0	0
			24-hour	28.0	33.5	30.2	0	0
NO_2	Queens College 2	µg/m³	Annual	0.021	-	-	0	0
Lead (Pb)	JHS 126	µg/m³	3-month	-	.019	.012	0	0
O_3	Susan Wagner	ppm	1-hour	-	.096	.082	0	0
			8-hour	0.74	-	-	1	1
Source: New York State Air Quality Report, Ambient Air Monitoring Systems, Annual 2009 Report								

B. THE FUTURE WITHOUT THE PROJECT

Background Concentrations. Mobile source modeling of CO concentrations at intersections usually account solely for emissions from vehicles on nearby streets, but not for overall pollutant levels. Therefore, background pollutant concentrations must be added to modeling results to obtain total pollutant concentrations at the prediction site.

Conservative background values were obtained from NYCDEP for Kings County. The 8-hour CO background concentrations are two ppm for the existing year and two ppm for the build year of 2014. As no data are available for years past 2007, it was determined that the existing year would be used for the build year background to create a more conservative analysis. Typically, the background level would be expected to decrease as more federally mandated lower-emission vehicles enter the vehicle fleet and older, higher polluting vehicles are retired. One-hour values were not supplied by NYCDEP as the agency believes that the 1-hour standard is not in jeopardy of being violated in the five boroughs of New York City.

In the No Build condition, as noted in the traffic analysis, there would not be a sufficient number of new vehicular trips to meet the CEQR screening criteria for detailed analysis (less than 160 new trips through any intersection) and no additional analysis is required.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Air Quality Screening Analyses - Mobile Sources. The proposed school is located in an area of Brooklyn, New York which is predominantly comprised of residential and small commercial land uses. As outlined in the *CEQR Technical Manual,* actions that would result in the generation of 160 or more peak-hour vehicle trips at an intersection may cause adverse air quality impacts and require a detailed air quality analysis for CO and PM_{10}. Based on the data obtained from the traffic studies associated with this project, the number of project-generated vehicles would not exceed 160 peak-hour vehicles at any nearby intersection. Therefore, no further is analysis for CO is required.

An additional scenario being considered for the proposed project would involve the reversal of the flow of traffic on Turner Place between Coney Island Avenue and East 8th Street, one of the one-way streets adjacent to the project block. Traffic along Turner Place currently travels east-to-west. However, traffic studies have been conducted for the proposed project to determine if reversing the traffic flow along Turner Place to west-to-east will improve access to the project site for cars and buses traveling northbound on East 8th Street. The reversal would also allow northbound traffic from East 8th Street to access the main entrance of the school by turning right on Turner Place rather than having to travel through more congested streets such as Church and Coney Island Avenues. Consequently, this scenario was also examined with respect to the CEQR mobile source screening threshold for air quality and it was determined that the reversal of Turner Place would not cause the number of project generated vehicles to exceed 160 at any nearby intersection. Therefore, no further analysis is required for this project scenario.

As described above, the NYSDEC and NYCDEP have developed interim guidelines for determining potential project-related $PM_{2.5}$ impacts. With respect to the traffic intersections being studied for the proposed project, the guidelines indicate that projects generating more

than 23 HDDV trucks (or buses) at an intersection during the peak hour have the potential to cause adverse air quality impacts, with respect to $PM_{2.5}$ and would thus require a detailed analysis. While the proposed school project would result in the generation of a few school buses and delivery vehicles, not all of the buses would be HDDVs. Accordingly, the traffic data show that the number of project-generated HDDVs (trucks and buses) would not exceed 23 during the peak hours at any of the traffic intersections. Therefore, the project does not meet the $PM_{2.5}$ screening criteria, and would not be expected to cause any adverse $PM_{2.5}$ impacts. No further analysis of this pollutant is required.

Air Quality Screening Analyses - Stationary Sources. According to the *CEQR Technical Manual,* a stationary source air quality screening should take into consideration information such as land use, fuel type, stack height and square footage of the development, to determine if a project has the potential to create stationary source air quality impacts. Based on the future operation of the proposed school's heating and hot water systems, the school was evaluated as a stationary source pollutant emitter. Since there are two existing buildings of equal or greater height in the vicinity of the proposed school structure, as per guidance in the *CEQR Technical Manual,* emissions from the school's heating and hot water systems must be assessed to determine the likelihood of an impact on the surrounding community.

The proposed school building would be five stories high and have a total area of approximately 107,000 gsf. It is assumed that the school would use natural gas to run its heating and hot water systems and is assumed to have a stack height of 10 feet. Based on the application of these assumptions to the *CEQR Technical Manual* screening nomographs for non-residential buildings, it was determined that taller buildings within 65 feet of the proposed project site could be potentially impacted. In the area immediately surrounding the proposed project site, the two apartment buildings that are taller than the proposed school building are both further than 65 feet away. Therefore, it is unlikely that emissions from the proposed school's heating system would impact the surrounding neighborhood. As a result, no significant air quality impacts are expected.

Also of concern are 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 find any manufacturing or processing plant emission sources within 400 feet of the proposed project. In addition, there are no major pollutant sources within 1,000 feet of the proposed project site. As a result, no impacts on the proposed project are expected and no further analysis is required.

Air Quality Screening Analyses - Greenhouse Gases (GHG). According to the *CEQR Technical Manual,* a greenhouse gas 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 health care facility. The proposed school project will be considerably smaller than 350,000 sf and is subsequently not considered an energy-intense source; therefore, a detailed greenhouse gas assessment is not required.

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.

Based on the mobile source screening procedures described above, the additional traffic generated by the proposed school facility would have no adverse effect on surrounding 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 17: NOISE

An analysis was conducted to assess potential noise impacts which could result from the construction and operation of the proposed PS/IS 338, a new public school located in the Prospect Park South section of Brooklyn on the block bounded by Turner Place, Hinckley Place, Coney Island Avenue, and East 8th Street. The analysis was performed in accordance with guidelines contained in the *CEQR Technical Manual*.

One issue of concern is the potential for existing noise sources (in particular from vehicular activity) to affect student activities within the proposed educational facility. Potential noise impacts on the surrounding community could also result from project-related increases in vehicular activity, noise from the school play yard, as well as stationary components of mechanical systems within the facility.

Noise Fundamentals. Noise within a community can come from man-made sources such as automobiles, trucks, buses, aircraft, and construction equipment, as well as industrial, commercial, transportation, and manufacturing facilities. Environmental noise can also originate from natural sources such as animals, insects and wind. Table 17-1 lists some typical activities, their noise levels, and the effects that they have on humans.

Noise levels, which are measured in units called decibels (dB), relate the magnitude of the sound pressure to a standard reference value. While the noise values of certain loud activities can approach 135 dB, normally encountered sounds lie within the range of 40 to 120 dB.

Noises contain sound energy at different frequencies whose range depends on the individual noise source. Human hearing does not register the sound levels of all noise frequencies equally, and reduces the impression of high and low-pitched sounds. Over the normal range of hearing, humans are most sensitive to sounds with frequencies in the range of 200 Hz to 10,000 Hz. To replicate the response of the human ear to noise, the noise levels at different frequencies must be adjusted using a process referred to as A-weighting. Under such a process, the resulting noise level, commonly expressed as an A-weighted decibel (dBA), will automatically compensate for the non-flat frequency response of human hearing.

Noise levels from human activities also vary widely over time. The equivalent noise level (L_{eq}) represents the time-varying noise level produced over a period of time, as a single number over a specified period of time. This represents the equivalent steady noise level, which, over a given period, contains the same energy as the time-varying noise during the same period. The most common time period is the noise over one hour, represented as $L_{eq}(h)$. This descriptor is commonly used to express results from noise measurements, predictions, and impact assessments. Other descriptors often used in noise analyses are L_{10} and L_{dn}. L_{10} is defined as the sound pressure level exceeded ten percent of the time and is often used to describe noise generated from traffic sources. It is also used as a noise descriptor for the CEQR Noise Exposure standards shown in Table 17-2. L_{dn} is the day-night equivalent sound level, defined as a 24-hour continuous L_{eq} with a 10dB adjustment added to all hourly noise levels recorded between the hours of 10 PM and 7 AM. L_{dn} is often used in the analysis of both aircraft and

train noise. However, as described in the *CEQR Technical Manual*, since the proposed project is a school with no overnight usage, the one-hour L_{eq} or L_{10} descriptors are generally used to describe the study area noise environment.

Table 17-1: Common Noise Levels

COMMON OUTDOOR NOISES	Sound Pressure Level (dBA)	COMMON INDOOR NOISES
	110	Rock Band at 15 feet
Jet Flyover at 1000 ft		
	100	
		Inside NYC Subway Train
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet		Food Blender at 3 feet
		Garbage disposal at 3 feet
Noisy urban setting - daytime	80	
		Shouting at 3 feet
Gas lawnmower at 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
	60	
		Large business office
Quiet urban setting - daytime	50	Dishwasher - next room
		Small theater
Quiet urban setting - nighttime	40	Large conference room and library
Quiet suburban setting - nighttime		
	30	
Quiet rural - nighttime		Bedroom at night
		Large concert hall (background)
	20	
		Broadcast and recording studio
	10	
		Threshold of hearing
	0	

A few general relationships may be helpful in understanding the decibel scale:

- Doubling of the noise energy produces a three dB increase in noise level. A three dB increase is normally the smallest change in sound levels that are perceptible to the human ear.

- A ten dB increase in noise level corresponds to a tenfold increase in noise energy; however, a listener would only judge a ten dB increase as being twice as loud.

- A 20 dB increase would result in a "dramatic change" in how a listener would perceive the sound.

CEQR Noise Impacts Thresholds. 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 65 dBA 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 five 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 three 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 three dBA or more.

CEQR Noise Exposure Standards. NYCDEP has also 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 17-2 are attenuation values and external noise exposure standards as they relate to traffic, aircraft, and rail noise.

SCA Noise Criteria. SCA has developed a criterion of an increase of five dBA as the impact criterion for noise from project-generated traffic and playgrounds. The level of five 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 17-2: 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:

(I) 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).

NYC Noise Code. Shown in Table 17-3 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 17-3: 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

A. EXISTING CONDITIONS

The proposed school site is located on Coney Island Avenue between Turner Place and Hinckley Place. The neighborhood consists of single- and multi-family residential land uses as well as small commercial uses. There are no surface rail lines in the immediate vicinity of this project. As a result, the major sources of existing community noise come primarily from automobile traffic. The heaviest existing traffic volumes are clearly along Coney Island Avenue. Very light traffic exists along Turner Place and Hinckley Place. There are no major stationary sources of noise in the study area.

Noise Monitoring. To determine the influence of existing traffic noise, one-hour noise measurements were conducted at three locations representative of existing or future sensitive locations and were situated along roadways where the greatest project generated increases in traffic volumes are likely to occur. All monitoring sites were representative of residential land uses and monitors were situated at or near the property line. Locations were monitored for the AM and PM peak time periods on May 26, 2010 and the midday period of June 11, 2010. The AM and PM peak periods were defined as 7:45-8:45 AM and 3:00-4:00 PM, respectively. These time periods are the peak hours when the majority of existing and future project-generated traffic would be passing these locations. Weekday AM and PM noise monitoring takes into

account the peak workweek and school traffic. The duration of the measurements along the heavily trafficked Coney island Avenue was 15 minutes. The duration of the measurements along Turner Place and Hinckley Place, streets with lower traffic volumes, was extended to 20 minutes to ensure that a representative measurement was obtained. During all measurements, simultaneous traffic counts were taken. The noise descriptors recorded during field measurements included L_{eq} and L_{10}. Table 17-4 shows the results of the noise monitoring program. An additional noise measurement shown in Table 17-5 was taken during the midday hour (12:00 PM – 1:00 PM). This location was chosen because it is representative of residences potentially impacted by noise from the proposed play yard. Figure 17-1 shows the location of all four noise monitoring sites.

Noise measurements were taken with a Larson & Davis Model 820 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 Cal250 calibrator. There were no significant variances between the beginning and ending calibration measurements. Weather conditions during the measurements consisted of sunny skies and temperatures of approximately 80 degrees Fahrenheit on April 2, 2009 and overcast weather with temperatures of approximately 55 degrees on April 3, 2009.

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 Passenger Car Equivalents (PCEs). PCEs are used to account for the different types of motor vehicles (i.e., cars, trucks) 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.

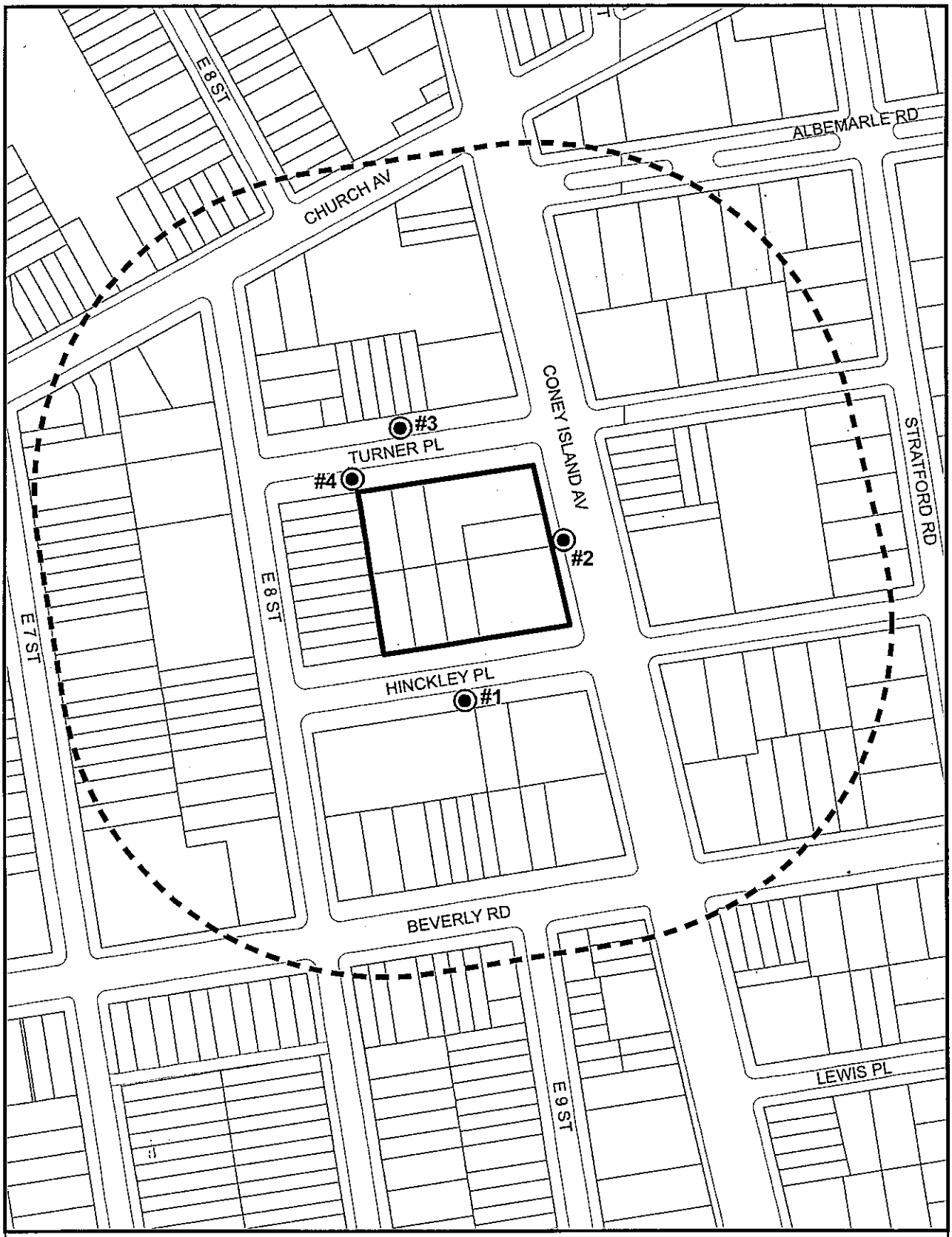

Figure 17-1: Noise Analysis

Proposed PS/IS 338
510 Coney Island Avenue, Brooklyn

New York City
School Construction Authority

Table 17-4: PS/IS 338 Monitored Peak Hour Noise Levels

Site #1: 1 Hinckley Place (Private Residence)				
Time of Day	L_{eq} (dBA)	L_{10} (dBA)	L_{50} (dBA)	L_{90} (dBA)
AM	59.9	62.4	57	53.5
PM	58.8	62.8	55.9	52.3
Site #2: 17 Coney Island Avenue (Residential Apartment Building)				
Time of Day	L_{eq} (dBA)	L_{10} (dBA)	L_{50} (dBA)	L_{90} (dBA)
AM	67.5	70.4	65.5	59.3
PM	67.9	71.3	65	58.6
Site #3: 6 Turner Place (Private Residence)				
Time of Day	L_{eq} (dBA)	L_{10} (dBA)	L_{50} (dBA)	L_{90} (dBA)
AM	57.1	60	55.8	51.8
PM	58	60.5	55.4	50.6

Table 17-5: PS/IS 338 Monitored Midday Hour Noise Level

Site #4: 1 East 8th Street (Private Residence)				
Time of Day	L_{eq} (dBA)	L_{10} (dBA)	L_{50} (dBA)	L_{90} (dBA)
Midday	56.6	57.6	54.2	51.8

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 passenger car equivalents through any intersection. The *CEQR Technical Manual* threshold for detailed analysis would not be met. The No Build project is not expected to result in any substantial change to noise conditions over the existing conditions.

C. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Potential mobile source impacts of the proposed project could result from increases in project-related traffic. Potential stationary source noise could result from the project's play yard. With respect to the potential traffic-related impacts, two traffic flow scenarios were assessed. Scenario #1 assesses traffic noise as it relates to existing traffic flow patterns in the study area. Alternately, Scenario #2 includes the study of a traffic flow reversal along Turner Place between Coney Island Avenue and East 8th Street. This reversal would change the existing east-to-west flow of traffic along Turner Place to a west-to-east flow.

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 both scenarios. According to CEQR guidelines, to cause a significant noise impact, the project would have to induce traffic that would at least double the existing Passenger Car Equivalents (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 dB increase in the corresponding noise level.

Under both traffic flow scenarios, traffic volume data for the proposed project (see Traffic and Transportation, Pedestrians and Parking) indicate that the addition of future project traffic would result in a doubling of the existing PCEs at two selected streets within the traffic network. Tables 17-6 and 17-7 show the results of the screening.

Table 17-6: PS/IS 338 Noise Screening Analysis Results (Scenario #1)

Hinckley Place (between Coney Island Avenue and East 8th Street)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	45	77	Yes
PM	30	60	Yes*
Coney Island Avenue (between Turner Place and Hinckley Place)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	5896	75	No
PM	6657	55	No
Turner Place (between Coney Island Avenue and East 8th Street)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	27	45	Yes
PM	36	43	Yes

Table 17-7: PS/IS 338 Noise Screening Analysis Results (Scenario #2)

Hinckley Place (between Coney Island Avenue and East 8th Street)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	45	39	No
PM	30	32	Yes
Coney Island Avenue (between Turner Place and Hinckley Place)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	5896	91	No
PM	6657	72	No
Turner Place (between Coney Island Avenue and East 8th Street)			
Time of Day	Existing PCEs	Project Induced PCEs	Traffic Doubled?
AM	27	68	Yes
PM	36	54	Yes

At Coney Island Avenue, where the PCEs do not double, there would be no impact since this level of increase in traffic volume would not result in at least a 3 dB increase in noise levels. Therefore, further analysis at these locations was not required. However, noise levels were predicted at Site #1 (1 Hinckley Place) and Site #3 (6 Turner Place) where the screening procedure showed that PCEs would double.

Mobile Source Noise Assessment. 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 the proposed project itself 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 #1 is representative of typical sensitive land uses along Hinckley Place. The location was modeled for the weekday PM and weekend PM time periods. Table 17-8 shows the predicted

noise levels at the site for the Existing, No Build and Build conditions under Scenario #1. Table 17-9 shows the predicted noise levels under Scenario #2.

Table 17-8: PS/IS 338 Leq(1-hr)(dBA) Noise Levels for Existing, No Build and Build Conditions (Scenario#1)

Site #1: 1 Hinckley Place (Private Residence)				
Time of Day	Existing Noise Level	No Build Noise Level	Build Noise Level	Build Increase
AM	59.9	60.0	64.2	4.2
PM	58.8	59.0	63.2	4.2
Site #3: 6 Turner Place (Private Residence)				
Time of Day	Existing Noise Level	No Build Noise Level	Build Noise Level	Build Increase
AM	57.1	57.2	60.5	3.3
PM	58.0	58.0	62.3	4.3

Table 17-9: PS/IS 338 Leq(1-hr)(dBA) Noise Levels for Existing, No Build and Build Conditions (Scenario#2)

Site #1: 1 Hinckley Place (Private Residence)				
Time of Day	Existing Noise Level	No Build Noise Level	Build Noise Level	Build Increase
AM	59.9	60.0	64.2	4.2
PM	58.8	59.0	63.2	4.2
Site #3: 6 Turner Place (Private Residence)				
Time of Day	Existing Noise Level	No Build Noise Level	Build Noise Level	Build Increase
AM	57.1	57.2	60.5	3.3
PM	58.0	58.0	62.3	4.3

Tables 17-8 and 17-9 show that for both traffic flow scenarios, the maximum difference in noise levels between No Build and Build alternatives at the studied sites was below 5dB. 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. Noise impacts generated by the proposed school play yard were determined using methodology based on those outlined in the Playground Noise Study[1] produced for the SCA. The methodology is based on assumed worst case noise levels of 69.3 dBA for the AM period, 71.4 dBA for the midday (recess) period and 62.9 dBA for the PM period; all measured at the property line of a typical elementary school playground. These noise levels were 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 at two sensitive noise receivers located closest to the proposed school play yard. In addition, only the midday (recess) period was analyzed as the measurement location would not be influenced by fluctuations in peak hour traffic noise. For the proposed project, the closest affected residences would be located at homes on East 8th Street between Turner Place and Hinckley Place and homes along Turner Place between 8th Street and Coney Island Avenue. For analysis purposes, 1 East 8th Street was used as a representative property for a row of ten homes on East 8th Street. All ten of the residential properties would be approximately 23 feet from the proposed school play yard property line. Potential noise impacts would occur at the rear of the row houses. The private residence at 1 East 8th Street would have eight windows on its east façade with a clear line of sight to the proposed school play yard, including two windows on the first floor and six windows in two groups of three on the second and third floors. The ten properties potentially impacted would all include this window configuration. The private residence at 34 Turner Place would be representative of six additional homes on Turner Place and would have seven windows on its south façade with a clear line of sight to the proposed school play yard. Three windows would be on the ground floor, three windows would be on the second floor and one window would be on the top floor. Subsequently, future school-related noise impacts were considered at these two representative properties.

The assessment for the sensitive receptor locations mentioned above was performed for the midday period to determine the potential impact from the proposed school play yard. The midday period represents the most sensitive period with respect to potential school play yard noise impacts. Ambient noise conditions at these potentially affected properties were represented by the existing noise measurement shown in Table 17-5. This measurement is representative of both receptor locations since there are no exterior noise sources within the study area that would result in a significant difference in noise level.

[1] Wu, Weixiong, *Development of Noise Assessment Method for School Playground Noise*, INTER-NOISE, 2006

Based upon measurements and acoustical principles, noise levels are assumed to decrease by the following values at specified distances from the proposed school 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 drop off per doubling of distances from the play yard boundary was assumed. As shown in Tables 17-10 to 17-11, the total Build noise level at the two representative residential receivers was calculated by logarithmically adding the adjusted future play yard noise to the No Build traffic noise level. As described above in the traffic noise screening section, future No Build traffic levels would result in an insignificant increase in future noise levels over the existing ambient noise levels. Therefore, future No Build noise levels were assumed to be the same as existing noise levels. For the representative residence at 1 East 8th Street, Table 17-10 shows that the increase in the future project noise level for the midday period *would* exceed the 5 dBA SCA impact criteria.

Table 17-10: Expected Noise Impact Summary with School (noise levels are L_{eq} reported in dBA)

Representative Location	Time of Day	Existing Traffic Noise	Total No Build Noise	Build Play Yard Noise[1]	Total Build Noise	Decibel Change in Noise Due to School
1 East 8th Street	Midday	56.6	56.6	66.6	66.0	10

[1] Play yard noise levels were reduced by 4.8dB to account for distance drop-off. 71.4dB-4.8dB (drop-off) = 66.6dB

For the representative residence at 34 Turner Place, Table 17-11 shows that the increase in the future project noise level for the midday period would not exceed the 5 dBA SCA impact criteria.

Table 17-11: Expected Noise Impact Summary with School (noise levels are L_{eq} reported in dBA)

Representative Location	Time of Day	Existing Traffic Noise	Total No Build Noise	Build Play Yard Noise[1]	Total Build Noise	Decibel Change in Noise Due to School
34 Turner Place	Midday	56.6	56.6	57.8	60.3	3.7

[1] Play yard noise levels were reduced by 13.6 dB to account for distance drop-off. 71.4dB-13.68dB (drop-off) = 60.3dB

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 17-3.

The new school facility's play yard is expected to increase noise levels over the No Build by 10 dBA. This change in noise levels would exceed SCA's criterion of significance of a 5 dBA increase over the No Build condition at ten residential properties located along the east side of East 8th Street between Turner Place and Hinckley Place.

School Interior Noise Levels. As shown in Table 17-4, the maximum L_{10} noise exposure experienced by the proposed school would be 71.3 dBA. 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) would be incorporated into the new school building's design and construction. Standard double-glazed windows are available which would result in the required attenuation value of 28 dBA.[2] In addition, a well-insulated facility can provide reduction of another 10 dBA.[3] As a result, the proposed school would not experience any noise exposure impacts as defined in Table 17-2.

D. PROPOSED MITIGATION

To address the potential play yard noise impacts, the SCA would make available to the owners of the ten affected residences along East 8th Street immediately adjacent to the project site, where playground noise would increase noise levels by five dBA or more, storm or sound-attenuating windows and alternative ventilation for the windows fronting the proposed school play yard. This scenario would significantly reduce the impact of playground noise upon the adjoining residences.

[2] U.S. Department of Housing and Urban Development - *The Noise Guidebook*

[3] Wyle Research Report - *Sound Insulation Methods for New Residential Construction Exposed to Aircraft Noise.*

CHAPTER 18: CONSTRUCTION-RELATED IMPACTS

The anticipated construction period for the proposed project is expected to be approximately 36 months. 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. Materials deliveries would be made primarily from Coney Island Avenue, a major arterial, and Turner Place and Hinckley Place, which are local streets with low traffic volumes. 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 this purpose.

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 proposed for the 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 result in 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. An average of 50 construction personnel is expected to be working on the project site for the duration of the construction period.

Construction Impacts on Air Quality. During construction, particulate emissions would temporarily increase due to the generation of fugitive dust and mobile source emissions. The following standard dust control measures would be undertaken as necessary:

- Minimizing the period and extent of area being exposed or re-graded at any one time.
- Spraying construction areas and haul roads with water, especially during periods of high wind or high levels of construction activity.
- Minimizing the use of vehicles on unpaved surfaces.

- Covering or spraying material stockpiles and truck loads.

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. The application of various control measures during construction demolition activities would be employed to minimize the amount of construction dust generated. These measures would include applying water or other suitable moisture-retaining agents on dirt roads, covering haul trucks carrying loose materials, or treating materials likely to become airborne and contribute to air pollution if left untreated.

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.

Construction Noise Impacts. Noise impacts during construction would include noise from construction equipment operation and from construction vehicles traveling in and out of the project site. It is expected that most construction workers would travel by automobile. The 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 the construction site. Typical noise levels of construction equipment are given in Table 18-1. The noise emission levels for construction equipment are measured at 50 feet (15.2 meters), and decrease over distance.

Table 18-1: Typical Noise Emission Levels for Construction Equipment

Equipment Item	Noise Level at 50 feet (dBA)
Air Compressor	81
Asphalt Spreader (paver)	89
Asphalt Truck	88
Backhoe	85
Bulldozer	87
Compactor	80
Concrete plant	83
Concrete spreader	89
Concrete mixer	85
Concrete vibrator	76
Crane (Derrick)	88
Delivery Truck	88
Diamond Saw	90
Dredge	88
Dump truck	88
Front end Loader	84
Gas-driven Vibra-compactor	76
Hoist	76
Jackhammer	88
Line Drill	98
Motor Crane	83
Pile Drive/extractor	101
Pump	76
Roller	80
Shovel	82
Truck	88
Tug	85
Vibratory Pile Driver/extractor	89

Source: Patterson, W., N., R.A. Ely and S. M. Swanson, "Regulating of Construction Activity Noise," Bolt Beranek and Newman, Inc., Report 2887, for the Environmental Protection Agency, Washington, D.C., November 1974.

Construction noise is regulated by the New York City Noise Control Code and by the United States Environmental Protection Agency (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 6:00 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. 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. Because the project site is of adequate size to accommodate construction staging on site, construction activities would be limited to the project site. 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 most leaks and mishaps. Any spills (oil, gasoline, brake fluid, transmission fluid) would be contained immediately and disposed of properly, off-site.

Hazardous Waste. Prior to the demolition of existing structures, all supplies, equipment and wastes would be removed and disposed of (as necessary) in accordance with applicable guidelines. 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. Any asbestos-containing materials (ACM) affected by demolition of the site buildings would be identified and properly managed during such activities. 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. Asbestos inspections have and would be conducted for all existing buildings to be demolished as part of the project.

Appendix A: Agency Correspondence

Correspondence from the New York City Police Department (June 23, 2010)

Correspondence from the New York City Fire Department (July 1, 2010)

Correspondence from the New York State Department of Environmental Conservation - Division of Fish, Wildlife & Marine Resources (June 16, 2010)

The City of New York

POLICE DEPARTMENT

Commanding Officer
66th Precinct
5822 16th Avenue
Brooklyn, NY 11204

June 23, 2010

STV Incorporated
225 Park Avenue South
New York, NY 10003-1604

Dear Mr. Hobbick:

I have conducted a site survey at the proposed new Primary/Intermediate school at 510 Coney Island Avenue and determined that there are no concerns foreseen at this time. The 66th Precinct will be able to provide police service and resources to this new school.

If you have any other questions and/or concerns, please feel free to contact me at the following number, (718) 851-5637.

Sincerely,

John J. Sprague
Deputy Inspector

The City of New York

FIRE DEPARTMENT

9 MetroTech Center Brooklyn, N.Y. 11201-3857

ROBERT F. SWEENEY
Chief of Operations
Bureau of Operations

Room TW-1

July 1, 2010

STV Incorporated
225 Park Avenue South
New York, New York 10003-1604
Attn: Cade Hobbick, AICP

Re: Proposed 750 Seat Primary/Intermediate School
510 Coney Island Avenue / Prospect Park South
Borough of Brooklyn

Dear Cade Hobbick:

I have tried to answer all of your questions concerning the above referenced project. The Fire Department Bureau of Operations will have no problem in supporting the proposed development and does not foresee any negative impact to fire services in the area from the proposed site changes that were mentioned in your letter.

This letter is not Fire Department approval for this proposal, as we have not received plans for review. The Fire Department has no plans to make any changes in stations or equipment in the area.

If there are any questions, please call Captain George Becker at (718) 855-8571.

Sincerely yours,

Robert F. Sweeney
Chief of Operations

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

June 16, 2010

Cade Hobbick
S T V Incorporated
225 Park Avenue South
New York City, NY 10003-1604

Dear Mr. Hobbick:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Construction of new School Facility, site as indicated on the map you provided, located at 510 Coney Island Avenue, Prospect Park South section of Brooklyn, Kings County.

We have no records of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,
Tara Salerno jp
Tara Salerno, Information Services
New York Natural Heritage Program

Enc.
cc: Reg. 2, Wildlife Mgr.

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Appendix B: Cultural Resources Memorandum

Historical Perspectives, Inc.: Preliminary Assessment/Disturbance Record (August 2010)

HISTORICAL PERSPECTIVES INC.

August 2010

Memorandum: Preliminary Assessment/Disturbance Record
New P.S./I.S. 338, 510 Coney Island Avenue
Brooklyn, Kings County, New York, 11218
Block 5342, Lots 6, 8, 10, 17, 19, 26, 28 and 30

INTRODUCTION

On behalf of the New York City Department of Education (DOE), the New York City School Construction Authority (SCA) proposes to construct a new Primary School/Intermediate School on Block 5342 in the Prospect Park South neighborhood of Brooklyn, New York (Figures 1 and 2). The project site has an address of 510 Coney Island Avenue, and includes Block 5342, Lots 6, 8, 10, 17, 19, 26, 28 and 30. Block 5342 is bounded by Coney Island Avenue on the east, East 8th Street on the west, Turner Place on the north, and Hinckley Place on the south. The project site fronts on all streets except East 8th Avenue. Because project plans have not been finalized, the entire project site is considered the Area of Potential Effect (APE).

Historical Perspectives, Inc. (HPI) has undertaken the following Preliminary Assessment/Disturbance Record study of the proposed site in order to: 1) identify categories of potential archaeological resources on the project site; 2) examine the construction history of the project site in order to determine the probability that any potential archaeological resources have survived post-depositional disturbances and remain on the site; and 3) determine whether additional research, in the form of a Phase 1A study is necessary.

METHODOLOGY

The present study entailed review of various resources:

- Historic maps were reviewed at the Map Division of the New York Public Library and using various online websites. These maps provided an overview of the topography and a chronology of land usage for the study site.
- Information about the property was reviewed using the New York City Department of Buildings (DOB) website.
- The SCA provided Phase I and Phase II Environmental Site Assessment reports for the project site, which included soil boring data (Langan 2009, 2010a and 2010b).
- Previous archaeological sites were reviewed using data from the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) and the New York City Landmarks Preservation Commission (LPC).
- Last, a site visit was conducted on May 27, 2010, to assess any obvious or unrecorded subsurface disturbance (Photographs 1–8; Figure 2).

CURRENT CONDITIONS

The project site contains a variety of existing conditions, which are described below, by lot number.

Lots 6 and 8 (Photographs 1 and 2)

These two lots each front Turner Place. Lot 6 has an address of 14 Turner Place and Lot 8 has an address of 18 Turner Place. Each lot has a two-story residence with a basement and a detached one-story garage at the rear (south side) of the lot. A covered car port adjoins the garage at 14 Turner Place. The residences share a common wall along the interior lot line boundary. These residences were built in ca. 1920.

Lot 10 (Photograph 3)

This lot has an address of 510 Coney Island Avenue but also has a long frontage on Turner Place. The lot, a used car sales lot, currently is paved with asphalt and contains a portable office trailer.

Lot 17 (Photograph 4)

This lot has an address of 520 Coney Island Avenue. The entire footprint of the lot contains a one-story concrete building with two garage bays, used as an automobile repair facility.

Lot 19 (Photograph 5)

The lot has an address of 524 Coney Island Avenue but also has a frontage on Hinckley Place. Currently, the site is vacant, but until 2008 there was an automobile repair facility on the western side of the lot, in an area now covered by low vegetation. The former parking area for the repair facility is paved with asphalt.

Lot 26 (Photograph 6)

This lot has an address of 33 Hinckley Place. It contains a frame, three-story dwelling and a concrete paved rear parking area. The building was constructed in ca. 1901.

Lot 28 (Photograph 7)

This lot has an address of 21 Hinckley Place. It contains a two-story frame dwelling. The yard areas of this lot are overgrown with vegetation. The building was constructed in ca. 1940.

Lot 30 (Photograph 8)

This lot has an address of 13 Hinckley Place. It currently is vacant and overgrown with vegetation. Former structures on the lot were demolished in 1984.

TOPOGRAPHY AND HYDROLOGY

Early maps of the vicinity of the study area record the topography and environment of the study lots prior to nineteenth- and twentieth-century road construction and other development. The earliest detailed maps of the area, the 1844 and 1856 Coastal Surveys, both show that the project site fell with a level area used as farmland (USCS 1844, 1856). The 1891 Bien and Vermeule map indicates that this level area was between 40-50 feet above sea level, whereas real estate atlases indicate that Coney Island Avenue was approximately 44 feet above sea level and East 8th Avenue was approximately 46 feet above sea level (Ulitz 1888-1889 [Figure 4]; Sanborn 1905 [Figure 5]). The modern U.S.G.S. topographic map (Figure 1) shows that the project site remains approximately 40-50 feet above sea level. This suggests that while there clearly has been grading and filling within the project site, overall elevations have not changed markedly over time. The project site is not in proximity to any natural water sources.

GEOLOGY

Long Island is the top of a Coastal Plain ridge formation that is covered with glacial drift, in reality an elevated sea bottom demonstrating low topographic relief and extensive marshy tracts. In the last million years, as glaciers advanced and receded three times, the surficial geology of the island, including the project site, was profoundly altered. "The glacier was an effective agent of erosion, altering the landscape wherever it passed. Tons of soil and stone were carried forward, carving and planing the land surface. At the margins of the ice sheet, massive accumulations of glacial debris were deposited, forming a series of low hills or terminal moraines" (Eisenberg 1978:19). Circa 18,000 years ago, the last ice sheet reached its southern limit, creating the Harbor Hill moraine that traverses the length of Long Island and then continues south into Brooklyn, ending near Owls' Head Park. The APE lies near the southern edge of this moraine.

SOILS

The USDA soil survey for New York City indicates that the project site falls within a large area mapped as "Pavement & buildings-Flatbush-Riverhead complex, 0 to 8 percent slopes." It is described as:

> Nearly level to gently sloping urbanized areas of outwash plains that have been substantially cut and filled, mostly for residential use; a mixture of anthropogenic and gneissic outwash soils, with 50 to 80 percent of the surface covered by impervious pavement and buildings (USDA 2005:17).

The area on the east side of Coney Island Avenue, immediately east of the project site, is mapped as Pavement & buildings, outwash substratum, 0 to 5 percent slopes, and is described as:

> Nearly level to gently sloping, highly urbanized areas with more than 80 percent of the surface covered by impervious pavement and buildings, over glacial outwash; generally located in urban centers (USDA 2005:14).

Additionally, as part of the Phase II Environmental Site Investigation (Langan 2010b), a total of 30 soil borings were completed on the lots that comprise the project site. The purpose of the soil borings was to investigate ground conditions and potential hazardous materials, and as such the soil boring logs often recorded soil strata in 5-foot increments, especially in the upper reaches of the soil column. Nonetheless, the results are useful for gauging the degree of previous ground disturbance on the project site. Of the 30 soil borings, all recorded a thick upper layer of fill soil, described as sand and silt with varying amounts of brick, concrete, and miscellaneous debris. Thirteen of the soil borings noted exactly 5 feet of fill, and the remainder of the soil borings recorded fill ranging from 5.5 to 22 feet thick. Generally, the borings that had 5 feet of fill were located in open yard areas or beneath buildings with no basements. Borings with deeper fill strata were in locations that previously contained buildings with basements, or in areas where there had been ground disturbance for other excavations, such as underground storage tanks. Beneath the fill were natural soils that correspond to the deep subsoil of the original soil column. It is apparent that the original ground surface, which would have contained the natural A and B horizons of the upper soil column where potential archaeological materials usually would be located, has been destroyed. Groundwater was recorded between 38.5 and 42 feet below grade. Bedrock was not encountered in any of the soil borings.

SUMMARY HISTORY OF THE PROJECT SITE

Precontact Occupation

For this report, the word precontact is used to describe the period prior to the use of formal written records. In the Western Hemisphere, the precontact period also refers to the time before European exploration and settlement of the New World. Archaeologists and historians gain their knowledge and understanding of precontact Native Americans in the lower Hudson Valley area from three sources: ethnographic reports, Native American artifact collections, and archaeological investigations.

Based on data from these sources, a precontact cultural chronology has been devised for the New York City area. Scholars generally divide the precontact era into three main periods, the Paleo-Indian (ca. 14,000-9,500 years ago), the Archaic (ca. 9,500-3,000 years ago), and the Woodland (ca. 3,000-500 years ago). The Archaic and Woodland periods are further divided into Early, Middle, and Late substages. The Woodland was followed by the Contact Period (ca. 500-300 years ago). Artifacts, settlement, subsistence, and cultural systems changed through time with each of these stages. Characteristics of these temporal periods have been well documented elsewhere, and in keeping with recent guidelines issued by the NYSOPRHP (2005), will not be fully reiterated here.

Scholars often characterize precontact sites by their close proximity to a water source, fresh game, and exploitable natural resources (i.e., plants, raw materials for stone tools, clay veins, etc.). These sites are often separated into three categories: primary (campsites or villages), secondary (tool manufacturing, food processing), and isolated finds (a single or very few artifacts either lost or discarded). Primary sites are often situated in locales that are easily defended against both nature (weather) and enemies. Secondary sites are often found in the location of exploitable resources (e.g., shell fish, lithic raw materials).

According to documentary evidence compiled by various archaeologists and organized by Robert S. Grumet, the APE appears to have been in the territory of the Marechkawieck group, which had its main settlement near what is now downtown Brooklyn. The Marechkawieck are also believed to have had a settlement on the elevated ground on the south side of Green-Wood Cemetery. The research of archaeologist Reginald P. Bolton (1922) notes the main Indian trail, now Sixth Avenue, linking these two settlements with the Narrows and the settlements of the related Nayack group at present Fort Hamilton 2.5 miles to the south southwest, with Flatbush Avenue also a major Indian trail, leading to a settlement at Flatbush by another local group, the Canarsee (Grumet 1981:26-28, 71). It is likely the project site and its vicinity was used by Native American groups during the Contact Period for farming (Bolton 1922).

According to historian Bolton, at the time of European Contact, the Canarsee - a local Native American group occupying the Brooklyn area - utilized large tracts of upland fields for maize cultivation, with living and camping activities concentrated along the shore and along year-round watercourses (Bolton 1922:130). The Canarsee were reportedly a western Long Island tribe of the Metoac or Metouwas Confederacy, with the principal site and headquarters at what is now Flatbush. According to maps made prior to 1840, Native Americans were occupying at least four long houses in the Kings County area. These "houses" were reportedly utilized during the colder seasons and were located approximately at 1) Flatlands; 2) the present site of Borough Hall; 3) Indian Pond at Bay Parkway and the King's Highway; and, 4) Fort Hamilton (Cropsey 1925:9). No previously identified encampments or villages were noted either in the project site or in the immediate vicinity (Ibid.).

At the end of the "Governor Kieft War" in 1645, the sachem Seyseys sold the Dutch all of the Marechkawieck lands from Gowanus to Jamaica Bay, an area which included the APE. Seyseys moved to Westchester County, and many Marechkawieck on western Long Island fled eastward to Nassau County, while others went to southern Kings County to live among the Nayack and Canarsee (Grumet 1981:27-28).

Despite the recorded Native American presence in western Kings County, the site files of the New York State Museum and the New York State Office of Parks, Recreation and Historic Preservation record no inventoried archaeological sites within a mile of the APE. For this reason, the NYSOPRHP GIS database does not identify the project site as within an area of archaeological sensitivity. Known sites tended to be clustered near the shoreline, and the nineteenth-century development of the Brooklyn shorefront has been so intense that it would have destroyed these sites prior to archaeological surveys of the region. Archaeologist Arthur C. Parker noted that Kings County, "without a doubt...was occupied in nearly every part, and was once an important place of Indian travel and traffic" (Parker 1920:582).

Construction History of the Project Site

The project site originally was part of the Town of Flatbush, and its earliest documented use was for farmland. One of the first detailed depictions of this section of what would later become Brooklyn was on the 1844 Coastal Survey, which illustrated that much of the area in the vicinity of the project site was carved up into farming plots (U.S.C.S. 1844). Church Avenue, located one block north of the project site, was the only road shown in the vicinity during the 1840s (e.g. Sidney 1849). By issuance of the 1856 Coastal Survey map, Coney Island Avenue had been laid out as well, but the project site was still depicted as vacant land. The 1873 Beers map (Figure 3) shows that Coney Island Avenue now supported a railroad line, and that the property southwest of Church and Coney Island Avenues, including the project site, was attributed to "R. Turner," who had a house on the south side of Church Avenue, on the west side of what is now East 8th Street, approximately two blocks to the northwest. The new street grid was shown as projected across the area, although not yet built. The project site itself was still vacant.

By the 1880s, both Turner Place and Hinckley Place had been opened, as had East 8th Street. Block 5342 (formerly Block 105) had been divided into individual building lots and a number of frame structures had been constructed. The 1888-1889 Ulitz map (Figure 4) shows that there were various buildings now located within the project site, including five buildings, presumably dwellings, on the lots fronting Coney Island Avenue, three of which had outbuildings at the rear of the lots, and five or six larger outbuildings or barns on some of the lots fronting Turner Place and Hinckley Place. The map also notes that water pipes had been laid under Coney Island Avenue, and likely the houses fronting that street were hooked up to the municipal water at about the same time or not long after they were constructed.

Maps made during the 1890s and early 1900s show that the project site continued to support dwellings and a store fronting Coney Island Avenue, and primarily barns or other service buildings fronting Turner Place and Hinckley Place (Sanborn 1893, 1905 [Figure 5]); Ulitz 1906; Bromley 1907). By 1905, a large dwelling had been built fronting Hinckley Place, on Lot 26 (Sanborn 1905 [Figure 5]). By the late 1920s, some of the dwellings along Coney Island Avenue had been demolished or converted to stores, with a "pump house" on Lot 17 and a carpet cleaning establishment and an auto repair shop at the corner of Hinckley Place, on portions of Lot 19 (Sanborn 1929). Two new dwellings had been built on Lots 6 and 8 by this time, and a series of garages were located on Lots 28 and 30.

The 1950 Sanborn map (Figure 6) shows additional changes to the project site, including a used car lot on Lots 10 and 17, a filling station on Lot 19, and a dwelling on Lot 28. The 1969 Sanborn map indicates that by this time, the structure on Lot 17 had been demolished and the existing garage had been built in its place. Two of the four buildings on Lot 19 also had been demolished. By the 1977 Sanborn map edition, all of the remaining buildings on Lot 19 had been removed and a single one-story concrete block filling station had been built along the western side of the lot. Sanborn maps showed no changes in 1979, 1981, or 1989.

There were only a few changes to the project site during the 1990s and 2000s. By issuance of the 1992 Sanborn map, all of the structures once shown on Lot 30 had been demolished. And by 2001, the former filling station on Lot 19 had been razed and replaced with a one-story concrete block automobile repair facility, which is still shown on the 2007 Sanborn map (Figure 2). This structure was demolished in 2008.

CONCLUSIONS

Disturbance Record

Review of historic maps, as well as field observations and soil boring data confirm that the project site has been heavily disturbed from past construction and demolition activities, which included substantial grading and filling episodes at various times during the twentieth century. It is unlikely that much, if any, of the natural ground surface survives on the project site.

Precontact Sensitivity

From what is known of precontact period settlement patterns on Long Island, most habitation and processing sites are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water. Based on the combination of a general lack of documented precontact period sites in the general vicinity, the lack of fresh water in the vicinity, and the level of known disturbance to the property, the project site is considered to have a low potential for hosting precontact cultural remains. Therefore, further research and study concerning precontact archaeological resources is not recommended.

Historical Sensitivity

Historic maps indicate that the project site was undeveloped until the late 1870s and/or 1880s. During the last decades of the nineteenth century, all of the dwellings on the project site fronted Coney Island Avenue, which had been supplied with piped city water by the 1880s and city sewers soon thereafter. The buildings fronting Turner Place and Hinckley Place during this period were ancillary buildings such as barns or sheds. It is unlikely that any of these structures would have relied on backyard shaft features such as wells or privies. Thus historical archaeological sensitivity is low, and further research and study concerning historic period archaeological resources is not recommended.

RECOMMENDATIONS

Based on the above conclusions, including a low sensitivity for both precontact and historic period archaeological resources, coupled with significant disturbance to the original ground surface on the project site, HPI recommends no further archaeological investigations are necessary for the project site.

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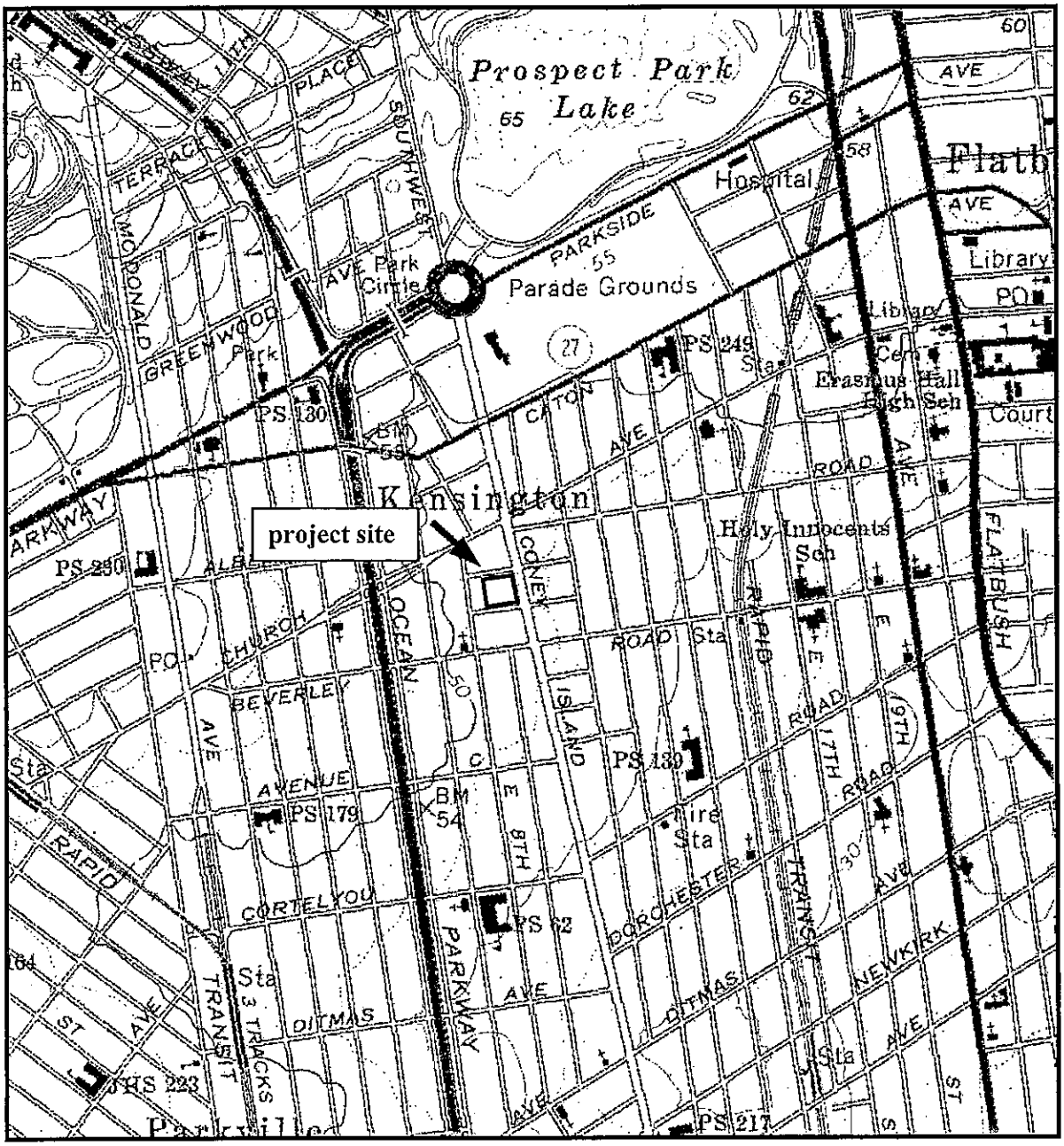
1844 *Map of New-York Bay and Harbor and the Environs* (#369). F. R. Hassler, Superintendent, U.S. Coast Survey, Washington D.C.

1856 *Gowanus Bay and Vicinity, Long Island, New York.* Register #599. S.A. Gilbert, Surveyor; A. D. Bache, Superintendent.

United States Department of Agriculture (USDA)
2005 *New York City Reconnaissance Soil Survey*. United States Department of Agriculture, Natural Resources Conservation Service, Staten Island, NY.

United States Geological Survey (USGS)
1979 *Brooklyn, N.Y.* Quadrangle. 7.5 minute series. U.S. Geological Survey, Reston, VA.



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Block 5342, Lots 6, 8, 10, 17, 19, 26, 28 and 30

Figure 1: Project site on *Brooklyn, N.Y.* topographic quadrangle (U.S.G.S. 1979)

2007 Certified Sanborn Map

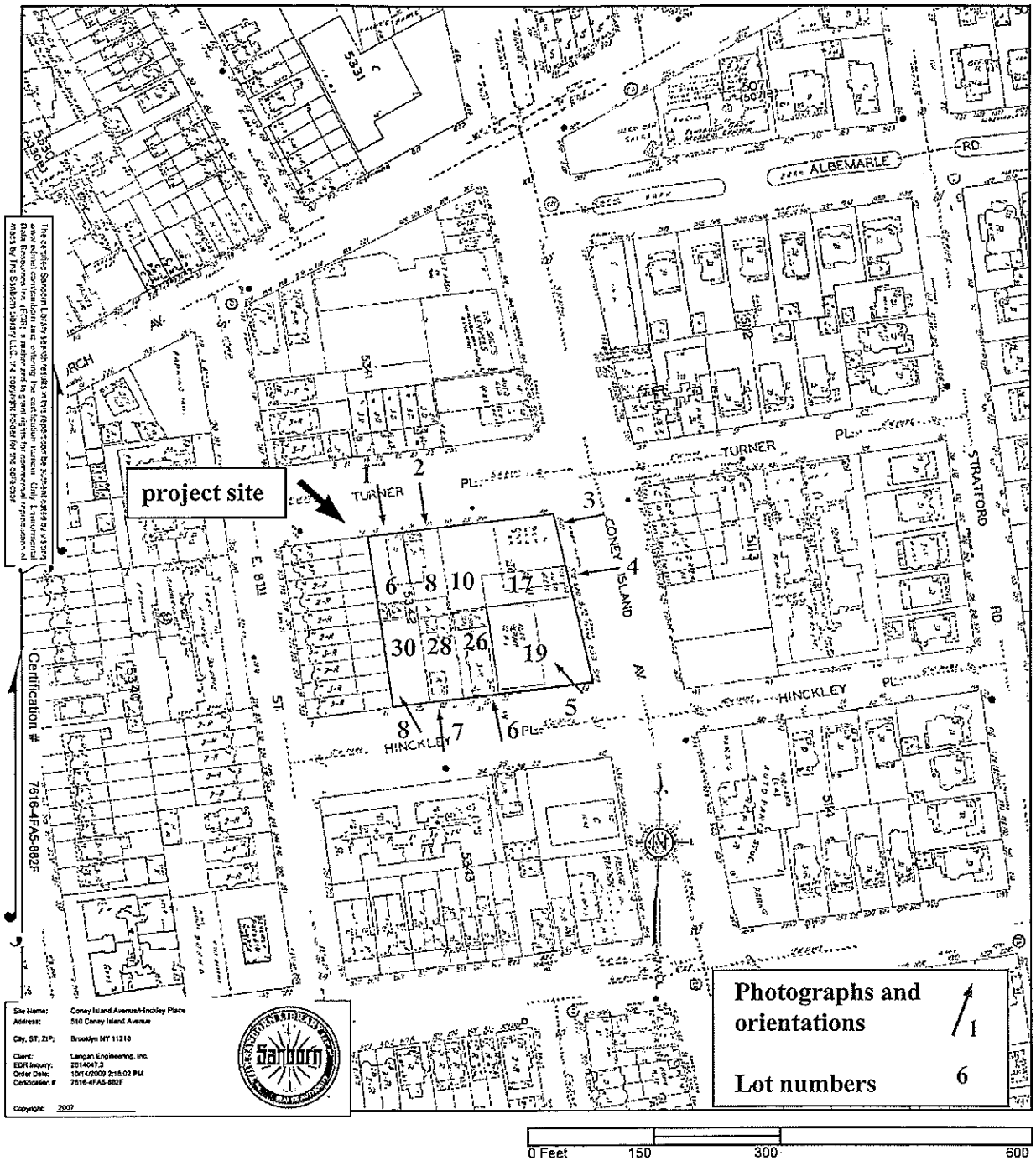

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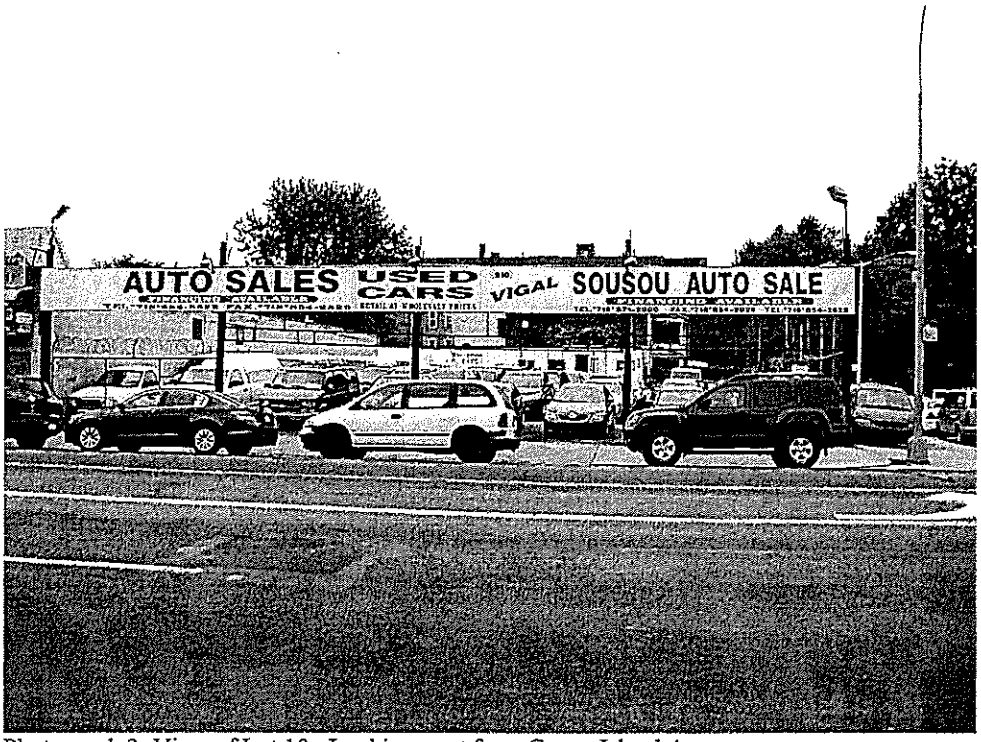
Figure 2: Project site on *Insurance Maps of the Borough of Brooklyn* (Sanborn 2007).

Photograph 1: View of Lot 6. Looking south from Turner Place.

Photograph 2: View of Lot 8. Looking south from Turner Place.

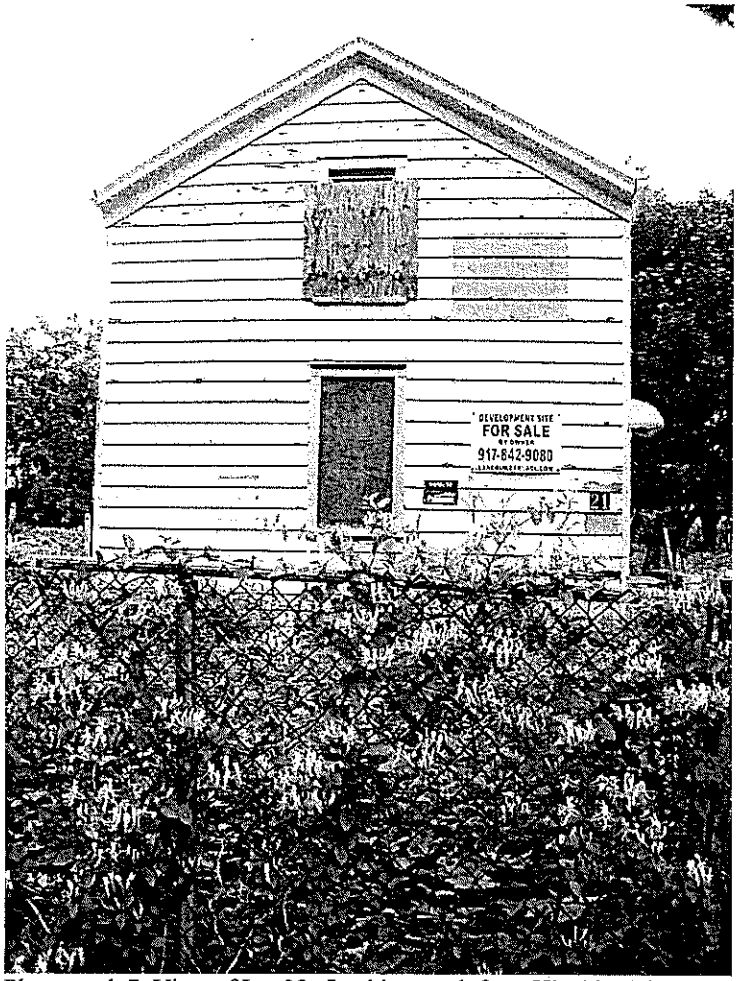


Photograph 3: View of Lot 10. Looking west from Coney Island Avenue.

Photograph 4: View of Lot 17. Looking west from Coney Island Avenue.

Photograph 5: View of Lot 19. Looking northwest from Hinckley Place.

Photograph 6: View of Lot 26. Looking north from Hinckley Place.



Photograph 7: View of Lot 28. Looking north from Hinckley Place.

Photograph 8: View of Lot 30. Looking northwest from Hinckley Place.

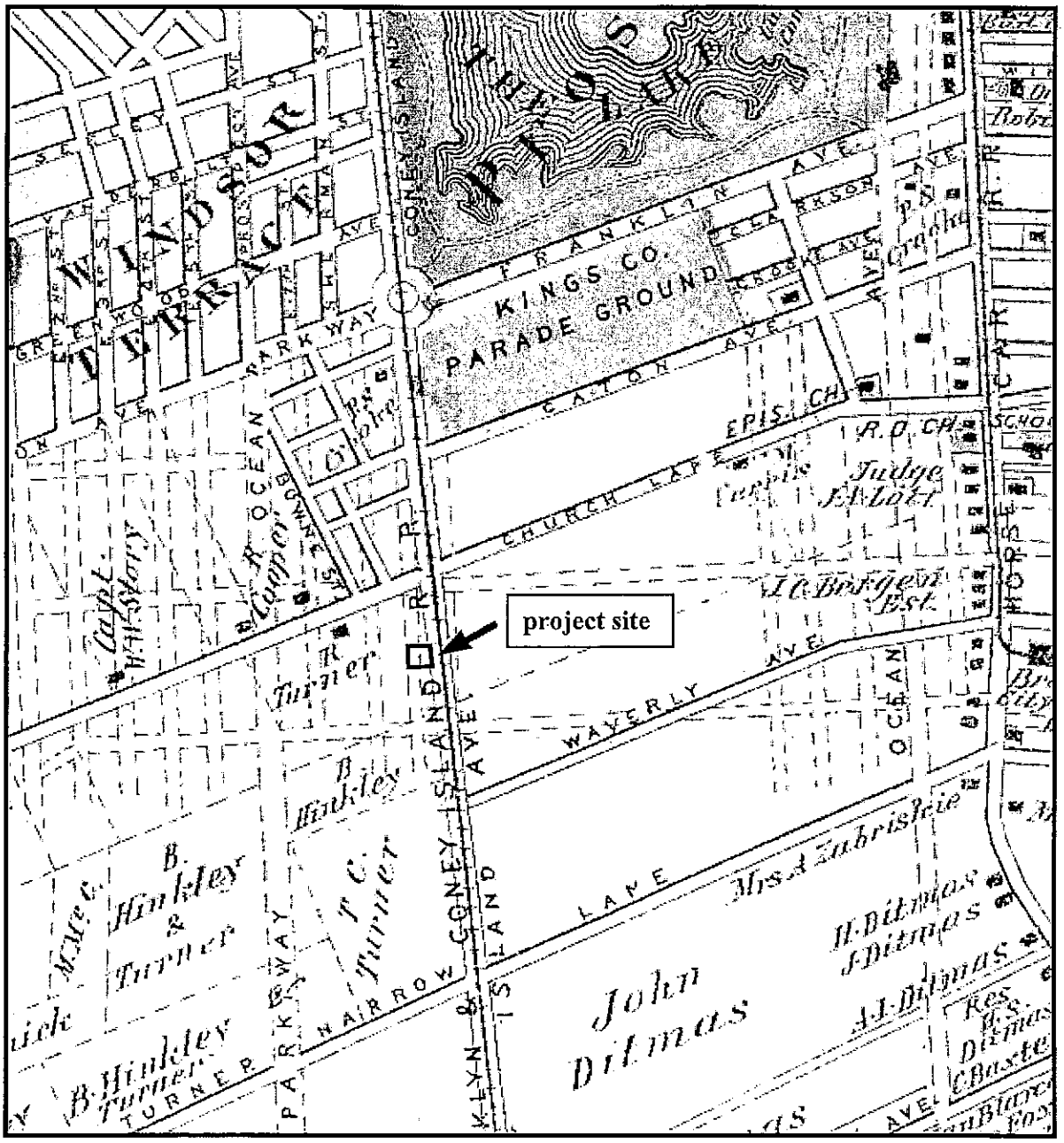


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Figure 3: Project site on *Atlas of Long Island, New York* (Beers 1873).

0 500 1000 1500 2000 2500 FEET

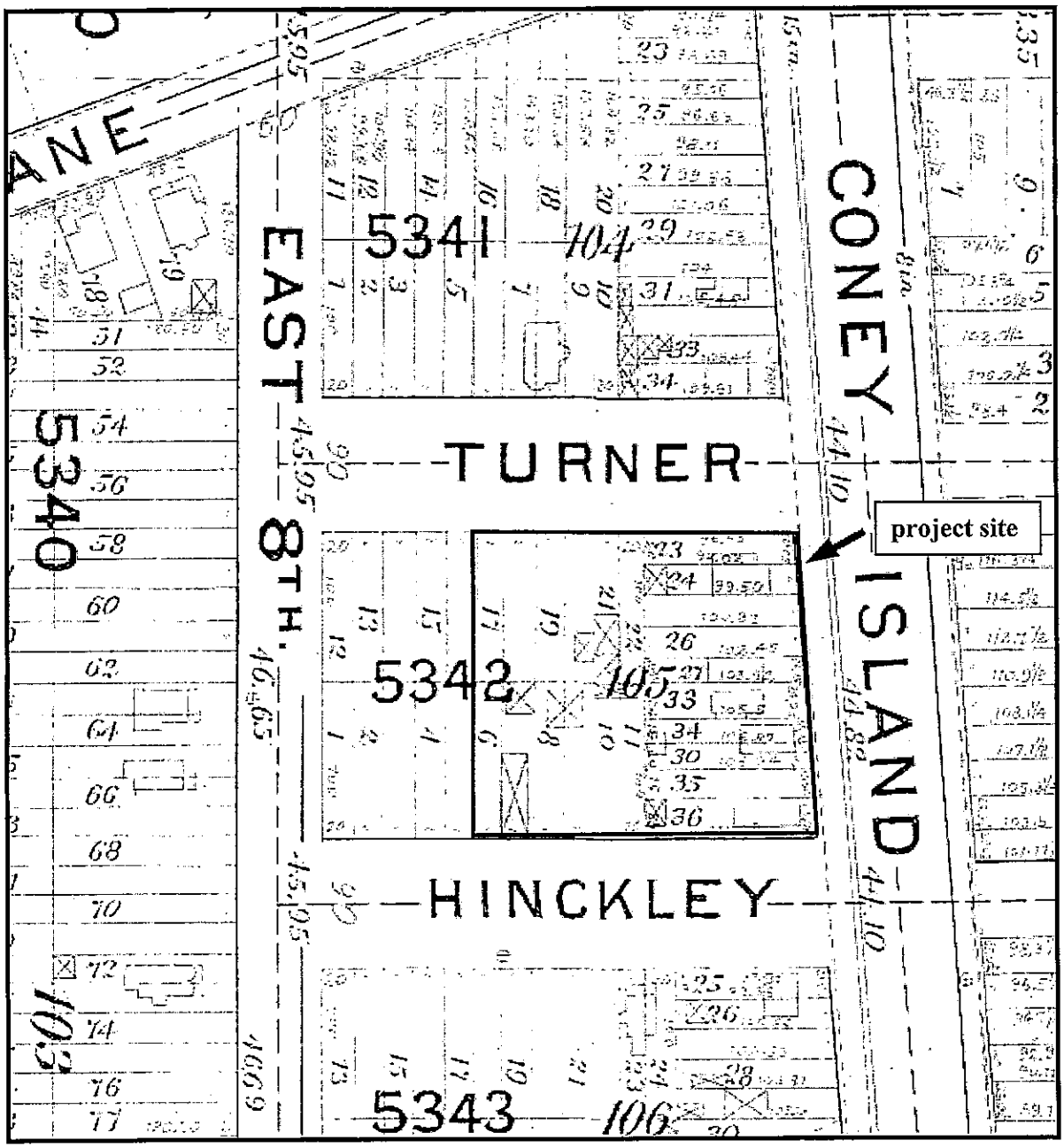

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Figure 4: Project site on *Atlas of the Brooklyn Borough of the City of New York York* (Ulitz 1888-1889).

0 50 100 150 200 250 FEET

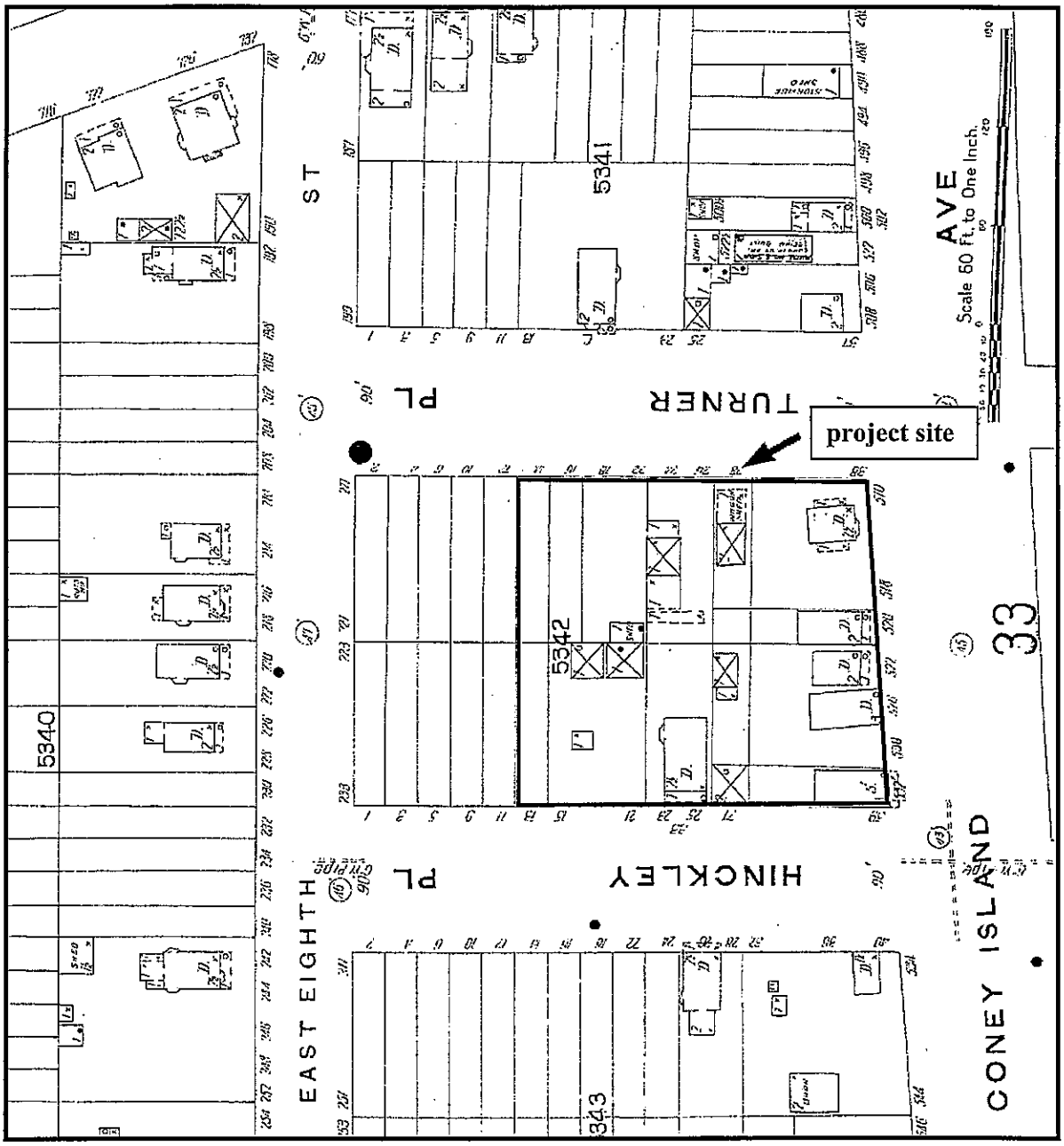

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Figure 5: Project site on *Insurance Maps of the Borough of Brooklyn* (Sanborn 1905).

0 50 100 150 200 250 FEET

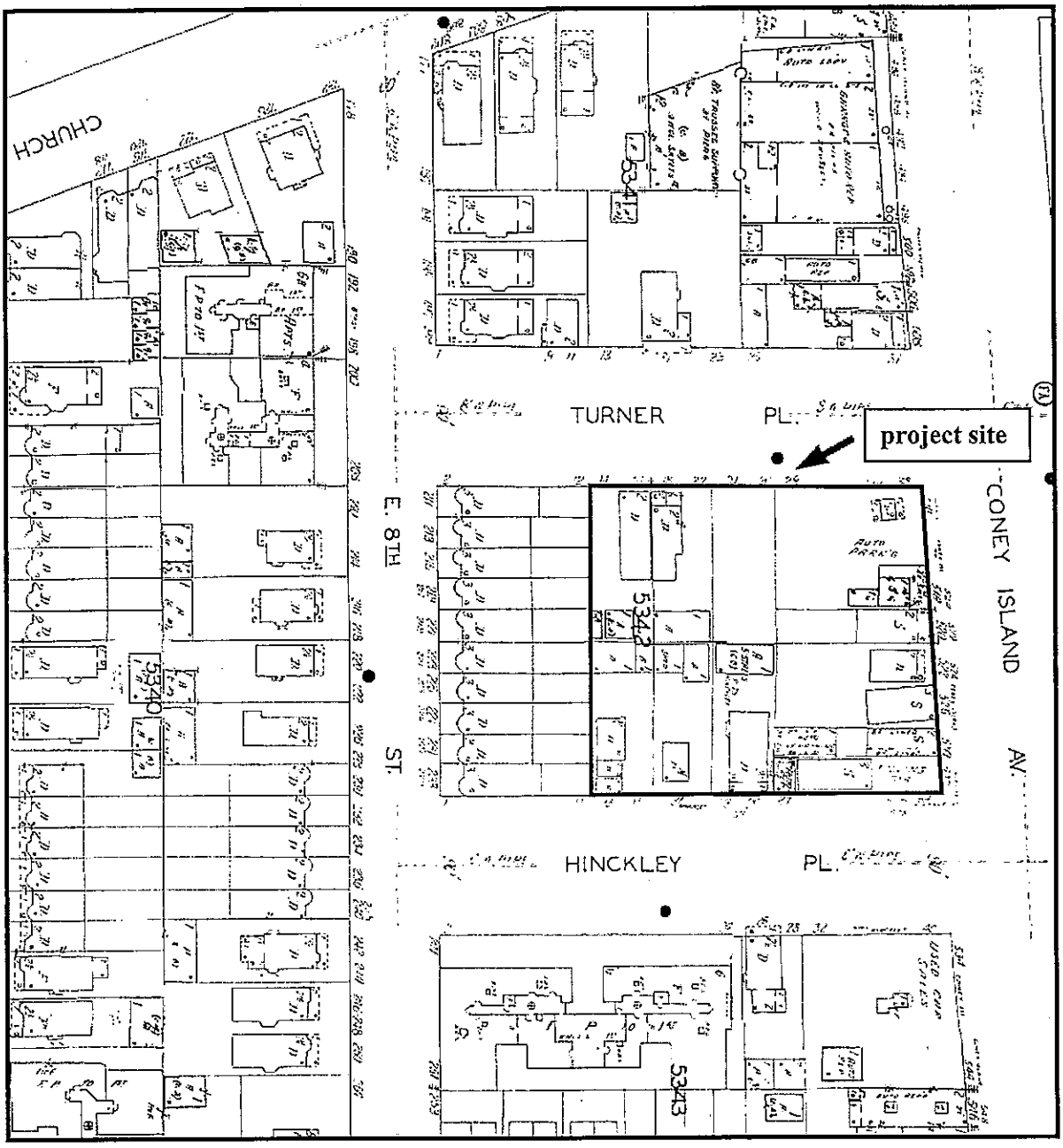

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Figure 6: Project site on *Insurance Maps of the Borough of Brooklyn* (Sanborn 1950).

0 50 100 150 200 250 FEET