City Environmental Quality Review
ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) SHORT FORM

FOR UNLISTED ACTIONS ONLY • *Please fill out and submit to the appropriate agency* (see instructions)

Part I: GENERAL INFORMATION

1. *Does the Action Exceed Any Type I Threshold in 6 NYCRR Part 617.4 or 43 RCNY §6-15(A) (Executive Order 91 of 1977, as amended)?* ☐ YES ☒ NO

If "yes," **STOP** and **complete the FULL EAS FORM**.

2. *Project Name* 57 Caton Place Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
17DCP100K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
N170214ZRK, 170213ZMK	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY			NAME OF APPLICANT		
New York City Department of City Planning			57 Caton Partners LLC		
NAME OF LEAD AGENCY CONTACT PERSON			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON		
Robert Dobruskin			Marcie Kesner, AICP		
ADDRESS 120 Broadway			ADDRESS 1177 Avenue of the Americas		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10036
TELEPHONE 212-720-3423	EMAIL RDOBRUS@planning.nyc.gov		TELEPHONE 1(212)715-7564	EMAIL mkesner@kramerlevin.com	

5. *Project Description*

The applicant, 57 Caton Partners LLC, is seeking a zoning map amendment to rezone the project area (Block 5322, Lots 1 and 4) from C8-2 to R7A, with a C2-4 overlay on the proposed development site (Lot 4), to facilitate the development of a 166,191 gross square foot (gsf) mixed-use residential and commercial building consisting of two wings (nine stories each) on a shared base which would contain approximately 106,905 gsf of market rate (up to 107 units) and affordable residential space, 12,994 gsf of ground floor retail, and up to 74 spaces of below-grade parking. The Applicant also seeks a text amendment to the Special Ocean Parkway District text and to Appendix F: Mandatory Inclusionary Housing Area to establish a Mandatory Inclusionary Housing Area that is coterminous with the project area to make use of Inclusionary Housing regulations and allowances.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 7	STREET ADDRESS 57 Caton Place; 312 Coney Island Avenue
TAX BLOCK(S) AND LOT(S) Block 5322, Lots 1 and 4		ZIP CODE 11218
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The block bounded by Ocean Parkway, Machate Circle, Coney Island Avenue, Caton Place, and East 8th Street		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY C8-2		ZONING SECTIONAL MAP NUMBER 16d

6. *Required Actions or Approvals* (check all that apply)

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

☐ CITY MAP AMENDMENT	☐ ZONING CERTIFICATION	☐ CONCESSION
☒ ZONING MAP AMENDMENT	☐ ZONING AUTHORIZATION	☐ UDAAP
☒ ZONING TEXT AMENDMENT	☐ ACQUISITION—REAL PROPERTY	☐ REVOCABLE CONSENT
☐ SITE SELECTION—PUBLIC FACILITY	☐ DISPOSITION—REAL PROPERTY	☐ FRANCHISE
☐ HOUSING PLAN & PROJECT	☐ OTHER, explain:	

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION 113-10, Appendix F

Board of Standards and Appeals: ☐ YES ☒ NO

☐ VARIANCE (use)

☐ VARIANCE (bulk)
☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

***Department of Environmental Protection*:** ☐ YES ☒ NO If "yes," specify:

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

☐ LEGISLATION
☐ RULEMAKING
☐ CONSTRUCTION OF PUBLIC FACILITIES
☐ 384(b)(4) APPROVAL
☐ OTHER, explain:
☐ FUNDING OF CONSTRUCTION, specify:
☐ POLICY OR PLAN, specify:
☐ FUNDING OF PROGRAMS, specify:
☐ PERMITS, specify:

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

☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)
☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
☐ OTHER, explain:

***State or Federal Actions/Approvals/Funding*:** ☐ YES ☒ NO If "yes," specify:

7. *Site Description:* *The directly affected area consists of the project site and the area subject to any change in regulatory controls. Except where otherwise indicated, provide the following information with regard to the directly affected area.*

***Graphics*:** *The following graphics must be attached and each box must be checked off before the EAS is complete. Each map must clearly depict the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11 x 17 inches in size and, for paper filings, must be folded to 8.5 x 11 inches.*

☒ SITE LOCATION MAP ☒ ZONING MAP ☒ SANBORN OR OTHER LAND USE MAP
☒ TAX MAP ☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)
☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 28,777
Roads, buildings, and other paved surfaces (sq. ft.): 28,777
Waterbody area (sq. ft) and type: 0
Other, describe (sq. ft.):

8. *Physical Dimensions and Scale of Project* (if the project affects multiple sites, provide the total development facilitated by the action)

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 166,191
NUMBER OF BUILDINGS: 1 (2 wings on a shared base)
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 166,191
HEIGHT OF EACH BUILDING (ft.): 95
NUMBER OF STORIES OF EACH BUILDING: 9

Does the proposed project involve changes in zoning on one or more sites? ☒ YES ☐ NO
If "yes," specify: The total square feet owned or controlled by the applicant: 23,702
The total square feet not owned or controlled by the applicant: 5,075

Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? ☒ YES ☐ NO
If "yes," indicate the estimated area and volume dimensions of subsurface permanent and temporary disturbance (if known):
AREA OF TEMPORARY DISTURBANCE: 23,702 sq. ft. (width x length)
VOLUME OF DISTURBANCE: approx. 642,746 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 23,702 sq. ft. (width x length)

Description of Proposed Uses (please complete the following information as appropriate)

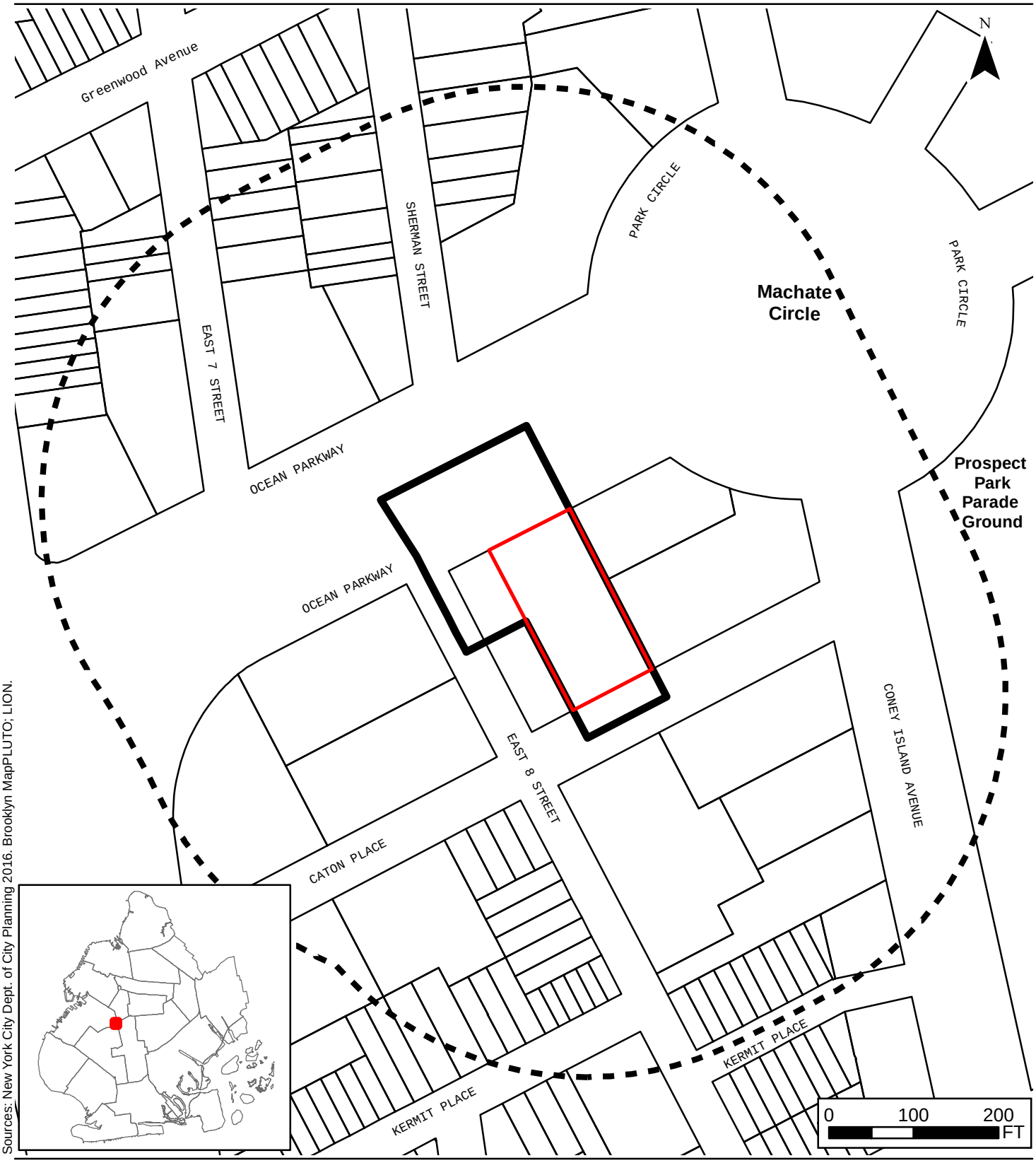
	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	106,905	1) 12,994 2) 41,288		
Type (*e.g.,* retail, office, school)	107 units	1) Local Retail 2) Parking		

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO
If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 279 NUMBER OF ADDITIONAL WORKERS: 44
Provide a brief explanation of how these numbers were determined: Based on the average household size of 2.63 for the Census Tract; 1 employee per 25 DU; 3 employees per 1,000 sf of retail

Does the proposed project create new open space? ☐ YES ☒ NO If "yes," specify size of project-created open space: sq. ft.

Has a No-Action scenario been defined for this project that differs from the existing condition? ☒ YES ☐ NO
If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly: See Section 1.0, "Project Description" attached.

9. *Analysis Year* CEQR Technical Manual Chapter 2		
ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2021		
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 26		
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO		IF MULTIPLE PHASES, HOW MANY?
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:		
10. *Predominant Land Use in the Vicinity of the Project* (check all that apply) ☒ RESIDENTIAL ☐ MANUFACTURING ☐ COMMERCIAL ☒ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: Public Facilities/Institutions, Parking		



Sources: New York City Dept. of City Planning 2016. Brooklyn MapPLUTO; LION.

Project Site

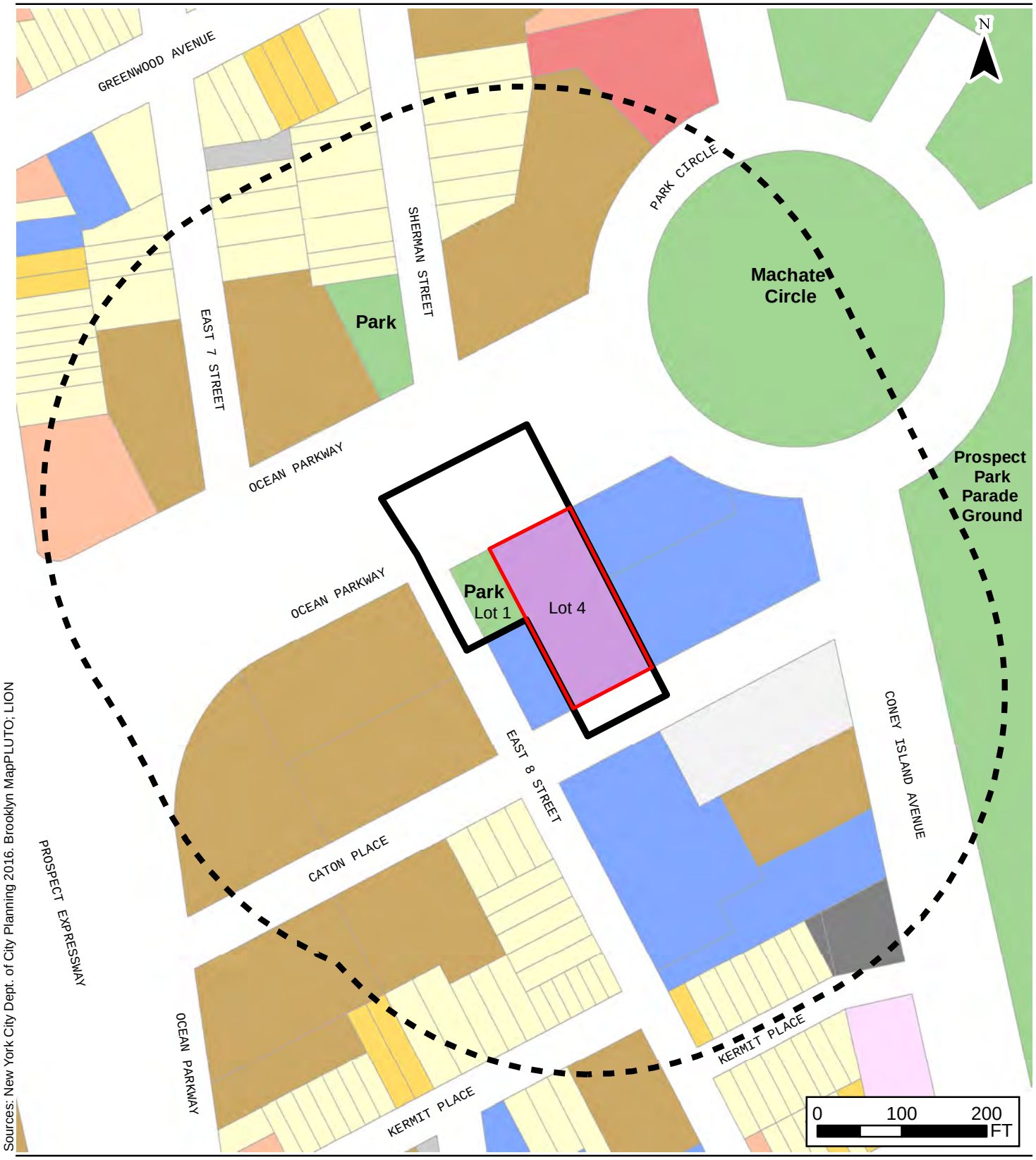
Project Area (Proposed Rezoning Area)

400-Foot Radius

57 Caton Place Rezoning
Brooklyn, New York

Site Location

Figure 1



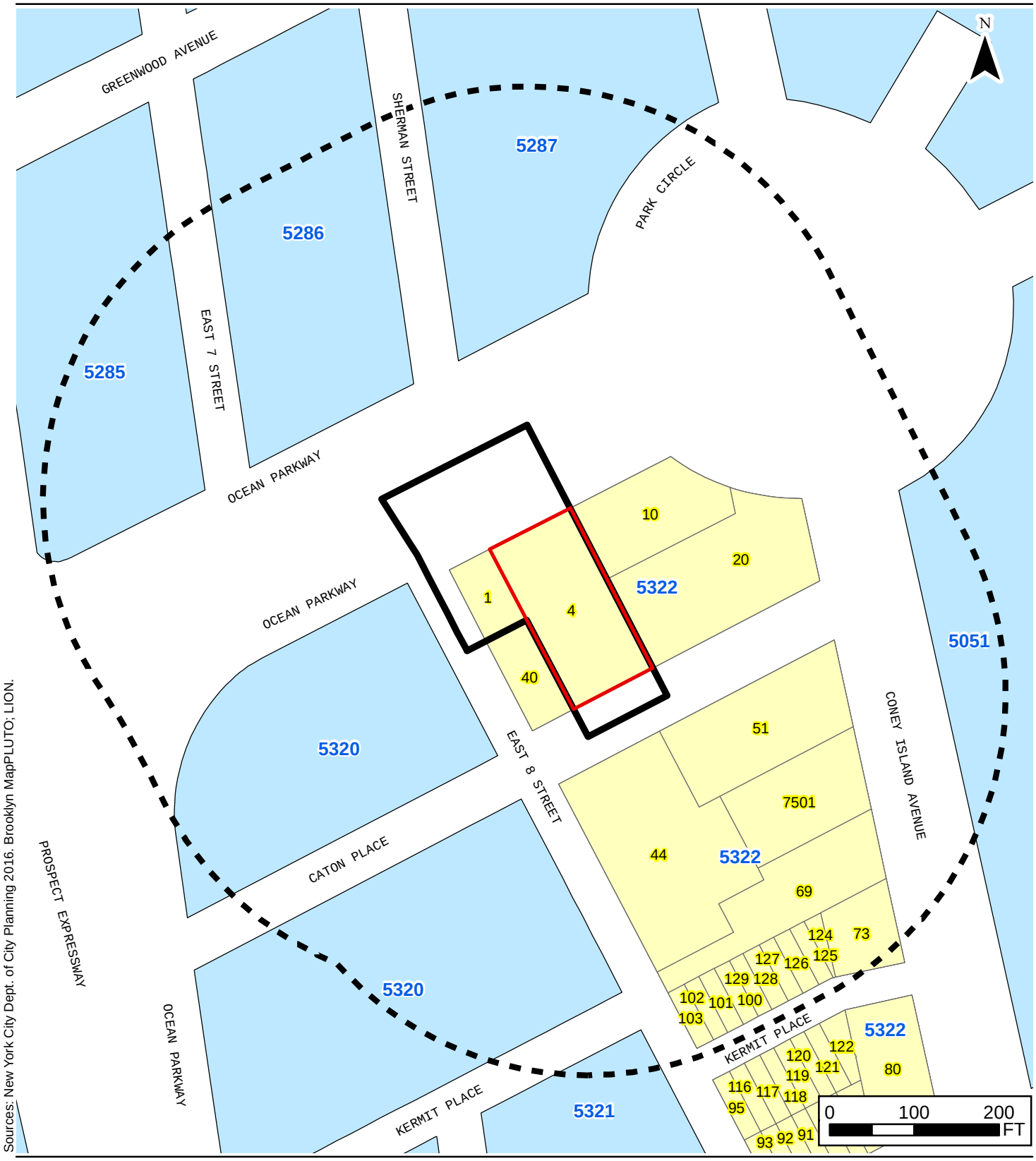
Sources: New York City Dept. of City Planning 2016. Brooklyn MapPLUTO; LION

Project Site
Project Area (Proposed Rezoning Area)
400-Foot Radius
One & Two Family Buildings
MultiFamily Walkup Buildings
MultiFamily Elevator Buildings
Mixed Commercial/Residential Buildings
Commercial/Office Buildings
Industrial/Manufacturing
Transportation/Utility
Public Facilities & Institutions
Open Space
Parking Facilities
Vacant Land
All Others or No Data

57 Caton Place Rezoning
Brooklyn, New York

Land Use

Figure 2



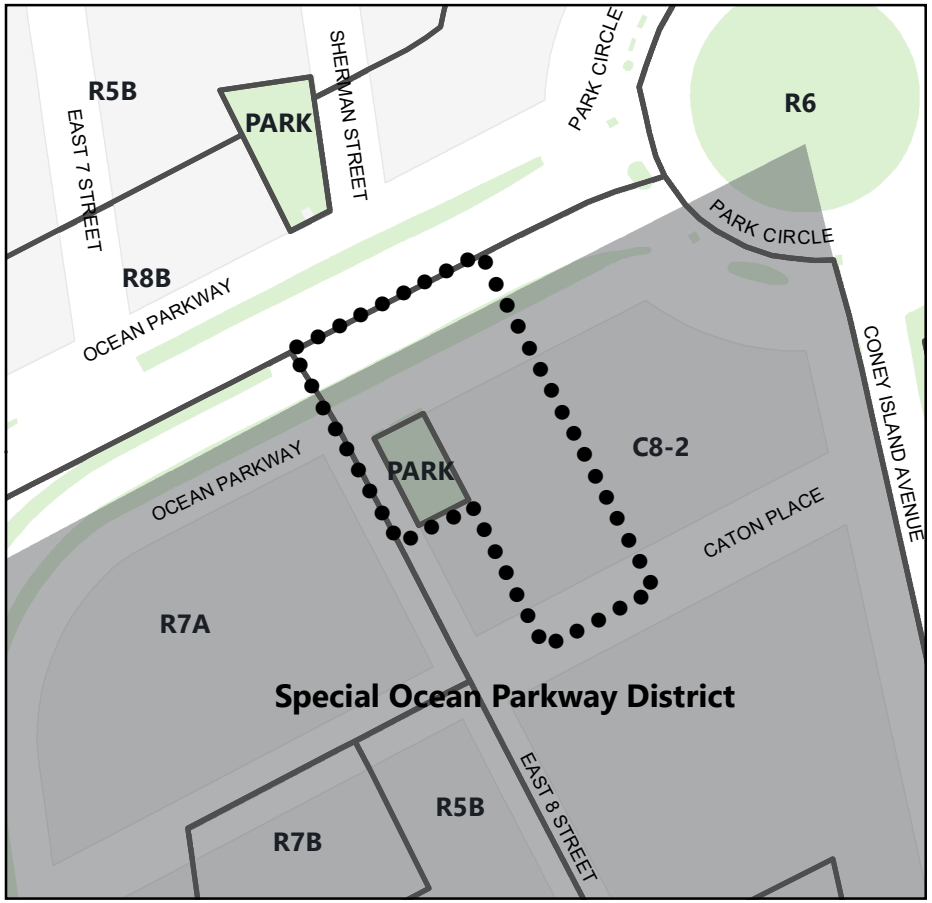
Project Site
Project Area (Proposed Rezoning Area)
400-Foot Radius
4 Project Block Tax Parcel (w/ Lot Number)
5200 Tax Block (w/ Block Number)

57 Caton Place Rezoning
Brooklyn, New York

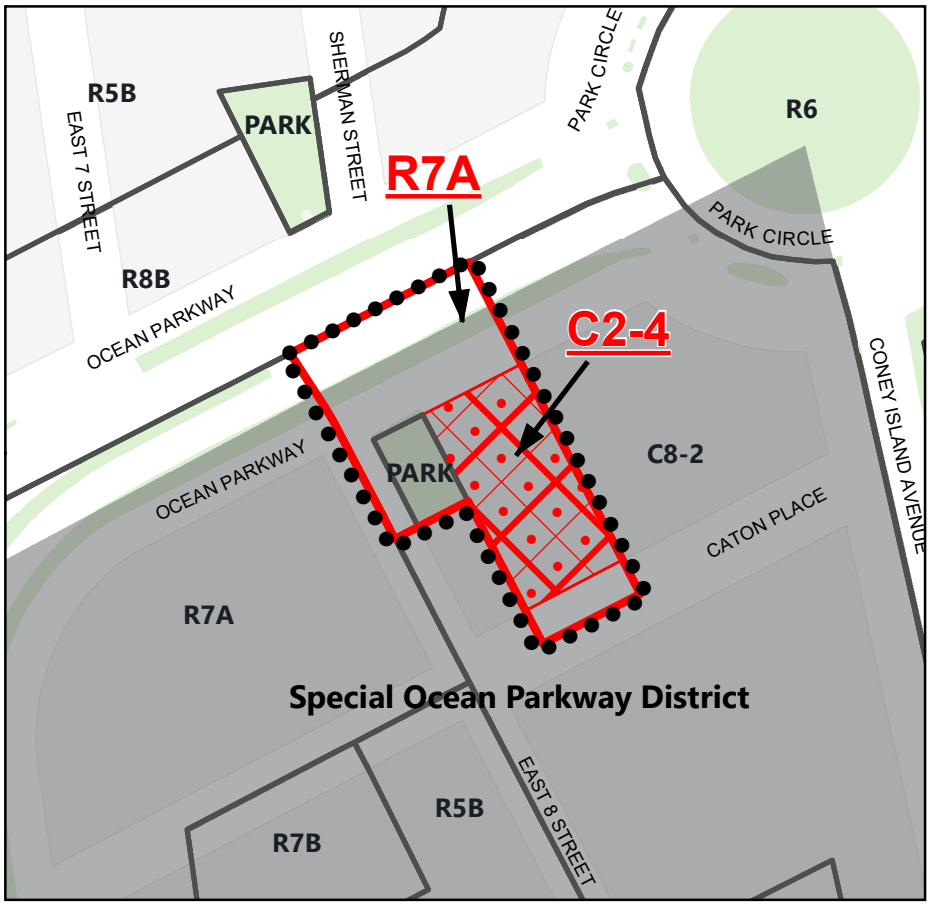
Tax Map

Figure 3

Existing Zoning



Proposed Zoning



Project Area

Proposed Rezoning Area

Project Site and C2-4 Overlay

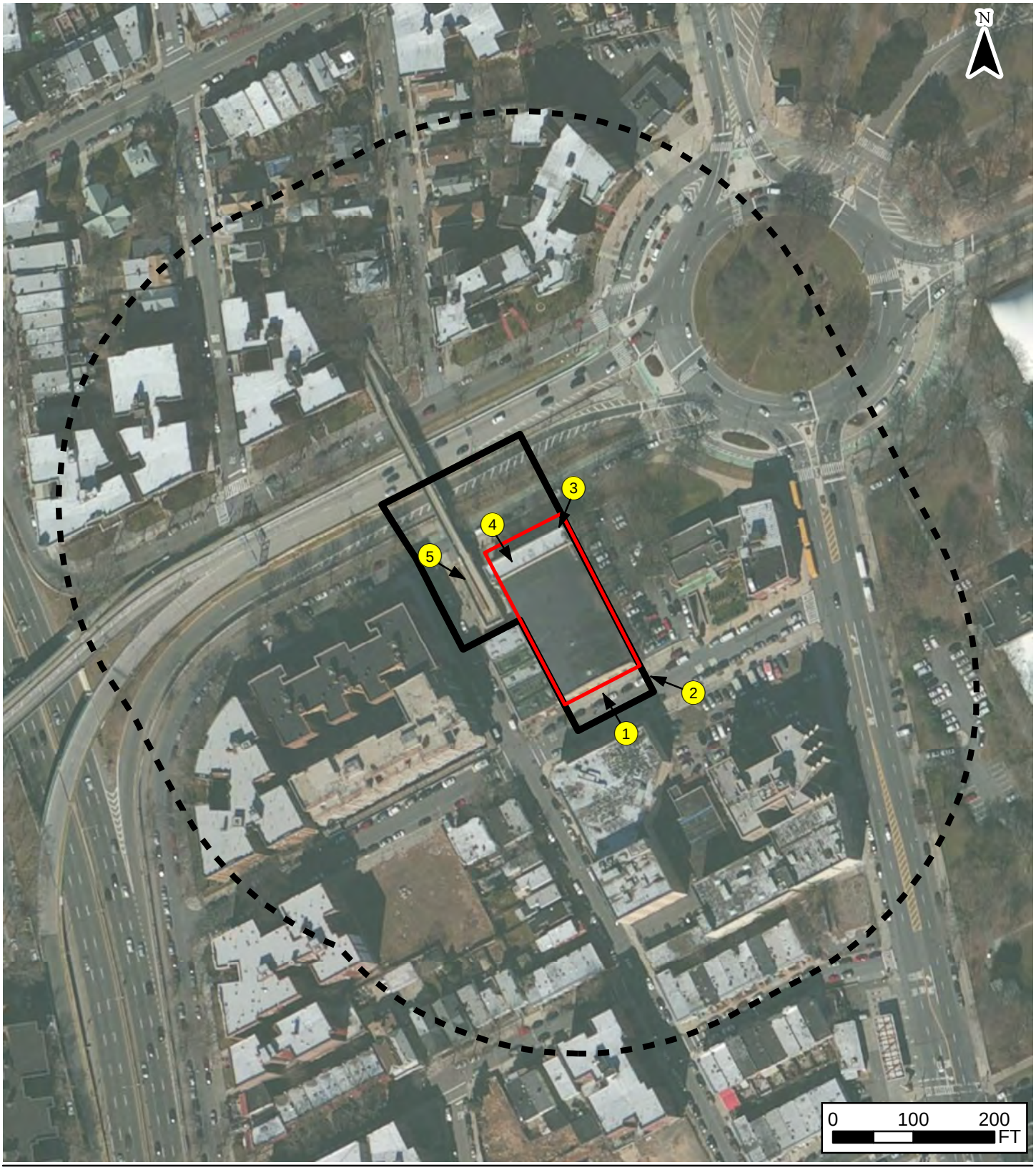
Zoning Districts

Special Ocean Parkway District

57 Caton Place Rezoning
Brooklyn, New York

Zoning Change Map

Figure 4



Project Site

Project Area (Proposed Rezoning Area)

400-Foot Radius

→ Photograph Location and Viewpoint Direction

57 Caton Place Rezoning
Brooklyn, New York

Photograph Locations

Figure 5



Photo 1

View of the project site facing north from Caton Place



Photo 2

View of the project site facing northwest from Caton Place

57 Caton Place Rezoning
Brooklyn, New York

Views of Project Site

Figure 5a

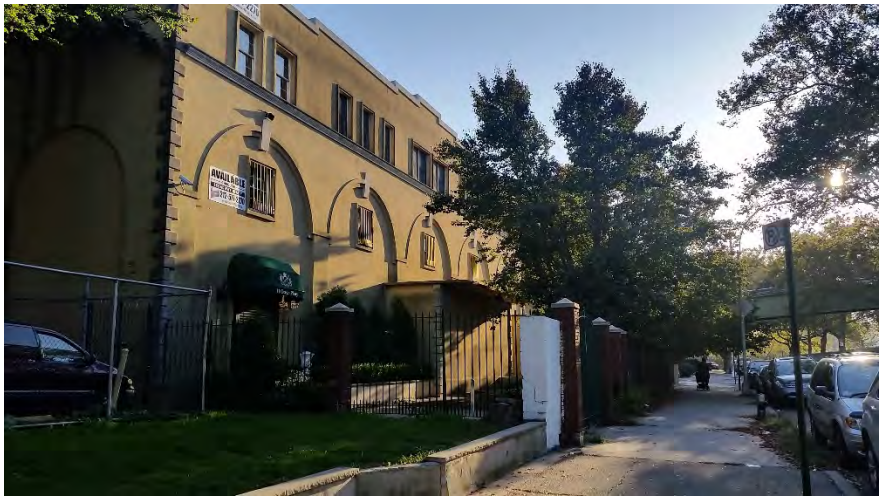


Photo 3

View of project site facing southwest from Ocean Parkway



Photo 4

View of the project site facing southeast from Ocean Parkway



Photo 5

View of Lot 1 facing southeast from corner of Ocean Parkway and East 8th Street

57 Caton Place Rezoning
Brooklyn, New York

Views of Project Site

Figure 5b

Source: Morris Adjmi Architects



View West along Caton Place



View West along Ocean Parkway

For Illustrative Purposes Only

57 Caton Place Rezoning
Brooklyn, New York

Proposed Project - Conceptual Renderings

Figure
6

Part II: TECHNICAL ANALYSIS

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

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

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☒	☐
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☐	☒
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. See Attached		
(e) Is the project a large, publicly sponsored project?	☐	☒
o If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
o If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of 200 or more residential units?	☐	☒
o Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
o Directly displace more than 500 residents?	☐	☒
o Directly displace more than 100 employees?	☐	☒
o Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
o Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
o **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
o **Libraries:** Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
o **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
o **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
o If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☐	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☒	☐
o If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☒
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☐	☐

	YES	NO
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See attached.		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
o If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☒	☐
o If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions. See attached		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☐	☒
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☐	☒
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☐	☒
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: Documented groundwater contamination in the surrounding areas with volatile organic compounds (VOCs) and solvents.	☐	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13?	☐	☐
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it	☐	☒

	YES	NO
involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?		
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 3,146		
o Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 21,981,453 MBTU		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
o Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☐	☒
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☐
o Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
o Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☒
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
o If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See attached	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒

	YES	NO
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☒	☐
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. The proposed project does not have the potential for a significant adverse impact in the technical areas above as noted in the attached Supplemental Analyses. In addition, the project would not result in the combination of moderate adverse impacts in the technical areas to have the potential to significantly affect public health. Therefore, an assessment of public health is not warranted.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. See attached.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	☒	☐
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☒	☐
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
o The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
o Closure of a community facility or disruption in its services?	☐	☒
o Activities within 400 feet of a historic or cultural resource?	☒	☐
o Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See attached		

20. *APPLICANT'S CERTIFICATION*

I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of the pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.

Still under oath, I further swear or affirm that I make this statement in my capacity as the applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.

APPLICANT/REPRESENTATIVE NAME	DATE
Noah Bernstein, AICP	1/11/2018

SIGNATURE

PLEASE NOTE THAT APPLICANTS MAY BE REQUIRED TO SUBSTANTIATE RESPONSES IN THIS FORM AT THE DISCRETION OF THE LEAD AGENCY SO THAT IT MAY SUPPORT ITS DETERMINATION OF SIGNIFICANCE.

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

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

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

IMPACT CATEGORY	Potentially Significant Adverse Impact YES	NO
Land Use, Zoning, and Public Policy	☐	☒
Socioeconomic Conditions	☐	☒
Community Facilities and Services	☐	☒
Open Space	☐	☒
Shadows	☐	☒
Historic and Cultural Resources	☐	☒
Urban Design/Visual Resources	☐	☒
Natural Resources	☐	☒
Hazardous Materials	☐	☒
Water and Sewer Infrastructure	☐	☒
Solid Waste and Sanitation Services	☐	☒
Energy	☐	☒
Transportation	☐	☒
Air Quality	☐	☒
Greenhouse Gas Emissions	☐	☒
Noise	☐	☒
Public Health	☐	☒
Neighborhood Character	☐	☒
Construction	☐	☒

2. Are there any aspects of the project relevant to the determination of whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? ☐ YES ☒ NO

If there are such impacts, attach an explanation stating whether, as a result of them, the project may have a significant impact on the environment.

3. Check determination to be issued by the lead agency:

☐ **Positive Declaration**: If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a *Positive Declaration* and prepares a draft Scope of Work for the Environmental Impact Statement (EIS).

☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements of 6 NYCRR Part 617.

☒ **Negative Declaration:** If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a *Negative Declaration*. The *Negative Declaration* may be prepared as a separate document (see template) or using the embedded Negative Declaration on the next page.

4. ***LEAD AGENCY'S CERTIFICATION***

TITLE	LEAD AGENCY
Director, Environmental Review and Assessment Division	New York City Department of City Planning
NAME	DATE
Robert Dobruskin, AICP	1/12/2018

SIGNATURE

Robert Dobruskin

1.0
Project Description

1.1 Introduction

The applicant, 57 Caton Partners LLC, is seeking a zoning map amendment from C8-2 commercial to R7A residential, with a portion of the district to include a C2-4 overlay, and a zoning text amendment to the Special Ocean Parkway District Section 113-10 and Appendix F of the Zoning Resolution (ZR) to establish a Mandatory Inclusionary Housing Area (MIHA) on Block 5322, Lots 1 and 4 in the Windsor Terrace neighborhood of Brooklyn, Community District 7 (the "proposed actions"). The proposed actions would facilitate the development of a 166,191-gross square foot (gsf) mixed-use residential and commercial building at 57 Caton Place (Lot 4, the "project site") containing approximately 106,905 gsf of market rate (up to 107 units) and affordable (up to 27 units) residential space, 12,994 gsf of ground floor retail, and up to 74 spaces of below-grade parking. The project area, the area affected by the rezoning, also includes the adjacent parcel (Lot 1).

1.2 Project Area and Project Site

The proposed rezoning area (the "project area") comprises two tax lots on the western portion of Brooklyn Block 5322 which is bounded by East 8th Street to the west, Ocean Parkway to the north, Park Circle to the northeast, Coney Island Avenue to the east, and Caton Place to the south (see EAS Figure 1). These tax lots include Lot 1, a City-owned lot mapped as parkland, and Lot 4, the project site. Lot 1 has an area of 5,075 square feet (sf) and currently contains several park benches and the off-ramp/landing of an Ocean Parkway pedestrian overpass, which connects this lot to another City-owned lot on the north side of Ocean Parkway.

The project area is located in a C8-2 commercial district that is mapped along the western side of Coney Island Avenue between Fort Hamilton Parkway/Ocean Parkway to the north and Beverly Road to the south, and includes industrial, community facility, residential, commercial and transportation & utility uses. The project area is also located in the northeast corner of the Special Ocean Parkway District and is bordered to the north and west by residential districts.

The project site is located at 57 Caton Place (Brooklyn Block 5322, Lot 4) which is a through lot located at the middle of the project block. The project site has a total lot area of approximately 23,702 sf, with approximately 106 feet of frontage along Caton Place and 110 feet of frontage along Ocean Parkway. The project site is developed with a three-story building that was originally built in 1939 as a roller skating rink and currently serves as a warehouse. Along Caton Place, the building is built to the street line and has two entrances and three loading docks, each with roll-down gates. The front of the building is located along Ocean Parkway and has two entrances; this building face is set back 30 feet

from the street line, per Special Ocean Parkway District front yard requirements, and is gated and landscaped with trees and shrubs along the fence line. The building is built to a Floor Area Ratio (FAR) of 1.07. The building is being leased to a commercial tenant on a short term basis (two-year lease). The tenant is using the space primarily for storage.

The C8-2 commercial zoning district, in which the project site is located, allows for a maximum FAR of 2.0 for commercial uses and 4.8 for allowed community facility uses. C8-2 districts provide for automotive and other heavy commercial services that often require large amounts of land such as automobile showrooms and repair shops, warehouses, gas stations, and car washes. However, all commercial uses as well as certain community facilities (Use Group 4) are permitted in C8 districts. Housing is not permitted and performance standards are imposed on certain semi-industrial uses. C8 districts are mapped mainly along major traffic arteries where concentrations of automotive uses have developed, and generally bridge commercial and industrial uses. Building heights in C8-2 districts are governed by a sky exposure plane beginning at a height of 60 feet or four stories (whichever is less). Parking is required within C8-2 districts requirements, and retail use has a parking requirement of 1 space per 400 square feet of floor area.

The project site is also located within the Special Ocean Parkway District, which was established to promote the scenic landmark designation of Ocean Parkway and maintain the existing scale and character of the community through special setback and landscaping requirements, as well as required enclosed parking for all uses along Ocean Parkway.

1.3 Proposed Actions

The applicant is proposing the following actions in order to facilitate the development of the proposed project:

- A zoning map amendment to rezone the project area from a C8-2 district to an R7A zoning district with a C2-4 commercial overlay over Lot 4. This would extend the neighboring R7A (to the west) to include the project site and city-owned parkland.
- Zoning text amendment to:
    - Appendix F: Mandatory Inclusionary Housing Area of the Zoning Resolution to establish an MIHA coterminous with the project area. The draft text amendment and MIHA map can be found in Appendix A.; and
    - Special Ocean Parkway District (ZR Section 113-00) to extend applicability of the MIH program to the designated areas. The draft text amendment can be found in Appendix A.

1.4 Proposed Project

The proposed actions would allow for the construction of an approximately 166,191 gsf (including cellar, sub-cellar and mechanical space) mixed-use development containing 107 residential units (an average of 1,000 gsf per dwelling unit), 12,994 gsf of local retail space, and a 74-space below-grade parking garage in a single building. The existing three-story building on the project site, which would

be vacated by the end of 2018, would be demolished. The proposed building would have two wings reaching nine stories each on a single, one-story base. The proposed project would have a total zoning floor area of 109,029 zoning square feet (zsf), or 4.6 FAR. The residential component would be composed of 106,905 gsf (99,285 zsf or 4.19 FAR) and would include ground floor lobby space, 107 dwelling units, outdoor space, and other residential amenities. In accordance with Option 1 of the Mandatory Inclusionary Housing (MIH) program, the applicant proposes to provide 25 percent of residential floor area (approximately 27 units) affordable to households earning an average of 60 percent of the area-wide median income (AMI)[1].The commercial component would contain 12,994 gsf of neighborhood-serving retail (9,744 zsf or 0.41 FAR) and would be located on the ground floor along the Caton Place frontage of the building. There would also be a 74-space below-grade parking garage which would be accessed via a driveway (and a new 12-foot wide curb cut) on Caton Place at the east side of the building.

The wing fronting on Caton Place would reach nine stories (95 feet tall excluding bulkhead) after a 15-foot setback above the seventh floor. The wing fronting on Ocean Parkway would also reach nine stories (95 feet tall excluding bulkhead) and would partially set back 10 feet at seven stories. Each wing would be approximately 60 feet deep and would be approximately 66 feet apart from each other. The interior area of the site between the two wings would be one story tall except for an outdoor residential amenity space located on the east side of the interior area. The building would be built to the street line along Caton Place and would have retail entrances, a residential lobby and a driveway for the parking garage. Along Ocean Parkway, the building would be set back 30 feet from the street line and would have a front yard and a residential lobby. A site plan, elevation and building massing diagram is provided in Figure 1-1.

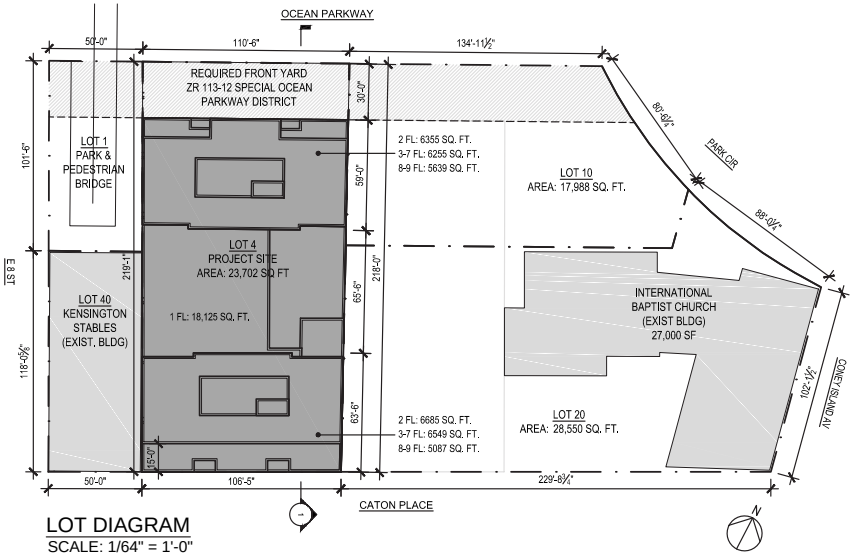
The proposed R7A district is a medium-density residential district that allows residential (Use Groups 1 and 2) and community facility uses (Use Groups 3 and 4) with a maximum residential FAR of 4.6. The maximum base height in an R7A district is 75 feet and the maximum building height is 90 feet or 95 feet with a qualifying ground floor (at least 13 feet in height). Parking is required for 50 percent (1 parking space per 2 dwelling units) of market-rate dwelling units in R7A districts. The proposed development would adhere to the R7A zoning regulations.

The proposed C2-4 commercial overlay is typically mapped along streets in residential districts to serve local retail needs; it allows a variety of neighborhood serving commercial uses including Use Groups 5-9. C2-4 commercial overlays have a maximum FAR of 2.0. Commercial parking requirements in a C2-4 is 1 space per 1,000 square feet of floor area, and can be waived if the total number of spaces required for all uses is below 40. The proposed development would adhere to the C2-4 zoning regulations.

1.5 Project Purpose and Need

The proposed actions would facilitate the construction of a mixed-use residential and commercial development containing 107 dwellings, including affordable housing pursuant to the Mandatory Inclusionary Housing (MIH) Program. The project site is currently substantially underbuilt to 1.07 FAR compared to the 2.0 commercial FAR allowed. In addition, the C8-2 zoning district, which is meant to bridge commercial and manufacturing districts, is geared toward heavy commercial and automotive uses that require large areas of land. This is not in line with the current land uses and trends along

[1] For the purpose of a conservative analysis, it was assumed that 20 percent affordability at or below 80 percent AMI was assumed for day care calculations (approximately 22 units which is below the CEQR threshold of 110 units for Day Care analysis in Brooklyn).



LOT DIAGRAM
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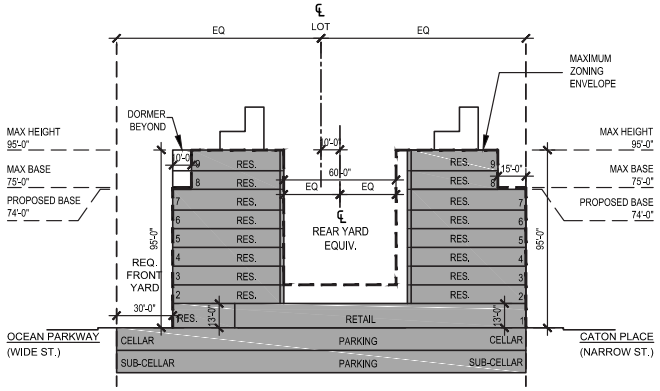
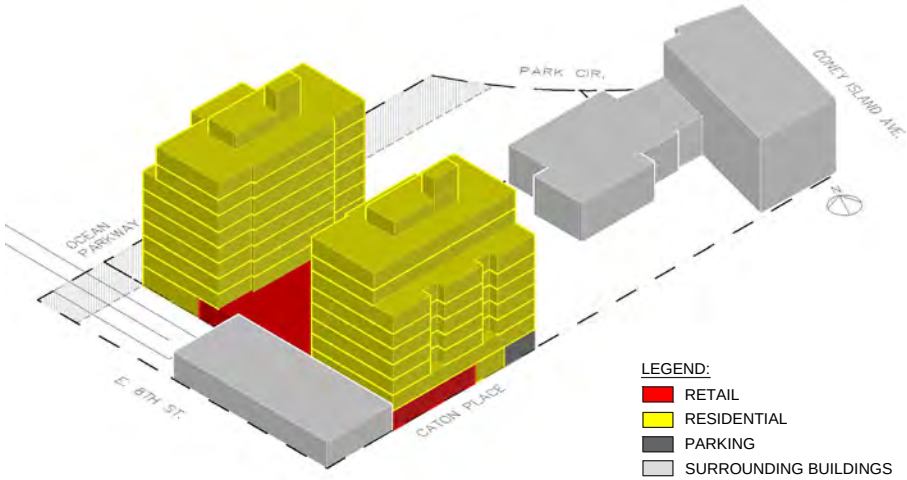


ZONING SECTION 1
SCALE: 1/64" = 1'-0"



For Illustrative Purposes Only

57 Caton Place Rezoning
Brooklyn, New York

With-Action RWCDS Diagrams

Figure
1-1

Caton Place, a street primarily characterized by residential and community facility uses. The C8 district no longer reflects the surrounding context of residential and community facility buildings, and the current C8-2 zoning district does not permit residential uses as of right.

The proposed R7A district would extend the existing adjacent R7A district that is mapped along the entire Ocean Parkway south to Avenue I. In accordance with the R7A regulations, the proposed building would be limited to a maximum building height of 95 feet (with a qualifying ground floor) or nine stories, which is an appropriate bulk and massing within the context of the existing community. The proposed C2-4 commercial overlay would be limited to Lot 4 and would allow the project to be a mixed-use building with qualifying commercial uses on the ground floor. This would facilitate neighborhood retail that would serve the residents in the proposed building and the surrounding community. It is the applicant's opinion that there is a need for neighborhood retail in the immediate area, especially in light of recent residential development trends on Caton Place, including 33 Caton Place and 22 Caton Place. Additionally, the ground floor retail would enliven the streetscape along the project site.

The proposed project would also provide new affordable housing. In accordance with the newly adopted MIH program, the applicant is proposing to dedicate 25 percent of the residential floor area to affordable housing, in accordance with Option 1 of MIH. This would contribute to the Mayor's Housing New York Plan goal of building 200,000 affordable housing units in the next 10 years. Without the proposed actions, no affordable housing or housing of any kind would be created on the project site.

In the applicant's opinion, the proposed actions would permit a building that is better integrated with the fabric of the neighborhood, maximizes the number of housing units that can be practically built within the surrounding context, and includes a significant component of affordable housing in keeping with the MIH program goals.

1.6 Analysis Framework

1.6.1 Analysis Year

The build year for the proposed project is 2021. This assumes the receipt of approvals by 2018 and a total construction duration of up to 26 months following the approval process.

1.6.2 Future No-Action Condition

The applicant purchased the project site property in May 2015 and, as noted above, the building is currently being leased to a commercial tenant on a two-year lease expiring in June 2018[2]. Absent the proposed actions (the future No-Action condition), the project area would remain a C8-2 commercial district and the applicant would redevelop the project site for retail and commercial parking use. This would be done as-of-right within the current zoning regulations.

[2] A portion of the building is also being leased to another tenant as storage space on a month-to-month basis.

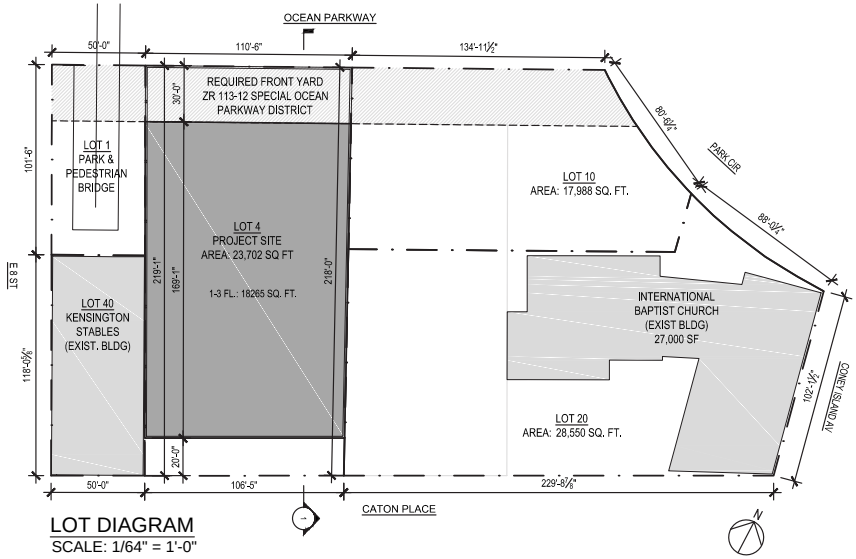
The as-of-right development would be comprised of an approximately 54,795-gsf, three-story commercial building with retail on the ground floor and two stories of accessory and public parking above containing 74 spaces. The building would have 16,852 gsf of retail space (15,831 zsf for a commercial FAR of 0.67), and would have 37,943 gsf of parking facility space (74 spaces) (17,808 zsf for a commercial FAR of 0.75). The total commercial zoning floor area of 33,639 zsf would result in an overall FAR of 1.42. The size of the retail space is generally based on market conditions and overall commercial space is below the maximum allowable FAR under current zoning regulations.

The ground floor would comprise retail space and a parking ramp, while the second and third stories would be composed entirely of enclosed parking facility space. The building would be three stories above grade and would be set back 20 feet from the streetline on Caton Place and 30 feet from the street line on Ocean Parkway, in accordance with Special Ocean Parkway District front yard requirements. The No-Action condition would have building access on both sides of the building with the garage entrance on Caton Place, similar to the proposed project. In accordance with C8-2 zoning regulations for buildings with more than 16,000 zsf of commercial space, the building would also have a loading berth on Caton Place. A site plan and elevation and massing diagrams of the as-of-right project are provided in Figure 1-2.

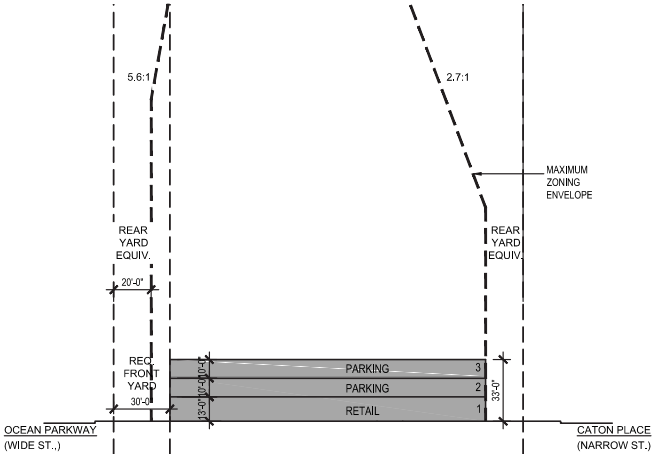
1.6.3 Future With-Action Condition

As noted, the future with the proposed actions (the future With-Action condition) would allow for the proposed project to be developed on the project site. Given that Lot 1 is being used predominantly for the landing/off ramp of the pedestrian overpass and that it is City-owned property that would require discretionary action to develop, redevelopment that is expected to occur as a result of the proposed actions is limited to Lot 4, the project site. The proposed project effectively reflects the full programmatic buildout of the development site since it maximizes the allowable FAR (4.6 FAR) and height (95 feet) and maximizes the amount of ground floor retail space within a residential development that contains standard amenities (outdoor space, lobby space, etc.). Overall, there would be 106,905 gsf of residential space (107 dwelling units), 12,994 gsf of local retail space, and a 74-space, below-grade parking garage (a minimum of 40 spaces is required by zoning).

The maximum zoning envelope under the proposed actions would be slightly larger than that of the proposed project (as shown in Figure 1-1). The interior area of the building (area between the two wings) could be taller and the wing fronting on Caton Place could be a few feet deeper. However, the proposed building envelope is effectively the RWCDS under the With-Action condition, since this design achieves the maximum allowable FAR (so there is no opportunity for additional floor space) and it uses an efficient residential floor plate depths. Additionally, the ground floor is at an appropriate height for its intended retail use and any increase in the ceiling height would reduce the residential floor heights. The With-Action RWCDS site plan, elevation and building massing diagrams are provided in Figure 1-1.



LOT DIAGRAM
SCALE: 1/64" = 1'-0"



ZONING SECTION 1
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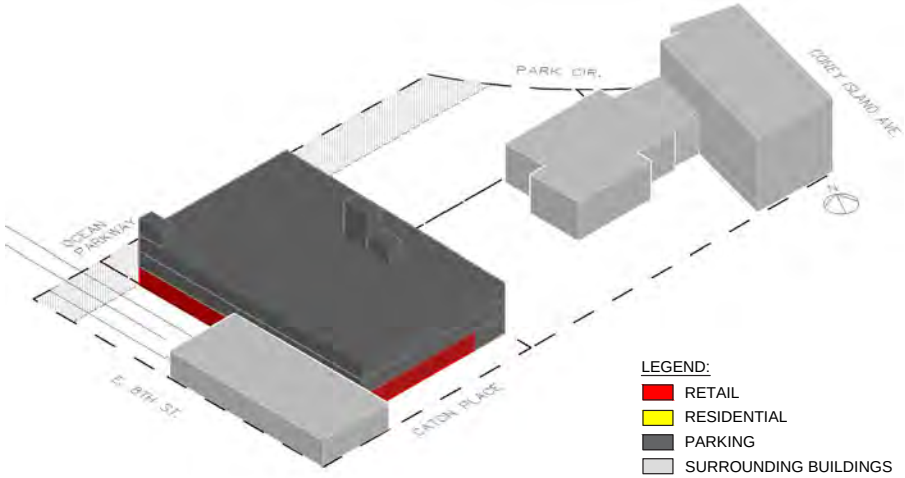


For Illustrative Purposes Only

57 Caton Place Rezoning
Brooklyn, New York

No-Action RWCDS Diagrams

Figure
1-2

1.6.4 Increment

A comparison of the With-Action RWCDS development with the No-Action RWCDS development and resulting increment of development is provided in Table 1-1 below. The increment for analysis is 106,905 gsf (or 107 dwelling units) of residential space and -3,858 gsf of local retail space[3].

In each of the technical areas in Section 2.0, "Supplemental Analyses," the future With-Action condition is compared to the future No-Action condition for the project site. Table 1-1 summarizes the increments for analysis.

Table 1-1: Increment of Development

	No-Action condition		With-Action condition		Increment	
Use	Gross Square Feet	Zoning Square Feet	Gross Square Feet	Zoning Square Feet	Gross Square Feet	Zoning Square Feet
Residential	-	-	106,905 (107 DU)	99,285 (4.19 FAR)	106,905 (107 DU)	+ 99,285 (4.19 FAR)
Retail	16,852	15,831 (0.67 FAR)	12,994	9,744 (0.41 FAR)	- 3,858	- 6,087 (-0.26 FAR)
Parking/ Mechanical	37,943 (74 spaces)	17,808[1] (0.75 FAR)	46,292 (74 spaces)	0[2]	8,349 (0 spaces)	-17,808 (-0.75 FAR)
TOTAL	54,795	33,639 (1.42 FAR)	166,191	109,029 (4.6 FAR)	111,396	75,390 (3.18)

Notes:
[1] Only the third floor portion of the commercial parking square footage is included in the Zoning Floor Area.
[2] There is no zoning square footage attributable to parking under the With-Action condition.

[3] There would also be a net increase of approximately 8,349 gsf of parking/mechanical area but no increase in the number of spaces and a net decrease in the amount of parking-related zoning floor area (see Table 1-1).

2.0
Supplemental Analyses

2.1: Land Use, Zoning, and Public Policy

2.1.1 Introduction

This analysis of land use, zoning, and public policy follows the guidelines set forth in the *2014 City Environmental Quality Review (CEQR) Technical Manual*. It characterizes the existing conditions in the area surrounding the project site and addresses potential impacts to land use, zoning, and public policy that would be associated with the proposed actions.

2.1.2 Methodology

This preliminary analysis of land use, zoning, and public policy follows the guidelines set forth in the *CEQR Technical Manual* for a preliminary assessment (Section 320). According to the *CEQR Technical Manual*, a preliminary land use and zoning assessment includes a basic description of existing and future land uses and zoning information, and describes any changes in zoning that could result in changes in land use. It also characterizes the land use development trends in the area surrounding the project site that might be affected by the proposed action, and determines whether the proposed project is compatible with those trends or may affect them.

For public policy, the *CEQR Technical Manual* stipulates that a preliminary assessment should identify and describe any public polices (formal plans, published reports) that pertain to the study area, and should determine whether the proposed project could alter or conflict with identified policies. If so, a detailed assessment should be conducted; otherwise, no further assessment is needed.

The following land use, zoning and public policy assessment follows this guidance and provides a description of existing conditions of the project site and surrounding area. This is followed by an assessment of the future No-Action condition and the future With-Action condition, and a determination that no further analysis is needed.

The study area for this analysis is the area within 400-feet of the project area which, for the proposed project, is generally bounded by Ocean Parkway to the west, Kermit Place to the south, the Parade Grounds/Prospect Park to the east, and mid-block between Ocean Parkway and Greenwood Avenue to the north (see EAS Figure 1). This is the area in which the proposed project would be most likely to have effects in terms of land use, zoning, and public policy.

2.1.3 Assessment

Existing Conditions

Land Use

Project Site and Project Area

The project site, located at 57 Caton Place (Brooklyn Block 5322, Lot 4), is a through lot located at the middle of the project block, which is bounded by Ocean Parkway to the north, Park Circle to the northeast, Coney Island Avenue to the east, Caton Place to the south, and East 8th Street to the west. The project site has a total lot area of approximately 23,702 square feet (sf), with approximately 106 feet of frontage along Caton Place and 110 feet of frontage along Ocean Parkway. The project site is developed with a three-story building that was originally built in 1939 and currently serves as a warehouse. The building occupies most of the lot area and has entrances along both Caton Place and Ocean Parkway.

The project area is the entire area that would be affected by the proposed rezoning, which includes the project site and Lot 1 to the west of the project site on the north side of the project block. It does not include Lot 40, which is just south of Lot 1 (see EAS Figure 3). Lot 1, a City-owned lot mapped as parkland, has an area of 5,075 sf and currently contains several park benches and the off-ramp/landing of an Ocean Parkway pedestrian overpass, which connects this lot to another City-owned lot on the north side of Ocean Parkway.

Study Area

The project area is located in the Windsor Terrace neighborhood of Brooklyn. As shown in EAS Figure 2, the study area is predominantly characterized by residential, institutional and parkland uses. Other than the project area lots, public facility/institutional uses occupy the remainder of the lots on the project block. Kensington Stables, a horse stable for equestrian activities in and around Prospect Park which was constructed in 1930, is located on Lot 40, immediately west of the project site at the southwest corner of the block. To the east of the project site are the International Baptist Church and associated International Christian School, located on Lot 20. Lot 10 is a landscaped lawn and planted area with sidewalks and entrances to the church and school.

The block immediately to the south of the project block also contains several large institutional uses, including the Cavalry Cathedral of Praise located at the northwest corner of the block, and the Brooklyn College Academy which fronts along Coney Island Avenue. The Brooklyn College Academy building also has a self-storage facility on the ground floor. A large surface parking lot associated with the Cavalry Cathedral of Praise is located at the northeast corner of the block, across the street from the International Christian Church. Just south of the parking lot is a large multi-family residential building (346 Coney Island Avenue). The southern edge of the block, along Kermit Place, contains a row of single family homes anchored by a multi-family walkup building at the southwest corner of the block and a large vacant lot at its southeast corner.

Residential elevator buildings are prevalent within the study area and are generally located along either side of Ocean Parkway, a major thoroughfare which curves in this area so that it is oriented both east-west along the northern side of the project site and north-south to the west of the study area.

Smaller scale one- and two-family residential buildings are located beyond the immediate frontage along Ocean Parkway along East 7th Street, Sherman Street, East 8th Street, and Kermit Place.

The study area contains a large section of parkland east of Coney Island Avenue, known as the Prospect Park Parade Ground. The Parade Ground provides numerous recreational fields and courts, with a recreation building along Coney Island Avenue that houses several NYC Department of Parks and Recreation offices and Brooklyn's 74th Police Precinct. Northwest of the Parade Ground is Machate Circle, a traffic circle with a center green space located at the southwest corner of Prospect Park that is also a primary entrance to the park. Prospect Park is a defining land use feature immediately outside of the study area to the northeast. Additionally, the Ocean Parkway pedestrian overpass located within the project area on Lot 1 connects the project area to a small open space on the north side of Ocean Parkway. Similar to Lot 1, this park is largely occupied by the landing and ramp to the overpass, with park benches featured in the remaining area around the landing structure.

Commercial space is limited within the study area. There is one commercial building, a TD Bank branch, located just north of Machate Circle at the northern boundary of the study area, and one mixed-use commercial and residential building on the corner of Ocean Parkway and Prospect Avenue.

Zoning

Project Site and Project Area

The project area, including the project site, is located in a C8-2 commercial zoning district within the larger Special Purpose Ocean Parkway District (see EAS Figure 4). The C8-2 zoning district is bounded by Ocean Parkway to the north and generally follows Coney Island Avenue south. The district extends well beyond the study area to its southern boundary at Beverly Road.

The C8-2 district allows for a maximum floor area ratio (FAR) of 2.0 for commercial uses and 4.8 for allowed community facility uses. C8-2 districts allow automotive and other heavy commercial services that often require large amounts of land such as automobile showrooms and repair shops, warehouses, gas stations and car washes. However, all commercial uses as well as certain community facilities (Use Group 4) are permitted in C8 districts. Residential uses are not permitted and performance standards are imposed on certain semi-industrial uses. C8 districts are mapped mainly along major traffic arteries (in this instance, Coney Island Avenue) where concentrations of automotive uses have developed, and generally bridge commercial and industrial uses. Building heights in C8-2 districts are governed by a sky exposure plane beginning at a height of 60 feet or four stories (whichever is less). Parking is required within C8-2 districts.

The Special Ocean Parkway District was established in 1977 to promote the scenic landmark designation of Ocean Parkway and maintain the existing scale and character of the community. Specifically, the special purpose designation requires landscaping along Ocean Parkway to strengthen its scenic landmark designation, limits community facility bulk, requires enclosed parking for all uses along Ocean Parkway and off-street loading for certain community facilities, and regulates use to conserve the value of land. The portion of Ocean Parkway that is within the project area is not designated a scenic landmark.

For the project site and project area, the bulk regulations of the Special District supersede those of the underlying C8-2 district, and include the following pertinent regulations for all developments having frontage on Ocean Parkway: a 30 foot front yard (balconies may penetrate the front yard to a depth of not more than six feet), and enclosed accessory off-street parking spaces.

Study Area

As shown in EAS Figure 4, in addition to the C8-2 zoning district, the study area is also mapped with R5B, R6, R6A, R7A, R7B, and R8B residential zoning districts (located north and south of the project area), parkland (generally to the east of Coney Island Avenue), and the Special Ocean Parkway District (generally south of Ocean Parkway and west of Coney Island Avenue). The locations of these zoning districts within the study area are illustrated on EAS Figure 4.

The R5B contextual district is mapped in several locations within the study area. In 2009, the southern and eastern portion of the block bounded by Caton Place to the north, Ocean Parkway to the west, Kermit Place to the south, and East 8th Street to the east, was rezoned from R6 to R5B (C 090197 ZMK). Additionally, R5B is mapped approximately 100 feet north of Ocean Parkway (above the R8B district, described below). This moderate density residential district allows an FAR of 1.35 for residential uses and 2.0 for community facility uses, with a maximum building height of 33 feet and maximum street wall height of 30 feet. A minimum five-foot front yard is required.

R6A is mapped on a very small portion of the study area at the southwest corner of the intersection between Kermit Place and East 8th Street. R6A is a contextual zoning district that permits residential and community facility uses to an FAR of 3.0. Buildings in an R6A district are subject to Quality Housing bulk regulations with a maximum building height of 70 feet and a maximum street wall height of 40 to 60 feet.

The study area is also mapped with R7A and R7B contextual residential districts. R7A is mapped on the block immediately to the west of the project site as well on the northwest corner of the block bounded by Caton Place, East 8th Street, Kermit Place and Ocean Parkway. A small portion of the same block, immediately to the east of the R7A district, is mapped R7B. Both of these contextual districts are subject to Quality Housing bulk regulations. R7A allows a maximum FAR of 4.0 for residential uses and a maximum building height of 80 feet after a setback from the maximum street wall height of 65 feet. R7B allows a maximum FAR of 3.0 for residential uses and a maximum building height of 75 feet with a maximum street wall height of 65 feet.

The contextual R8B district, mapped along the north side of Ocean Parkway within the study area, permits a maximum residential and community facility FAR of 4.0, with mandatory Quality Housing bulk regulations which encourage six-story apartment buildings with a setback at the top story. The district requires a base height between 55 and 65 feet and a maximum building height of 75 feet.

Machate Circle is zoned R6, a medium density residential zoning district. R6 districts are subject to the height factor regulations and permit a maximum FAR of 2.43 for residential buildings and 4.8 for community facilities. Building envelopes are regulated by the sky exposure plane. Prospect Park Parade Ground at the eastern edge of the study area is designated as parkland.

Public Policy

Housing New York: A Five-Borough, Ten-Year Plan

On May 5, 2014, the de Blasio administration released Housing New York: A Five-Borough, Ten-Year Housing Plan ("Housing New York"), a plan to build or preserve 200,000 affordable residential units. To achieve this goal, the plan aims to double the New York City Department of Housing Preservation and Development (HPD)'s capital budget, target vacant and underused land for new development, protect tenants in rent-regulated apartments, streamline rules and processes to unlock new

development opportunities, contain costs, and accelerate affordable construction. The plan details the key policies and programs for implementation, including developing affordable housing on underused public and private sites.

New York City Landmarks Law

The New York City Landmarks Law of 1965 established the New York City Landmarks Preservation Commission (LPC) and authorized the Commission to designate individual buildings, historic districts, interior landmarks and scenic landmarks of historical, cultural and architectural significance. Prospect Park, including Machate Circle, the southwestern park circle, is a scenic landmark, designated by the LPC in 1975 (LPC No. LP-00901). A portion of Machate Circle is located within the boundaries of the study area. Constructed from 1865-1867, Prospect Park was designed by Frederick Law Olmsted and Calvert Vaux as a response to the open space needs of the people of Brooklyn. Prospect Park, the heart of the Brooklyn park system, encompasses approximately 526 acres of open space and is notable for its varied landscape effects of meadow, woods, and lake; its extensive variety of native and exotic plants and trees; and its successful circulation system separating pedestrian and vehicular traffic. The Prospect Park Parade Ground is not a designated scenic landmark.

Other than the policies above, there are no public policies governing the project area or surrounding study area.

Future No-Action Condition

Absent the proposed project (the future No-Action condition), the existing three-story building on the project site would be demolished and the applicant would redevelop the project site for retail and parking use. This would be done as-of-right within the current zoning regulations.

The as-of-right development would be an approximately 54,795-gross square foot (gsf), three-story commercial building with retail on the ground floor and two stories of accessory and public parking above containing 74 spaces. The building would have 16,852 gsf of retail space and 37,943 gsf of parking facility space. The total commercial zoning floor area would be 33,639 zoning square feet (zsf), including the retail space and the portion of the parking facility space dedicated to commercial parking. The size of the retail space is generally based on market conditions and overall commercial space is below the maximum allowable FAR under current zoning regulations.

Land Use and Zoning

The future No-Action condition would introduce two new land uses on the project site: retail and parking. The existing warehouse use on the project site is largely inconsistent with the land use and development of the surrounding area, as it is the only use of that kind within the study area. In addition, within the past several years, two large multi-family residential projects have been completed near the project site, 22 Caton Place and 33 Caton Place, exhibiting a trend toward residential development within the project area. Though the future No-Action condition would not reflect this development directly, the proposed uses under the future No-Action condition, retail and parking, are compatible and would serve the growing residential population. Lot 1 on the project block would remain mapped as parkland, and would continue to be occupied primarily by the off-ramp and landing of the Ocean Parkway pedestrian overpass.

There is one planned development within the 400-foot study area that is expected to be completed by the 2021 analysis year. Permit applications have been filed for a 157,600 gsf, eight-story commercial self-storage facility at 72 Caton Place, which is currently an existing surface parking lot associated with the Cavalry Cathedral, across the street from the project site. This is a permitted use in the C8-2 zoning district and, as mentioned above, there is an existing self-storage business located on the ground floor of the Brooklyn College Academy building, on the same block. Therefore, though it would be one of only a few commercial buildings within the study area, the use would be similar to land uses already in present in the study area.

In the future No-Action condition, there are no known zoning changes that are anticipated to affect the project site or study area. The project site and study area would continue to be governed by the various zoning regulations found in the area, as described in the existing conditions section above. The proposed future No-Action project would conform to zoning in full.

Public Policy

In the future No-Action condition, there are no known public policy changes that are anticipated to affect the project site or study area.

Future With-Action Condition

The proposed actions would facilitate the development of a 166,191-gsf mixed-use residential and commercial building containing approximately 106,905 gsf of market rate and affordable residential space (up to 107 units with 25 percent affordable units per Mandatory Inclusionary Housing [MIH] guidelines, amounting to approximately 27 units), 12,994 sf of ground floor, neighborhood-serving retail, and up to 74 spaces of below-grade parking. This represents the future With-Action condition.

Land Use

The proposed actions would facilitate a change in land use under the future With-Action condition, as compared to the future No-Action condition, with the introduction of residential uses on the project site. As discussed above, the study area is characterized predominantly by residential and institutional uses, with multi-family residential uses prevalent along Caton Place to the west of East 8th Street, as well as along Ocean Parkway. Two relatively large-scale residential developments, 22 Caton Place and 33 Caton Place, have been completed within the past several years. In addition, though ground floor retail is scarce within the study area, the proposed neighborhood-serving retail on the project site is expected to fill a need for this type of local amenity.

As mentioned above, an eight-story commercial self-storage facility is proposed at 72 Caton Place, across the street from the project site. That project would be located immediately adjacent to the existing multi-family residential building along Coney Island Avenue. Therefore, the proposed project would be consistent with the mixed-use character of the block. Based on these conditions, the proposed project would be consistent with the surrounding land uses and with recent development trends within the study area.

Given that Lot 1 is City-owned property and is largely developed with the landing/off-ramp of the Ocean Parkway pedestrian overpass, land uses on Lot 1 are not anticipated to change from existing conditions or the future No-Action condition as a result of the proposed actions.

Zoning

As detailed in Section 1.0, "Project Description," the applicant is seeking a zoning map amendment from C8-2 commercial to R7A residential with a C2-4 overlay on Lot 4 and a zoning text amendment to the Special Ocean Parkway District, ZR Section 113-00 and Appendix F of the Zoning Resolution, to establish a Mandatory Inclusionary Housing Area (MIHA) within the project area. These actions would increase the permitted density of the project area and allow new residential uses.

The proposed actions are necessary for the development of a building that would enliven the neighborhood and is in keeping with recent development on the same street as the project site. While the proposed action would change the zoning designation within the project area, the proposed project is in keeping with the purpose and goals of the Special Ocean Parkway District, as it adheres to all relevant bulk and setback regulations. Compared to the future No-Action condition, the proposed project would provide substantial benefits to the surrounding community, including affordable housing and a more dynamic streetfront that would add diversity and vibrancy to a block that, with the presence of the existing warehouse building on the project site and the Cavalry Cathedral of Praise building across Caton Place, is currently characterized by large windowless street walls.

The proposed actions include the following zoning changes.

Proposed Zoning Map Amendment

A zoning map amendment to Zoning Map 16d would change the zoning of the project area from a C8-2 commercial district on Lot 4 and a park space on Lot 1 to an R7A residential district with a C2-4 overlay on Lot 4 (See EAS Figure 4). The proposed R7A district is a medium-density residential district that allows residential (Use Groups 1 and 2) and community facility land uses (Use Groups 3 and 4) with a maximum residential FAR of 4.6. The maximum base height in an R7A is 75 feet and the maximum building height is 90 feet or 95 feet with a qualifying ground floor (at least 13 feet in height). Parking is required for 50 percent (1 parking space per 2 dwelling units) of market-rate dwelling units in R7A districts.

The proposed C2-4 commercial overlay is typically mapped along streets in residential districts to serve local retail needs allowing a variety of neighborhood serving commercial uses, including Use Groups 5-9. C2-4 commercial overlays have a maximum FAR of 2.0. Commercial parking requirements in a C2-4 district are 1 space per 1,000 square feet of floor area, and can be waived if the total number of spaces required for all uses is below 40.

As described above, the underlying R7A and C2-4 zoning controls would be superseded by the controls of the Special Ocean Parkway District, where applicable.

Proposed Zoning Text Amendment

Special Ocean Parkway District

A zoning text amendment to the Special Ocean Parkway District would establish that the provisions of Sections 23-154 (Inclusionary Housing) and 23-90 (Inclusionary Housing) shall apply to Mandatory Inclusionary Housing Areas within the Special Ocean Parkway District.

Establish a Mandatory Inclusionary Housing Area

A zoning text amendment to Appendix F of the Zoning Resolution, "Mandatory Inclusionary Housing Areas," would establish a Mandatory Inclusionary Housing Area that is coterminous with the project area (see Appendix A). In the future With-Action condition, approximately 25 percent of residential units would be reserved as affordable.

The proposed actions would apply only to the project area and would have no effect on the study area. The proposed zoning would be compatible with the new zoning districts that were created in the southwest portion of the project area in 2009, as well as the other surrounding residential zoning districts. In addition, under the With-Action condition, the proposed project would conform to zoning in full. Therefore, the proposed actions would not result in a significant adverse impact to zoning.

Public Policy

Housing New York: A Five-Borough, Ten-Year Plan

The proposed actions would be consistent with the Housing New York plan and would result in approximately 27 new affordable housing units in the Windsor Terrace neighborhood of Brooklyn. Therefore, the proposed actions would be supportive of this public policy goal.

New York City Landmarks

The proposed actions would not result in new development within or immediately adjacent to any LPC-designated landmarks. No impacts to the scenic landmark, Prospect Park and Machate Circle, are anticipated as a result of the proposed project.

2.1.4 Conclusion

As described above, the proposed actions would result in the redevelopment of the project site as a mixed-use commercial and residential building with a 4.6 FAR. The development resulting from the proposed actions would be consistent with the area's development patterns and proposed zoning regulations for the project area. The proposed project would maintain and enhance the existing land use character within the study area (defined by a mix of institutional uses and low- to mid-density residential uses). The proposed neighborhood-serving retail would complement the area's growing residential population. In addition, the proposed project would have no impact on the scenic resources within the study area. Therefore, the proposed project would not result in any significant adverse impacts to land use, zoning, or public policy.

2.2 Shadows

2.2.1 Introduction

A shadow is defined in the *2014 CEQR Technical Manual* as the circumstance in which a building or other built structure blocks the sun from the land. An adverse shadow impact is considered to occur when the incremental shadow from a proposed action falls on a sunlight sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources. Sunlight-sensitive resources include publicly accessible open space, historic architectural resources that contain features that depend on direct sunlight for their enjoyment by the public, and greenstreet spaces (landscaped pervious space within the road right-of-way). In general, shadows on city streets and sidewalks or on other buildings are not considered significant. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are also not considered significant.

2.2.2 Methodology

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City is 4.3 times its height. For actions resulting in structures less than 50 feet high, a shadows assessment is generally not necessary unless the site is adjacent to a park, historic resource, or important sunlight dependent natural feature. As described in Section 1.0, "Project Description," the proposed actions would facilitate the development of a 166,191-gross square foot (gsf) mixed-use residential and commercial building with two towers reaching nine stories each on a single, one-story base. Including mechanical and elevator bulkhead, the towers reach a height of 118 feet. The With-Action condition is anticipated to cast a maximum shadow of approximately 507.4 feet. There are four potential sunlight-sensitive resources within the maximum potential shadow radius of the With-Action condition, including:

- Machate Circle, located northeast of the project site;
- Greenstreets, including the landscaped malls along Ocean Parkway and landscaped medians surrounding Machate Circle;
- Two parks immediately adjacent to and northwest of the project site which hold the landings and ramps of the Ocean Parkway pedestrian overpass; and
- The Prospect Park Parade Grounds to the east of the project site.

Therefore, the following provides a shadow assessment to determine whether the proposed actions would result in incremental shadows that could have significant adverse impacts.

2.2.3 Assessment

Because of the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangle area south of any given project area. In New York City, this area lies between -108 and +108 degrees from true north. Therefore, sunlight-sensitive resources located in the area to the south of the project site (where no project shadows could fall) are excluded from further assessment.

In accordance with the *CEQR Technical Manual*, Tier 1 and Tier 2 shadow screening assessments were first conducted to: 1) establish a base map that illustrates the selected buildings in relation to the location of sunlight-sensitive resources; 2) determine the longest shadow study area; and 3) locate the triangular area that cannot be shaded by the With-Action condition. The results of the Tier 1 and Tier 2 screening assessments are illustrated in Figure 2.2-1.

Tier 1 Shadow Screening

Open Space

As illustrated in Figure 2.2-1, four parks fall within the maximum shadow radius for the With-Action condition: two parks immediately adjacent to and north of the project site which hold the Ocean Parkway pedestrian overpass ramps; Machate Circle, a traffic circle with a center green space which is part of Prospect Park; and the Prospect Park Parade Grounds to the east of Coney Island Avenue.

The two parks (both unnamed) that hold the overpass ramps are completely paved with a few trees in tree pits and limited seating. Though these parcels are officially mapped as parkland, in the case of the park adjacent to the project site, the overpass landing and ramps compose a majority of the lot. Based on this condition, since it serves as a pedestrian transportation facility as opposed to a passive or active open space, that park is not considered further in this analysis. The overpass ramp park to the north of the project site, at the corner of Sherman Street and Ocean Parkway, is slightly larger and provides a more substantial seating area.

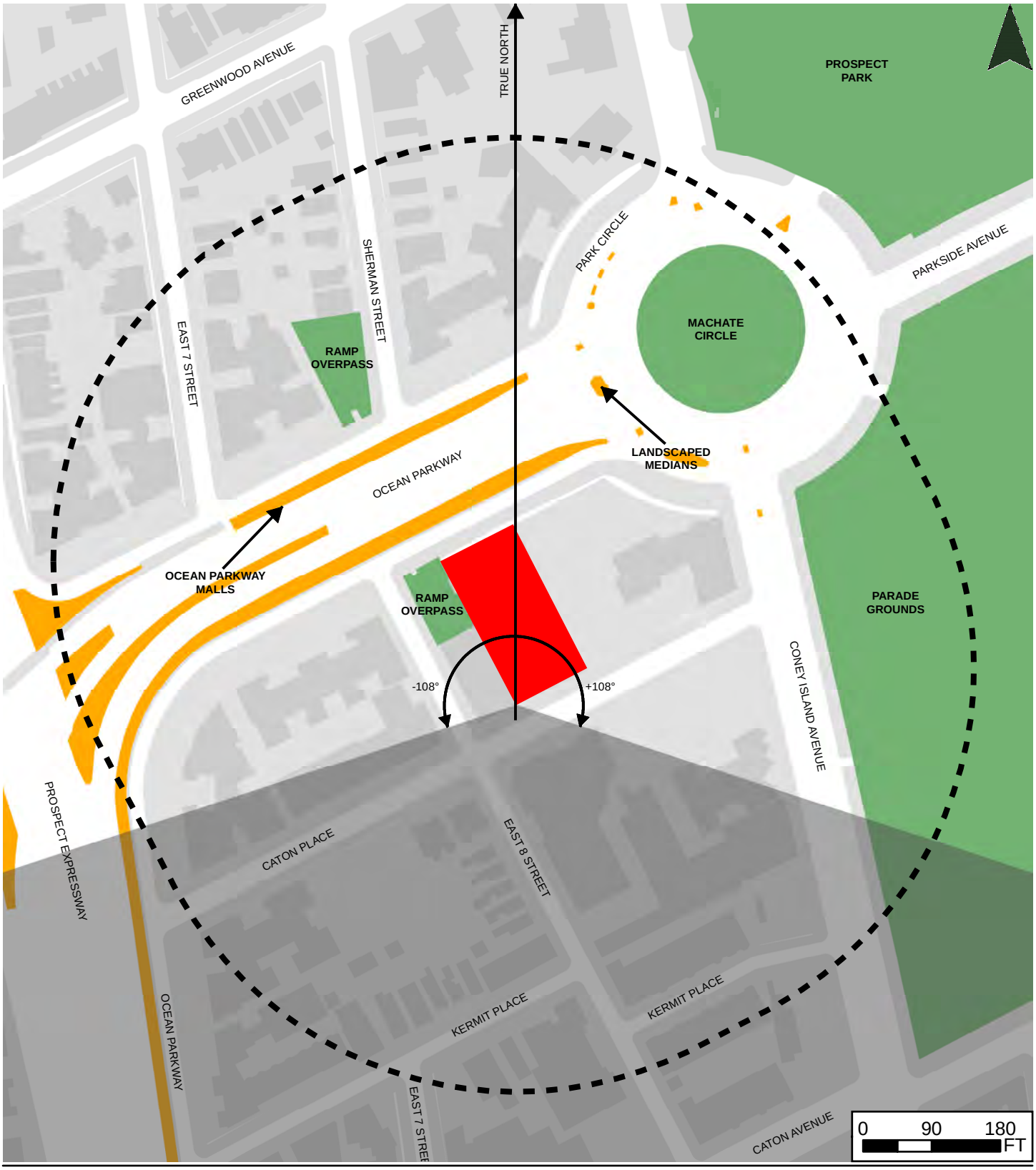
The portion of the Parade Grounds that falls within the maximum shadow radius mostly includes fenced lawn areas, a DPR office building which also holds Brooklyn's 74th Police Precinct, and associated parking areas. This portion of the Parade Grounds also features trees and other landscaping vegetation, though it is not heavily used for recreation.

Greenstreets

Landscaped malls are located along the length of Ocean Parkway to the north of the project site, within the maximum shadow radius for the With-Action condition. These malls include several long, thin landscaped medians. In addition, several landscaped medians line the primary roadways around Machate Circle, acting as a barrier between the roadways and the bicycle lanes (see Figure 2.2-1). In general, greenstreets are jointly administered/operated by the New York City Department of Parks and Recreation (DPR) and Department of Transportation (DOT), and are a "citywide system of engineered landscapes that transform unused impervious areas into vibrant and pervious green space."[1] The greenstreets within the maximum shadow radius were observed to function as permeable, decorative landscaped areas and not usable open space, with the exception of a portion

[1] http://www.nycgovparks.org/greening/green-infrastructure, Accessed 10.26.2016

Date: 9/30/2016



Project Site
507.4-Foot Maximum Shadow Screening Radius
Area that Cannot be Shaded by the Propoosed Action
Open Space and Recreation
Greenstreets (or Equivalent)

57 Caton Place Rezoning
Brooklyn, New York

Tier 1 and Tier 2
Shadow Screening Assessment

Figure
2.2-1

of the southern-most mall along Ocean Parkway, which, west of East 8th Street, which becomes a shared-use path for cyclists and pedestrians along a grassy area with trees.

Since the Tier 1 shadow screening assessment indicated that open space resources and greenstreets fall within the With-Action condition's maximum shadow radius, a Tier 2 shadow screening assessment is required.

Tier 2 Shadow Screening

As illustrated in Figure 2.2-1, the sunlight-sensitive resources identified in the Tier 1 shadow screening assessment fall within the area that could be shaded by the With-Action condition (outside of the triangle to the south of the project site). Therefore, a Tier 3 shadow screening assessment is required.

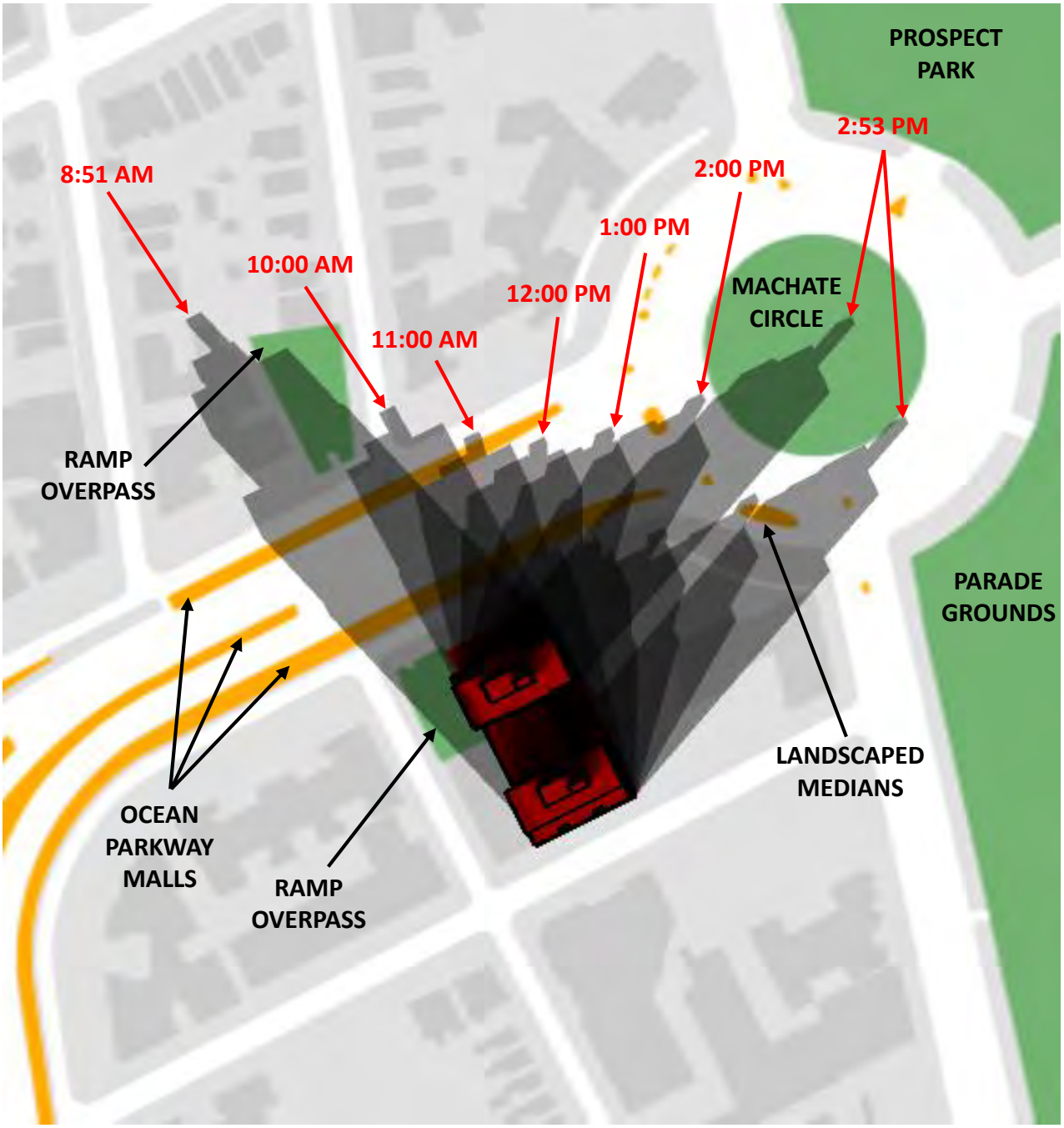
Tier 3 Shadow Screening

In accordance with the *CEQR Technical Manual*, a Tier 3 screening assessment was performed to assess the resources of concern within the With-Action condition's maximum shadow radius, as identified by the Tier 1 and Tier 2 assessments. These resources include the open space resources (Machate Circle and the Parade Grounds), and greenstreets (Ocean Parkway malls and Machate Circle landscaped medians) mentioned above.

As the sun travels across the sky during the day, shadows fall in a curve on the ground opposite the sun. When the sun rises, shadows fall to the west. Because the sun rises in the east and travels across the southern part of the sky throughout the day to set in the west, a project's earliest shadows would be cast almost entirely westward. Throughout the day, shadows would shift clockwise, until sunset, when they would fall east. Midday shadows are always shorter than those at other times of the day because the sun is highest in the sky at that time. Furthermore, because of the tilt of the earth's axis, the angle at which the sun's rays strike the earth varies throughout the year, so that during the summer, the sun is higher in the sky and shadows are shorter than during the winter. Winter shadows, although the longest, move the most quickly along their paths and do not affect the growing season of outdoor trees and plants.

The Tier 3 screening assessment was performed for the four representative days of the year set forth in the *CEQR Technical Manual*: December 21, the winter solstice and shortest day of the year; March 21/September 21, the equinoxes; May 6/August 6, the midpoints between the summer solstice and the equinoxes; and June 21, the summer solstice and the longest day of the year. The *CEQR Technical Manual* defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset.

A three dimensional computer model was developed to represent the With-Action condition. In accordance with the *CEQR Technical Manual*, surrounding buildings were not included in the Tier 3 shadow assessment model. The results of the Tier 3 shadow assessment for the With-Action condition are illustrated in Figures 2.2-2a through 2.2-2d.

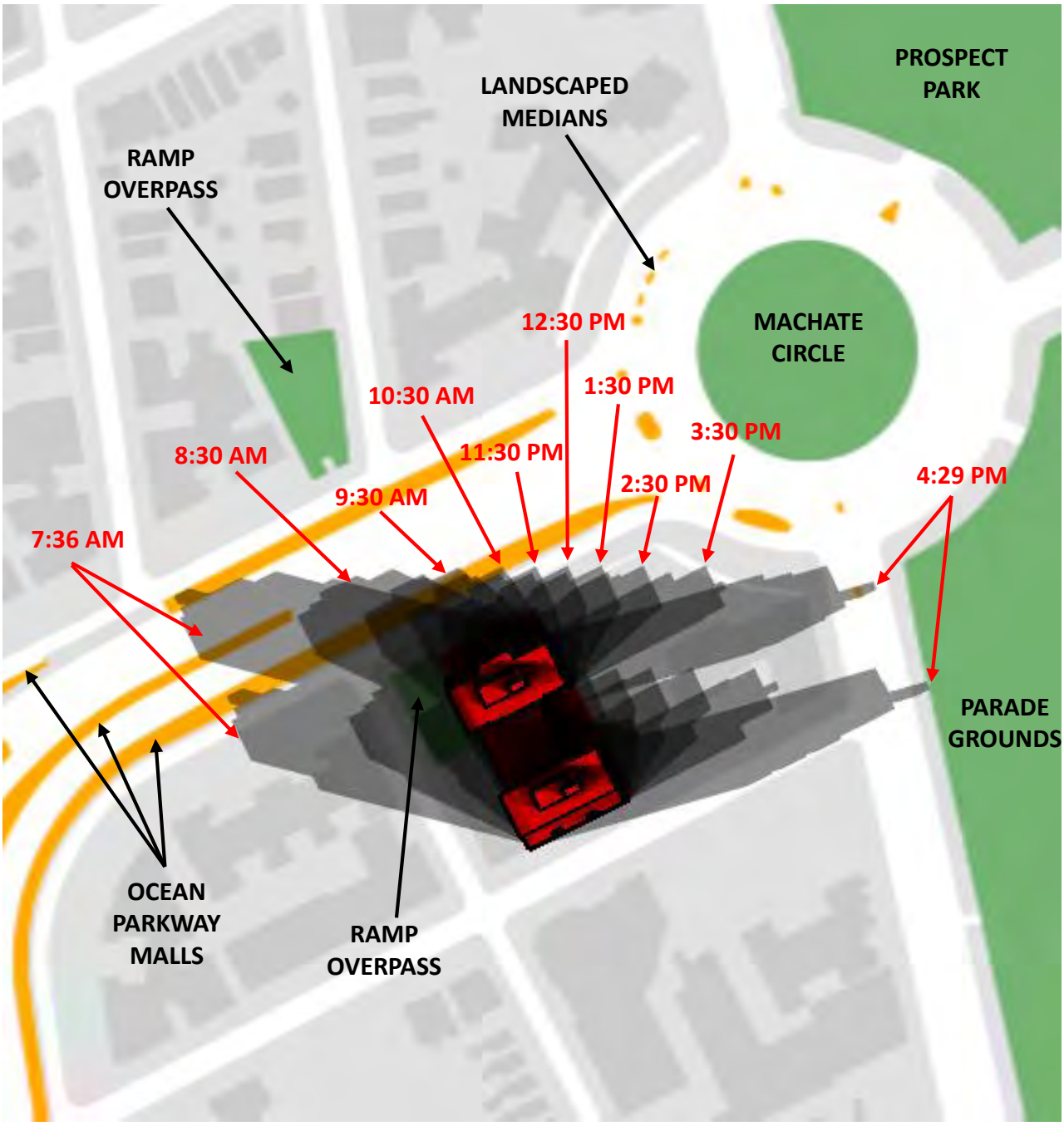


Project Site
Projected Shadow
Open Space and Recreation
Greenstreets (or Equivalent)

57 Caton Place Rezoning
Brooklyn, New York

Tier 3 Shadow Screening Analysis: December 21

Figure 2.2-2a

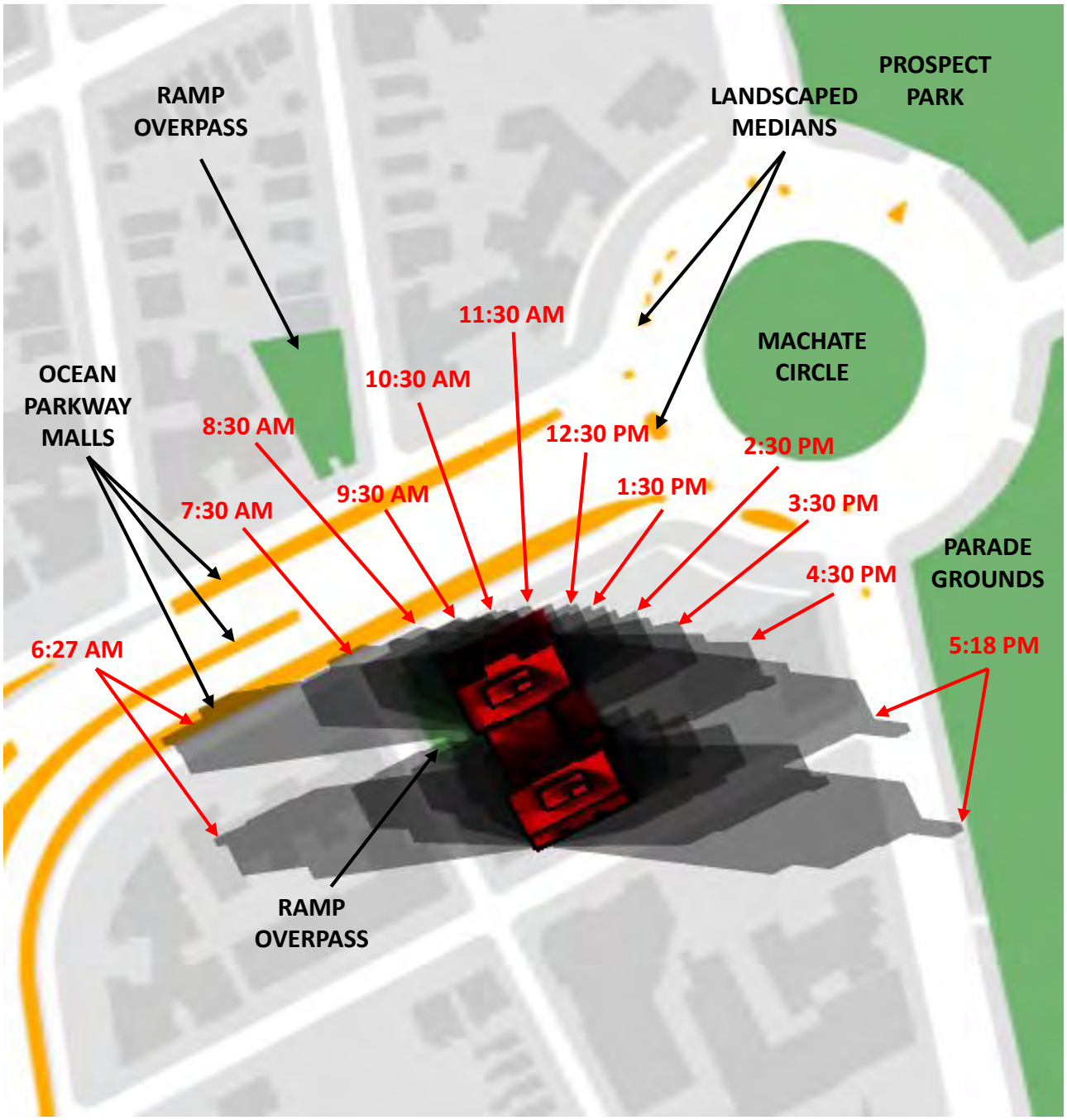


Project Site
Projected Shadow
Open Space and Recreation
Greenstreets (or Equivalent)

57 Caton Place Rezoning
Brooklyn, New York

Tier 3 Shadow Screening Analysis:
March 21

Figure
2.2-2b

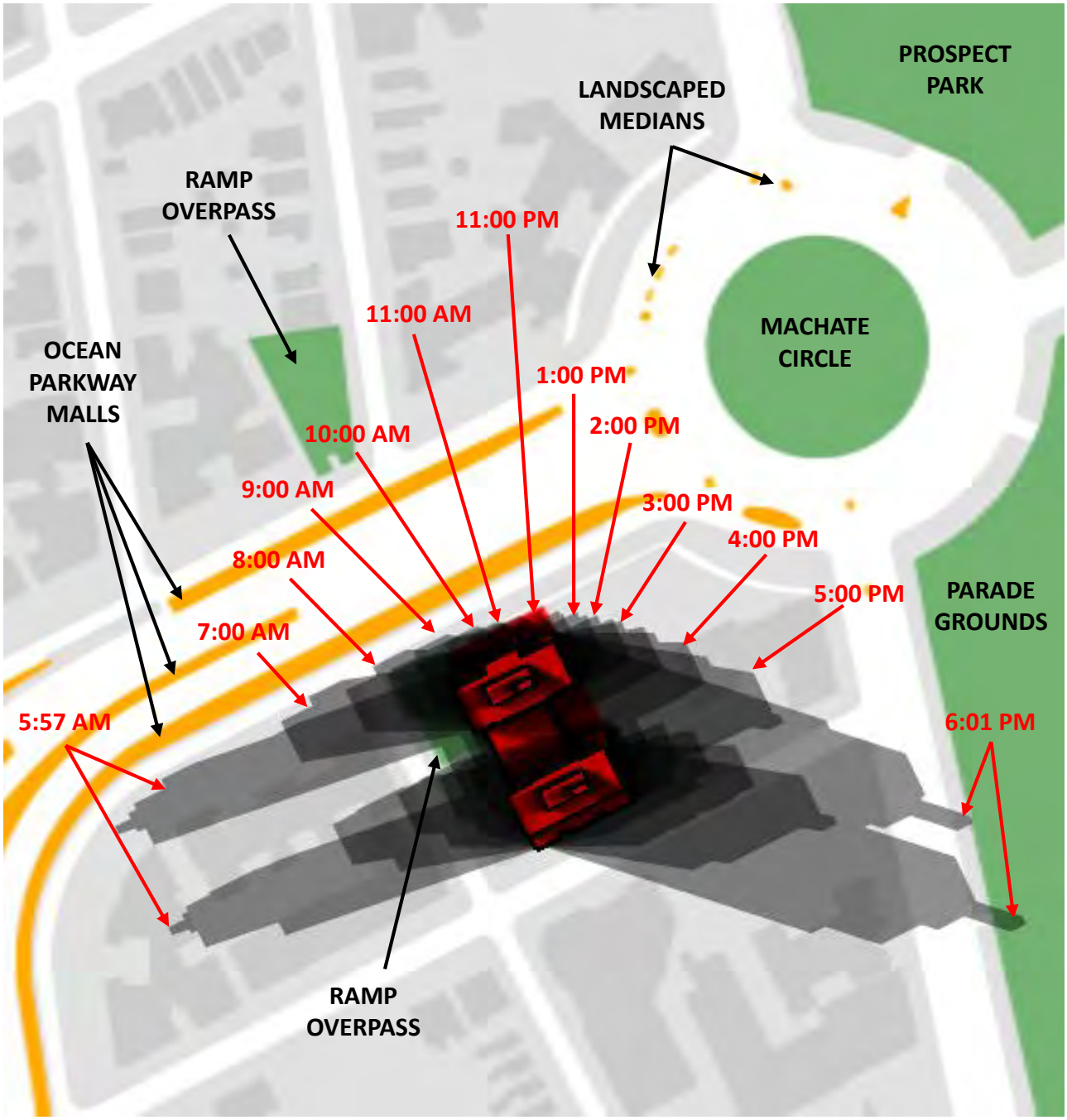


Project Site
Projected Shadow
Open Space and Recreation
Greenstreets (or Equivalent)

57 Caton Place Rezoning
Brooklyn, New York

Tier 3 Shadow Screening Analysis: May 6

Figure 2.2-2c



Project Site
Projected Shadow
Open Space and Recreation
Greenstreets (or Equivalent)

57 Caton Place Rezoning
Brooklyn, New York

Tier 3 Shadow Screening Analysis:
June 21

Figure
2.2-2d

Open Space

Shadows from the With-Action condition would only fall on Machate Circle for a short period of one of the analysis days. Using the three dimensional computer modeling software, and as indicated in Table 2.2-1 and Figure 2.2-2a, it was estimated that shadows would fall on Machate Circle for approximately 45 minutes (2:08 PM to 2:53 PM) during the December 21 analysis day. Given the relatively short duration of this shadow and since they would occur during a time of the year that would not affect growing vegetation, it is not anticipated to significantly impair public enjoyment of this resource or affect its vegetation.

Similarly, it was estimated that shadows would fall on the northern pedestrian overpass park for approximately one hour and nine minutes (8:51 AM – 10:00 AM) during the December 21 analysis day. As with Machate Circle, the short duration and time of year (wintertime) lessen the impact of shadows on the overpass park at the corner of Sherman Street and Ocean Parkway. The final open space resource, the Parade Grounds, would only be impacted for six minutes during the June 21 analysis day (see Figure 2.2-2d). Therefore, no significant adverse shadow impacts on open space resources would occur.

Table 2.2-1: Tier 3 Screening Shadow Duration from With-Action Condition on Identified Resources

Analysis Day/ Timeframe Window	December 21 8:51 AM - 2:53 PM	March 21 / Sept. 21 7:36 AM - 4:29 PM	May 6 / August 6 6:27 AM - 5:18 PM	June 21 5:57 AM - 6:01 PM
OPEN SPACE				
Machate Circle				
Shadow Enter – Exit Times	2:08 PM – 2:53 PM	No Shadow Coverage	No Shadow Coverage	No Shadow Coverage
Shadow Duration	45 minutes	-	-	-
Parade Grounds				
Shadow Enter – Exit Times	No Shadow Coverage	No Shadow Coverage	No Shadow Coverage	5:55 PM – 6:01 PM
Shadow Duration	-	-	-	6 minutes
Pedestrian Overpass Park – Sherman Street and Ocean Parkway				
Shadow Enter – Exit Times	8:51 AM – 10:00 AM	No Shadow Coverage	No Shadow Coverage	No Shadow Coverage
Shadow Duration	1 hour, 9 minutes	-	-	-
GREENSTREETS				
Ocean Parkway Malls				
Shadow Enter – Exit Times	8:51 AM – 2:53 PM	7:36 AM – 11:45 AM	6:27 AM – 7:54 AM	No Shadow Coverage
Shadow Duration	6 hours, 2 minutes	4 hours, 9 minutes	1 hour, 27 minutes	-
Landscaped Medians				
Shadow Enter – Exit Times	1:25 PM – 2:53 PM	4:23 PM – 4:29 PM	No Shadow Coverage	No Shadow Coverage
Shadow Duration	1 hour, 28 minutes	6 minutes	-	-

Notes:
(1) Daylight savings time not used; times shown are eastern standard time (EST)
(2) All times are approximate

Greenstreets

As shown in Figures 2.2-2a through 2.2-2c, shadows from the With-Action condition would be cast on the Ocean Parkway malls during the December 21, March 21/September 21, and May 6/August 6 analysis days, and on the Machate Circle landscaped medians during the December 21 and March 21/September 21 analysis days (though only for six minutes during the latter). Shadows would fall on the Ocean Parkway malls for about six hours (8:51 AM to 2:53 PM) during the December 21 analysis day, for just over four hours (7:36 AM to 11:45 PM) during the March 21/Sept 21 analysis day, and almost one and a half hours (6:27 AM to 7:54 AM) during the May 6/August 6 analysis day. The landscaped medians would be affected by shadows for about one and a half hours (1:25 PM to 2:53 PM) during the December 21 analysis day.

The most substantial shadow coverage for the Ocean Parkway malls and the landscaped medians would occur in the winter, when vegetation is dead or dormant. As described earlier, the Ocean Parkway malls are long, thin landscaped medians. Even with the duration of shadows during the March 21/September 21 and May 6/August 6 analysis days, shadows would pass over portions of the malls quickly such that no area would be deprived of sunlight as a result of the proposed action for an extended period of time. Additionally, as shown in Figure 2.2-2c, the coverage during the May 6 / August 6 analysis day would be relatively small, affecting only a portion of the southernmost strip. The portion of the southernmost Ocean Parkway mall that is accessible to the public usage- the shared pedestrian-bicycle path west of East 8th Street, would only have project-generated shadows for a short period of time (less than one hour) in the morning during the March 21/September 21 analysis day and an even shorter period of time in the morning during the May 6/ August 6 analysis day. This portion would be free from project-generated shadows on the other analysis days.

Other than this shared pedestrian-bicycle pathway, the rest of the greenstreets along Ocean Parkway and Machate Circle consist entirely of permeable, landscaped traffic medians with no useable open space. The public's use of these resources would not be diminished as a result of shadows cast by the With-Action condition.

Based on the foregoing analysis, no significant shadow impacts are anticipated and no further analysis is necessary.

2.2.4 Conclusion

The projected shadows that would be cast on resources of concern as a result of the With-Action condition are most significant during the December 21 analysis day, when vegetation would be dead or dormant. In addition, the projected shadows would mostly fall on the landscaped malls and traffic medians that do not offer public access or public use, and therefore would not adversely affect the public's enjoyment of them. Therefore, there would be no significant adverse shadow impacts to these resources or the viability of their vegetation. The proposed actions would not result in significant adverse shadow impacts to any resources of concern.

2.3 Historic and Cultural Resources

2.3.1 Introduction

Historic and cultural resources are defined as districts, buildings, structures, sites and objects of historical, aesthetic, cultural, and archaeological significance. According to the *2014 CEQR Technical Manual*, these include properties that have been designated, or are under consideration for being designated, as New York City Landmarks or Scenic Landmarks, or are eligible for such designation; properties within New York City Historic Districts; properties listed in, or determined eligible for listing in, the State and/or National Register of Historic Places (SR/NR); and National Historic Landmarks. This section assesses the potential for the proposed actions to affect architectural and archaeological resources located on the project site or in the surrounding area.

2.3.2 Methodology

According to the *2014 CEQR Technical Manual* archaeological resources usually need to be assessed for projects that would result in any in-ground disturbance. In-ground disturbance is any disturbance to an area not previously excavated, including new excavation that is deeper and/or wider than previous excavation on the same site. The State Historic Preservation Office's (SHPO) Cultural Resources Information System indicates that the project site is immediately adjacent to an archeologically sensitive area. The proposed project would involve the development of up to 74 below-grade parking spaces. Excavation would be limited to the project site. Therefore, the New York City Landmarks Preservation Commission (LPC) was consulted to identify any potential impacts of the proposed actions on archaeological resources. In response, LPC issued a letter dated September 27, 2016 confirming that the project area properties have no archeological significance (see Appendix B). Therefore, the proposed actions would not result in any adverse archeological impacts and no further archeological analysis is required.

Generally, architectural resources should be surveyed and assessed if the proposed project would result in any of the following, whether or not any known historic resources are located near the site of the project:

- New construction, demolition, or significant physical alteration to any building, structure, or object;
- A change in scale, visual prominence, or visual context of any building, structure, object or landscape feature. Visual prominence is generally the way in which a building, structure, object, or landscape feature is viewed. For example, a building may be part of an open setting, such as a tower within a plaza, which is either conforming or non-conforming with the street wall in terms of its height, footprint, and/or setback. Visual context is the character of the surrounding built or natural environment. This may include the following: the architectural components of an area's buildings (e.g., height, scale,

proportion, massing, fenestration, ground-floor configuration, style), streetscapes, skyline, landforms, vegetation, and openness to the sky;

- Construction, including but not limited to, excavating vibration, subsidence, dewatering, and the possibility of falling objects;
- Additions to or significant removal, grading, or replanting of significant historic landscape features;
- Screening or elimination of publicly accessible views;
- Introduction of significant new shadows or significant lengthening of the duration of existing shadows on an historic landscape or on an historic structure if the features that make the structure significant depend on sunlight. For example, stained glass windows that cannot be seen without sunlight, or buildings containing design elements that are part of a recognized architectural style that depends on the contrast between light and dark design elements, such as deep window reveals and prominent rustication.

One historic and cultural resource, the LPC-designated scenic landmark and SR/NR-listed Prospect Park (LP-0901, 90NR01313) was identified within a 400-foot study area surrounding the project area. Since there is a large scenic landmark in close proximity to and within view of the proposed project, and since the proposed project would result in a change to the visual prominence of the project site, a preliminary assessment of architectural resources is provided.

2.3.3 Preliminary Assessment

Existing Conditions

Project Area and Project Site

The project area (the proposed rezoning area) comprises two tax lots, Lots 1 and 4, on the western portion of Brooklyn Block 5322 bounded by East 8th Street to the west, Ocean Parkway to the north, Park Circle to the northeast, Coney Island Avenue to the east, and Caton Place to the south. The project site, Lot 4, is a through lot between Ocean Parkway and Caton Place, in the middle of the project block. The project site is developed with a three-story semi-detached commercial/manufacturing building that currently serves as a warehouse. The existing structure was originally constructed in 1939 as a roller skating rink. It has a tan uniform façade with bas-relief arches and columns.

The adjacent Lot 1, a City-owned lot mapped as parkland, composes the remainder of the project area, and currently contains several park benches, small trees, and the off-ramp/landing of an Ocean Parkway pedestrian overpass which connects this lot to another City-owned lot on the north side of Ocean Parkway. The open-air overpass was constructed in 1940.

An LPC website file search and review of SHPO records revealed that there is no individual landmark designation for the existing building on the project site. In addition, in response to the aforementioned consultation with LPC regarding the project area, LPC issued a letter dated September 27, 2016,

confirming that the project area properties have no architectural or archeological significance (see Appendix B).

Study Area

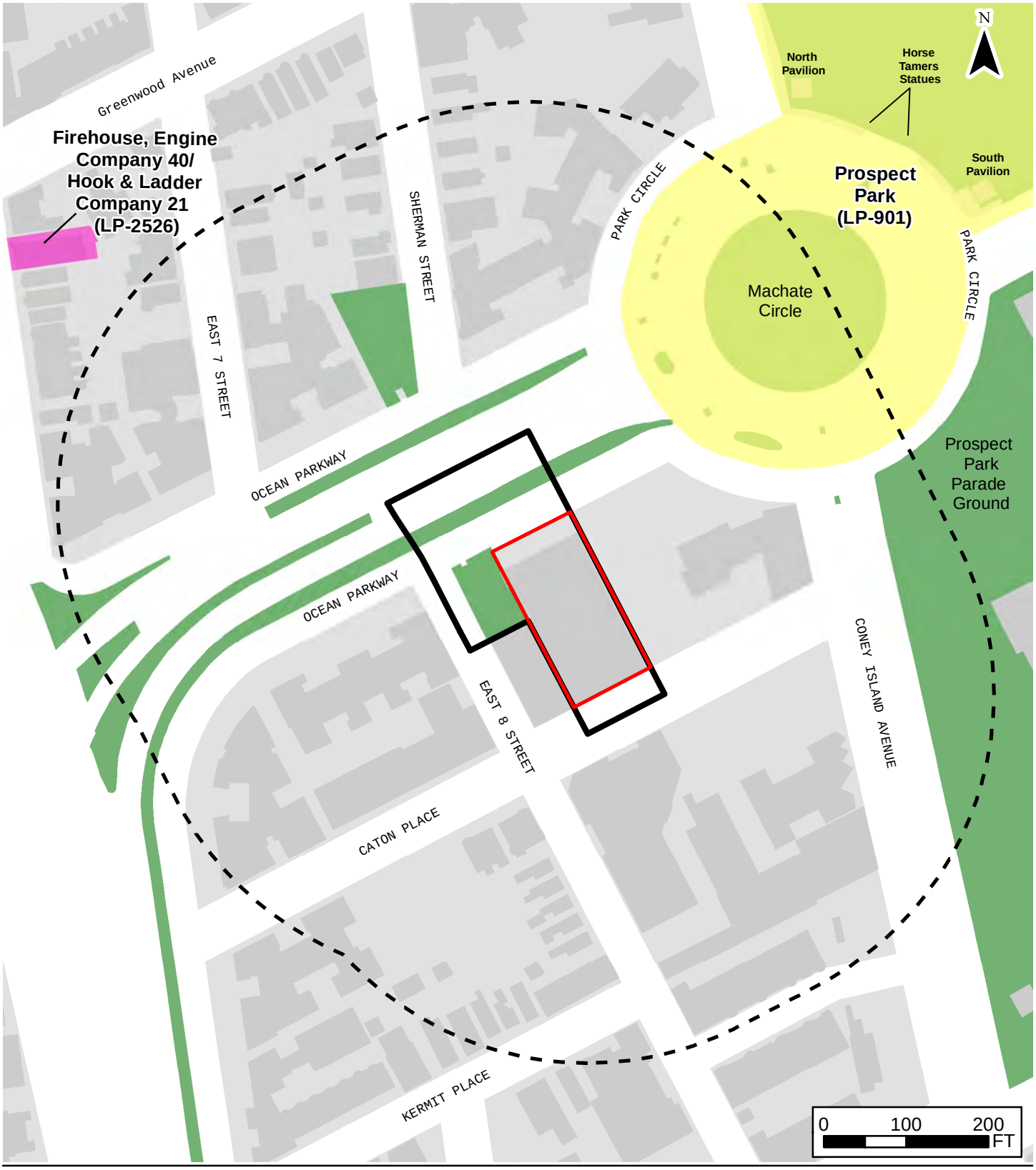
As shown in Figure 2.3-1, a small portion of the LPC-designated scenic landmark and NR/SR-listed Prospect Park (LP-0901, 90NR01313) falls within the 400-foot study area.

Prospect Park, a 526-acre public park, is the centerpiece of Brooklyn's park system. The park was designed by Frederick Law Olmsted and Calvert Vaux in 1865, after the team finished design on Manhattan's Central Park; construction of the park began the following year. Prospect Park was designated a scenic landmark by the LPC in 1975 and listed on the SR/NR in 1980. The LPC designation report is included in Appendix C. The site of the park is historically significant as the site of the Battle of Long Island, the first major battle between the Continental Army under Washington and the British Army in North America after the Declaration of Independence. The boundaries of the scenic landmark include the inner curb line of Park Circle enclosing the central island, known as Machate Circle. Machate Circle and Park Circle are the only portions of the 526-acre scenic landmark that fall within the 400-foot study area.

One prominent feature of Prospect Park is the carefully planned circulation system. Olmsted and Vaux designed the circulation system with a series of arches to keep carriage drives, bridle paths and walks completely separate from each other. Unlike Central Park, Prospect Park has no transverse roads. Other notable features of Prospect Park include its varied landscape, meandering water system, and formal spaces. The most noteworthy landscape features are the Long Meadow, over a mile in length and bordered by extensive wood areas, and the elevated lands of Quaker Hill, Breeze Hill, and Lookout Hill, the highest point in the park. The meandering water system begins at Swan Boat Lake by the Long Meadow, continuing through a stream in the secluded Ravine, eventually connecting a series of smaller lakes and ending in the 57-acre man-made Prospect Park Lake.

Olmsted and Vaux also planned several formal spaces for the park, including the Concert Grove (today known as the Flower Garden) and Grand Army Plaza, the prominent plaza approach to the park. Grand Army Plaza is occupied by a fountain designed by Eugene Savage and the Soldiers' and Sailors' Memorial Arch, designed by John H. Duncan. The classical appearance of the Grand Army Plaza is mirrored in several other park entrances, including the Machate Circle entrance with two Horse Tamers statues designed by Frederick MacMonnies and flanking walls leading to two tile-roofed pavilions designed by the firm of McKim, Mead & White. Machate Circle is a landscaped central island planted with trees and flowers, which can be accessed by pedestrians crossing the Park Circle roadways via crosswalks with countdown pedestrian signals. Photos of these features are provided in Figure 2.3-2.

Other prominent elements of Prospect Park include several buildings, structures, statues and monuments. Landmarked buildings and structures within Prospect Park include the Boathouse on the Lullwater, the Grecian Shelter, located along Parkside Avenue across from the Parade Ground (though not visible from the project site), the Lefferts Homestead on Flatbush Avenue and the Litchfield Villa, near Prospect Park West. Other notable statues include the bronze figure of James S. T. Stranahan and a large group of sculptures in the Flower Garden. Three monuments memorialize the Battle of Long Island in 1776.



Project Site

Project Area (Proposed Rezoning Area)

400-Foot Radius

Individual Landmarks

Scenic Landmarks

57 Caton Place Rezoning
Brooklyn, New York

Historic Resources

Figure 2.3-1

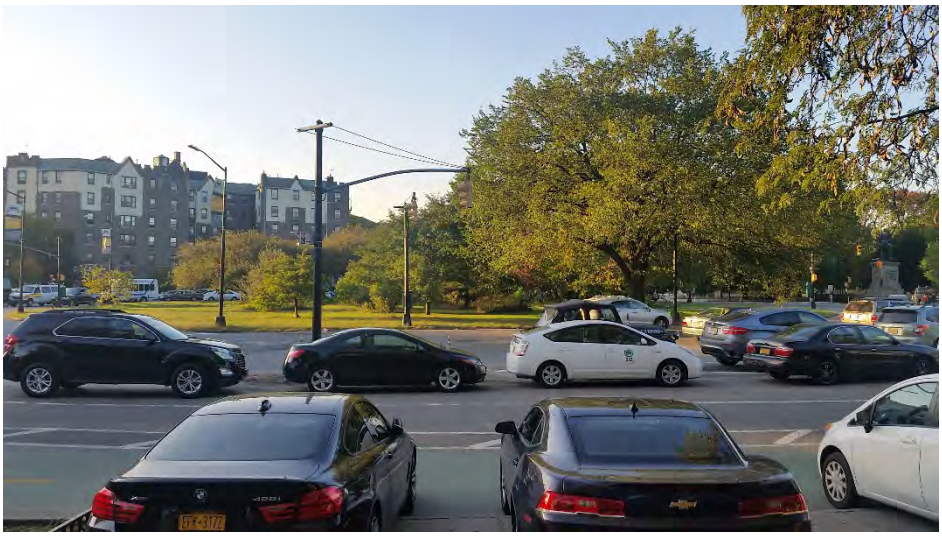


Photo 1

Machate Circle facing north from Prospect Park Parade Ground



Photo 2

Northern tile-roofed pavilion; view facing east from Prospect Park Southwest



Photo 3

Northern Horse Tamers statue with classical-style pedestal; view looking northwest from Prospect Park entrance roadway

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Brooklyn, New York

Study Area Historic Features

Figure 2.3-2

Future No-Action Condition

As described in Section 1.0, "Project Description," absent the proposed actions (the future No-Action condition), the existing three-story building on the project site would be demolished and the applicant would redevelop the project site with an approximately 54,795-gross square foot (gsf) as-of-right three-story commercial building with retail on the ground floor and two stories of accessory and public parking above.

In keeping with the Special Ocean Parkway District rear yard equivalent requirements, the building would be set back 30 feet from Ocean Parkway on its north side. The building would also be set back 20 feet from the Caton Place lot line and from the adjacent Kensington Stables building, creating a discontinuous street front along Caton Place. The building would be constructed to a height of 33 feet with no setbacks after the base height, in keeping with the shorter buildings on the project block and across Caton Place to the south.

Future With-Action Condition

As described in Section 1.0, "Project Description," in the future With-Action condition, the proposed actions would facilitate the development of a 166,191-gsf mixed-use residential and commercial building containing approximately 106,905 gsf of market rate and affordable residential space, 12,994 sf of ground floor (plus cellar), neighborhood-serving retail, and up to 74 spaces of below-grade parking.

The With-Action development would have two towers reaching nine stores each on a single, one-story base. The project would have a total zoning floor area of 109,029 zsf (4.6 FAR) and would include ground floor lobby space, outdoor space, and other residential amenities. The retail space would be located on the ground floor along the Caton Place frontage of the building. The tower fronting on Caton Place would reach 95 feet tall (excluding mechanical bulkhead) after a 15-foot setback above the seventh floor. The tower fronting Ocean Parkway would also be 95 feet tall (excluding mechanical bulkhead) and would set back ten feet at seven stories. Each tower would be approximately 60 feet deep and would be approximately 66 feet apart from each other. Unlike the future No-Action condition, the building would be built to the lot line along Caton Place and would have retail entrances, a residential lobby and a driveway for the parking garage. Along Ocean Parkway, the building would be set back 30 feet from the lot line and would have a front yard and a residential lobby.

Given that Lot 1 is City-owned parkland and is being used predominantly for the landing/off ramp of the pedestrian overpass, redevelopment that is expected to occur as a result of the proposed actions is limited to Lot 4, the proposed project site.

Project Area and Project Site

As discussed previously, LPC issued a letter dated September 27, 2016, confirming that the project area properties (Lot 1 and Lot 4) have no architectural or archeological significance (see Appendix B). Therefore, there would be no direct impacts on archeological or architectural resources in the project area as a result of the proposed actions, and no further analysis is required.

Study Area – Architectural Resources

As shown in Figure 2.3-1, a portion of Machate Circle, designated as part of the Prospect Park scenic landmark, falls within the 400-foot study area. Potential impacts of the proposed project on this historic resource relating to shadows, urban design and visual resources are analyzed below.

Shadows

As discussed in Section 2.2, "Shadows," shadows from the proposed project would not result in any significant incremental shadow impacts on Machate Circle. Using three-dimensional computer modeling software, it was estimated that shadows would fall on Machate Circle for approximately 45 minutes (2:08 PM to 2:53 PM) during the December 21 shadow analysis day. Given the relatively short duration of this shadow, and since it would occur during a time of the year that would not affect growing vegetation, it is not anticipated to significantly impair public enjoyment of Machate Circle or affect its vegetation.

Urban Design

As discussed in Section 2.4, "Urban Design and Visual Resources," the proposed actions would not result in a significant adverse impact on urban design.

The proposed actions would allow for greater bulk and density on the project site compared to the future No-Action condition. The With-Action condition would also be taller than neighboring buildings on the project block, specifically, Kensington Stables to the west of the project site and the International Church/School to the east.

However, the With-Action condition would be consistent with the urban design character of the study area overall, and particularly with the recent developments that have occurred on Caton Place to the west of the project area, including two medium-density multi-family elevator buildings which have been constructed at 22 Caton Place and 33 Caton Place (the Kestrel). The With-Action condition would be of similar character and scale to these developments.

In addition, compared to the future No-Action condition, the With-Action condition would be in keeping with the existing character of Ocean Parkway and the area surrounding Machate Circle. Ocean Parkway and the north side of Machate Circle is largely characterized by six- to eight-story multi-family elevator buildings. The project block presents one exception to an otherwise contiguous street wall along the south side of Ocean Parkway. The With-Action condition would continue this development pattern, helping to maintain the existing character surrounding the Machate Circle scenic landmark. In contrast, the future No-Action condition would not include residential uses, nor would it be in keeping with the scale of Ocean Parkway between Machate Circle and Prospect Avenue.

Therefore, the proposed actions would not result in any adverse impacts to the urban design character of the study area nor would it alter or effect the character surrounding the scenic landmark, Machate Circle and Prospect Park.

Visual Resources

As discussed in Section 2.4, "Urban Design and Visual Resources," the visual resources within the 400-foot study area include the prominent features of the Machate Circle entrance to Prospect Park: the two Horse Tamers statues, the curved benches connected to the statues and the two tile-roofed pavilions on either side of the park entrance. Renderings depicting the significant views both from the project site to these visual resources and vice versa are provided in Figures 2.4-4a - 2.4-4f. See Section 2.4, "Urban Design and Visual Resources" for detailed assessments of each viewpoint.

The renderings show that changes in the building massing of the proposed project compared to the No Action condition would not obstruct or detract from views of or affect the notable features of Prospect Park and Machate Circle. Given the distance between the project site and the statues and pavilions behind Machate Circle, the proposed project would not be very pronounced in views looking west from Prospect Park, and in many cases, would be completely obstructed from view.

Therefore, the proposed actions would not result in any adverse impacts to visual resources in the study area.

2.3.4 Conclusion

The project area does not contain any significant architectural or archeological resources. Although a small portion of the Prospect Park scenic landmark falls within the study area, the proposed project would not impact this historic resource with respect to shadows, urban design or visual resources. In addition, there are no significant views to this historic resources that would be impacted by the proposed project. Therefore, significant impacts to historic and cultural resources are not anticipated as a result of the proposed actions.

2.4 Urban Design and Visual Resources

2.4.1 Introduction

Urban design is the totality of components that may affect a pedestrian's experience of public space. To determine if a proposed action has the potential to change the pedestrian experience, an urban design assessment under CEQR guidelines focuses on the components of a proposed action that may have the potential to alter the arrangement, appearance, and functionality of the built environment from the pedestrian's perspective. In accordance with the *2014 CEQR Technical Manual*, a preliminary assessment of urban design is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning regulations.

A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources. As defined by the *CEQR Technical Manual*, the sidewalks adjacent to project site provide views to the scenic landmark Machate Circle (part of Prospect Park) and the Prospect Park Parade Ground. No natural features, as defined by the *CEQR Technical Manual*, exist within the 400-foot study area.

The following provides an assessment of urban design and visual resources within the 400-foot study area for the proposed actions.

2.4.2 Methodology

In accordance with the *CEQR Technical Manual* guidelines, the following preliminary urban design and visual resources assessment considers a 400-foot radius study area where the proposed actions would be most likely to influence the built environment. As stipulated in the *CEQR Technical Manual*, since the purpose of the preliminary assessment is to determine whether any physical changes proposed by the project would significantly impact elements of urban design and visual resources, the following information, if known, is included in a preliminary assessment:

- A concise narrative of the existing project area, and conditions under the future No-Action and With-Action conditions;
- An aerial photograph of the study area and ground-level photographs of the site area with immediate context;
- Zoning and floor area calculations of the existing and future With-Action conditions;
- Building massing and building heights; and
- A three-dimensional representation of the future With-Action and No-Action (if relevant) condition streetscape.

If the preliminary assessment determines that a change to the pedestrian experience is minimal and unlikely to disturb the vitality, walkability or visual character of the area, then no further assessment

is necessary. However, if it shows that changes to the pedestrian environment and/or visual resources are significant enough to require greater explanation and further study, then a detailed analysis may be appropriate.

The following preliminary urban design and visual resources assessment follows these guidelines and provides a characterization of existing conditions followed by a description of urban design and visual resources under the future No-Action and With-Action conditions, and an analysis determining the extent to which physical changes resulting from the proposed actions would alter the pedestrian experience.

The urban design and visual resources study area is typically defined as the area within 400 feet of the project site which, for this project, is generally bounded by Ocean Parkway to the west, Kermit Place to the south, the Parade Grounds/Prospect Park to the east, and mid-block between Ocean Parkway and Greenwood Avenue to the north (see Figure 2.4-1). This is the area in which the proposed project would be most likely to have effects in terms of urban design and visual resources.

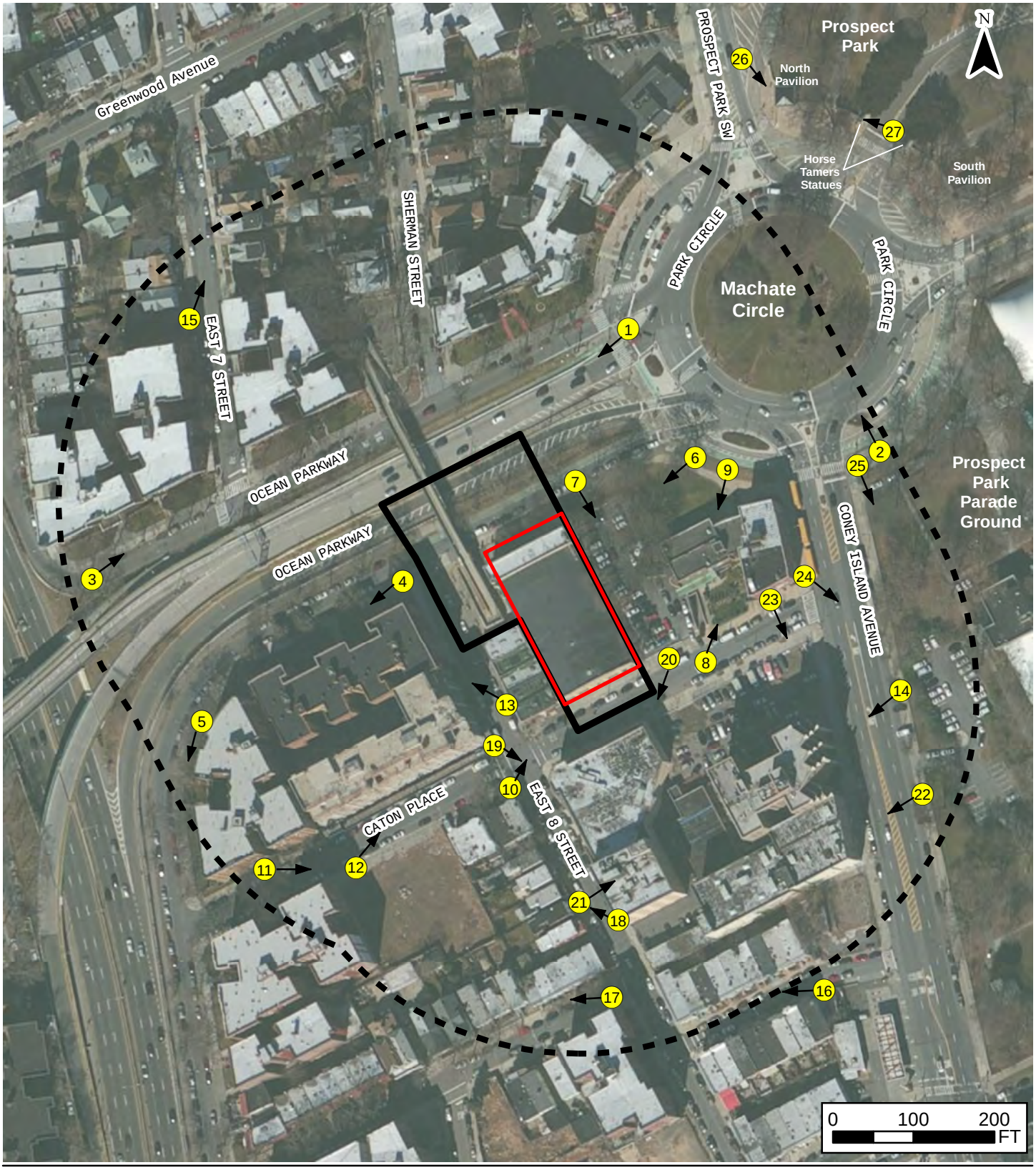
2.4.3 Assessment

Existing Conditions

Project Site and Project Area

The project area (the proposed rezoning area) comprises Lots 1 and 4 on Brooklyn Block 5322. The proposed project site is located at 57 Caton Place (Lot 4), which is a through lot located at the middle of the project block with 110 feet of frontage on Ocean Parkway and approximately 106 feet of frontage along Caton Place. The project site is developed with a three-story semi-detached commercial/manufacturing building that currently serves as a warehouse. The existing structure was originally constructed in 1939 as a roller skating rink. It has a tan uniform façade with bas-relief arches and columns. Along Caton Place, the building is built to the lot line and has two entrances and three loading docks, each with roll-down gates. The front of the building is located along Ocean Parkway and has two entrances; this building face is set back 30 feet from the street line, per Special Ocean Parkway District front yard requirements, and is gated and landscaped with trees and shrubs along the fence line. Sidewalks lining the Ocean Parkway front of the project site are approximately 15 feetwide; sidewalks along Caton Place are approximately 20 feet wide. See Figures 5a and 5b (Photos 1 – 5) for project area photographs.

The adjacent Lot 1, a City-owned lot mapped as parkland, composes the remainder of the project area, and currently contains several park benches, small trees, and the off-ramp/landing of an Ocean Parkway pedestrian overpass which connects this lot to another City-owned lot on the north side of Ocean Parkway. The open-air overpass was constructed in 1940. This lot also contains a gated alleyway, approximately ten feet wide, which connects East 8th Street to Ocean Parkway. The gate of the alleyway along Ocean Parkway is built at the lot line and is contiguous with the gated entrance of the warehouse building on the project site. The overpass site on the north side of the roadway is also developed as parkland, with benches and tables which are separated from the overpass and the sidewalk by fencing.



Project Site

Project Area (Proposed Rezoning Area)

400-Foot Radius

→ Photograph Location and Viewpoint Direction

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Brooklyn, New York

Study Area Photographs

Figure 2.4-1

Study Area

Urban Design

The study area is divided by the roadways of Ocean Parkway, Fort Hamilton Parkway, and an exit off the Prospect Expressway, which run east-west and together total approximately six lanes with two landscaped islands (see Figure 2.4-1a, Photo 1) that feed into Park Circle/Machate Circle. Machate Circle is a three-to-four-lane roundabout in the northeast portion of the study area (see Figure 2.4-1a, Photo 2). A good portion of Machate Circle is dedicated to pedestrian/bicycle traffic, with bike lanes lining the outer traffic lane. On-street parking is available along both the eastbound and westbound service roads of Ocean Parkway. A pedestrian overpass connects the north side to the south side of these streets, with a landing located on Lot 1, adjacent to the project site. Development patterns on either side of Ocean Parkway generally favor large six- to eight-story multi-family residential elevator buildings. These buildings are predominantly pre-war buildings set back from the lot line with landscaped yards and small retaining walls. These structures, while mostly detached or semi-detached, form a relatively continuous street wall along Ocean Parkway (see Figures 2.4-1a and 2.4-1b, Photos 3 – 5). In 1975, a portion of Ocean Parkway extending from Seabreeze Avenue to Church Avenue (southwest of the project site) was designated by the New York City Landmarks Preservation Commission (LPC) as a scenic landmark (LP-821). The character along Ocean Parkway is preserved by the Special Ocean Parkway District, a zoning district established to promote the scenic landmark designation along Ocean Parkway and maintain the scale and character of the community. Though the scenic landmark designation does not extend to the portion of Ocean Parkway within the study area, the Special Ocean Parkway District is mapped generally south and east of Ocean Parkway and west of Coney Island Avenue, and includes the study area. Therefore, this portion of the study area is still subject to the district's zoning regulations, which include special bulk, landscaping and parking regulations. The parking regulations dictate that new parking lots must be covered, as seen in several recent developments within the study area.

One exception to this development pattern along Ocean Parkway is Block 5322, the project block, which is bounded by Ocean Parkway, Coney Island Avenue, Caton Place and East 8th Street. The only building on this block that fronts Ocean Parkway is on the project site (see Figure 2.4-1b, Photo 6). Immediately to the east of the project site is a surface parking lot associated with the International Baptist Church and International Christian School. The parking lot is accessed from Caton Place; fencing for the parking lot is set back approximately 30 feet from the lot line along Ocean Parkway, with a small lawn area on a raised bed along the sidewalk (Figure 2.4-1c, Photo 7). The International Church/School is a four-story detached community/public facility building located at the southeast corner of the block. The original building of the International Baptist Church was constructed in 1957 out of brick. The tallest portion of the building fronts along Coney Island Avenue. Along Caton Place, the building is built to the lot line for 50 feet from the corner of Coney Island Avenue, after which the building is setback from the lot line approximately 55 feet (Figure 2.4-1c, Photo 8). Lots 10 and 20, on which the International Church/School is constructed, is treated as one contiguous lot; there is a landscaped lawn area on Lot 10 with entrance walkways to the north side of the building (the northeast corner of the project block) which functions as a front yard and setback (Figure 2.4-1c, Photo 9). The surface parking lot spans Lot 10 and 20 as well. Lot 40 on the project block contains Kensington Stables, a horse stable for equestrian activities in and around Prospect Park which was constructed in 1930. The one-story brick stable building is built to the lot line, consistent with the Caton Place front of the project site building (Figure 2.4-1d, Photo 10).

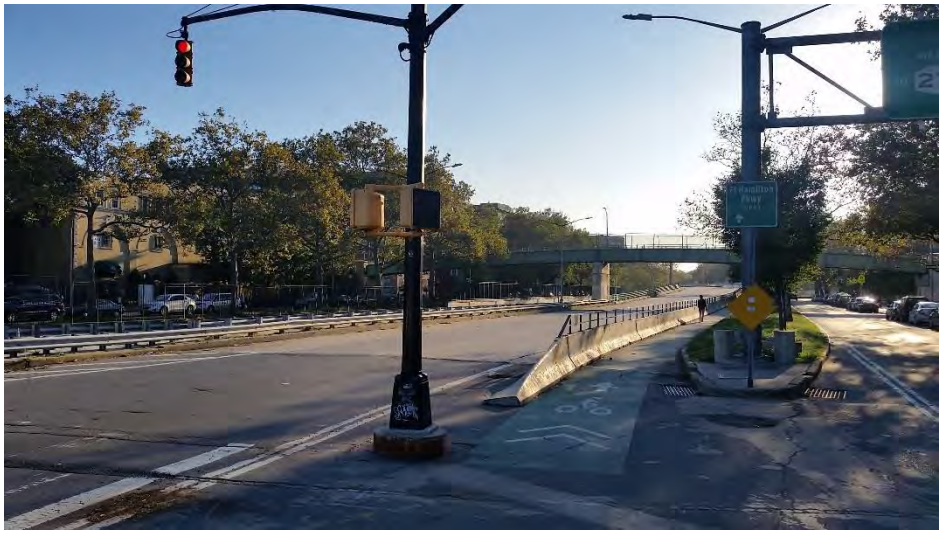

Photo 1

View of Machate Circle facing west from Machate Circle; view of project site in background

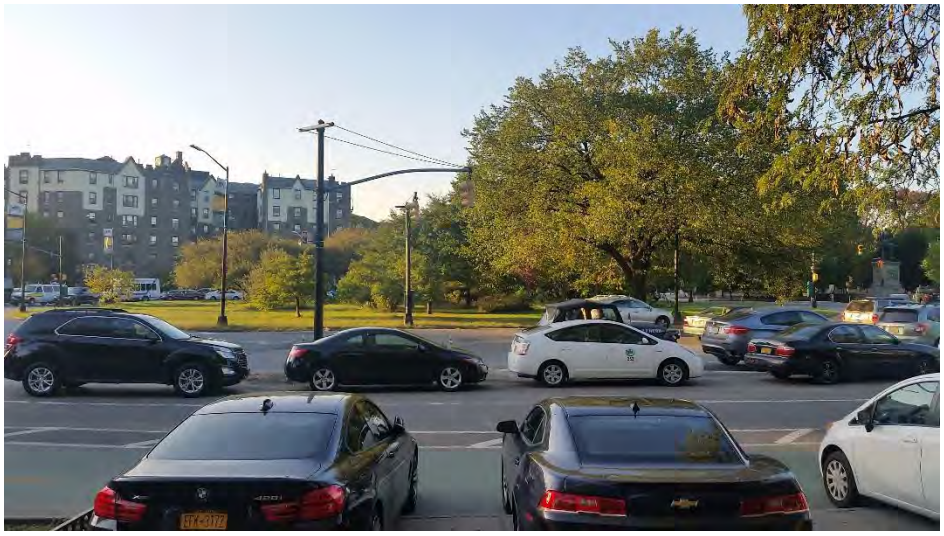

Photo 2

Machate Circle facing north from Prospect Park Parade Ground



Photo 3

North side of Ocean Parkway, view facing east

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Views of the Study Area

Figure 2.4-1a

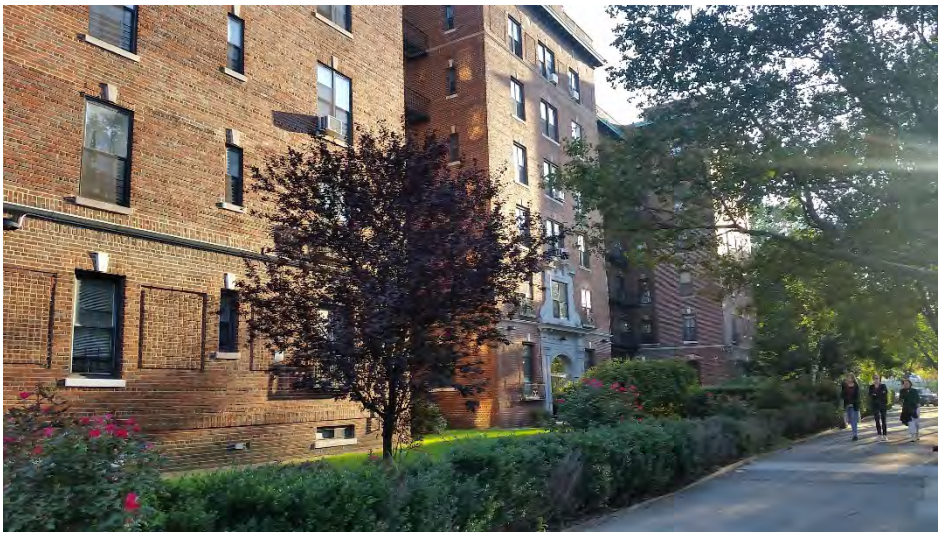

Photo 4

View of south side of Ocean Parkway facing west from intersection with East 8th Street



Photo 5

View of south side of Ocean Parkway facing west along the bend in the street

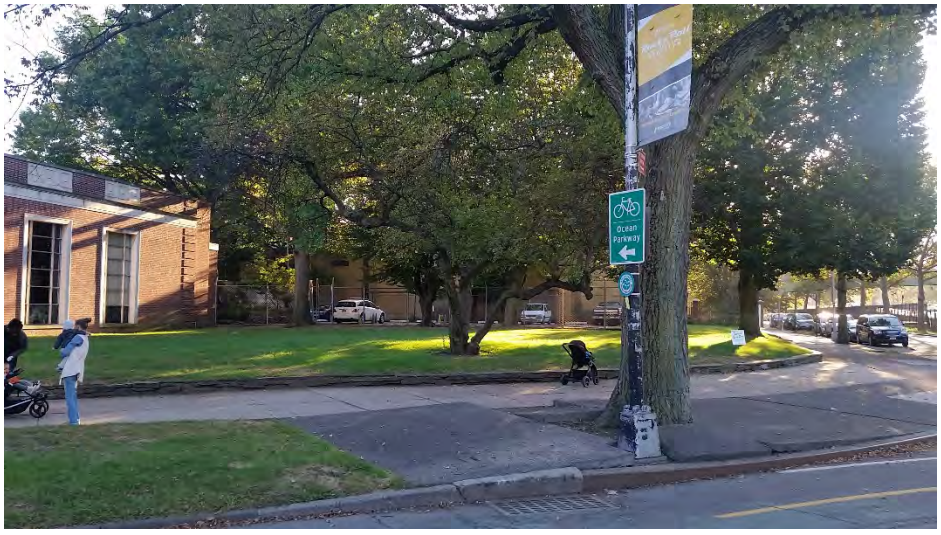

Photo 6

North side of the project block, set back from Ocean Parkway

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Views of the Project Area

Figure 2.4-1b



Photo 7

Surface parking to the east of the project site, set back from Ocean Parkway



Photo 8

View of International Baptist Church/ International Christian School facing north from Caton Place



Photo 9

North side of the International Baptist Church/ International Christian School; Lot 10 entrance walkways and landscaping

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Views of the Study Area

Figure 2.4-1c



Photo 10

Kensington Stables, view facing northeast from corner of Caton Place and East 8th Street



Photo 11

81 Ocean Parkway and 22 Caton Place, facing southwest from Caton Place

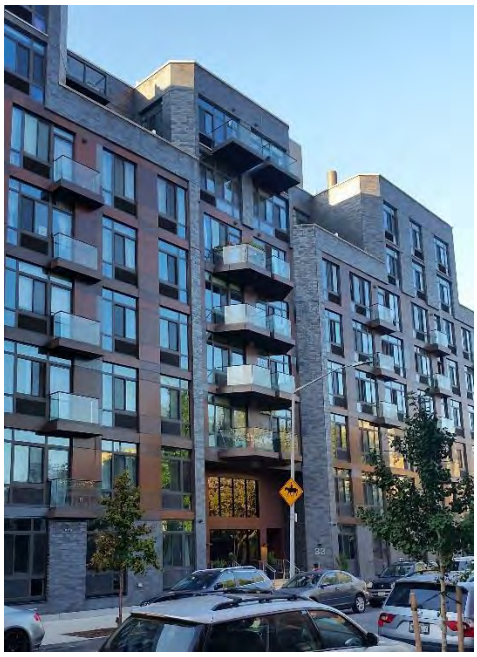

Photo 12

The Kestrel, view facing northeast from Caton Place

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Views of the Study Area

Figure 2.4-1d

Other than those along Ocean Parkway, multi-family residential elevator buildings within the study area include two buildings constructed within the last several years along Caton Place to the west of the project site, one nine-story building along Coney Island Avenue between Caton Place and Kermit Place, and a seven-story brick building at the southwest corner of Kermit Place and 8th Street, which was constructed in 1956 (See Figures 2.4-1d and 2.4-1e, Photos 11 - 14). The two relatively new buildings along Caton Place, though more modern, were designed to complement the older adjacent brick multi-family buildings. The façade of The Kestrel, the building located at the northwest corner of East 8th Street and Caton Place, has brick features with glass balconies. The recently completed 22 Caton Place multi-family residential elevator building, on the south side of Caton Place, rises seven stories with a brick façade. Much of the residential development within the study area is subject to contextual zoning regulations. The purpose of these districts is to encourage the development of buildings that are consistent with and complementary to existing neighborhood character. See Section 2.1 "Land Use, Zoning, and Public Policy" for a detailed discussion of the individual contextual districts within the study area.

Aside from mid-rise multi-family residential development, the study area is also characterized by smaller one- to three-story, one- and two-family buildings, particularly along East 7th Street and Sherman Street, as well as along the north side of Kermit Place and the west side of East 8th Street between Caton Place and Kermit Place. These residential buildings fronting East 7th Street and Sherman Street are generally set back from the lot line and feature front lawns, large street trees and in some cases, front porches (See Figure 2.4-1e, Photo 15). These structures are on long lots and generally cover 20 to 50 percent of the lot allowing for large backyards. Lot widths vary considerably along these streets. The one- and two-family homes located within the study area to the south of Ocean Parkway, particularly along the west side of East 8th Street and the north sides of Kermit Place, are typically two stories and include detached homes with small setbacks and front yard plantings as well as attached brick rowhouses (See Figure 2.4-1f, Photos 16-18).

To the south of the project block, the large irregular-shaped block bounded by Coney Island Avenue, Caton Place, East 8th Street, and Kermit Place, is characterized primarily by large institutional buildings. The four-story Cavalry Cathedral of Praise building, located at the corner of East 8th Street and Caton Place, is a largely featureless tan building with one entrance at the corner and another further south along East 8th Street. The building presents a blank street wall immediately across from the project site (See Figure 2.4-1g, Photos 19-21). The five-story Brooklyn College Academy building on the same block is a large tan brick building which fronts Coney Island Avenue (See Figure 2.4-1h, Photo 22). At the corner of Caton Place and Coney Island Avenue is a large surface parking facility associated with the Cavalry Cathedral which runs half the length of the block along Caton Place, opposite the International Church/School building (See Figure 2.4-1h, Photo 23).

Coney Island Avenue, a large north-south thoroughfare, separates the Prospect Park Parade Ground from the rest of the study area to the west. Coney Island Avenue has two travel lanes in each direction and on-street parking on either side. Machate Circle, mentioned above, is a large traffic circle that connects Ocean Parkway/Fort Hamilton Parkway, Coney Island Avenue, Parkisde Avenue and Prospect Park Southwest, and also provides a main entrance into Prospect Park. As mentioned, Machate Circle includes a dedicated bike lane and a pedestrian lane, separated from the main roadway by planted islands. There is also pedestrian-accessible green space in the center of the circular roadway. Crosswalks are provided across each connecting roadway and there are three crosswalks with countdown pedestrian signals providing connections to the center island.



Photo 13

West side of East 8th Street looking north from intersection of East 8th Street and Caton Place



Photo 14

346 Coney Island Avenue, looking west from Prospect Park Parade Ground



Photo 15

Single-family homes along East 7th Street; view facing northeast

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Views of the Study Area

Figure 2.4-1e



Photo 16

North side of Kermit Place; view facing west from Coney Island Avenue



Photo 17

North side of Kermit Place; view facing west from intersection of Kermit Place and East 8th Street



Photo 18

Single-family homes along East 8th Street between Kermit Place and Caton Place

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Views of the Study Area

Figure 2.4-1f



Photo 19

Cavalry Cathedral of Praise; view facing southeast from the intersection of Caton Place and East 8th Street



Photo 20

Cavalry Cathedral of Praise; view facing south from Caton Place



Photo 21

East 8th Street entrance to Cavalry Cathedral of Praise; view facing east

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Views of the Study Area

Figure 2.4-1g



Photo 22

Brooklyn College Academy building; view facing west from Coney Island Avenue

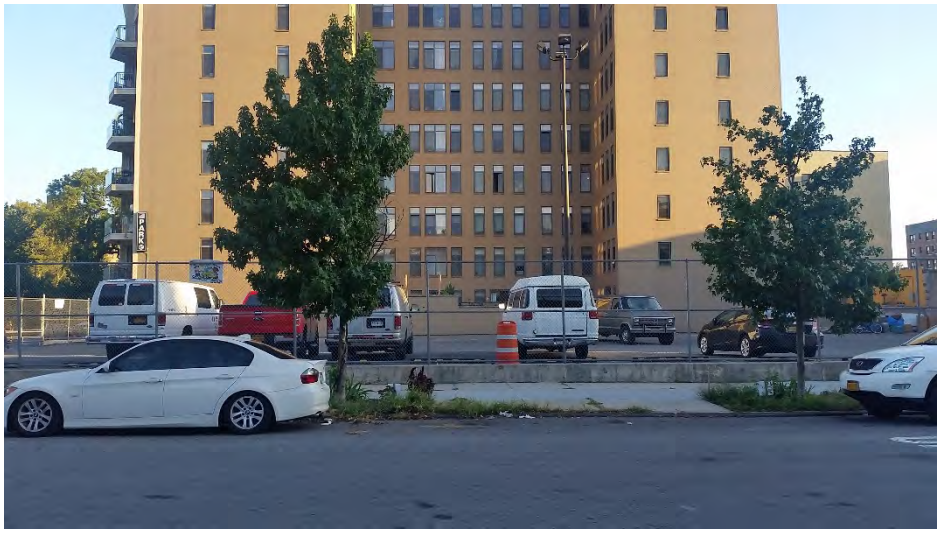

Photo 23

Surface parking east of the Cavalry Cathedral; view facing south from Caton Place



Photo 24

View of Prospect Park Parade Ground recreation building facing southeast from the intersection of Caton Place and Coney Island Avenue

57 Caton Place Rezoning
Brooklyn, New York

Views of the Study Area

Figure
2.4-1h

The Prospect Park Parade Ground occupies the eastern portion of the study area and is a major Brooklyn destination. The park features landscaped passive recreation areas, recreation courts and fields, as well as an office building along Coney Island Avenue that houses several Parks Department offices and the Brooklyn's 74th Police Precinct. Police vehicles are parked in front of the building along Coney Island Avenue (See Figures 2.4-1h and 2.4-1i, Photos 24 and 25).

The Fort Hamilton Parkway subway stop for the F and the G subway is just outside of the northwest border of the study area. Given all of these features and the proximity to the park, the study area is considered active.

Visual Resources

Several visual resources within the study area can be seen from the publicly accessible sidewalks adjacent to the project site, including the Prospect Park Parade Ground from the south side of the project site and Machate Circle/Prospect Park from the north side of the project site. Machate Circle, as a part of Prospect Park, and Ocean Parkway are designated scenic landmarks, although as mentioned, the section of Ocean Parkway visible from the study area is not designated.

Prospect Park was designated a scenic landmark by LPC in November, 1975 (LP-0901) and listed on the State and National Register of Historic Places in 1980 (90NR01313). The park was designed by Frederick Law Olmsted and Calvert Vaux in 1865; construction began the following year. Prominent features of Prospect Park include the carefully planned circulation system (facilitated by a series of arches to separate the carriage drives, bridle paths, and walkways), the varied landscape effects of meadows and woods, the meandering water system of pools through the Ravine to Prospect Park Lake, and several formal spaces including the Flower Garden and Grand Army Plaza, the latter dominated by the Soldiers' and Sailors' Memorial Arch. The classical appearance of Grand Army Plaza is mirrored in several other park entrances, including the Machate Circle entrance near the project site. The Machate Circle entrance's most prominent features are Frederick MacMonnies' Horse Tamers statues and their classical pedestals and flanking walls designed by the firm McKim, Mead & White. The entrance is enhanced by two tile-roofed pavilions and curving benches built out from the statues (see Figures 2.4-1i, Photos 26 and 27).

Landmarked buildings and structures within Prospect Park include the Boathouse on the Lullwater, the Grecian Shelter, located along Parkside Avenue across from the Parade Ground (though not visible from the project site), the Lefferts Homestead on Flatbush Avenue and the Litchfield Villa, near Prospect Park West. Notable statues include the bronze figure of James S. T. Stranahan and a large group of sculptures in the Flower Garden. Three monuments memorialize the battle of Long Island in 1776. Further details on the features of Prospect Park that contributed to its designation are included in Section 2.3, "Historic and Cultural Resources." The LPC designation report is provided in Appendix C

Machate Circle, though visible from the project site, is best viewed from the more immediate roadways that surround the traffic circle. The prominent features at the Machate Circle entrance to Prospect Park are mostly hidden behind the tress and vegetation planted within the traffic circle, and are therefore not visible from the project site.

The Prospect Park Parade Ground is a valuable open space resource, however it is not a designated scenic landmark. In addition, the portion of the Parade Ground that is visible from the sidewalks on the south side of the project site, though it contains trees and landscaping, is cut off from the rest of

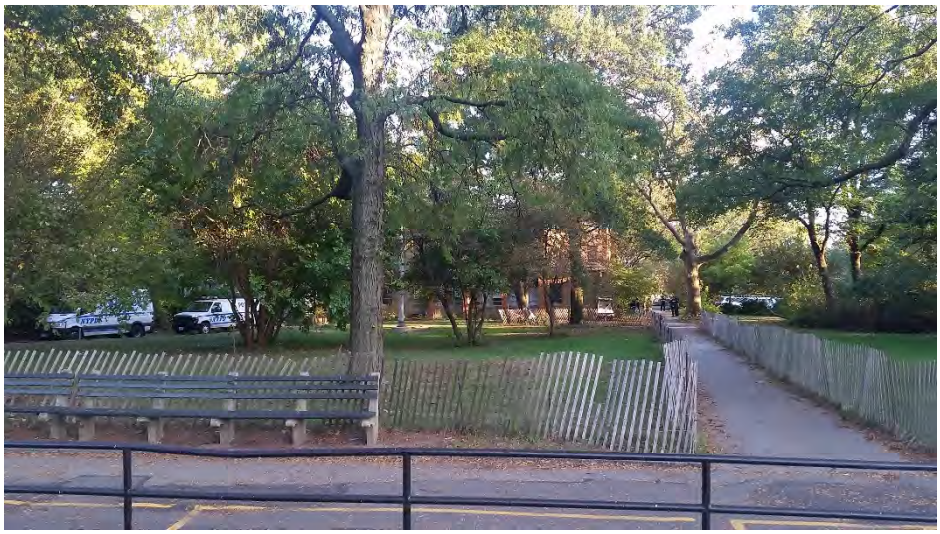

Photo 25

Prospect Park Parade Ground; view facing south from Machate Circle



Photo 26

Northern tile-roofed pavilion; view facing east from Prospect Park Southwest



Photo 27

Northern Horse Tamers statue with classical-style pedestal; view looking northwest from Prospect Park entrance roadway

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Views of the Study Area

Figure 2.4-1i

the Parade Ground by an office building and police precinct with associated parking, diminishing the open space character. Therefore, the Parade Ground would not be visually impacted by the proposed project and is not included in the visual resource analysis.

Future No-Action Condition

As described in Section 1.0, "Project Description," absent the proposed actions (the future No-Action condition), the existing three-story building on the project site would be demolished and the applicant would redevelop the project site for retail and parking use. This would be done as-of-right within the current zoning regulations.

The as-of-right No-Action development would be an approximately 54,795-gross square foot (gsf), three-story commercial building with retail on the ground floor and two stories of accessory and public parking above containing 74 spaces. The building would have 16,852 gsf of retail space and 37,943 gsf of parking facility space. The total commercial zoning floor area would be 33,639 zoning square feet (zsf), including the retail space and the portion of the parking facility space dedicated to commercial parking. The size of the retail space is generally based on market conditions and overall commercial space is below the maximum allowable FAR under current zoning regulations.

In keeping with the Special Ocean Parkway District rear yard equivalent requirements, the building would be set back 30 feet from Ocean Parkway on its north side. The building would also be set back 20 feet from the Caton Place lot line and from the adjacent Kensington Stables building, creating a discontinuous street front along Caton Place. The building would be constructed to a height of 33 feet with no setbacks after the base height, in keeping with the shorter buildings on the project block and across Caton Place to the south. See Figure 2.4-2 and 2.4-3 for renderings of the future No-Action condition.

As discussed in Section 2.1, "Land Use, Zoning and Public Policy," there is one new anticipated development within the study area expected to be completed by the 2021 analysis year. Permit applications have been filed for a 157,600 gsf, 109-foot tall, eight-story commercial self-storage facility at 72 Caton Place which is currently in place of existing surface parking lot associated with the Cavalry Cathedral, across Caton Place from the project site. However, considering that there is an existing nine-story multi-family residential building immediately to the south of this proposed development, a new eight-story building would not alter the existing urban design character of the study area.

Future With-Action Condition

As described in Section 1.0, "Project Description," in the future With-Action condition, the project area would be rezoned from a C8-2 commercial district to an R7A residential with a C2-4 overlay over the project site (Lot 4). The rezoning area would also be mapped as a Mandatory Inclusionary Housing Area. The proposed actions would facilitate the development of a 166,191-gsf mixed-use residential and commercial building containing approximately 106,905 gsf of market rate and affordable residential space (up to 107 units with up to 25 percent affordable units per Mandatory Inclusionary Housing [MIH] guidelines, amounting to approximately 27 units), 12,994 square feet of ground floor (plus cellar), neighborhood-serving retail, and up to 74 spaces of below-grade parking.



No-Action



With-Action

For Illustrative Purposes Only

57 Caton Place Rezoning
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Building Massings
View from Ocean Parkway

Figure
2.4-2



No-Action



With-Action

For Illustrative Purposes Only

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Building Massings View from Caton Place

Figure
2.4-3

This represents the future With-Action condition. Refer to Figures 2.4-2 and 2.4-3 for a visualization of the future No-Action and With-Action conditions.

The With-Action development would have two towers reaching nine stores each on a single, one-story base. The project would have a total zoning floor area of 109,029 zsf (4.6 FAR) and would include ground floor lobby space, outdoor space, and other residential amenities. The retail space would be located on the ground floor along the Caton Place frontage of the building. The below-grade parking garage would be accessed via a driveway on Caton Place, similar to the future With-Action condition. The tower fronting on Caton Place would reach 95 feet tall (excluding mechanical bulkhead) after a 15-foot setback above the seventh floor. The tower fronting Ocean Parkway would also be 95 feet tall (excluding mechanical bulkhead) and would set back ten feet at seven stories. Each tower would be approximately 60 feet deep and would be approximately 66 feet apart from each other. Unlike the future No-Action condition, the building would be built to the lot line along Caton Place and would have retail entrances, a residential lobby and a driveway for the parking garage. Along Ocean Parkway, the building would be set back 30 feet from the lot line and would have a front yard and a residential lobby.

Given that Lot 1 is being used predominantly for the landing/off ramp of the pedestrian overpass, redevelopment that is expected to occur as a result of the proposed actions is limited to Lot 4, the proposed project site.

Urban Design

The proposed actions would allow for greater bulk and density on the project site compared to the future No-Action condition. The With-Action condition would also be taller than neighboring buildings on the project block, specifically Kensington Stables to the west of the project site and the International Church/School to the east.

However, the With-Action condition would be consistent with the urban design character of the study area overall, and particularly with the recent developments that have occurred on Caton Place to the west of the project area. As discussed above, two medium-density multi-family elevator buildings have been constructed at 22 Caton Place and 33 Caton Place (the Kestrel). The With-Action condition would be of similar character and scale to these developments. The Kestrel also contains below-grade parking with access provided from Caton Place. The proposed contextual zoning district is the same as the zoning district in which these developments occurred. In addition, the proposed commercial self-storage across Caton Place from the project site would be a large building with a comparable height (109 feet tall) to the With-Action condition.

Compared to the future No-Action condition, the With-Action condition would be in keeping with the existing character of Ocean Parkway. As previously mentioned, Ocean Parkway is largely characterized by six- to eight-story multi-family elevator buildings. The project block presents one exception to an otherwise contiguous street wall along Ocean Parkway. With-Action condition would continue this development pattern. In contrast, the future No-Action condition would not include residential uses, nor would it be in keeping with the scale of Ocean Parkway between Machate Circle and Prospect Avenue.

The With-Action condition would also improve the pedestrian experience along Caton Place and Ocean Parkway compared to the future No-Action condition. Instead of above-ground parking, the With-Action condition would provide parking below-grade. Residential uses on the upper floors

would increase the vibrancy of the block and surrounding area. In addition, the With-Action condition would be built to the lot line along Caton Place, meeting the front face of Kensington Stables and maintaining the contiguous street wall that currently exists. Similar to the future No-Action condition, the ground floor retail would also help to activate a portion of the street that is currently characterized by blank street walls and surface parking. The retail would likely draw new visitors to the project block and serve both users of the Kensington Stables and the residents of the neighborhood including the new residents of the proposed project and recent residential developments along Caton Place.

Therefore, the proposed actions would not result in any adverse impacts to the urban design character of the study area.

Visual Resources

As mentioned above, the prominent features of the Machate Circle entrance to Prospect Park include the two Horse Tamers statues, the curved benches connected to the statues and two tile-roofed pavilions on either side of the park entrance. The following visual resource assessment includes renderings of the No-Action and With-Action conditions from the views both from the project site to Machate Circle/Prospect Park and vice versa, with a subsequent evaluation of the visual impact the proposed project could have on each view (see Figure 2.4-4). The views include the following: (1) view east along Ocean Parkway (Figure 2.4-4a), (2) view from the intersection of Prospect Park Southwest and Park Circle toward the project site (Figure 2.4-4b), (3) view from the north pavilion toward the project site (Figure 2.4-4c), (4) view from the Horse Tamers statues toward the project site (Figure 2.4-4d), (5) view from the south pavilion toward the project site (Figure 2.4-4e), and (6) view from Machate Circle toward the project site (Figure 2.4-4f).[1]

View east along Ocean Parkway

Development patterns along Ocean Parkway, as described above, generally favor large six- to eight-story multi-family residential buildings that are set back from the lot line with landscaped yards and small retaining walls. These structures form a relatively continuous street wall along Ocean Parkway that is disrupted by the development pattern on the project block.

As shown in Figure 2.4-4a, the project site is visible when looking east along Ocean Parkway toward Machate Circle and Prospect Park. Though Machate Circle is visible in the distance, the pedestrian bridge connecting the project area to the north side of the parkway obstructs any significant views to this visual resource. None of the significant features of the Machate Circle entrance are visible from this location. Additionally, although the With-Action condition would be taller than the No-Action condition, the proposed project would not block any existing view of Machate Circle. The With-Action condition would extend the existing development pattern along Ocean Parkway to the project block, providing continuity without detracting from this viewpoint.

View from the Intersection of Prospect Park Southwest and Park Circle toward the Project Site

Figure 2.4-4b provides a view of the project site from the intersection of Prospect Park Southwest and Park Circle. From the perspective of a pedestrian at this intersection, the project site is far to the right

[1] Photos were taken in early April when leaves were not on the trees to reflect a typical worst-case condition.



Project Site

Project Area (Proposed Rezoning Area)

400-Foot Radius

(#) → View (w/ ID number)

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Visual Resources Study Map

Figure 2.4-4



No-Action



With-Action

Photo taken 4/10/2017
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57 Caton Place Rezoning
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View east along Ocean Parkway

Figure
2.4-4a



No-Action



With-Action

Photo taken 4/10/2017
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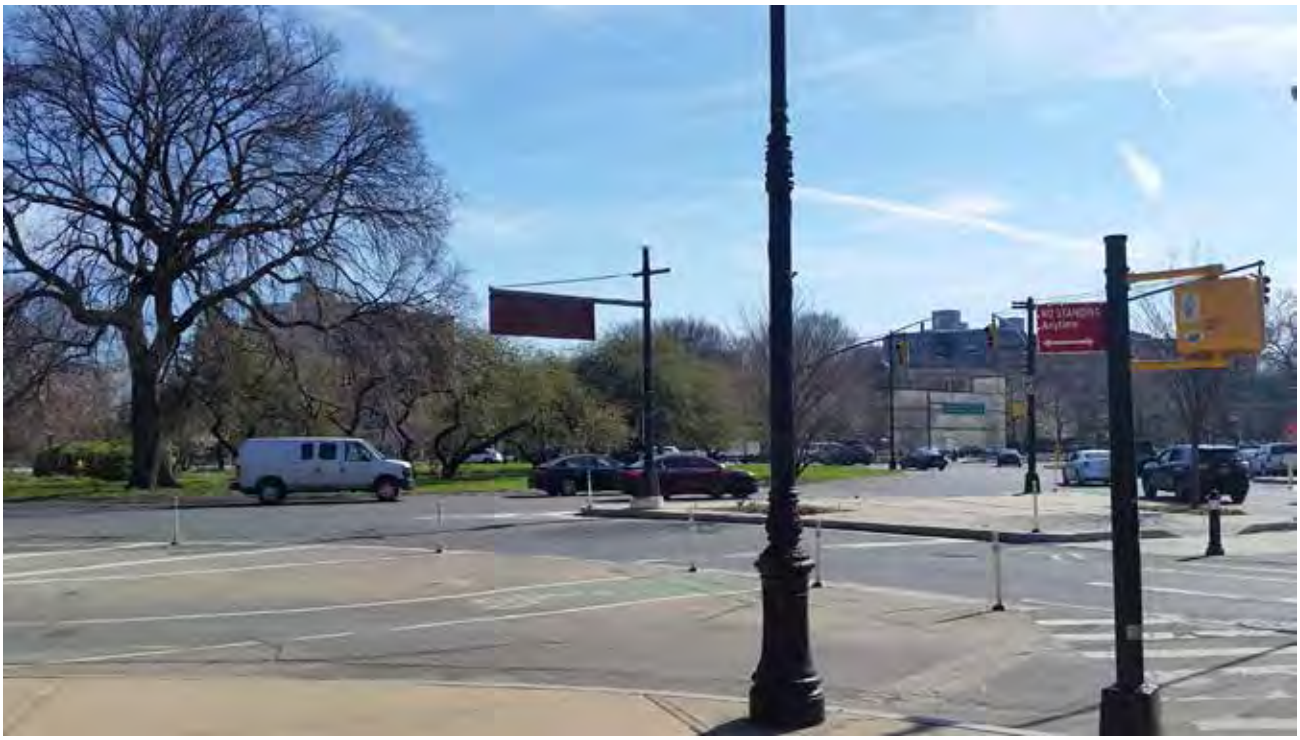
View southwest from the Intersection of Prospect Park SW and Park Circle

Figure
2.4-4b



No-Action



With-Action

Photo taken 4/10/2017
For Illustrative Purposes Only

57 Caton Place Rezoning
Brooklyn, New York

View southwest from the North Pavilion

Figure
2.4-4c



No-Action
(building is not visible from this view)



With-Action

Photo taken 4/10/2017
For Illustrative Purposes Only

57 Caton Place Rezoning
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View southwest from the Horse Tamers Statues

Figure
2.4-4d



No-Action
(building is not visible from this view)



With-Action

Photo taken 4/10/2017
For Illustrative Purposes Only

57 Caton Place Rezoning
Brooklyn, New York

View southwest from the South Pavilion

Figure
2.4-4e



No-Action



With-Action

Photo taken 4/10/2017
For Illustrative Purposes Only

57 Caton Place Rezoning
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View southwest from Machate Circle

Figure
2.4-4f

of Machate Circle and therefore would not disrupt any view of the visual resource from this location. In addition, compared to the No-Action condition, the With-Action condition would be generally in keeping with the height of the adjacent buildings, as well as the height of the residential buildings that are situated on the northwest corner of Machate Circle (along the right edge of the photo). In the context of the surrounding buildings, the With-Action condition would not stand out significantly.

View from the North Pavilion toward the Project Site

Much like the previous viewpoint, the With-Action condition would not disturb significant views from the northern tile-roofed pavilion which anchors the Machate Circle entrance to Prospect Park. As shown in Figure 2.4-4c, facing southwest from the pavilion, the project site falls mostly to the right of Machate Circle. Much of the With-Action condition that falls directly behind Machate Circle would be concealed behind street trees and trees planted within Machate Circle, though the top floors would be visible. However, the With-Action condition would continue the development pattern along Ocean Parkway, providing a continuous building elevation from this viewpoint. In addition, the significant distance between the pavilion and the project site helps minimize any visual impact from this viewpoint.

View from the Horse Tamers Statues toward the Project Site

Figure 2.4-4d depicts the view of the proposed project from behind the Horse Tamers statues that flank the entrance road to Prospect Park. As shown, views toward the project site from this location are obstructed by the trees and other vegetation within Machate Circle (even during the winter months when trees are bare); during the months when leaves are on the trees, more of the With-Action condition would be obstructed. In addition, other buildings are visible beyond Machate Circle from this view, meaning any view of the With-Action condition would not be out of context. Therefore, the With-Action condition would not impact this viewpoint.

View from the South Pavilion toward the Project Site

As shown in Figure 2.4-4e, the large street trees planted along the entrance to the park partially obstruct the view toward the project site from the southern pavilion (even during the winter months when trees are bare). As a result, the With-Action condition would not detract significantly from this viewpoint. In addition, the With-Action condition would be almost entirely obstructed during much of the year when leaves are on the trees.

View from Machate Circle toward the Project Site

As mentioned, Machate Circle is accessible to pedestrians via several crosswalks with countdown pedestrian signals; however there are no sidewalks or paved areas within the circle itself and it does not draw much pedestrian activity. The With-Action condition would be visible to a pedestrian standing in Machate Circle. However, as shown in Figure 2.4-4f, the With-Action condition would be in context with the buildings to its west and would therefore not overshadow the view from Machate Circle.

In general, changes in the building massing compared to the future No-Action condition would not impact visibility of the visual resources within the study area. In addition, the distance between the project site and the prominent features of the Machate Circle entrance minimizes the visual impact of the With-Action condition on the views from these visual resources. . In addition, as mentioned, the With-Action condition would be in keeping with the character and scale of the surrounding buildings along Ocean Parkway, and would therefore have no impact on the visual character of Machate Circle. Therefore, significant adverse impacts to visual resources are not anticipated.

2.4.4 Conclusion

Overall, the With-Action condition would be compatible with the residential character of the surrounding area, and would be consistent with the surrounding building form and streetscape. The proposed residential use compared to the above-ground parking under the future No-Action condition would reinforce the existing development pattern found within the study area, such that the quality of the urban design and visual resources at the project site would improve. These improvements would also conform to the goals of the special districts governing urban design and visual character in the area.

In addition, as demonstrated by the graphic renderings of the With-Action condition, the development would not result in any significant adverse impacts on views to and from the prominent features of the scenic resources within the study area. Therefore, the proposed actions would not result in a significant adverse impact on urban design and visual resources, and no further analysis is necessary.

2.5 Hazardous Materials

2.5.1 Introduction

A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive or toxic). According to the *2014 CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when: a) hazardous materials exist on a site and b) an action would increase pathways to their exposure; or c) an action would introduce new activities or processes using hazardous materials.

2.5.2 Methodology

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

- Phase I Environmental Site Assessment (ESA), dated November 13, 2013, prepared by Singer Environmental Group, LTD (Singer).
- Phase I ESA, dated November 11, 2016, prepared by VHB.
- Phase II ESA, dated November 7, 2017, prepared by VHB.
- Remedial Action Plan (RAP), dated November 27, 2017, prepared by VHB.

The Singer Phase I ESA was prepared in accordance with the American Society for Testing and Materials (ASTM) Practice E527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. VHB's November 11, 2016 Phase I ESA was prepared in accordance with ASTM Practice E1527-13, inclusive of the "All Appropriate Inquiry" requirement amended in the Federal Register on December 30, 2013. The United States Environmental Protection Agency (EPA) "All Appropriate Inquiry" requirement establishes specific regulatory requirements for conducting appropriate inquiries into the previous ownership, uses, and environmental conditions of a property for the purposes of qualifying for certain landowner liability protections under Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

The applicant, 57 Caton Partners LLC, is seeking a zoning map amendment from C8-2 commercial to R7A residential, with a portion of the district to include a C2-4 commercial overlay, and a zoning text amendment to the Special Ocean Parkway District Section 113-10 and Appendix F of the Zoning Resolution (ZR) to establish a Mandatory Inclusionary Housing Area (MIHA) on Block 5322, Lots 1 and 4 in the Windsor Terrace neighborhood of Brooklyn, Community District. The proposed actions would facilitate the development of a 166,191 gross square foot (gsf) mixed-use residential and commercial building at 57 Caton Place containing approximately 106,905 gsf of market rate and affordable residential space (up to 107 units), 12,994 gsf of ground floor retail, and up to 74 spaces of below-grade parking. The project area, the area affected by the rezoning, also includes the adjacent

parcel (Lot 1); however, this is a City-owned parcel of parkland that contains a pedestrian overpass landing and is not projected to be redeveloped as a result of the proposed actions.

2.5.3 Assessment

Existing Conditions

The project site is located at 57 Caton Place (Brooklyn Block 5322, Lot 4) which is a through lot located at the middle of the project block. The project site has a total lot area of approximately 23,702 sf, with approximately 106 feet of frontage along Caton Place and 110 feet of frontage along Ocean Parkway. The project site is developed with a three-story building that was originally built as a roller skating rink and currently serves as a warehouse. Along Caton Place, the building is built to the street line and has two entrances and three loading docks, each with roll-down gates.

Phase I Environmental Site Assessments

The Phase I ESA, dated November 13, 2013 completed by Singer for the project site, was prepared in accordance with ASTM Practice E1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. VHB's Phase I ESA, dated November 11, 2016, was completed for the project site and included analyses as specified in the ASTM Method E1527-13.

The goal of the Phase I ESA process is to identify "Recognized Environmental Conditions" (RECs), which means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

Per the current ASTM Standard, the Phase I ESA reviewed a variety of information sources, including current and historic Sanborn Fire Insurance Maps and aerial photographs; state and federal environmental regulatory databases identifying listed sites; and local environmental records. The Phase I ESA also included reconnaissance of the site and surrounding neighborhood and interviews with the building manager.

As stated in the current ASTM Practice E1527-13, there may be environmental issues or conditions at the site, which may be requested by the user to be addressed as part of the Phase I ESA, which are not covered within the scope of ASTM Practice E1527-13. These issues are referred to as "non-scope considerations" and include evaluations relating to asbestos, lead-based paint, mold, etc. These added considerations were also evaluated as part of the Phase I ESA prepared by VHB.

VHB's Phase I ESA was able to establish a history of the project site as early as 1893, when the project site was vacant/undeveloped. According to the provided records, in 1905 the project site was improved with a temporary gas tank on the central portion of the site. According to historical aerial photographs and Sanborn maps, the current building was constructed between 1905 and 1924, and was previously utilized as a horse riding shed associated with the "Bedford Riding Academy." Between 1924 and 1950, the building began being utilized as a roller skating rink. The building is currently being used for storage, prior to which it was used as a textile distribution facility for Italian men's suits. The project site has remained in its current configuration since 1924.

As indicated in VHB's Phase I ESA, the project site consists of a rectangular-shaped, approximately 0.54± acre parcel improved with a vacant one- and partial three-story warehouse. The aforementioned warehouse, approximately 19,624 square feet (sf) in size occupies the majority of the project site. The northern portions of the building are improved with vacant offices associated with former textile distribution/warehouse activities. The remaining portions of the project site consist of concrete sidewalks and an unpaved planter with several trees on the northern portion of the project site.

Based upon the information provided in the Phase I ESAs, the following findings and site features were identified:

- The site is located at a topographic elevation of approximately 52 feet above mean sea level (amsl).
- Groundwater beneath the project site is estimated to be approximately 43 feet below grade surface (bgs) and is expected to flow to the south-southwest, based on available groundwater contour maps.
- Limited quantities of maintenance products (household cleaning agents) were located within the building during the Phase I ESA visual inspection. None of the materials observed had the potential to impact subsurface conditions at the site.
- There was no visual evidence of underground storage tanks or aboveground storage tanks (USTs/ASTs) during the Phase I ESA visual inspections. Overhead natural gas-fired heating units were observed throughout the warehouse portions of the building.
- Sanitary wastes generated at the site are discharged into the New York City municipal sewer system. No septic systems, leaching structures, drains or sumps were observed during the site reconnaissance.
- Stormwater runoff generated at the site infiltrates into the ground in pervious areas, or discharges into curbside storm drains located along Caton Place. One floor drain within the basement was observed to contain internal piping, indicating same discharges into the municipal sewer.
- There is a potential for PCBs to be present in on-site fluorescent light ballasts. The Phase I ESA indicates that PCBs are subject to federal disposal restrictions and should be dealt with as part of standard renovation and/or demolition practices.
- Housekeeping practices within the building was observed to be good. Various remnant items were observed to be stored within the warehouse and shipping/receiving portions of the vacant warehouse. These items can be easily relocated or moved prior to any potential redevelopment.
- Based upon the age of the on-site building, there is a potential for lead-based paint (LBP) and asbestos-containing materials (ACM) to be present.
- The regulatory agency database search, performed by Environmental Data Resources, Inc. (EDR) contained in VHB's Phase I ESA identified nearby groundwater contamination (within 300-feet of the site) documented on the New York State list of Inactive Hazardous Waste Sites. The groundwater contamination identified were associated with solvents (specifically trichloroethene [TCE]). No source of groundwater contamination was identified in VHB's

Phase I ESA. As such, potential contamination to groundwater quality relating to solvents was identified in VHB's Phase I ESA.

The following RECs were identified were identified in association with the site:

- Nearby groundwater contamination associated with solvents (TCE) were identified on surrounding sites within 300-feet of the site. Although the groundwater contamination were documented to be hydraulically downgradient of the site, the sources attributed to the documented groundwater contamination could not be identified. Given this information, there is a potential for groundwater quality beneath the site to have been impacted by solvents from an unknown source. These potential contamination are considered a REC.
- Based upon the potential presence of solvent-impacted groundwater, there is a potential for volatile organic compound (VOC)-impacted groundwater to be present beneath the site. As such, a vapor encroachment condition (VEC) cannot be ruled out at this time associated with potential solvent-impacted groundwater. A potential VEC is also considered a REC for the subject property.

In addition to the aforementioned RECs, the following additional environmental concerns were identified during the course of this Phase I ESA:

- Given the age of the subject building, there is a potential for ACM to be present in building and roofing materials. The building would be subject to abatement regulations and procedures prior to any potential redevelopment of the subject property.
- Given the age of the subject building, there is a potential for LBP to be present, and it would be subject to NYSDOH and HUD regulations prior to any potential renovations or redevelopment.
- Given the age of the subject building, there is a potential for PCBs to be present in building materials. PCBs are subject to federal disposal restrictions and should be dealt with as part of standard renovation and demolition practices.

Based on the results of the Phase I ESA, a comprehensive subsurface investigation (Phase II ESA investigation) at the site was warranted. A Phase II ESA Work Plan and Health and Safety Plan (HASP) was prepared by VHB and submitted to New York City Department of City Planning (DCP) and the associated reviewing agency (the New York City Department of Environmental Protection [DEP]) for review and approval. The Phase II ESA Work Plan and HASP outlined a comprehensive subsurface investigation involving the collection and analysis of soil, groundwater and soil vapor at the site. DEP approved the Phase II ESA Work Plan and HASP in correspondence dated January 20, 2017 issued to the lead agency (DCP) (see Appendix B).

Phase II Environmental Site Assessments

A comprehensive Phase II ESA was performed at the site under the approved Phase II ESA Work Plan and HASP. The following activities were performed as part of the comprehensive Phase II ESA:

- A geophysical survey (i.e., magnetometer and ground-penetrating radar [GPR]) was conducted to identify any potential subgrade features or utilities prior to the subsurface investigation.

- Four (4) soil borings were installed at the site in order to evaluate subsurface soils. Continuous soils samples were collected down to the proposed maximum depth-of-excavation (approximately 27-feet below grade surface [bgs]). Multi-depth soil samples were collected (shallow and deeper soils) to provide a profile of soils down to the terminal excavation depth.
- Two (2) groundwater samples were collected at the site to determine baseline groundwater conditions.
- Three (3) soil vapor samples were collected at a depth representative of future building slab conditions (approximately 27-feet bgs).

Upon receipt of laboratory analysis, the following findings were provided in VHB's Phase II ESA:

- There were no subgrade features identified during the geophysical survey within or proximate to the locations of the proposed soil boring locations.
- With regard to soils, shallow soils at the site were determined to be slightly contaminated with elevated metals, with additional pesticide contamination on the northern portions of the site. VHB recommended that shallow soils at the subject property removed during the excavation be considered as *minimally contaminated*.
- With regard to groundwater, magnesium, manganese and sodium were detected in both samples that exceeded applicable regulatory standards in both total and dissolved concentrations. The Phase II ESA indicates that the most common source of magnesium in groundwater is through the erosion of rocks such as limestone and dolomites, and minerals such as calcite and magnesite. The presence of manganese in groundwater is typical in Brooklyn, and can often be attributed to the dissolution of manganese from surrounding rocks and leaching. Further, manganese also occurs naturally in groundwater that that has little oxygen and where groundwater flow is slow. The presence of sodium in groundwater can possibly be attributed to the subject property's proximity to a coastal area, or the presence of rock salt being utilized during the winter months in densely developed areas. Given the sample detections of naturally occurring metals in groundwater, VHB did not believe groundwater beneath the site was contaminated due to intense on- or off-site uses. Furthermore, the absence of TCE in groundwater indicated that groundwater contamination that was previously identified in the Phase I ESA in nearby areas to the south and southwest remain isolated and have not encroached onto the site. However, given the presence of metals above regulatory standards, VHB recommended that groundwater beneath the subject property be considered as impaired or *minimally contaminated*.
- With regard to soil vapor, volatile organic compounds (VOCs) were detected at the terminal excavation depth at the site above New York State Department of Health (NYSDOH) 75th percentile guidance values. These VOCs included acetone, chloroform, tetrahydrofuran, n-Hexane, benzene, cyclohexane, toluene, tetrachloroethylene (PCE), ethylbenzene, xylenes, styrene, 1,3,5-trimethylbenzene and 1,2,4-trimethylbenzene. Although VOCs were detected in soil vapor, it should be noted that there were no compounds detected at actionable concentrations that are subject to the NYSDOH Soil Vapor/Indoor Air Matrices. There were no actionable concentrations of VOCs subject to the NYSDOH Soil Vapor/Indoor Air Matrices. However, given the presence of petroleum- and solvent-related VOCs in the soil vapor beneath the subject properties, VHB recommended that soil vapor beneath the subject property be considered as *minimally contaminated*.

Remedial Action Plan

Based upon the results of the comprehensive Phase II ESA, a Remedial Action Plan (RAP) was developed for the site. The RAP included a site-specific Construction Health and Safety Plan (CHASP) and Community Air Monitoring Plan (CAMP), all of which were dated, and submitted to DCP on November 27, 2017. The goal of the RAP is to remediate existing environmental conditions that were determined to be present during the Phase II ESA subsurface investigations in order to create environmentally safe space to the maximum extent practicable for future on-site occupants subsequent to redevelopment activities. The following remedies are outlined in the RAP:

SOILS

- Completion of a waste characterization study prior to excavation activities to identify a proper disposal facility for *minimally contaminated soils.*
- Excavation and proper removal of the minimally contaminated soils in accordance with prevailing regulations.
- Endpoint sampling to determine the performance of the remedy.
- Performance of a CAMP for particulates during excavation activities.

GROUNDWATER

Given the depth-to-groundwater (determined to be approximately 48-feet bgs), groundwater will not be encountered as part of the proposed site redevelopment activities. Furthermore, minimal contamination to groundwater was not attributed to on-site activities or previous site uses. Therefore, no further action or remediation is required.

SOIL VAPOR

Although there were no actionable concentrations of VOCs detected in soil vapor that were subject to the NYSDOH guidance and matrices, an engineered composite cover consisting of reinforced footings and concrete slab that will vary in thickness will serve as protection for future site occupants from minimally contaminated soil vapors present in the surrounding areas. Furthermore, a minimum 20-mil thick soil vapor barrier will be incorporated into the design of the proposed project to protect from any potential future soil vapor migration at the site.

CHASP

A site-specific CHASP was prepared for the site that outlines specific activity protocols. The CHASP was developed to minimize the possibility of work-related injury through aware and qualified supervision, health and safety training, medical monitoring, use of personal protective equipment, and activity-specific safety protocols. The CHASP was issued as an appendix to the RAP.

In correspondence dated December 21, 2017 issued to DCP (see Appendix B), DEP conditionally approved the RAP, CHASP and CAMP for the site. The following provisions will be incorporated into the RAP based on DEP's approval correspondence:

- Any potential USTs/ASTs (including dispensers, piping and fill-ports) encountered during remedial action or construction will be properly closed/removed in accordance with all applicable NYSDEC regulations.

- The applicant will obtain a DEP Sewer Discharge Permit if any dewatering is required for the proposed construction.
- All areas that may be landscaped or covered with grass, will be capped with a minimum of two feet of clean fill/top soil that will be imported from an approved facility/source. The clean fill will be segregated at the source and representative samples will be collected and analyzed at a frequency of one (1) samples for every 250 cubic yards (c.y.). The samples will be analyzed for a comprehensive list of VOCs, SVOCs, pesticides, PCBs and metals by a New York State Department of Health Environmental Laboratory Approval Program-certified laboratory. The applicant will submit a clean soil report to DEP for review and approval prior to the importation and use of any clean soils at the site.
- All suspected lead-based paint and PCBs that may be present in on-site structures will be properly removed and managed prior to the start of construction activities and will be abated (if required) in accordance with all federal, State, and local regulations.

Future No-Action Condition

Absent the proposed project (the No-Action condition), the project area would remain a C8-2 commercial district and the applicant would redevelop the project site for retail and commercial parking use. This would be done as-of-right within the current zoning regulations. With respect to hazardous materials, under the future No-Action condition, the approved RAP, CHASP and CAMP that provides a pathway to address minimally contaminated soils and soil vapor would not be implemented. As such, these conditions would not be remediated as a result. However, regulatory requirements pertaining to building materials containing ACM, LBP and PCBs would be addressed under prevailing regulations as part of standard demolition and redevelopment practices.

Future With-Action Condition

As detailed in Section 1.0, "Project Description," the future with the proposed actions (the future With-Action condition) would allow for the proposed project to be developed on the project site, consisting of the development of a 166,191-gsf mixed-use residential and commercial building at 57 Caton Place containing approximately 111,909 gsf of market rate and affordable residential space (up to 106 units), 12,994 gsf of ground floor retail, and up to 74 spaces of below-grade parking. With respect to hazardous materials, under the future With-Action condition, minimally-contaminated soils and soil vapor that were identified in the comprehensive Phase II ESA would be remediated through the implementation of the DEP-approved RAP, CHASP and CAMP. Specifically, all minimally contaminated soils would be disposed at an approved facility following a waste characterization study. Furthermore, the proposed project would be protected from potential soil vapor encroachment conditions through the incorporation of a minimum 20-mil thick soil vapor barrier into the building design. The soil vapor barrier would be installed beneath the building foundation and sidewalls.

In addition to the above, regulatory requirements pertaining to building materials containing ACM, LBP and PCBs would be addressed under prevailing regulations as part of standard demolition and redevelopment practices. Given these conditions, the With-Action condition would not result in any significant adverse impacts with respect to hazardous materials.

2.5.4 Conclusion

In order to reduce the potential for exposure to future site occupants, under the proposed action, minimally-contaminated soils and soil vapor that were identified in the comprehensive Phase II ESA would be remediated through the implementation of the DEP-approved RAP, CHASP and CAMP. Specifically, all minimally-contaminated soils would be disposed at an approved facility following a waste characterization study. Furthermore, any potential soil vapor encroachment conditions would be remediated through the incorporation of a minimum 20-mil thick soil vapor barrier into the building design. The soil vapor barrier would be installed beneath the building foundation and sidewalls.

In addition, regulatory requirements pertaining to building materials containing ACM, LBP and PCBs would be addressed under prevailing regulations as part of standard demolition and redevelopment practices. Given these conditions, the proposed actions would not result in any significant adverse impacts with respect to hazardous materials.

2.6 Transportation

2.6.1 Introduction

According to the *2014 CEQR Technical Manual*, the objective of a transportation analysis is to determine if a proposed project may result in significant adverse impacts on the transportation network within the area surrounding the proposed project, and to identify measures to mitigate any resulting impacts.

The extent to which transportation analyses are needed depends on the specific use or combination of uses and degree of development being proposed. As detailed in Section 1.0, "Project Description", the proposed project would include residential, local retail, and parking space. As indicated in the EAS checklist, the proposed project would exceed the minimum development density thresholds requiring transportation analysis set forth in Table 16-1 of the *CEQR Technical Manual*; therefore, further transportation analysis is required.

2.6.2 Methodology and Analytical Framework

According to 2014 *CEQR Technical Manual* procedures for transportation analysis, a two-step screening process is to be undertaken to determine whether a quantified analysis is necessary. The first step, the Level 1 (Trip Generation) screening, determines whether the number of peak hour person and vehicle trips generated by the proposed project would be below the thresholds for further study:

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

When these thresholds are exceeded, the 2014 *CEQR Technical Manual* recommends that detailed trip assignments (Level 2) be performed to estimate the incremental trips resulting from the proposed project and to identify potential locations for further analyses. If the trip assignments show that the proposed project would result in 50 or more peak hour vehicle trip ends at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

The proposed project would create up to 107 dwelling units, 12,994 gross square feet (gsf) of local retail space and up to 74 parking spaces, i.e., the "With-Action" condition. As detailed in Section 1.0, Project Description, absent the proposed project (the "No-Action" condition), the site would be redeveloped as-of-right with approximately 16,852 gsf of local retail space and 74 parking spaces.

Trip generation was calculated for both the No-Action condition and With-Action condition land uses to quantify the volume of person trips by travel mode (auto, taxi, bus and walk) in each scenario, as well as vehicle trips. The net person and vehicle trips generated by the proposed project would be the

difference in total trips generated by the uses under the With-Action condition as compared to the No-Action (subtracting the No-Action trip generation from the With-Action trip generation).

2.6.3 Level 1 Screening Assessment (Trip Generation)

Trip generation, modal split, and other travel demand assumptions were developed for each land use to determine the volume of trips that would be generated by the project during weekday peak hours (AM, midday and PM), as well as the Saturday midday peak hour. These estimates were based on data obtained from: the *2014 CEQR Technical Manual*; the US Census' 2009–2014 American Community Survey (ACS) Means of Transportation to Work data; the *Seward Park Mixed-Use Development FGEIS* [2013]; and reasonable planning assumptions. Travel demand factors used to calculate trips generated by each land use are summarized in Table 2.6-1 and described in detail below.

Residential

For residential use, weekday and Saturday trip generation rates of 8.075 and 9.6 daily person trips per 1,000 square feet, respectively, were obtained from the *2014 CEQR Technical Manual*. A temporal distribution of 10 percent during the weekday AM peak hour, 5 percent during the weekday midday peak hour, 11 percent during the weekday PM peak hour, and 8 percent during the Saturday midday peak hour, was also obtained from the *2014 CEQR Technical Manual*. A directional distribution of 15 percent "in" during the weekday AM peak hour, 50 percent "in" during the weekday midday peak hour, 70 percent "in" during the weekday PM peak hour, and 50 percent "in" during the Saturday midday peak hour was based on the *Seward Park Mixed-Use Development FGEIS*. A modal split of 18 percent by auto, 1 percent by taxi, 5 percent by bus, 70 percent by subway, and 6 percent by walk was based on 2009–2014 ACS data. A vehicle occupancy of 1.09 persons per vehicle was obtained from the 2009–2014 ACS data and a taxi occupancy of 1.4 passengers per taxi was obtained from the *Seward Park Mixed-Use Development FGEIS*.

For truck delivery trips, weekday and Saturday trip generation rates of 0.06 and 0.02 daily trips per 1,000 square feet, respectively, were based on the *2014 CEQR Technical Manual.* A temporal distribution of 12 percent during the weekday AM peak hour, 9 percent during the weekday midday peak hour, 2 percent during the weekday PM peak hour, and 9 percent during the Saturday midday peak hour were also based on the *2014 CEQR Technical Manual*.

Local Retail

For local retail, the weekday and Saturday daily person trip generation rates of 205 and 240 person trips per 1,000 square feet, respectively, were based on the *2014 CEQR Technical Manual*. The temporal distributions of 3 percent for the weekday AM peak hour, 19 percent for the weekday midday peak hour, 10 percent for the weekday PM peak hour, and 10 percent for the Saturday midday peak hour were also obtained from the *2014 CEQR Technical Manual*.

Table 2.6-1: Travel Demand Characteristics

Rates	Residential	Local Retail
Person Trip Generation Rate (Weekday)	8.075[1]	205[1]
	per DU	*per 1,000 sf*
Person Trip Generation Rate (Saturday)	*9.6*[1]	*240*[1]
	per DU	*per 1,000 sf*
Temporal Distribution		
Weekday AM Peak	10%[1]	3%[1]
Weekday Midday Peak	5%[1]	19%[1]
Weekday PM Peak	11%[1]	10%[1]
Saturday Midday Peak	8%[1]	10%[1]
Linked Trip Credit		
	0%	25%[3]
Modal Split		
Auto	18%[2]	2%[3]
Taxi	1%[2]	3%[3]
Bus	5%[2]	6%[3]
Subway	70%[2]	6%[3]
Walk	6%[2]	83%[3]
Vehicle Occupancy		
Auto	1.09[2]	1.65[3]
Taxi	1.40[3]	1.40[3]
Directional Split		
Weekday AM Peak	15%/85%[3]	50%/50%[3]
Weekday Midday Peak	50%/50%[3]	50%/50%[3]
Weekday PM Peak	70%/30%[3]	50%/50%[3]
Saturday Midday Peak	50%/50%[3]	50%/50%[3]
Truck Trip Generation (Weekday)	0.06[1]	0.35[1]
	per 1,000 sf	*per 1,000 sf*
Truck Trip Generation (Saturday)	0.02[1]	0.04[1]
	per 1,000 sf	*per 1,000 sf*
Truck Temporal Distribution		
Weekday AM Peak	12%[1]	8%[1]
Weekday Midday Peak	9%[1]	11%[1]
Weekday PM Peak	2%[1]	2%[1]
Saturday Midday Peak	9%[1]	11%[1]
Truck Trip Directional Split - 50% in/ 50% out[1]		

Sources:
[1] *2014 CEQR Technical Manual*
[2] 2009 – 2014 American Community Survey Means of Transportation to Work (Table B08006) for Brooklyn Census Tracts 500, 502.2 and 504
[3] *Seward Park Mixed-Use Development FGEIS* (2013)

A directional distribution of 50 percent "in" during all peak hours was applied, which is typically assumed in New York City EISs for local retail uses. A modal split of 2 percent by auto, 3 percent by taxi, 6 percent by bus, 6 percent by subway, and 83 percent by walk was based on the *Seward Park Mixed-Use Development FGEIS*. Vehicle occupancy rates of 1.65 persons per auto and 1.40 passengers by taxi during all peak hours were based on the *Seward Park Mixed-Use Development FGEIS*, as well as a 25 percent linked trip credit for all local retail trips.

For truck deliveries, weekday and Saturday daily trip generation rates of 0.35 and 0.04 trips per 1,000 square feet, respectively, were obtained from the *2014 CEQR Technical Manual*. A temporal distribution of 8 percent during the weekday AM peak hour, 11 percent during the weekday midday peak hour, 2 percent during the weekday PM peak hour, and 11 percent during the Saturday midday peak hour, as well as directional distribution assumptions (50 percent "in" during all peak hours) were obtained from the *CEQR Technical Manual*.

Since the local retail land use pertains to both the No-Action and With-Action conditions, the size differential between the two was used to determine the net local retail trip generation for the future With-Action condition.

Level 1 Screening Results

Transit and Pedestrians

Table 2.6-2 summarizes the net increment of person trips that would be generated during peak hours as a result of the proposed project. The table also shows the breakdown of the anticipated number of trips in the future condition which are associated with the No-Action condition, projected trips for the With-Action condition, and the net increase in trips between the With-Action and No-Action conditions.

Bus

As indicated in Table 2.6-2, the increase in hourly bus passenger trips would be 5 trips or less during any of the peak hours, which is below the Level 1 screening threshold of 200 hourly passenger trips, and no further bus analysis is needed.

Subway

The increases in hourly subway passenger trips would be 60 trips in the weekday AM peak hour, 22 trips in midday peak hour, 63 trips in the PM peak hour, and 54 trips in the Saturday midday peak hour. Thus, the projected subway increases during all peak hours would be below the Level 1 screening threshold of 200 hourly passenger trips, and no further subway analysis is needed.

Pedestrians

Additionally, the pedestrian trips (walk trips plus transit trips) would not exceed the 200 hourly pedestrian trip threshold during any the peak hours. Moreover, there would be a net reduction in walk trips during all peak hours, due to the smaller amount of local retail space (which typically generates a high rate of walk trips) developed in the No-Action condition as compared to the With-Action condition. Since the expected increases in pedestrian trips are below the Level 1 screening threshold of 200 pedestrian trips hour, no further pedestrian analysis is needed.

Table 2.6-2: Trip Generation Summary – Person Trips

No-Action Condition												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Mode	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	1	1	2	5	5	10	3	3	6	3	3	6
Taxi	1	1	2	7	7	14	4	4	8	5	5	10
Bus	2	2	4	15	15	30	8	8	16	9	9	18
Subway	2	2	4	15	15	30	8	8	16	9	9	18
Walk	32	32	64	204	204	408	108	108	216	126	126	252
TOTAL	38	38	76	246	246	492	131	131	262	152	152	304
With-Action Condition												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Mode	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	3	14	17	8	8	16	14	7	21	9	9	18
Taxi	1	2	3	6	6	12	4	3	7	4	4	8
Bus	3	6	9	12	12	24	9	7	16	9	9	18
Subway	11	53	64	26	26	52	53	26	79	36	36	72
Walk	26	29	55	159	159	318	87	85	172	99	99	198
TOTAL	44	104	148	211	211	422	167	128	295	157	157	314
Net Total (With-Action Condition minus No-Action Condition)												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Mode	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	13	15	3	3	6	11	4	15	6	6	12
Taxi	0	1	1	-1	-1	-2	0	-1	-1	-1	-1	-2
Bus	1	4	5	-3	-3	-6	1	-1	0	0	0	0
Subway	9	51	60	11	11	22	45	18	63	27	27	54
Walk	-6	-3	-9	-45	-45	-90	-21	-23	-44	-27	-27	-54
TOTAL	6	66	72	-35	-35	-70	36	-3	33	5	5	10

Traffic and Parking

As shown in Table 2.6-3, the net increase in vehicle trip ends ("ins" plus "outs") would not exceed the 50 peak hour trip threshold for vehicles during any of the peak hours. The number of hourly net vehicle trips generated by the proposed project would be 16 in the weekday AM peak hour, 2 in the weekday midday peak hour, 10 in weekday PM peak hour, and 12 in the Saturday midday peak hour. Since the volume of new vehicle trips that would be generated by the proposed project would not exceed the 50 vehicle trip threshold, no further analysis is required.

A detailed breakdown of person and vehicle trips by land use is provided in Appendix D.

Table 2.6-3: Trip Generation Summary – Vehicle Trips

No-Action Condition												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Type	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	0	0	0	3	3	6	2	2	4	2	2	4
Taxi	2	2	4	10	10	20	6	6	12	6	6	12
Truck	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	2	4	13	13	26	8	8	16	8	8	16
With-Action Condition												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Type	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	12	14	6	6	12	12	6	18	8	8	16
Taxi	3	3	6	8	8	16	4	4	8	6	6	12
Truck	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	5	15	20	14	14	28	16	10	26	14	14	28
Net Total (With-Action Condition minus No-Action Condition)												
	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
Type	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	12	14	3	3	6	10	4	14	6	6	12
Taxi	1	1	2	-2	-2	-4	-2	-2	-4	0	0	0
Truck	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3	13	16	1	1	2	8	2	10	6	6	12

2.6.4 Conclusion

The number of transit, pedestrian and vehicle trips generated under the With-Action condition as compared to the No-Action condition would not exceed CEQR Level 1 (trip generation) preliminary screening thresholds for transportation, and no further transit, pedestrian or traffic analysis is necessary. Therefore, there would be no potential for significant adverse transportation impacts as a result of the proposed actions.

2.7 Air Quality

2.7.1 Introduction

This section examines the potential for air quality impacts from the proposed actions. According to the *2014 CEQR Technical Manual*, air quality impacts can be characterized as either direct or indirect impacts. Direct impacts result from emissions generated by stationary sources, such as stack emissions from on-site fuel burned for boilers and heating, ventilation, and air conditioning (HVAC) systems. Indirect effects are caused by off-site emissions associated with a project, such as emissions from on-road motor vehicles ("mobile sources") traveling to and from a project site.

As detailed in Section 2.5, "Transportation" the number of incremental trips generated by the proposed actions would be lower than the *2014 CEQR Technical Manual* CO-based screening threshold of 170 vehicles per hour, as well as the $PM_{2.5}$-based screening threshold discussed in Chapter 17, Section 210 and 311 of the *CEQR Technical Manual*. Therefore, traffic from the proposed action would not result in a significant adverse impact on mobile source air quality and a quantified assessment of on-street mobile source emissions is not warranted. The With-Action condition would not introduce additional parking spaces as compared to the No-Action condition; therefore, no significant adverse impact would be anticipated associated with parking facilities and no analysis is warranted.

The following assessment is limited to the stationary sources analyses of the proposed project.

Pollutants of Concern

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

Carbon Monoxide

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

Particulate Matter

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

(alveoli) in the lungs. Particulates are associated with increased incidence of respiratory diseases, cardiopulmonary disease, and cancer.

Nitrogen Oxides

When combustion temperatures are extremely high, such as in engines, atmospheric nitrogen gas may combine with oxygen gas to form various oxides of nitrogen. Of these, nitric oxide (NO) and nitrogen dioxide (NO_2) are the most significant air pollutants. This group of pollutants is generally referred to as nitrogen oxides or NO_x. Nitric oxide is relatively harmless to humans but quickly converts to NO_2. Nitrogen dioxide has been found to be a lung irritant and can lead to respiratory illnesses. Nitrogen oxides, along with VOCs, are also precursors to ozone formation.

Sulfur Dioxide

Sulfur Dioxide (SO_2) emissions are the main components of the "oxides of sulfur," a group of highly reactive gases from fossil fuel combustion at power plants, other industrial facilities, industrial processes, and burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. High concentrations of SO_2 will lead to formation of other sulfur oxides. By reducing the SO_2 emissions, other forms of sulfur oxides are also expected to decrease. When oxides of sulfur react with other compounds in the atmosphere, small particles that can affect the lungs can be formed. This can lead to respiratory disease and aggravate existing heart disease.

Non-criteria Pollutants

In addition to the criteria pollutants discussed above, non-criteria pollutants may be of concern. Non-criteria pollutants are emitted by a wide range of man-made and naturally occurring sources. These pollutants are sometimes referred to as hazardous air pollutants (HAP) and when emitted from mobile sources, as Mobile Source Air Toxics (MSATs). Emissions of non-criteria pollutants from industrial sources are regulated by the United States Environmental Protection Agency (EPA).

Federal ambient air quality standards do not exist for non-criteria pollutants; however, the New York State Department of Environmental Conservation (NYSDEC) has issued standards for certain non-criteria compounds, including beryllium, gaseous fluorides, and hydrogen sulfide. NYSDEC has also developed guidance document DAR-1 (February 2014). DAR-1 contains a compilation of annual and short term (1-hour) guideline concentrations for these compounds. The NYSDEC guidance thresholds represent ambient levels that are considered safe for public exposure. EPA has also developed guidelines for assessing exposure to non-criteria pollutants. These exposure guidelines are used in health risk assessments to determine the potential effects to the public.

Impact Criteria

The predicted concentrations of pollutants of concern associated with a proposed project are compared with either the National Ambient Air Quality Standards (NAAQS) for criteria air pollutants or ambient guideline concentrations for non-criteria pollutants. In general, if a project would cause the standards for any pollutant to be exceeded, it would likely result in a significant adverse air quality impact. In

addition, for CO from mobile sources and for $PM_{2.5}$, the *de minimis* criteria are also used to determine significance of impacts.

National Ambient Air Quality Standards

The Clean Air Act (CAA) requires the USEPA to set standards on the pollutants that are considered harmful to public health and the environment. The NAAQS were implemented as a result of the CAA, amended in 1990 (see Table 2.7-1)[1]. The NAAQS applies to six principal ("criteria") pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter 10 (PM_{10}), particulate matter 2.5 ($PM_{2.5}$), sulfur dioxide (SO_2), and ozone.

Table 2.7-1: National and New York State Ambient Air Quality Standards

Pollutant	Averaging Time	Standard
Carbon Monoxide (CO)	1-Hour	35 ppm (40,000 µg/m^3)
	8-Hour	9 ppm (10,000 µg/m^3)
Nitrogen Dioxide (NO_2)	Annual	53 ppb (100 µg/m^3)
	1-Hour	100 ppb (188 µg/m^3)
Ozone	8-Hour	0.075 ppm
Particulate Matter (PM_{10})	24-Hour	150 µg/m^3
Particulate Matter ($PM_{2.5}$)	Annual	12.0 µg/m^3
	24-Hour	35.0 µg/m^3
Sulfur Dioxide (SO_2)	Annual	0.03 ppm (80 µg/m^3)
	24-Hour	0.14 ppm (365 µg/m^3)
	3-Hour	0.5 ppm (1,300 µg/m^3)
	1-Hour	75 ppb (196 µg/m^3)

Source: *2014 CEQR Technical Manual*

Non-criteria Pollutant Thresholds

Non-criteria, or toxic, air pollutants include a multitude of pollutants of ranging toxicity. No federal ambient air quality standards have been promulgated for toxic air pollutants. However, USEPA and NYSDEC have issued guidelines that establish acceptable ambient levels for these pollutants based on human exposure.

The NYSDEC DAR-1 guidance document presents guideline concentrations in micrograms per cubic meter (µg/m^3) for the one-hour and annual average time periods for various air toxic compounds. These values are provided in Table 2.7-2 for the compounds affecting receptors located at projected and potential development sites. The compounds listed are those emitted by existing sources of air toxics in the rezoning area.

[1] United States Environmental Protection Agency (October 2011). National Ambient Air Quality Standards. Retrieved from http://www.epa.gov/air/criteria.html.

Table 2.7-2: Industrial Source Analysis, Relevant NYSDEC Air Guideline Concentrations

Pollutant	CAS Number	SGC (µg/m³)	AGC (µg/m³)
Ethanol	00064-17-5	---	45,000
Isopropyl Alcohol	00067-63-0	98,000	7,000
Acetone	00067-64-1	180,000	30,000
1-Butanol	00071-36-3	---	1,500
Propane	00074-98-6	---	43,000
Isobutyl Alcohol	00078-83-1	---	360
Methyl Ethyl Ketone	00078-93-3	13,000	5,000
Butyl BenzylPhthalate	00085-68-7	---	0.42
Ethylbenzene	00100-41-4	---	1,000
Butane	00108-88-3	238,000	---
Toluene	00108-88-3	37,000	5,000
Ethylenglycolmonobutyl	00111-76-2	14,000	1,600
Butyl Carbitol	00112-34-5	370	200
Butyl Acetate	00123-86-4	95,000	17,000
Tetrachloroethylene	00127-18-4	300	4
Ethylacetate	00141-78-6	---	3,400
Carbon Monoxide	00630-08-0	14,000	---
Ethyl 3-Ethoxyproprioanate	00763-69-9	140	64
Xylene M,O&P Mix	01330-20-7	22,000	100
Sulfur Dioxide	07446-09-5	197	80
Oil Mist (Mineral)	08012-95-1	380	12
Mineral Spirits	08032-32-4	---	900
Stoddard Solvents	08052-41-3	---	900
liphatic Hydrocarbons	64742-89-8	---	3,200
Aromatic Petroleum Distillates	64742-94-5	---	100
Particulates[1]	NY075-02-5[2]	88	12
Liquid Mist NEC	NY105-00-0	380	12
Oxides of Nitrogen	NY210-00-0	188.1	100
Misc. VOC	NY990-00-0	98,000	7,000

Source: NYSDEC, DAR-1 AGC/SGC Tables.
Notes:
[1] Pollutant includes emissions from both Particulates (NY075-00-0) and Total Solid Particulate (NY079-00-0).
[2] Conservatively assumes all particulate emissions would be PM2.5.

In order to evaluate impacts of non-carcinogenic toxic air emissions, USEPA developed a methodology called the "Hazard Index Approach." The acute hazard index is based on short-term exposure, while the chronic non-carcinogenic hazard index is based on annual exposure limits. If the combined ratio of pollutant concentration divided by its respective short-term or annual exposure threshold for each of the toxic pollutants is found to be less than 1.0, no significant adverse air quality impacts are predicted to occur due to these pollutant releases.

In addition, USEPA has developed unit risk factors for carcinogenic pollutants. USEPA considers an overall incremental cancer risk from a proposed action of less than one-in-one million to be

insignificant. Using these factors, the potential cancer risk associated with each carcinogenic pollutant, as well as the total cancer risk of the releases of all of the carcinogenic toxic pollutants combined, can be estimated. If the total incremental cancer risk of all the carcinogenic toxic pollutants combined is less than one-in-one million, no significant adverse air quality impacts are predicted to occur due to these pollutant releases.

CO De Minimis Criteria

New York City has developed *de minimis* criteria to assess the significance of the increase in CO concentrations that would result from the impact of proposed projects or actions on mobile sources, as set forth in the *2014 CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant environmental impact. Significant increases of CO concentrations in New York City are defined as: (i) an increase of 0.5 ppm or more in the maximum eight-hour average CO concentration at a location where the predicted No-Action eight-hour concentration is equal to or between 8.0 and 9.0 ppm; or (ii) an increase of more than half the difference between baseline (i.e., No-Action) concentrations and the eight-hour standard, when No-Action concentrations are below 8.0 ppm.

$PM_{2.5}$ De Minimis Criteria

New York City uses *de minimis* criteria to determine the potential for significant adverse $PM_{2.5}$ impacts under CEQR. The *de minimis* criteria are as follows:

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete receptor location (elevated or ground level).

2.7.2 Methodology

Stationary Sources

According to the *2014 CEQR Technical Manual* guidelines, air quality analyses of stationary sources may be warranted if a project would (i) create new stationary sources of pollutants – such as emission stacks of industrial plants, hospitals, other large institutional uses, or even a building's boilers – that may affect surrounding uses; (ii) introduce certain new uses near existing or planned emissions stacks that may affect the use, or (iii) introduce structures near such stacks so that changes in the dispersion of emissions from the stacks may affect surrounding uses.

HVAC Systems Analysis

As described in Section 220 and Section 321 in Chapter 17 of the *2014 CEQR Technical Manual*, for single-building projects that would use fossil fuels (i.e., fuel oil or natural gas) for HVAC systems, a preliminary stationary source screening analysis is typically warranted to evaluate the potential for impacts on existing buildings from HVAC systems emissions for the proposed project. The *2014 CEQR Technical Manual* provides screening nomographs based on fuel type, stack height, minimum distance from the source to the nearest receptor buildings with similar or greater heights, and floor area of development resulting from the proposed project. There are three different curves representing three different stack heights (30 feet, 100 feet and 165 feet) on the figures, and the number closest to but not higher than the proposed stack height should be selected. Locate a point on the appropriate chart by plotting the size of the development against the distance to the nearest building of similar or greater height. If the plotted point is on or above the curve, there is the potential for a significant air quality impact from the project's boilers, and further analysis needs to be conducted using the USEPA's AERSCREEN and/or AERMOD model.

Industrial Source Analysis

As described in Section 220 and Section 321 in Chapter 17 of the *2014 CEQR Technical Manual*, an air quality assessment is required to evaluate the potential impacts of emissions from ventilation exhaust systems of manufacturing or processing facilities when a project would result in new sensitive uses (particularly schools, hospitals, parks, and residences) within a 400-foot radius. A screening analysis is usually performed based on Table 17-3 in Chapter 17 of *2014 CEQR Technical Manual*. The screen table provides the maximum 1-hour, 8-hour, 24-hour and annual average modeled values based on a generic emission rate of 1 gram per second of a pollutant from a 20-foot tall point source for the distances from 30 feet to 400 feet from the receptor of same height. Predicted impact from the industrial source of concern based on the screen table will be compared with the short-term guideline concentrations (SGCs) and annual guideline concentration (AGCs) recommended in NYSDEC's DAR-1 AGC/SGC Tables. If a proposed project fails the above screening analysis, further refined analysis using the USEPA's AERSCREEN and/or AERMOD model will be warranted to determine any potential for significant adverse impacts.

"Large" or "Major" Source Analysis

As described in Section 220 and Section 321 in Chapter 17 of the *2014 CEQR Technical Manual*, an air quality assessment is required to evaluate the potential impacts of emissions from a "large" or "major" emission source when a project would result in new uses within a 1000-foot radius. "Major" sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits. "Large" sources are identified as sources located at facilities that require a State Facility Permit. A detailed analysis is usually performed for such sources to determine any potential for significant adverse impact.

Odor Analysis

As described in Section 220 in Chapter 17 of the *2014 CEQR Technical Manual* and, an air quality assessment is required when a project would result in potentially significant odors or results in new

sensitive uses near an odor-producing facility. The project site is adjacent to an existing horse stable facility at 51 Caton Place (Block 5322, Lot 40) – Kensington Stables. Per the *CEQR Technical Manual* and consultation with New York City Department of City Planning (NYCDCP), an air quality analysis was performed to evaluate the potential odor impacts of emissions from horse manure at the existing Kensington Stables facility onto the sensitive receptors introduced by the proposed project.

Refined Dispersion Modeling

The primary pollutant of concern from the Kensington Stables facility is Ammonia (NH_3). A detailed odor analysis was performed using EPA's AERMOD dispersion model to predict the NH_3 levels at operable windows or air intakes on the proposed building. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources).

The AERMOD model calculates pollutant concentrations from one or more emission sources based on hourly meteorological data, and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. The analyses of potential impacts from exhaust stacks were made assuming stack tip downwash, urban dispersion and surface roughness length, and elimination of calms. AERMOD can be run with and without building downwash (the downwash option accounts for the effects on plume dispersion created by the structure the stack is located on, and other nearby structures). Per EPA's guidelines, the building downwash algorithms do not apply to volume or area sources.[2]

Emission Rate and Stack Parameters

Initial emission rates of NH_3 from the facility were estimated based on the number of horses housed by the facility. It was assumed that each horse produces an average of eight kilograms of NH_3 per year based on the odor analysis conducted in the *770 11th Avenue FEIS* (07DCP071M) for a similar horse stable facility.

The AERMOD model is capable of handling multiple source types, including point, area, line and volume source types, etc. Per EPA guidelines, the AERMOD point source algorithms are used to model emission releases from stacks and isolated vents, as well as other kinds of sources; the AERMOD area source algorithms are used to model low level or ground level releases with no plume rise (e.g., storage piles, slag dumps, and lagoons); the line source type is a simplified representation of an elongated area source and uses the same algorithms as used for the area source type for rectangular sources; while the AERMOD volume source algorithms are appropriate to model release from a variety of industrial sources, such as building roof monitors, multiple vents, and conveyor belts.[2] At the existing Kensington Stables facility, there are 14 exhaust vents on the building roof, which would be most appropriately modeled using AERMOD volume source algorithms.

Based on field observations as well as available aerial photos provided by Google and Bing, the 14 roof vents were distributed in the southern part of the roof (see Figure 2.7-1). To assess the cumulative impact from odors emissions from the 14 roof vents, the odor emissions were modeled as one volume source located in the center of roof vent area based on the assumption that the exhaust area of the volume source is equivalent to the combined surface area of 14 vents. The source parameters such as

[2] User's Guide for the AMS/EPA Regulatory Model – AERMOD. USPEA, December 2016.



Project Site

Kensington Stables

Project Area (Proposed Rezoning Area)

Roof Vents Area

Volume Source Analysis Location

57 Caton Place Rezoning
Brooklyn, New York

Odor Analysis - Volume Source Modeling

Figure 2.7-1

release height, initial lateral dimension (σ_y) and initial vertical dimension (σ_z) were estimated based on the facility layout and EPA's guidelines on volume source modeling in AERMOD. As stated above, the building downwash option doesn't apply to volume source, therefore, the analysis was performed without building downwash.

Meteorological Data

All analyses were conducted using the latest five consecutive years of meteorological data (2011-2015). Surface data were obtained from La Guardia Airport and upper air data were obtained from Brookhaven Station, New York. Data were processed using the current EPA AERMET version 16216 and the EPA procedure. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the five-year period.

Receptor Placement

Discrete receptors (i.e., locations where concentrations are calculated) were placed on each floor at spaced intervals along all building façades of the proposed building to represent potentially sensitive locations such as operable windows and intake vents.

Odor Impact Thresholds

A significant odor impact may occur if the maximum predicted NH_3 levels exceed the applicable thresholds. For NH_3, most of the guideline concentrations are established based potential health impacts. The Occupational Safety and Health Administration (OSHA) has established a permissible worker exposure limit of 50 ppm over an 8-hour period which is considered a strong odor. The American Conference of Governmental Industrial Hygienists (ACGIH) has established a short-term (15-minute) exposure limit of 35 ppm. The Agency of Toxic Substances & Disease Registry (ATSDR), an agency of the U.S. Department of Health and Human Services, states that a concentration of 5 ppm is considered the threshold of detection. The NYSDEC established a SGC (1-hour) threshold of 2400 $\mu g/m^3$ (3.4 ppm) and AGC threshold of 100 $\mu g/m^3$ (0.14 ppm).

Per consultation with New York City Department of City Planning (NYCDCP), for the purposes of this study, the predicted NH_3 levels were compared with the NYSDEC's SGC threshold of 2400 $\mu g/m^3$ and AGC threshold of 100 $\mu g/m^3$.

2.7.3 Assessment

Existing Conditions

The total concentrations experienced at receptors include background concentrations from existing surrounding emission sources. Background concentrations are ambient pollution levels associated with existing stationary, mobile, and other area emission sources. The NYSDEC maintains an air quality monitoring network and produces annual air quality reports that include monitoring data for CO, NO_x, PM_{10}, $PM_{2.5}$, and SO_2. To develop background levels, the latest available pollutant concentrations from

monitoring sites located closest to the project site were used. If the pollutant concentration from the nearest monitoring station is not available or the data is not for background concentrations determination (e.g., data collected from Tapered Element Oscillating Microbalance [TEOM] sampler), the next closest monitoring station would be selected and so forth. Table 2.7-3 summarizes the background concentrations used for each of the pollutants.

$PM_{2.5}$ impacts are assessed on an incremental basis and compared with the $PM_{2.5}$ *de minimis* criteria, without considering the annual background. Therefore, the annual $PM_{2.5}$ background is not presented in the table.

Table 2.7-3: Background Concentrations

Pollutant	Averaging Time	Monitoring Location	Background Concentration
Carbon Monoxide (CO)	1-Hour[1]	Queens College, Queens	1.9 ppm
	8-Hour[1]	Queens College, Queens	1.4 ppm
Nitrogen Dioxide (NO_2)	1-Hour[2]	Queens College, Queens	113.2 µg/m^3
	Annual[3]	Queens College, Queens	34.0 µg/m^3
Particulate Matter (PM_{10})	24-Hour[4]	Division Street, Manhattan	44 µg/m^3
Particulate Matter ($PM_{2.5}$)	24-Hour[5]	JHS 126, Brooklyn	23 µg/m^3
Sulfur Dioxide (SO_2)	1-Hour[6]	Queens College, Queens	29.1µg/m^3

Source: NYSDEC Ambient Air Quality Report, 2015, http://www.dec.ny.gov/chemical/29310.html

Notes:

[1] 1-hour CO and 8-hour CO background concentrations are based on the highest second max value from the latest five years of available monitoring data from NYSDEC (2011-2015)

[2] 1-hour NO_2 background concentration is based on three-year average (2013-2015) of the 98th percentile of daily maximum 1-hour concentrations from available monitoring data from NYSDEC.

[3] Annual NO_2 background concentration is based on the maximum annual average from the latest five years of available monitoring data from NYSDEC (2011-2015).

[4] 24-hour PM_{10} is based on the highest second max value from the latest three years of available monitoring data from NYSDEC (2013-2015).

[5] The 24-hour $PM_{2.5}$ background concentration is based on maximum 98th percentile concentration averaged over three years of data from NYSDEC (2013-2015).

[6] 1-hour SO_2 background concentration is based on maximum 99th percentile concentration averaged over the latest three years of available monitoring data from NYSDEC (2013-2015).

No-Action Condition

As described in Section 1.0, "Project Description," absent the proposed action (the No-Action condition), the existing three-story building on the project site would be demolished and the applicant would redevelop the project site for retail and parking use The No-Action condition would be an approximately 54,795-gross square foot (gsf), three-story commercial building with retail on the ground floor and two stories of accessory and public parking above containing 74 spaces. The building would be constructed to a height of 33 feet.

Future With-Action Condition

As described in Section 1.0, "Project Description," the proposed actions would facilitate the development of a 166,191-gross square foot (gsf) mixed-use residential and commercial building with two wings reaching nine stories each on a single, one-story base, with a below-grade accessory parking garage (the With-Action condition). The wing fronting on Caton Place would reach 95 feet tall (excluding mechanical bulkhead) after a 15-foot setback from the streetwall above the seventh floor. The wing fronting Ocean Parkway would also be 95 feet tall (excluding mechanical bulkhead) and

would set back 10 feet from the streetwall at a height of seven stories. Including mechanical bulkhead, the wings would reach a height of 118 feet (the mechanical bulkhead would reach 105 feet and the elevator bulkhead would reach 118 feet). Each wing would be approximately 60 feet deep and would be approximately 65.5 feet apart from each other at their nearest point of distance.

Stationary Sources

HVAC Screening Analysis

As described in the above methodology section, a screening analysis is typically conducted to evaluate the potential for impacts on existing buildings from emissions from heating and hot water systems for the proposed project. The *2014 CEQR Technical Manual* procedures provide nomographs for air quality stationary HVAC screening analysis based on fuel type, stack height, minimum distance from the source to the nearest receptor buildings with similar or greater heights, and floor area of development resulting from the proposed project.

The methodology determines the minimum required distance from the source to the nearest receptor of similar or greater height, beyond which the action would not have a significant adverse impact. The screening procedures utilize information regarding the type of fuel to be used, the maximum development size, and the heat and hot water systems exhaust stack height to evaluate whether a significant adverse impact may occur. Based on the maximum development size, if the distance from the development site to the nearest building of similar or greater height is less than the minimum required distance determined in the *CEQR Technical Manual*, there is the potential for significant air quality impacts, and a refined dispersion modeling analysis would be required using the USEPA's AERSCREEN and/or AERMOD model. Otherwise, if the source passes the screening analysis, and no further analysis is required.

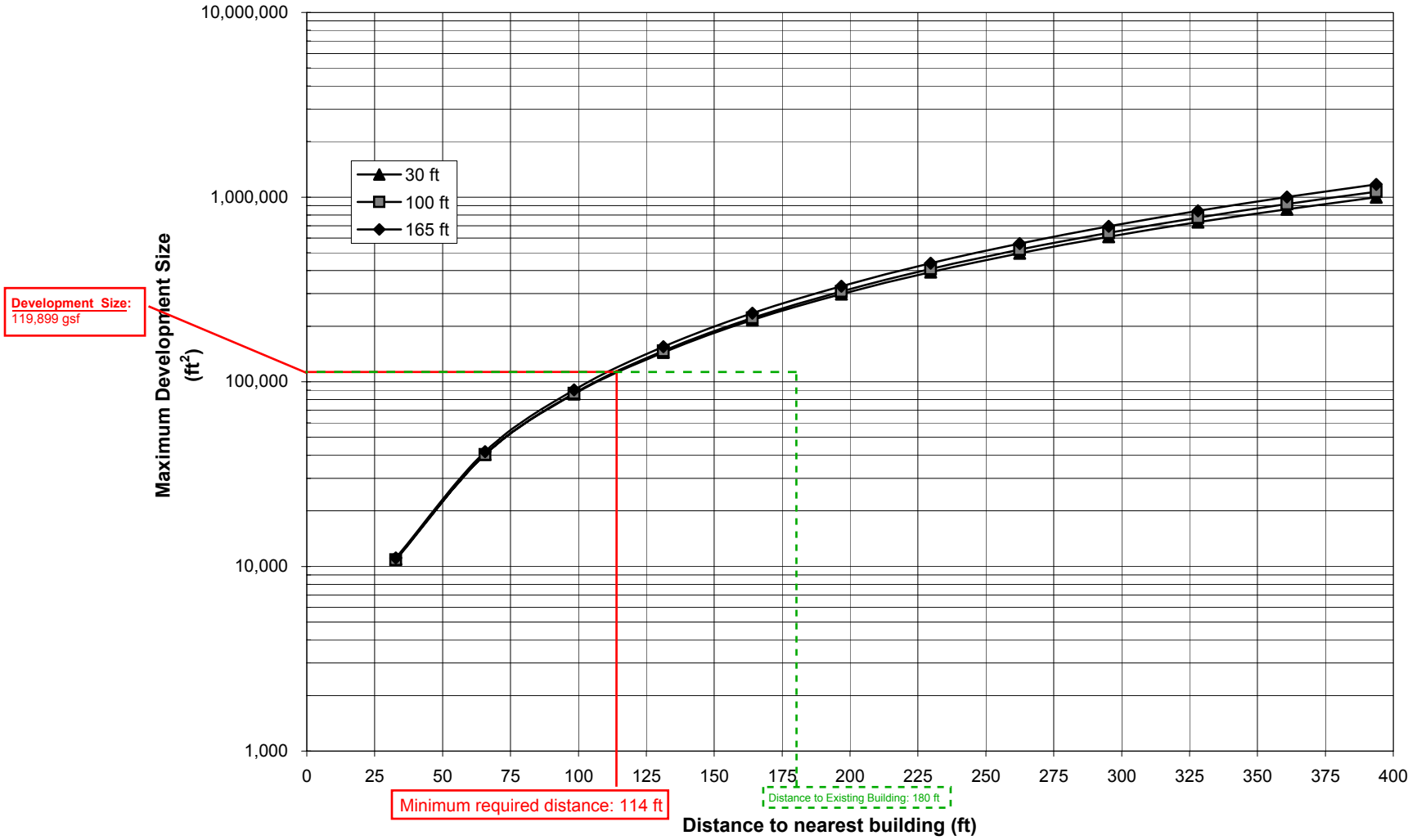
Project-on-Existing Screening

A screening analysis was performed to evaluate potential cumulative impacts from the proposed project's HVAC systems on existing buildings of similar or greater height (project-on-existing impact) within a 400-foot radius of the project site. As mentioned above, the With-Action condition would facilitate a mixed-use building with two wings of same height above the base structure. It is assumed that each wing would have a separate boiler installation with the exhaust stack located on the building roof (at a height of approximately 95 feet). The With-Action condition would have a development of approximately 166,191 gsf. The amount of space that would be cooled and heated would be approximately 119,899 gsf (including 106,905 gsf of residential and 12,994 gsf of commercial) and thus should be used for project-on-existing HVAC analysis purposes following the guidelines as discussed in the *CEQR Technical Manual* Air Quality Appendix.

The nearest existing building of similar or greater height to the proposed building is located across the street and to the east of the project site at 346 Coney Island Avenue (Block 5322, Lot 7501). This is an approximately 94-foot tall residential building located on a corner lot and is set back from the street line on Caton Place behind a parking lot, approximately 180 feet away from the project site.

As shown in Figure 2.7-2, based on the results of the HVAC screening nomograph for residential building assuming the use of No.2 fuel oil for the HVAC systems for conservative purposes (though the applicant intends to use a natural gas system for the proposed project), at this distance, there would

FIG App 17-5
SO_2 BOILER SCREEN
RESIDENTIAL DEVELOPMENT - FUEL OIL #2



be no air quality impacts anticipated from the proposed building's HVAC systems and no further analysis is warranted.

Project-on-Project Screening

As mentioned, for the With-Action condition, each wing would have a separate boiler installation with the exhaust stack located on the building roof. Therefore, an additional stationary HVAC analysis is warranted to determine the project-on-project effects of stationary source HVAC emissions (the northern wing impact on the southern wing and vice-versa). As described above, both building segments would be approximately 95 feet high. The northern and southern wings would be 65.5 feet apart at the nearest point. As mentioned above, the proposed building would include approximately 119,899 gsf of commercial and residential space that need to cooled or heated by the boiler stack, and this area would be generally split evenly between the two wings. Therefore, each wing would heat and cool approximately 59,950 gsf of space.

For the determination of project-on-project air quality impacts, a screening analysis was initially performed for No. 2 fuel oil. As shown in Figure 2.7-3, based on the results of the HVAC screening graphs for residential use, the distance between two wings is less than the minimum required distance, which means the HVAC emissions from the two wings' boiler stacks may have a potential air quality impact on each other using No.2 fuel oil. Therefore, a screening analysis was then performed by assuming natural gas for the HVAC systems. As shown in Figure 2.7-4, based on the results of the HVAC screening graphs for residential use, there would be no project-on-project stationary source air quality impacts anticipated from the proposed building's natural gas-fueled HVAC systems (the applicant intends to use natural gas for the proposed project). However, the potential for stationary source impacts would not screen out were the system to oil-fueled, in which case further analysis would be warranted. Therefore, some restrictions on boiler fuel type is necessary to avoid impacts.

To ensure that there are no significant adverse impacts from the proposed project's heat and hot water systems, a restriction would be required regarding fuel type and stack location. The text of the (E) designation (E-461) would be as follows:

> **"Block 5322, Lot 4: Any new residential and/or commercial development on the above reference properties must exclusively use natural gas as the type of fuel for heating, ventilating and air conditioning (HVAC) systems, and ensure that the northern wing HVAC stack is at least 129 feet away from the lot line facing Caton Place and the southern wing HVAC stack is at least 155 feet away from the lot line facing Ocean Parkway, to avoid any potential for significant air quality impacts."**

Industrial Source Analysis

To assess air quality impacts on the proposed project associated with air toxics emissions from industrial permits from nearby land uses, an investigation of existing land uses within a 400-foot radius of the project site was conducted. Initially, land use maps were reviewed to identify surrounding land uses potentially have DEP issued industrial permits - Commercial/Office Buildings, industrial/Manufacturing, Transportation/Utility, Public Facilities/Institutions, and Parking Facilities. Based on this search, Table 2.7-4 shows the list of all existing land uses with air toxics concerns (based on land use alone) within a 400-foot radius of the project site.

FIG App 17-5
SO_2 BOILER SCREEN
RESIDENTIAL DEVELOPMENT - FUEL OIL #2

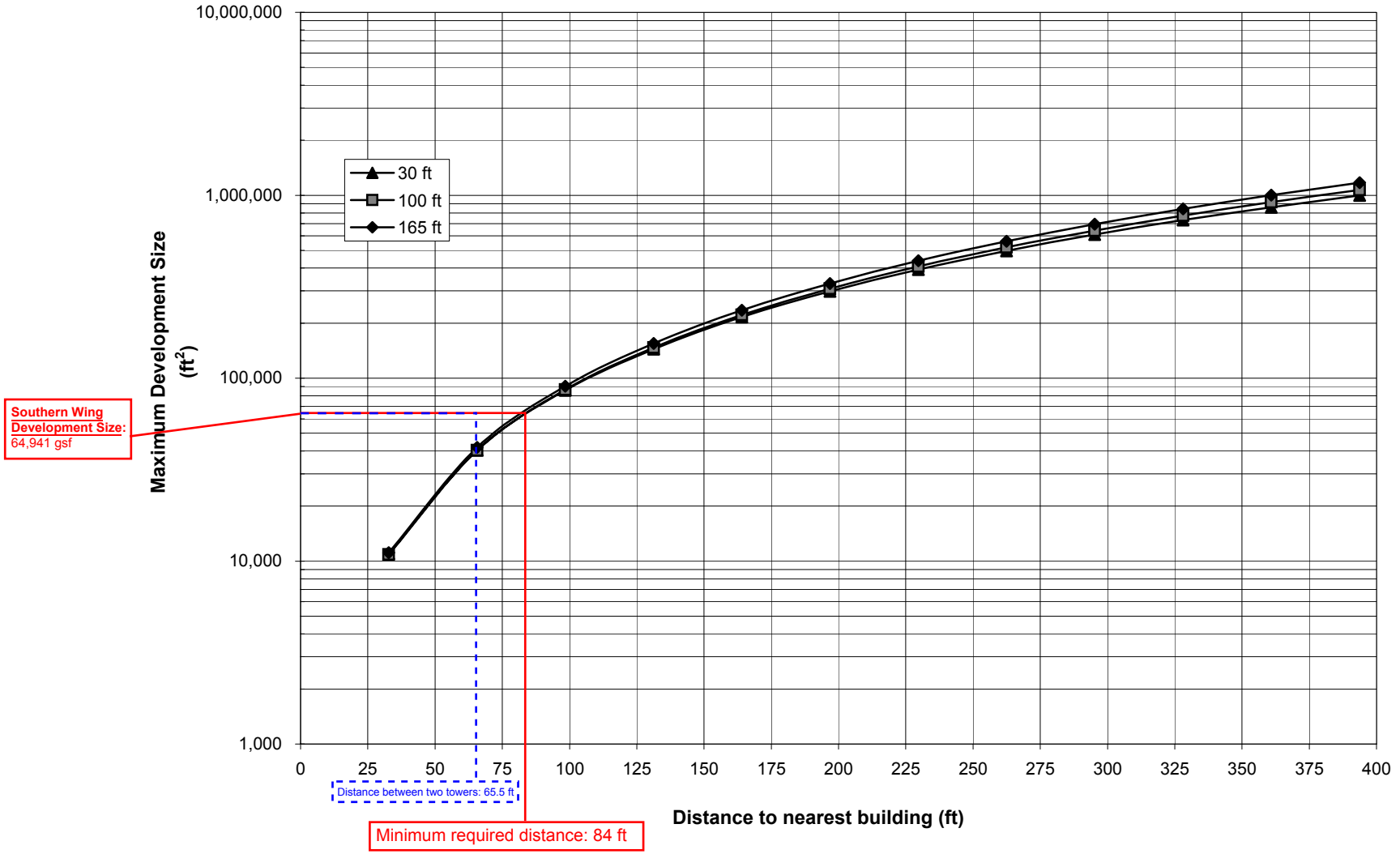


FIG App 17-7
NO_2 BOILER SCREEN
RESIDENTIAL DEVELOPMENT - NATURAL GAS

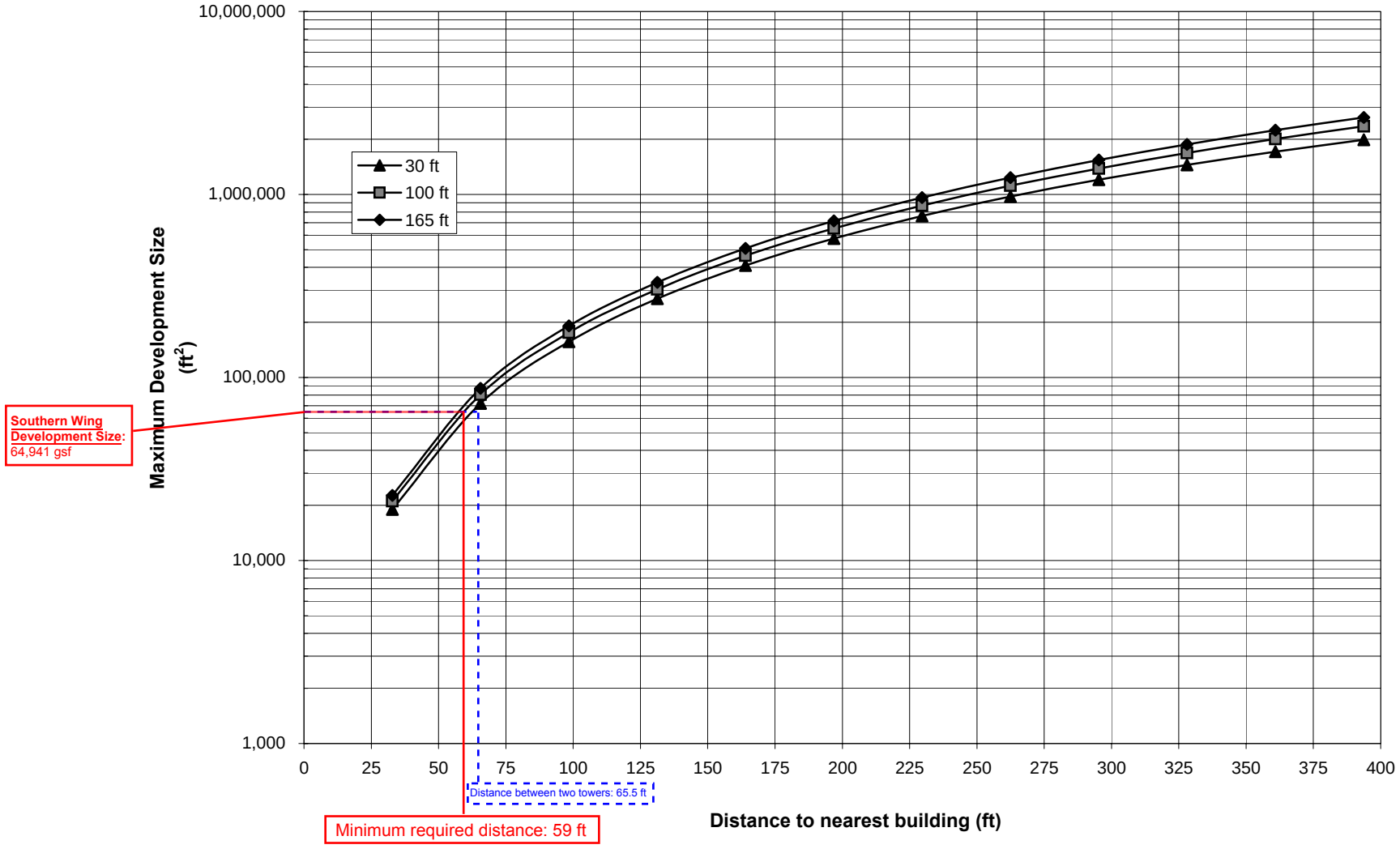


Table 2.7-4: Industrial Sources within 400 feet of the proposed project

Block	Lot	Address	Land Use	Owner Name	DEP CATS[1]
5322	10	1 Ocean Parkway	Public Facility/ Institutional	International Baptist	CA091370/ Cancelled Boiler Certification
5322	20	310 Coney Island Avenue	Public Facility/ Institutional	International Baptist	CA366987/ Expired Boiler Registration

Notes:
[1] NYCDEP's Clean Air Tracking System. https://a826-web01.nyc.gov/DEP.BoilerInformationExt/

To identify facilities listed above, a preliminary survey was conducted including online searches of NYCDEP's Clean Air Tracking System (DEP CATS). No active industrial permits associated with air toxics emissions were found for any of the sites listed above. One cancelled boiler permit and one expired boiler registration were identified. Both permits are associated with a religious institution building (church and school) adjacent to the project site. An air toxics analysis is not warranted for cancelled permits and the use they are associated with (church/school) is not a source of concern with regard to industrial air toxics. Therefore, no further air toxics emissions analysis is needed.

"Large" or "Major" Source Analysis

To assess the potential impacts of these "large" or "major" sources on the projected and potential development sites, a review of existing permitted facilities was conducted. Sources of information reviewed include the NYSDEC Title V and State Facility Permit websites and available aerial photos provided by Google and Bing.[3]

Review of available information indicated that no large or major sources were found within a 1,000-foot radius of the project site. Therefore, no impact associated with large or major emission sources would be anticipated and no analysis is needed.

Odor Analysis

A detailed odor analysis was performed to evaluate the potential odor impacts of emissions from horse manure at the existing Kensington Stables facility onto the sensitive receptors introduced by the proposed project using the methodology previously described.

The Kensington Stables facility generally houses 32 horses throughout the year, while it reaches the maximum number of 40 horses during peak season. Therefore, for conservative purposes, the short-term and annual NH_3 emissions were estimated based on the maximum number of 40 horses.

EPA's AERMOD dispersion model was used to predict the NH_3 levels at operable windows or air intakes on the proposed building. The modeled concentrations are summarized in Table 2.7-5. As shown in Table 2.7-5, the 1-hour and annual NH_3 concentrations are well below the NYSDEC's SGC threshold of 2,400 $\mu g/m^3$ and AGC threshold of 100 $\mu g/m^3$, respectively.

[3] NYSDEC Title V- http://www.dec.ny.gov/dardata/boss/afs/issued_atv.html;
State Permit- http://www.dec.ny.gov/dardata/boss/afs/issued_asf.html.

Table 2.7-5: Modeled NH_3 Concentrations (µg/m³) from Odor Analysis

Year	1-hour NH_3	SGC	Annual NH_3	AGC
2011	214	2,400	14	100
2012	202		12	
2013	228		13	
2014	198		12	
2015	224		14	

In additional to NH_3, minor Hydrogen Sulfide (H_2S) emissions are released from manure storage areas at the Kensington Stables facility. H_2S could unreasonably interface with the comfortable enjoyment of life and property. However, compared to NH_3, H_2S emissions are quite low. The facility implements regular waste cleaning such as replacement of bedding and removal of manure to reduce human exposures to odor emissions, and increases the frequency of cleaning in the summer when high temperature accelerates the dispersion of odors. Additionally, the facility has roof vent filters installed, which minimizes the potential for odor emissions to be released to the air. With these odor control measures, the emissions from the facility are minor and negligible. Therefore, pollutant emissions from the existing Kensington Stables facility would not result in a significant adverse odor impact on the new sensitive receptors introduced by the proposed project.

2.7.4 Conclusion

The number of incremental trips generated by the proposed actions would be lower than screening thresholds addressed in the *CEQR Technical Manual*, therefore, traffic from the proposed actions would not result in a significant adverse impact on mobile source air quality.

The analyses also demonstrated that there would be no potential significant adverse stationary source air quality impacts from the proposed project's HVAC systems. An (E) designation (E-461) would be applied to the development site as part of the proposed project to ensure the development would not result in any significant adverse air quality impacts from the proposed building's HVAC systems emissions.

Additionally, no industrial sources associated with air toxics emissions were identified in a 400-foot radius of the project site. No "large" or "major" sources were identified in a 1,000-foot radius of the project site. A detailed odor analysis indicated that pollutant emissions from the existing Kensington Stables facility would not result in a significant adverse odor impact on the new sensitive receptors introduced by the proposed project.

Therefore, there would be no adverse air quality impacts as a result of the proposed actions.

2.8 Noise

2.8.1 Introduction

The applicant is seeking the proposed actions to facilitate the development of a mixed-use residential and commercial building with a below-grade accessory parking garage. In the future with the proposed actions, the existing three-story building would be razed and the proposed project would be constructed which would have two wings on an shared base reaching nine stories (95 feet tall excluding bulkhead) each. Along Caton Place, the proposed building would be built to the street line and along Ocean Parkway the building would be set back 30 feet from the street line. The proposed building would contain a below-grade parking garage, retail space on the ground-level, up to 107 residential units, and outdoor residential amenity space in the interior courtyard area. Therefore, the proposed actions would introduce new noise-sensitive receptors. The purpose of the noise assessment under CEQR is to determine: (1) if new noise receptors that would be introduced by the proposed actions would be in an acceptable ambient sound level environment; and (2) if the proposed actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors adjacent to the proposed development including residential, commercial, and institutional land uses.

According to the *2014 CEQR Technical Manual* a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would be located in an area with high ambient noise levels. Mobile sources include vehicular traffic generated by the proposed action and stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment.

The following analysis includes background on metrics used to describe noise, the methodology and criteria used to assess potential impacts, results from a sound level monitoring program at the project site, an evaluation of the ambient sound levels that would exist at new receptor locations and an assessment of the potential for the proposed actions to significantly affect existing receptors due to the introduction of new mobile or stationary sources.

Noise Background

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

- Level - Sound level is based on the amplitude of sound pressure fluctuations and is often equated to perceived loudness.
- Frequency - Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz (Hz). Pure tones have energy concentrated in a narrow frequency range and can be more audible to humans than broadband sounds. Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB).

Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels results in a 3 dB increase in the overall level. Research indicates the following general relationships between sound level and human perception:

- A 3 dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
- A 10 dB increase is a tenfold increase in acoustic energy and is perceived as a doubling in loudness to the average person.

Audible sound is comprised of acoustic energy over a range of frequencies typically from 20 to 20,000 Hz. The human ear does not perceive sound levels at each frequency equally loud. To compensate for this phenomenon in perception, a frequency filter known as A-weighting (dBA) is used to evaluate environmental noise levels. Table 2.8-1 presents a list of common outdoor and indoor sound levels.

Table 2.8-1: Common Indoor and Outdoor Sound Levels

Outdoor Sound Levels	Sound Pressure μPa		Sound Level dB(A)	Indoor Sound Levels
	6,324,555	-	110	Rock Band at 5 m
Jet Over-Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area—Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
	20,000	-	60	
Quiet Urban Area—Daytime		-	55	Quiet Conversation at 1 m
	6,325	-	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		-	45	
	2,000	-	40	Empty Theater or Library
Quiet Suburb—Nighttime		-	35	
	632	-	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	
Reference Pressure Level	20	-	0	Threshold of Hearing

Source: Highway Noise Fundamentals, Federal Highway Administration, September 1980.
μPA MicroPascals describe pressure. The pressure level is what sound level monitors measure.
dB(A) A-weighted decibels describe pressure logarithmically with respect to 20 μPa (the reference pressure level).

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

- L_{10} is the sound level which is exceeded for 10 percent of the time during a given time period. Therefore, it represents the higher end of the range of sound levels. The unit is used in the *2014 CEQR Technical Manual* to evaluate acceptable thresholds for noise exposure for new receptors that would be introduced by a proposed action.
- L_{eq} is the energy-average A-weighted sound level. The L_{eq} is a single value that is equivalent in sound energy to the fluctuating levels over a period of time. Therefore, the L_{eq} takes into account how loud noise events are during the period, how long they last, and how many times they occur. L_{eq} is commonly used to describe environmental noise and relates well to human annoyance. In accordance with the *2014 CEQR Technical Manual*, the L_{eq} sound level is used to assess the potential for significant increases in noise due to a proposed action at existing receptors in the study area.

Assessment Methodology

The noise analysis considers two receptor types when evaluating noise for the proposed actions. Since the proposed action would introduce new retail and residential uses, these locations are considered to be "new receptors". Additionally, the analyses consider "existing receptors" which are the current buildings surrounding the proposed action with noise-sensitive use such as residences and the Calvary Cathedral of Praise and the International Baptist Church and Iglesia Bautista International Christian School. The following describes the results of the noise assessment for these two types of receptors.

2.8.2 Noise Assessment for New Receptors

- With-Action noise conditions at new sensitive receptors that would be introduced by the proposed action are evaluated according to absolute exterior level. The noise exposure guidelines for acceptable ambient conditions depend on the type of land use. The goal is to maintain interior noise levels of 45 dBA or lower at residential receptors and 50 dBA or lower at commercial, office and retail receptors. Noise measurements and simultaneous traffic counts are conducted to determine existing exterior sound levels. With-Action noise levels are determined based on the measured sound levels and potential changes to traffic volumes due to the proposed actions. As described in Section 2.6 "Transportation," the Level 1 screening indicated there would be fewer than 50 peak-hour vehicle trips generated by the proposed actions. Below this threshold, there would not be a significant change to the existing traffic conditions compared to the existing conditions. Therefore, the measured sound levels have been used to evaluate the acceptability of noise conditions at future receptors.
- The exterior sound levels are evaluated to determine if receptors would be in an acceptable ambient sound level environment. For example, exterior ambient sound levels exceeding 70 dBA L_{10} at residential receptors are considered to be Marginally Unacceptable and the need to provide window/wall sound attenuation that is sufficient to reduce interior sound levels to acceptable levels must be considered. The analyses present the results of the ambient sound

level monitoring program and the assessment of whether new receptors would be in a high ambient noise environment.

Noise Assessment for New Receptors

The *2014 CEQR Technical Manual* provides noise exposure guidelines for assessing ambient noise conditions at new residential and institutional receptors, as shown in Table 2.8-2.

Table 2.8-2: Noise Exposure Guidelines for Use in City Environmental Impact Review

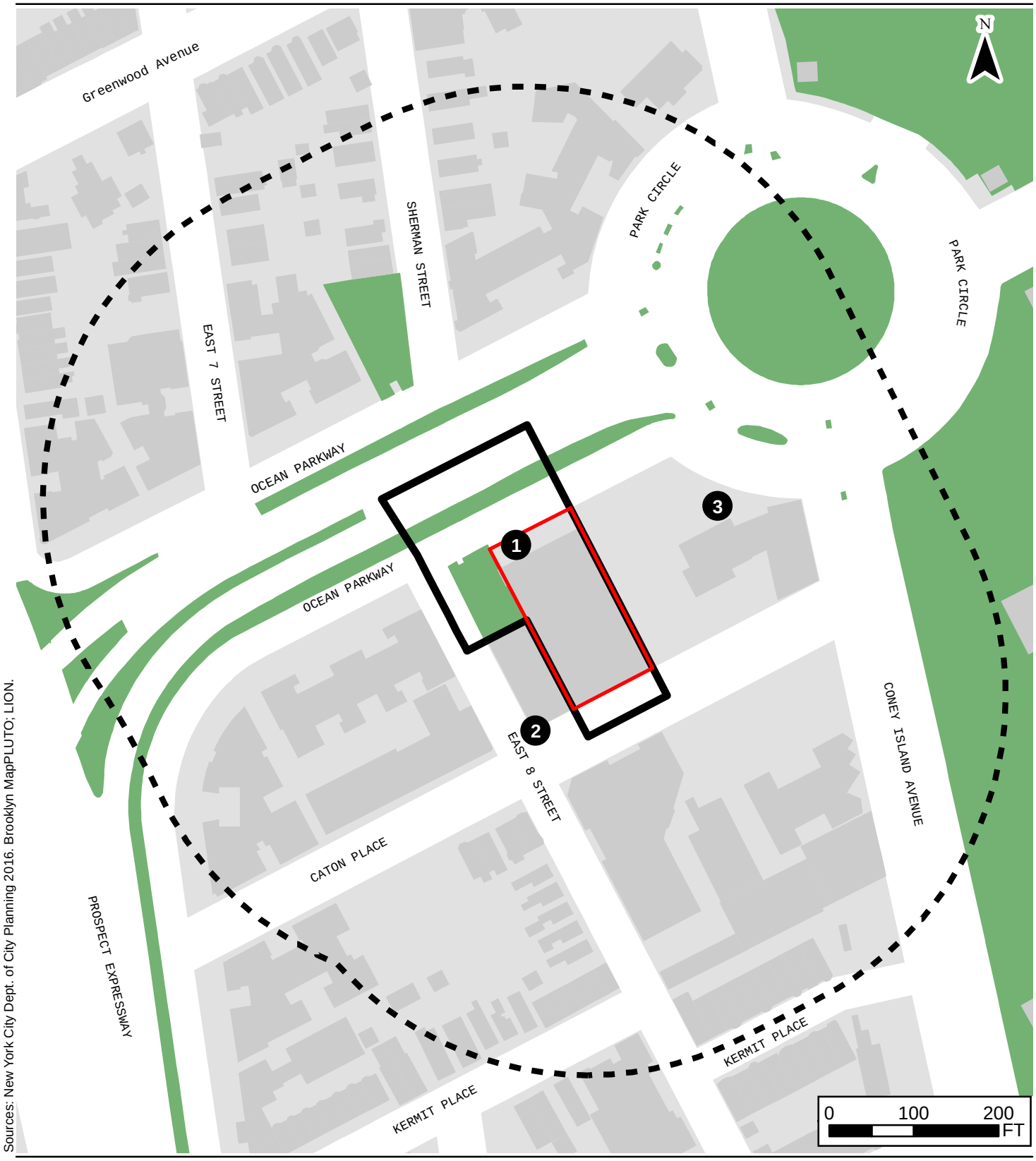
Receptor Type	Time Period	Acceptable External Exposure	Marginally Acceptable External Exposure	Marginally Unacceptable External Exposure	Clearly Unacceptable External Exposure
Residence, hotel, or motel	7 AM to 10 PM	$L_{10} \leq 65$ dB(A)	$65 \leq L_{10} \leq 70$ dB(A)	$70 \leq L_{10} \leq 80$ dB(A)	$L_{10} > 80$ dB(A)
	10 PM to 7 AM	$L_{10} \leq 55$ dB(A)	$55 \leq L_{10} \leq 70$ dB(A)	$70 \leq L_{10} \leq 80$ dB(A)	$L_{10} > 80$ dB(A)
Commercial or office	Same as Residential				

Source: Table 19-2, *2014 CEQR Technical Manual*.

Existing Sound Levels

A sound level monitoring program was conducted on October 7, 2016 to determine the existing sound levels near the project site. Noise monitors were set up on the sidewalk at East 8th Street and Caton Place, Ocean Parkway and Park Circle/Machate Circle as shown in Figure 2.8-1. The measurement at East 8th street and Caton Place is representative of the noise exposure on the southern and western façades of the proposed development. The measurement on Ocean Parkway is representative of the noise exposure on the northern façade and the measurement near Machete Circle is representative of the noise exposure on the eastern façade as well as upper floor receptors that would have a direct line of sight to the traffic roundabout. The noise monitors were placed at with a minimum of four feet between the microphone and nearby reflecting surfaces.

With vehicular noise dominating the overall noise environment, 20-minute sound level measurements were conducted during the morning peak period (8:00 – 9:00 AM), midday period (12:00 – 1:00 PM), and evening peak period (5:00 – 6:00 PM). Measurements were conducted using a Type I sound level meter at ground level and followed the procedures outlined in the *2014 CEQR Technical Manual* which include documenting significant sources of sound and conducting spot traffic counts by vehicle classification. The measurements represent exterior sound levels surrounding the project site and are typical of an urban area, where the predominant sources consist of vehicular traffic along the adjacent local roadways and typical urban area activities. Table 2.8-3 summarizes the measured sound level results.



Sources: New York City Dept. of City Planning 2016. Brooklyn MapPLUTO; LION.

Project Site

Project Area (Proposed Rezoning Area)

400-Foot Radius

1 Noise Monitoring Location (w/ I.D. Label)

57 Caton Place Rezoning
Brooklyn, New York

Noise Monitoring Locations

Figure 2.8-1

Table 2.8-3: Ambient Sound Levels Measured at Ground Level

Monitoring Location	Time Period	Duration	L_{eq}	L_{min}	L_{max}	L_1	L_{10}	L_{50}	L_{90}
Caton Place and East 8th Street	Morning	20 min	57.8	52.0	76.4	66.0	59.3	55.0	53.4
	Midday	20 min	60.6	52.5	78.1	71.1	63.8	55.6	53.5
	Evening	20 min	57.8	52.3	70.9	65.3	60.4	56.1	54.1
Park Circle/Machate Circle	Morning	20 min	61.7	54.0	75.9	70.4	64.4	59.8	56.5
	Midday	20 min	63.8	56.7	81.0	73.5	66.1	61.0	58.0
	Evening	20 min	66.5	52.6	86.1	78.7	67.6	59.4	56.2
Ocean Parkway	Morning	20 min	64.3	53.5	86.0	74.0	64.9	61.3	57.3
	Midday	20 min	60.9	50.3	75.1	71.6	62.9	59.0	53.9
	Evening	20 min	60.7	52.3	71.7	66.8	63.7	59.5	54.8

Source: Measurements conducted by VHB at ground-level on October 7, 2016.

Noise Assessment for New Receptors

The *2014 CEQR Technical Manual* provides noise exposure guidelines for assessing ambient sound levels, as shown in Table 2.8-2. Based on these noise exposure guidelines, noise impact has been assessed to determine the level of acceptability for new sensitive receptors on the applicable facades of the proposed building. Table 2.8-4 summarizes the L_{10} sound levels at each façade of the proposed building based on results of the sound level monitoring program. The table also indicates whether the existing sound levels are considered to be acceptable according to the *2014 CEQR Technical Manual*.

Table 2.8-4: Sound Level Acceptability

Project Façade	Time	L_{10} Sound Level	Impact
Caton Place and East 8th Street	Morning	59.3	Acceptable
	Midday	63.8	Acceptable
	Evening	60.4	Acceptable
Park Circle/Machate Circle	Morning	64.4	Acceptable
	Midday	66.1	Marginally Acceptable
	Evening	67.6	Marginally Acceptable
Ocean Parkway	Morning	64.9	Acceptable
	Midday	62.9	Acceptable
	Evening	63.7	Acceptable

According to the noise exposure guidelines in the *2014 CEQR Technical Manual*, existing L_{10} sound levels are considered Acceptable on the northern, western, and southern facades during all peak periods and on the eastern façade and residential outdoor area during the morning peak period because they are below 65 dBA. Existing L_{10} sound levels are considered Marginally Acceptable on the eastern facade and residential outdoor area during the midday and evening peak periods because they are between 65 and 70 dBA. Based on the finding of Acceptable and Marginally Acceptable sound levels at the proposed development interior sound levels are expected to be less than 45 dBA and there is no need to consider designing and specifying the building for specific outdoor-to-indoor sound attenuation.

2.8.3 Noise Assessment for Existing Receptors

The closest existing receptors to proposed development include an eight-story residential building on the northwest corner, two-family residences on the southwest corner, and the Cavalry Cathedral of Praise on the southeast corner of East 8th Street and Caton Place. West of the proposed development, there is a six-story residential building on the southwest corner of East 8th Street and Ocean Parkway and to the east is the International Baptist Church and Iglesia Bautista International Christian School. North of the proposed development are multi-story residential buildings on the opposite side of Ocean Parkway.

Noise impact at existing nearby sensitive receptors is assessed according to the relative increase between No-Action condition and With-Action condition sound levels. Noise impact is assessed according to the increase in the L_{eq} sound level in accordance with the *2014 CEQR Technical Manual*. If mobile or stationary sources of the proposed actions would increase L_{eq} sound levels by 3 dB or more and absolute levels would exceed 65 dBA L_{eq}, the proposed actions would cause a significant adverse impact prior to mitigation. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5 dB increase would be considered a significant adverse noise impact.

Mobile Sources

As described in Section 2.6 "Transportation," the Level 1 screening (trip generation) indicated there would be fewer than 50 peak-hour vehicle trips generated by the proposed actions. Since the With-Action condition would not generate sufficient vehicular traffic to exceed the threshold for a transportation analysis according to the *2014 CEQR Technical Manual*, the proposed actions would not result in a doubling of noise passenger car equivalents (PCEs), which would be necessary to cause a 3 dBA increase in noise levels. Therefore, the proposed actions would not cause a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted.

Stationary Sources

The proposed project is not anticipated to include any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment, truck loading docks, loudspeaker systems, stationary diesel engines, car washes, or other similar types of uses. Roof-top mechanical equipment would likely be housed inside the bulkhead. The design and specifications for the mechanical equipment, such as heating, ventilation, and air conditioning, are not known at this time. However, the the selection of equipment that would incorporate sufficient noise reduction devices would comply with applicable noise regulations and standards (including the standards contained in the revised New York City Noise Control Code), which would ensure that this equipment does not result in any significant increases in noise levels by itself or cumulatively with other project noise sources.

2.8.4 Conclusion

Ambient sound levels were monitored at three locations around the proposed development during morning, midday and afternoon peak periods. According to the noise exposure guidelines in the *2014 CEQR Technical Manual*, existing L_{10} sound levels are considered Acceptable or Marginally Acceptable at all facades and the residential outdoor area of the proposed development because they are below 70 dBA. Based on the finding of Acceptable and Marginally Acceptable sound levels at the proposed

development interior sound levels are expected to be less than 45 dBA and there is no need to consider designing and specifying the building for specific outdoor-to-indoor sound attenuation.

Based on the Level 1 transportation analysis, there would be less than 50 vehicle trips generated by the proposed actions which would not result in a doubling of PCEs, which would be necessary to cause a 3 dBA increase in noise levels and cause significant adverse impact to existing receptors. Therefore, there would be no potential for significant adverse mobile source noise impacts.

Using rooftop mechanical equipment that would incorporate sufficient noise reduction devices to comply with applicable noise regulations and standards, the proposed actions would not introduce stationary sources of noise that would have the potential to cause significant adverse noise impact to existing receptors.

2.9 Neighborhood Character

2.9.1 Introduction

This analysis of neighborhood character follows the guidelines set forth in the *2014 City Environmental Quality Review (CEQR) Technical Manual*. As defined within the manual, neighborhood character is an amalgam of various elements that give neighborhoods a distinct "personality," including land use, urban design and visual resources, historic resources, socioeconomic conditions, transportation, and noise. Not all of these elements affect neighborhood character in all cases; a neighborhood usually draws its distinctive character from a few defining elements. According to the *CEQR Technical Manual*, neighborhood character impacts are rare and occur under unusual circumstances.

As described in Section 1.0, "Project Description," the proposed project would result in the development of the project site with a 166,191-gsf mixed-use residential and commercial building that would have two towers reaching nine stories each on a single, one-story base. This section includes a preliminary assessment of neighborhood character; the assessment was prepared in conformance with the *CEQR Technical Manual* using information from the technical analyses presented in other relevant sections of this EAS.

2.9.2 Methodology

A neighborhood character assessment is generally needed, per the *CEQR Technical Manual*, when a proposed project is projected to generate significant adverse impacts to one or more of the contributing elements of neighborhood character. In the absence of an impact on any of the relevant technical areas, a combination of moderate effects to the neighborhood could result in an impact to neighborhood character. A significant impact identified in one of the technical areas that contribute to a neighborhood's character is not necessarily equivalent to a significant impact on neighborhood character. Therefore, an assessment of neighborhood character is generally appropriate if a proposed project has the potential to result in any significant adverse impacts in the technical areas listed above or on open space or shadows. Examples of possible changes in those technical areas that could result in an adverse effect on neighborhood character, should those technical areas be defining features of the neighborhood, are as follows:

- Land Use, Zoning, and Public Policy. If development resulting from a proposed action would conflict with surrounding uses, conflict with land use policy or other public plans for the area, or change land use character, neighborhood character could be affected.
- Socioeconomic Conditions. If a proposed action results in substantial direct or indirect displacement or addition of population, employment, or businesses; or substantial differences in population or employment density, neighborhood character could be affected.

- Open Space. If an action would result in a reduction or displacement of an open space or result in additional population that would place a substantial demand on open space, neighborhood character could be affected.
- Historic and Cultural Resources. If a proposed action would result in substantial direct changes to a historic resource or substantial changes to public views of a historic resource, neighborhood character could be affected.
- Urban Design and Visual Resources. If a proposed action would result in substantially different building block, form, size, scale, or arrangement; block form, street pattern or street hierarchy, streetscape elements, or substantial direct changes to a visual feature, such as unique and important public view corridors and vistas, or to public visual access to such a feature, neighborhood character could be affected.
- Shadows. If a proposed project would cast an incremental shadow on a sun-sensitive resources, neighborhood character could be affected.
- Transportation. When a proposed project would result in a change in traffic patterns or would substantially increase traffic volumes on residential streets, neighborhood character could be affected.
- Noise. When a proposed action would substantially increase noise levels in an area, neighborhood character could be affected.

As part of a neighborhood character analysis, the defining features of the neighborhood are identified and then a determination is made as to whether the project has the potential to adversely affect these defining features, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas. If the assessment concludes that a proposed project has the potential to adversely affect defining features of a neighborhood, a detailed analysis is undertaken to determine whether the project would result in a significant adverse impact on neighborhood character.

The neighborhood character analysis draws from the technical assessments listed above. As recommended in the *CEQR Technical Manual*, the study area for the neighborhood character analysis is consistent with the study areas in the relevant technical areas assessed under CEQR that contribute to the defining elements of the neighborhood. As such, the study area for neighborhood character is consistent with the 400-foot study area used for the analysis of land use, zoning, and public policy.

As detailed in the previous sections of this EAS, the proposed project would not result in significant adverse impacts in any of the above technical areas; therefore, this analysis evaluates the potential for the proposed project to affect neighborhood character through a combination of moderate effects. The analysis begins with an assessment of each of the technical areas, then identifies the defining features of the neighborhood and assesses whether the project would adversely affect those defining features.

2.9.3 Project Potential to Adversely Affect the Contributing Elements of Neighborhood Character

This section evaluates the potential for the project to result in an adverse impact on neighborhood character through a combination of moderate effects in the various technical areas.

- Land Use, Zoning, and Public Policy. As discussed in Section 2.1, "Land Use, Zoning, and Public Policy," the proposed project would be consistent with land uses, zoning, and public policy in the study area. The project would not conflict with surrounding uses, nor would it conflict with land use policy or other public plans for the area.

- Socioeconomic Conditions. The proposed project would not result in a substantial direct or indirect displacement or addition of population, employment, or businesses; or substantial differences in population or employment density.

- Open Space. The proposed project would not result in the reduction or displacement of open space, nor would it place a substantial demand on open space.

- Historic and Cultural Resources. As discussed in Sections 2.3, "Historic and Cultural Resources" and 2.4, "Urban Design and Visual Resources," the proposed project would not result in direct changes to a historic resource nor would it affect public views of a historic resource. While a small portion of the Prospect Park scenic landmark falls within the study area, the proposed project would not impact this historic resource with respect to shadows, urban design or visual resources. As demonstrated by the renderings of the With-Action condition (see Figures 2.4-4a – 2.4-4f in Section 2.4), the development would not result in any significant adverse impacts on views to and from this historic resource. Therefore, the proposed actions would not result in a significant adverse impact on historic and cultural resources.

- Urban Design and Visual Resources. As discussed in Section 2.4, "Urban Design and Visual Resources," the proposed project would be compatible with the residential character of the surrounding area, and would be consistent with the surrounding building form and streetscape. The proposed residential use would reinforce the existing development pattern found within the study area, such that the quality of the urban design and visual resources at the project site would improve. These improvements would also conform to the goals of the special districts governing urban design and visual character in the area.

  In addition, as demonstrated by the renderings of the With-Action condition (see Figures 2.4-4a – 2.4-4f in Section 2.4), the development would not result in any significant adverse impacts on views to and from the prominent features of the scenic resources within the study area. Therefore, the proposed actions would not result in a significant adverse impact on urban design and visual resources.

- Shadows. As discussed in Section 2.2, "Shadows," the proposed project would result in limited shadow increments on Machate Circle and the pedestrian overpass park during the December analysis day. The shadows would be limited in extent and duration, and no significant adverse shadows impacts would occur.

- Transportation. As discussed in Section 2.6, "Transportation," the proposed project would not result in a change in traffic patterns nor would it substantially increase traffic volumes on residential streets.

- Noise. As discussed in Section 2.8, "Noise," the proposed project would not substantially increase noise levels at the project site or in the study area.

Taken together, the proposed project would not result in a combination of moderate effects that would result in adverse effects to neighborhood character.

2.9.4 Project Potential to Affect the Defining Features of the Neighborhood

Identification of the Defining Features of the Neighborhood

The 400-foot study area contains several distinct areas that make up the overall neighborhood: Caton Place east of East 8th Street, Caton Place west of East 8th Street, and the Ocean Parkway, Coney Island Avenue, and Park Circle roadways.

Caton Place between East 8th Street and Coney Island Avenue, on which the south side of the project site faces, is defined by the mix of institutional uses on the north and south sides of Caton Place. On the south side, the four-story Cavalry Cathedral of Praise building, a largely featureless tan building, presents a blank street wall immediately across from the project site. Another large, tan brick mixed-use building—the Brooklyn College Academy Building— is located on the same block, fronting Coney Island Avenue. In addition to the institutional uses, Caton Place to Coney Island Avenue is dominated by the surface parking lots on either side of the street: on the south side, parking for the Cavalry Cathedral, and on the north side, parking for the International Baptist Church and International Christian School. Permit applications have been filed for an eight-story commercial self-storage facility in the location of the existing surface parking lot for the Cavalry Cathedral (72 Caton Place), across the street from the project site. The Kensington Stables just to the west of the project site are a distinct use on the block as well, drawing visitors from beyond the neighborhood to the area. Activity levels in the area are defined by the International Christian School and the stables.

The neighborhood along Caton Place west of East 8th Street has a different character and is generally more cohesive, with predominantly residential uses and a mix of building types, including older and more recently-constructed multi-family walkup buildings on the north side of Caton Place and several single-family buildings on the south side of the street. The two relatively new buildings (the Kestrel and 22 Caton Place), although more modern, were designed to complement the older adjacent brick multi-family buildings.

The remainder of the study area is defined by the area's roadways and park uses. The roadways include Ocean Parkway to the north of the project site, Park Circle to the northeast, and Coney Island Avenue to the east. The park uses include Machate Circle, which is part of the LPC-designated scenic landmark and SR/NR-listed Prospect Park, and the Prospect Park Parade Ground. To the north of Ocean Parkway are residential elevator buildings. While distinctive, these buildings feel distant from the project site. To the northeast, Machate Circle predominates along with the Park Circle roadway. To the east, Coney Island Avenue contributes to the predominance of roadways in the area.

When in Machate Circle, the character of the area is dominated by the grassy areas and trees within the circle and the movement of vehicular traffic around Park Circle. When at Prospect Park, the area is dominated by the park itself—its perimeter wall designed by the firm of McKim, Mead & White, the two Horse Tamers statues at the park entrance, and park activity (e.g., cyclists; strollers; joggers; groups gathered for picnics/barbeques and other activities).

Overall, the defining features of the neighborhood are:

- In the area immediately south and east of the project site (Caton Place east of 8th Street): large institutional uses and their surface parking areas

- To the west of the project site along Caton Place and south of Ocean Parkway: residential uses in a mix of building typologies.
- North of the project site: area roadways and Prospect Park in the far distance as well as Park Circle/Machate Circle.

Assessment

Overall, the proposed project would not adversely affect the defining features of the neighborhood.

On Caton Place east of 8th Street, the project would replace the existing 1939 three-story building, currently used as a warehouse with a 166,191-gsf mixed-use residential and commercial building, thereby extending the residential uses that predominate west of 8th Street to the east side of the street. The building form would be in keeping with the multi-family elevator buildings that are located on the block to the west of the project block and would conform to requirements that buildings be set back 30 feet from Ocean Parkway. On this portion of Caton Place, where the street's character is defined by the institutional uses and their surface parking areas, the addition of a mixed-use residential building with retail use would be expected to increase the level of activity; however, this change would be consistent with existing levels of activity in the area (associated with Kensington Stables and the International Christian School, for example), and would not be adverse.

The proposed project would not affect the residential uses in the area west of East 8th Street but would instead extend the residential uses to the area east of East 8th Street. The addition of retail uses at the project site would support the residential uses west of East 8th Street.

The proposed project would also not affect the defining features of the remainder of the study area – the roadways would continue in their current condition and traffic generated by the proposed project would be minimal, as discussed in Section 2.6 "Transportation". Park Circle/Machate Circle would continue to be a prominent feature in the area with Prospect Park beyond. As discussed in detail in Section 2.4, "Urban Design and Visual Resources," and depicted in Figures 2.4-4a – 2.4-4f, views from various Prospect Park locations and from Machate Circle would include the proposed project; however, while visible, the building would be part of the distant view, beyond the substantial trees and plantings within Machate Circle. Additionally, the portions of the building within view would be in keeping with the character and scale of the surrounding buildings along Ocean Parkway. As discussed above and in Section 2.4, the development would not result in any significant adverse impacts on views to and from the prominent features of the scenic resources within the study area. Therefore, the proposed actions would not result in a significant adverse impact on urban design and visual resources.

2.9.5 Conclusion

The proposed project would not result in significant adverse impacts in any of the technical areas that contribute to neighborhood character, nor would it adversely affect the defining features of the neighborhood. Therefore, no further assessment is warranted, and the proposed project would not result in significant adverse impacts on neighborhood character.

2.10 Construction

2.10.1 Introduction

Construction activities, although temporary in nature, can sometimes result in significant adverse environmental impacts. Consideration of several factors, including the location and setting of the project in relation to other uses, and the intensity and duration of the construction activities, may indicate that a project's construction activities warrant analysis.

The proposed project would result in the construction of a 166,191-gross square foot (gsf) mixed-use residential and commercial building at 57 Caton Place containing approximately 106,905 gsf of market rate and affordable residential space (up to 107 units), 12,994 gsf of ground floor retail, and up to 74 spaces of below-grade parking. The existing three-story building on the project site, which would be vacated prior to construction, would be demolished. The proposed building would have two wings reaching nine stories each on a single, one-story base.

Based on a construction schedule developed in conjunction with a construction manager, construction activity associated with the proposed project is anticipated to last a total of approximately 26 months Because the construction period would be longer than two years ("long-term" per the *CEQR Technical Manual*), a preliminary assessment of potential construction impacts was prepared in accordance with the guidelines of the 2014 *CEQR Technical Manual.* This assessment is presented below; as detailed in the assessment, construction of the proposed project would not result in any significant adverse impacts.

2.10.2 Construction Regulations and General Practices

Construction Oversight

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility, as follows.

- The New York City Department of Buildings (DOB) has primary oversight of construction. DOB oversees compliance with the New York City Building Code to ensure that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both workers and the general public during construction. Areas of oversight include installation and operation of equipment such as cranes and lifts, sidewalk sheds, safety netting, and scaffolding.
- The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code, reviews and approves any needed Remedial Action Plans (RAPs) and associated Construction Health and Safety Plans (CHASPs) as well as the removal of fuel tanks and abatement of hazardous materials. DEP also regulates water disposal into the sewer system and reviews and approves any rerouting of wastewater flow.

- The New York City Fire Department (FDNY) has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials.
- The New York City Department of Transportation Office of Construction Mitigation and Coordination (DOT OCMC) reviews and approves any traffic lane and sidewalk closures.
- New York City Transit (NYCT) is responsible for bus stop relocations and subsurface construction within 200 feet of a subway, if needed.
- The New York City Landmarks Preservation Commission approves studies and testing to prevent loss of archaeological resources and to prevent damage to architectural resources.
- The New York State Department of Environmental Conservation (NYSDEC) regulates disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. NYSDEC also regulates discharge of water into rivers and streams.
- The New York State Department of Labor (DOL) licenses asbestos workers.
- The New York State Department of Transportation (NYSDOT) reviews and approves any traffic lane closures on its roadways, should any be necessary.
- The U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, however, much of its responsibility is delegated to the state level.
- The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

Construction Hours

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate: (1) emergency conditions; (2) public safety; (3) construction projects by or on behalf of City agencies; (4) construction activities with minimal noise impacts; and (5) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. The DOB issues these work permits, and in some instances, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work typically ends at 4:00 PM, with some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours. Any extended workdays generally last until approximately 5:30 PM or 6:00 PM and do not include all construction workers on-site, but only those involved in the specific task requiring additional work time. For work outside of normal construction hours, work permits are obtained from DOB prior to such work commencing. The numbers of workers and pieces of equipment in operation for work outside normal hours is generally limited to those needed to complete the

particular authorized task. Overall, the level of activity for any work outside of normal construction hours is less than a normal workday.

Construction Practices

Access, Deliveries and Staging Areas

Access to construction sites is controlled. Work areas are fenced off, and limited access points for workers and construction-related trucks are provided. Typically, worker vehicles are not allowed into the construction area, and workers or trucks without a need to be on the site are not allowed entry. After work hours, the gates are closed and locked. Security guards may patrol the construction site after work hours and over weekends to prevent unauthorized access.

Material deliveries to the site are controlled and scheduled. To aid in adhering to the delivery schedules, as is normal for building construction in New York City, flaggers are employed at each of the construction site's access points. Flaggers are typically supplied by either the subcontractor on-site at the time or by the construction manager. The flaggers control trucks entering and exiting the project site so that they would not interfere with one another. In addition, they provide an additional traffic aid as trucks enter and exit the on-street traffic streams. Flaggers would be posted on both Ocean Parkway and Caton Place.

For the construction at the project site, trucks would deliver materials on both the Caton Place and Ocean Parkway frontages of the site. Construction activities would be staged within the project site and are also anticipated to occur on portions of the sidewalk and street on the Ocean Parkway and Caton Place frontages immediately adjacent to the site. These temporary closures are discussed in the following section "Lane and Walkway Closures."

Material deliveries to the site would be controlled and scheduled as discussed above.

Lane and Walkway Closures

Temporary curb-lane and sidewalk closures are typical for construction projects in New York City. To manage such closures, a Maintenance and Protection of Traffic (MPT) plan is developed consistent with DOT requirements. DOT OCMC reviews and approves MPT plans, and the implementation of the closures is also coordinated with DOT OCMC. In general, construction managers for major projects on adjacent sites also coordinate their activities to avoid delays and inefficiencies.

For construction on the site, there would be temporary closures of the sidewalk and curb lanes along Ocean Parkway and Caton Place immediately adjacent to the project site. The sidewalk closure would be limited to the superstructure phase of the project only; during other phases of construction, a full sidewalk shed, including masonry scaffolding, would be installed thereby allowing pedestrian passage past the site. During the period that the sidewalk is closed, signs informing pedestrians of the sidewalk closures would be posted at the four corners of the block on which the project site is located (i.e., at the intersections of Ocean Parkway and East 8th Street, Ocean Parkway and Park Circle, Caton Place and East 8th Street, and Caton Place and Coney Island Avenue). The curb lane closure would not affect any traffic lanes.

An MPT plan would be developed for review and approval by DOT OCMC for these temporary sidewalk and lane closures.

Public Safety

A variety of measures are employed to ensure public safety during construction at sites within New York City. Examples include the use of sidewalk bridges to provide overhead protection for pedestrians passing by the construction site and the employment of flaggers to control trucks entering and exiting the construction site, to provide guidance to pedestrians, and/or to alert or slow down the traffic. Other safety measures include following DOB requirements during the installation and operation of tower cranes to ensure safe operation of the equipment and the installation of safety nettings on the sides of the project as the superstructure advances upward to prevent debris from falling to the ground.

As noted above, flaggers would be posted at the site, and a full sidewalk shed would be installed during most phases of construction to ensure pedestrian safety. In addition, as at other New York City construction site, the 57 Caton Place project would follow all DOB safety requirements to ensure that construction of the project is conducted with care so as to minimize the disruption to the community.

Rodent Control

Construction projects in New York City typically include provisions for a rodent (i.e., mouse and rat) control program with provisions for this formalized in construction contracts for the development. Rodent control programs are typically carried out throughout construction, beginning with surveying and baiting appropriate areas prior to construction and providing for proper site sanitation and maintenance during construction. Signage would be posted, and coordination would be conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides would be permitted, and the contractor would be required to implement the rodent control program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

2.10.3 Construction Schedule and Activities

Construction Schedule

The anticipated construction schedule is presented in Table 2.10-1 and reflects a reasonable assumption for construction activities at the site. Construction would begin in 2019. It is assumed that full build out on the project site would be completed by the middle of 2021. Altogether, it is projected that construction activities would occur on the site over a period of 26 months.

Table 2.10-1 Anticipated Construction Schedule

	2019												2020												2021	
	Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1	
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F
Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Demolition																										
Excavation/Foundation																										
Superstructure																										
Exterior Closure																										
Interior Buildout																										
Site Work																										

Source: Hunter Roberts Construction Group, VHB

As shown in the schedule, construction would begin in early 2019 with the demolition of the existing on-site building. Excavation and foundation work would follow, also in early 2019, and continue through the third quarter of 2019 (approximately eight months). Superstructure work would follow beginning in the fourth quarter of 2019 for approximately five months. Overlapping with a portion of the superstructure work, the exterior closure of the building would begin at the start of 2020 and continue for approximately five months. Interior build-out would overlap with the exterior closure work, beginning toward the end of the first quarter and continuing through the first quarter of 2021. Final site work would be complete in the first quarter of 2021. The main stages of construction are discussed in more detail in the following section.

Construction Activities

Construction of the proposed project would be subject to the government regulations and oversight detailed above in Section 2.10.2 (Construction Regulations and General Practices) and would employ the general construction practices described above.

Demolition, Site Preparation, Excavation and Foundation

Construction at the project site would begin with a number of activities to prepare the site for construction work. Early activities would involve the installation of public safety measures, such as Jersey barriers and fencing and pedestrian overhead protection measures. The construction site would be fenced off, with solid fencing to minimize interference between the persons passing by the site and the construction work. Gates for workers and for trucks would be installed. A trailer for the construction engineers and managers would be hauled to the site and installed. Also, portable toilets, dumpsters for trash, and water and fuel tankers would be brought to the site and installed. Temporary utilities would be connected to the construction trailer. During the startup period, permanent utility connections may be made, especially if the construction manager has obtained early electric power for construction use, but utility connections may be made almost any time during the construction sequence. Interior access roads and turnarounds would be established.

Following the initial site preparation activities, the existing three-story warehouse building on the project site would be demolished and removed. Materials would be hauled off-site and transported to appropriate receiving facilities.

As part of the proposed project, excavators would be used for the task of digging the building's foundation. Any excavated soil to be removed from the project site would be loaded onto dump trucks for transport to a licensed disposal facility or for reuse elsewhere on the project site or on another construction site that needs fill.

This stage of construction would also include the construction of the proposed project's foundation and below-grade elements. Columns and concrete walls would be built to the grade level. Concrete trucks would be used to pour the foundation and the below-grade structures. Excavation and foundation activities would also involve the use of hydraulic drills, cranes, dewatering pumps, generators, and compressors.

To reduce the potential for public exposure to contaminants during excavation activities, construction activities would be performed in accordance with all applicable regulatory requirements as discussed in 2.5, "Hazardous Materials."

The project site's excavated areas could be subject to accumulated groundwater as well as collected rain and snow until the slab-on-grade is built. This accumulated water would need to be removed, and would be pretreated prior to discharge, if necessary. The decanted water would then be discharged into the City sewer system in accordance with DEP regulations, which specify maximum concentrations of pollutants. DEP can also impose project-specific limits, depending on the location of the project and contamination that has been found in nearby areas. Any groundwater discharged into the City's sewer system would meet the applicable limits.

For the 57 Caton Place project, demolition is expected to occur over approximately 1 month in the first quarter of 2019. Excavation and foundation work would continue over approximately 8 months beginning in the first quarter of 2019 and ending in the third quarter of the same year.

Core and Shell (Superstructure)

Construction of the core and shell involves construction of the building's framework, core, and exterior. The superstructure is the building's framework (beams and columns) and floor decks. Construction of the core, or interior structure, includes construction of the building's elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; and restroom areas. Construction of the exterior involves the installation of the façade (exterior walls, windows, and cladding and the roof).

Equipment during this phase typically includes air compressors, delivery and concrete trucks, concrete pumps, concrete trowels, welding equipment, and a variety of handheld tools. Temporary construction elevators (hoists) would also be constructed for the delivery of materials and vertical movement of workers when necessary. Superstructure activities would also require the use of mobile cranes, welders, impact wrenches, and a variety of trucks. In addition, temporary construction elevators (hoists) would be used for the delivery of materials and vertical movement of workers during superstructure activities.

For construction of the With-Action condition, superstructure work is anticipated to occur over approximately five months starting in the fourth quarter of 2019. The exterior closure work would overlap with the superstructure work and is expected to be complete in the first quarter of 2020. As noted above, during the superstructure work, the sidewalks immediately adjacent to the project site would be closed.

Interior Fit-out and Site Work (MEP, Core Finishes, Fit Out, Open Space)

Interior fit-out activities include the construction of interior partitions, installation of lighting fixtures and interior finishes (i.e., flooring, painting, etc.); mechanical and electrical work, such as the installation of elevators; and lobby finishes. In addition, final cleanup and touchup of the proposed buildings and final building systems (i.e., electrical system, fire alarm, plumbing, etc.) testing and inspections are part of this stage of construction.

Equipment used during interior construction typically includes exterior hoists, compressors, delivery trucks, and a variety of small hand-held tools. This stage of construction is typically the quietest and does not generate fugitive dust since this work occurs within the buildings with the façades substantially complete.

This stage of construction would also include the final finishing of the building and grounds, including landscaping activities. This is also when the construction protection measures (fencing, sidewalk enclosures, bridges, temporary sidewalks, remaining scaffolding, etc.) around the construction site would be removed. This stage of construction would also include punch list completion activities, which are typically small tasks that were not completely finished and project commissioning to ensure compliance with contract requirements.

For the project, this work would begin on second floor of the building and the lower floors of the two wings as exterior closure for each wing is being completed; the work would begin in the first quarter of 2020 and would continue through the end of the construction period in the first quarter of 2021. Overall, this phase of construction would occur over approximately 12 months.

2.10.4 Assessment of Project Construction

In accordance with the guidelines of the *CEQR Technical Manual*, this preliminary assessment evaluates the effects associated with the proposed action's construction related activities—including transportation, air quality, and noise—on sensitive receptors located near the area of construction. Hazardous materials are discussed in 2.5, "Hazardous Materials."

As discussed in 2.1, "Land Use, Zoning, and Public Policy," the area immediately surrounding the project site contains the Kensington Stables, a horse stable for equestrian activities located immediately west of the project site, the International Baptist Church and associated International Christian School located to the east of the project site, and a City-owned lot that contains several park benches and the off-ramp/landing of the Ocean Parkway pedestrian overpass. The nearest residential uses are located to the southwest of the project site, across Caton Place and East 8th Street.

No historic architectural resources are located in the area surrounding the project site, and the project site does not contain archaeological resources; therefore, construction would not have the potential to affect historic and cultural resources.

Transportation

Traffic

Construction of the project would generate trips from construction workers traveling to and from the site as well as from the delivery of materials and equipment, and the removal of debris. The number of trips generated during construction was based on the construction sequencing discussed above; projections of worker and delivery trucks are shown in Table 2.10-2. Construction activities would occur between 2019 and 2021.

As shown in the Table 2.10-2, it is projected that the highest number of construction trips would be generated during the fourth quarter of 2020. During this period, construction activities would generate on average 95 workers a day and 9 trucks a day. Based on the survey data for construction workers in Brooklyn from the 2006 *Atlantic Yards Arena and Redevelopment Project FEIS* (and as cited in the *East New York Rezoning Proposal FEIS* [2016]*)*, it is anticipated that approximately 55.8 percent of construction workers would drive to and from the project site. The average vehicle occupancy is 1.89 workers per vehicle. For the peak construction period, the average number of autos would be 28 per day. The total number of vehicles generated would be approximately 37 vehicles per day (46 passenger car equivalents [PCEs] per day[1]).

Table 2.10-2: Average Number of Daily Construction Vehicle (Trucks and Worker Autos) by Quarter

	2019				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Workers	14	19	27	48	64	92	73	95	38
Autos	4	6	8	14	19	27	22	28	11
Trucks	7	7	7	6	7	9	9	9	2
Vehicles	11	13	15	20	26	36	31	37	13
PCEs	18	20	22	26	33	45	40	46	15

Source: Hunter Roberts Construction Group, VHB

Construction activities would be expected to occur for a construction shift of 7 AM to 3:30 PM. For construction workers, typical arrival patterns show that most arrivals (approximately 80 percent) occur during the hour of 6 to 7 AM (the hour before the beginning of a regular day shift), and the same percentage of departure trips occurs during the hour of 3:30 PM to 4:30 PM (at the end of the shift). For trucks, deliveries are usually spread throughout the day but the peak activity (approximately 25 percent) would occur during the 6 to 7 AM hour. Construction activities are expected to generate 23 auto trips, and 4 truck trips during the 6 AM to 7 AM peak hour, and 23 auto trips and no truck trips during the 3 PM to 4 PM peak hour. Table 2.10-3 shows the hourly construction vehicle trip projections.

[1] Per the *2014 CEQR Technical Manual*, the peak quarter for construction traffic is assessed based on PCEs and it is assumed that one truck is equivalent to two passenger cars.

Table 2.10-3: Projected Construction Vehicle Trips

Time	Auto Trips		Truck Trips		Total	
	In	Out	In	Out	In	Out
6 AM to 7 AM	23	0	2	2	25	2
7 AM to 8 AM	5	0	1	1	6	1
8 AM to 9 AM	0	0	1	1	1	1
9 AM to 10 AM	0	0	1	1	1	1
10 AM to 11 AM	0	0	1	1	1	1
11 AM to Noon	0	0	1	1	1	1
Noon to 1 PM	0	0	1	1	1	1
1 PM to 2 PM	0	0	1	1	1	1
2 PM to 3 PM	0	1	0	0	0	1
3 PM to 4 PM	0	23	0	0	0	23
4 PM to 5 PM	0	4	0	0	0	4
5 PM to 6 PM	0	0	0	0	0	0
6 PM to 7 PM	0	0	0	0	0	0

The number of vehicle trips expected to be generated during the peak construction period would below 50 total vehicle trips during all hours of the construction work day. Additionally, peak construction-related vehicle activity would occur during the 6-7 AM and 3-4 PM hours which do not coincide with typical peak hours for background traffic. Therefore, it is unlikely that there would be the potential for significant adverse construction-related traffic impacts, and no further construction traffic analysis in needed.

Parking

As shown in Table 18-3, the projected number of construction auto trips during the peak construction period would be approximately 27 vehicles per day. This is a relatively minor parking demand and construction worker autos would be expected to park at available on-street and off-street parking facilities within the vicinity of the project site.

Transit and Pedestrians

Based on the construction worker data from *Atlantic Yards Arena and Redevelopment Project FEIS*, it is anticipated that approximately 44.2 percent of construction workers would commute to the project site by transit modes (i.e. bus and subway). It is expected that the vast majority of workers (80 percent) would arrive between 6 AM and 7 AM, and depart between 3:30 PM and 4:30 PM. Construction activities would be expected to generate 34 transit trips during the peak hours. The total number of pedestrian trips and transit tips generated would be below the *CEQR Technical Manual* threshold of 200 transit trips and 200 pedestrian trips, construction activities are not expected to result in transit or pedestrian impacts.

Air Quality

Construction impacts on air quality may occur because of particulate matter (fugitive dust) created by demolition, excavation, earth moving operations, etc., and increased truck traffic to and from the construction site on local roadways or because of temporary road closings.

For stationary source emissions, the most intense construction activities in terms of air pollutant emissions are typically the demolition, excavation, and foundation stages since it is during these stages

that the largest number of large non-road diesel engines would be employed, resulting in the highest levels of air emissions. The other stages of construction, including superstructure, exterior façades, interior finishes and site work, typically result in much lower air emissions since they require fewer pieces of heavy duty diesel equipment. Equipment used in the latter stages of construction generally have small engines and are dispersed vertically throughout the building, resulting in very low concentration increments in adjacent areas. Additionally, the latter stages of construction do not involve soil disturbance activities and therefore would result in significantly lower dust emissions. Interior finishes activities are better shielded from nearby sensitive receptors by the proposed structures themselves.

For the proposed project, the overall construction period would be longer than two years; however, the most intense construction activities in terms of air pollutant emissions is anticipated to occur for less than two years (approximately 8 months). Therefore, it is not anticipated that project construction would result in any significant adverse air quality impacts to nearby sensitive receptors. Furthermore, the project would adhere to the applicable laws, regulations, and building codes in place that focus on clean fuel, dust suppression measures, and idling restrictions for on-road vehicles.

Mobile source emissions typically result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near the construction site. As described above in the Transportation section, the total vehicular and PCE trip generation from construction would be lower than the *2014 CEQR Technical Manual* CO-based analysis screening threshold of 170 vehicles per hour, as well as the $PM_{2.5}$-based screening threshold (discussed in Chapter 17, Section 210 and 311 of the *CEQR Technical Manual)*. Additionally, no traffic lane closures are anticipated as a result of construction activities. Therefore, a more detailed assessment of construction-related mobile source air quality analysis is not warranted, and it is not anticipated that the project construction would result in any significant adverse mobile source air quality impacts.

Noise

Construction activities have the potential to affect the noise conditions of existing receptors near the proposed development and new receptors that would be introduced during the phased development. Construction noise can vary widely depending on the phase of construction (e.g., demolition, land clearing and excavations, foundation, steel and concrete erection, mechanical and interior fit out) and the specific task equipment and methods being used. The most significant construction noise sources at a construction site are generally the movement of trucks to and from a project site, back-up alarms and equipment such as excavators, hoe rams, drill rigs, pile driving rigs, and cranes. The noisiest phase of construction is typically during excavation and foundation work.

Noise from construction activities and some construction equipment is regulated by the New York City Noise Control Code and by the EPA. The New York City Noise Control Code limits construction activities to weekdays between the hours of 7:00 AM and 6:00 PM, requires that a Construction Noise Mitigation Plan be implemented, and sets noise limits for specific pieces of construction equipment. Noise control measures would be described in the Construction Noise Mitigation Plan and could include a variety of source and path controls.

The following controls to reduce noise at the source would be implemented to the extent feasible, practical and safe as required by the New York City Noise Code:

- The responsible party would self-certify that all construction tools and equipment have been maintained to not generate excessive or unnecessary noise and that the noise emissions would not exceed the levels specified in the Federal Highway Administration's Roadway Construction Noise Model User's Guide, January, 2006.
- All construction equipment would be equipped with necessary noise reduction equipment including mufflers. All equipment with internal combustion engines would be operated with the doors closed including noise-insulating materials and at the lowest engine speed allowable.
- Where feasible, practical and safe, the use of back-up alarms would be minimized and/or quieter back-up alarms would be installed in accordance with OSHA standards.
- Vehicles would not be allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163.
- The contractor shall utilize a training program to inform workers on methods that can minimize construction noise.
- For impact equipment such as pile drivers and jackhammers, the quietest equipment shall be selected taking into consideration the structural and geotechnical conditions.
- The use of hoe rams shall include the use of acoustic shrouds or acoustic curtains to minimize noise.

The following path noise controls would be implemented to the extent feasible, practical and safe as required by the New York City Noise Code:

- When the DOB regulations require a perimeter barrier or "construction fence" and the site is within 200 feet of a receptor, the barrier shall be constructed in a specific manner (as described in the New York City Noise Code) to provide sufficient sound attenuation. Section 3307.7 of the New York City Building Code requires a solid 8-foot wall made out of wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.
- Should noise complaints occur during construction, the contractor shall use path noise control measures such as temporary noise barriers, jersey barriers and/or portable noise enclosures for small equipment.
- In general, the quietest equipment and methods shall be used for excavators, dump trucks, cranes, auger drills and concrete saws to the extent feasible and practical.

Overall, construction of the proposed project would not involve any unusual or exceptional construction activities or practices for a multiple-winged midrise type building in New York City. As noted above, demolition at the site, where the noisiest activities would be anticipated, would be limited to the removal of the platform and existing rip rap. Excavation and foundation work would occur over nine months beginning in early 2019. Superstructure construction would occur for five months following foundation work. Exterior work on the facades and interior fit out activities would occur for approximately 13 months after superstructure construction. With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, the proposed project is not anticipated to result in significant adverse construction noise impacts at the nearest receptors including the International Christian School and the International Baptist Church.

Conclusion

Construction would occur over an approximately 26-month period, and would adhere to the applicable laws, regulations, and building codes that govern construction in New York City. As detailed in the construction assessment above, the proposed project would not result in significant adverse construction impacts in the key technical areas of historic and cultural resources, hazardous materials, transportation, air quality, and noise. Therefore, no further analysis is warranted, and the project would not result in construction-period significant adverse impacts.

APPENDIX A

Proposed Text Amendment

57 CATON PLACE
ZONING TEXT AMENDMENT

Matter underlined is new, to be added;
Matter ~~struck out~~ is to be deleted;
Matter within # # is defined in Section 12-10;
* * * indicates where unchanged text appears in the Zoning Resolution

ARTICLE XI
SPECIAL PURPOSE DISTRICTS

Chapter 3
Special Ocean Parkway District

* * *

113-00
GENERAL PURPOSES

* * *

113-01
General Provisions

In harmony with the general purposes of the #Special Ocean Parkway District# and in accordance with the provisions of this Chapter, certain specified regulations of the districts on which the #Special Ocean Parkway District# is superimposed are made inapplicable and special regulations are substituted therefor. Except as modified by the express provisions of the Special District, the regulations of the underlying districts remain in force.

In #flood zones#, in the event of a conflict between the provisions of this Chapter and the provisions of Article VI, Chapter 4 (Special Regulations Applying in Flood Hazard Areas), the provisions of Article VI, Chapter 4, shall control.

For the purpose of applying the Inclusionary Housing Program provisions set forth in Sections 23-154 and 23-90, inclusive, #Mandatory Inclusionary Housing areas# within the #Special Ocean Parkway District# are shown on the maps in APPENDIX F of this Resolution.

The Subdistrict of the #Special Ocean Parkway District# is identified in Appendix A of this Chapter. In addition to the requirements of Sections 113-10 through 113-40, inclusive, the special regulations set forth in Sections 113-50 through 113-57, inclusive, shall apply to the Subdistrict.

* * *

113-10
SPECIAL BULK REGULATIONS

The bulk regulations of the underlying districts shall apply, except as superseded, supplemented or modified by the provisions of this Section, inclusive.

* * *

APPENDIX F

Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

* * *

BROOKLYN

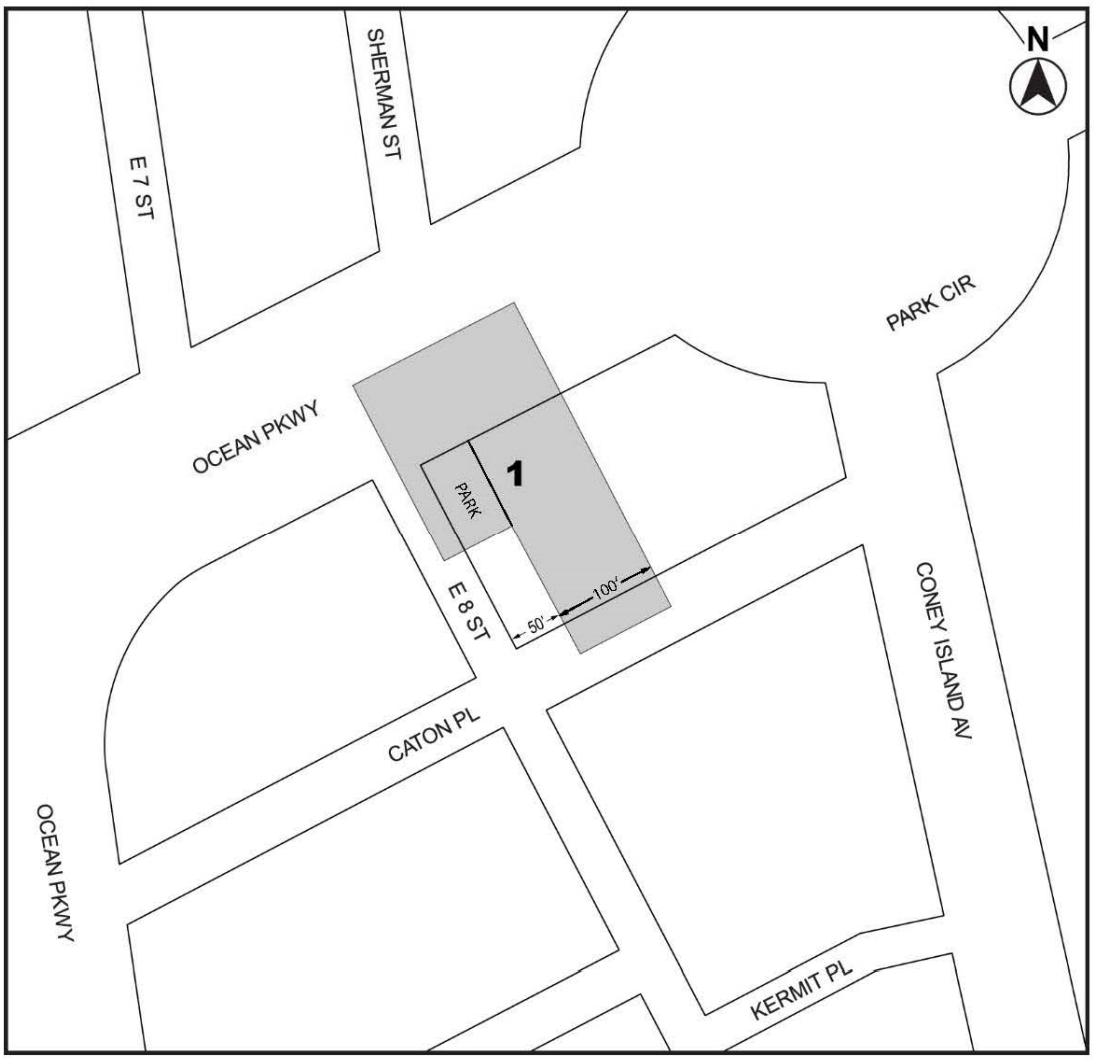
* * *

Brooklyn Community District 7
In portions of the #Special Ocean Parkway District#, and in the R7A and R8A Districts, within the areas shown on the following Maps 1 ~~and~~, 2 and 3:

* * *

Map 3 – [date of adoption]

[PROPOSED MAP]



Mandatory Inclusionary Housing area see Section 23-154(d)(3)

Area 1 [date of adoption] — MIH Program Option 1

Portion of Community District 7, Brooklyn

* * *

APPENDIX B

Agency Correspondence

NYC Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-K
Project: 57 CATON PLACE REZONING
Date received: 9/23/2016

Properties with no Architectural or Archaeological significance:
1) ADDRESS: 1 EAST 8 STREET, BBL: 3053220001
2) ADDRESS: 57 CATON PLACE, BBL: 3053220004

Gina Santucci 9/27/2016

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 31810_FSO_DNP_09272016.doc

NYC Environmental Protection

Vincent Sapienza, P.E.
Acting Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

Tel. (718) 595-4398
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alicata@dep.nyc.gov

January 20, 2017

Mr. Robert Dobruskin
Director, Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, New York 10271

Re: 57 Caton Place Rezoning
Block 5322, Lot 4
CEQR # 17DCP100K
Brooklyn, New York

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the November 2016 Phase I Environmental Site Assessment (Phase I), the December 2016 Phase II Environmental Site Assessment Work Plan (Phase II Work Plan) and the December 2016 Health and Safety Plan (HASP) prepared by VHB., on behalf of 57 Caton Partners, LLC., (applicant) for the above referenced project. It is our understanding that the applicant is seeking:

1.) A zoning map amendment from the New York City Department of City Planning (DCP) to rezone Block 5322, Lot 4 from a C8-2 zoning district to a R8A/C2-4 and R7A/C2-4 zoning district.
2.) A zoning text amendment to Zoning Resolution (ZR) 113-00 (Special Ocean Parkway District) to create an authorization to allow bulk waivers on through block sites fronting Ocean Parkway.
3.) A zoning text amendment to Appendix F of the ZR to establish a Mandatory Inclusionary Housing Area.

The project site is located between East 8th Street and Coney Island Avenue in the Windsor Terrace neighborhood of Brooklyn Community District 7. As currently proposed, the rezoning action would facilitate the development of a mixed-use residential and commercial building consisting of two towers containing approximately 107 dwelling units, 12,994 gross square feet of ground floor retail space and up to 74 spaces of below grade parking. It should be noted that the project site is currently improved with a vacant one and partial three-story building.

The November 2016 Phase I report revealed that historical on-site and surrounding area land uses consists of manufacturing and commercial uses including a roller skating rink, a textile distribution facility, churches, a horse stable, a horse track, Baders Hotel, Leonard's Casino, J.W. Mear's Automobile Garage, Bedford Riding Academy and several residential dwellings. Regulatory databases such as the New York State Department of Environmental Conservation (NYSDEC) SPILLS, Leaking Underground Storage Tank (LUST), Leaking Storage Tanks (LTANKS),

Resource Conservation and Recovery Act Generators, and Petroleum Bulk Storage (PBS) Underground Storage Tanks (USTs) and PBS Aboveground Storage Tanks (ASTs) identified several sites in close proximity to the project site. The SPILLS database reported 22 spills within a 1/8-mile radius of the project site, the PBS USTs and the PBS ASTs databases reported 20 USTs and 35 ASTs within a 1/4-mile radius of the project site and the LTANKS database reported 33 LTANKS within a 1/2-mile radius of the project site. Based on the age of the building that currently occupies the property, asbestos containing materials, lead based paint and polychlorinated biphenyls containing materials could be present in the structure.

The December 2016 Work Plan proposes to install four soil borings (SB-1 through SB-4), two monitoring wells (GW-1 and GW-2), and three sub-slab soil vapor probes (SV-1 through SV-3) at the project site. Two soil samples will be collected from each soil boring. One soil sample will be collected from just below the building slab and the second sample collected from just below the terminal excavation depth, which is approximately 27 feet below ground surface. Eight soil samples and two groundwater samples will be collected and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, TCL semi-volatile organic compounds via EPA Method 8270, pesticides via EPA Method 8081, polychlorinated biphenyls via EPA Method 8082 and Target Analyte List metals via EPA Methods 6010 and 7471 (filtered and unfiltered for groundwater samples). Three soil vapor samples will also be collected and analyzed for VOCs via EPA Method TO-15.

Based upon our review of the submitted documentation, we have the following comments/recommendations to DCP:

DEP finds the December 2016 Phase II Work Plan and HASP for the proposed investigation **acceptable**. DCP should inform the applicant that upon completion of the investigation activities, the applicant should submit a detailed Phase II report to DEP for review and approval. The report should include, at a minimum, an executive summary, narrative of the field activities, laboratory data and conclusions, comparison of soil, groundwater and soil vapor analytical results (i.e., NYSDEC 6NYCRR Part 375, NYSDEC Water Quality Regulations, and NYSDOH's October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York), updated site plans depicting sample locations, boring logs, and remedial recommendations, if warranted.

Future correspondence related to this project should include the following CEQR number **17DCP100K**. If you have any questions, you may contact Ms. Cassandra Scantlebury at (718) 595-6756.

Sincerely,

Wei Yu

Wei Yu
Acting Deputy Director, Hazardous Materials

cc: R. Weissbard; T. Estesen; C. Scantlebury; M. Wimbish; W. Pugliese (DCP); O. Abinader (DCP)

NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

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59-17 Junction Blvd.
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December 21, 2017

Robert Dobruskin
Director, Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, New York 10271

Re: 57 Caton Place Rezoning
Block 5322, Lots 1 and 4
CEQR # 17DCP100K

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the November 2017 Phase II Environmental Site Assessment (Phase II), the November 2017 Remedial Action Plan (RAP) and the November 2017 Construction Health and Safety Plan (CHASP) prepared by VHB., on behalf of 57 Caton Partners, LLC., (applicant) for the above referenced project. It is our understanding that the applicant is seeking:

1.) A zoning map amendment from the New York City Department of City Planning (DCP) to rezone the project area from a C8-2 zoning district to a R8A/C2-4 and R7A/C2-4;
2.) A zoning text amendment to Zoning Resolution (ZR) 113-00 (Special Ocean Parkway District) to create an authorization to allow bulk waivers on through block sites fronting Ocean Parkway and;
3.) A zoning text amendment to Appendix F of the ZR to establish a Mandatory Inclusionary Housing Area.

As currently proposed, the rezoning action would facilitate the development of a mixed-use residential and commercial building on Lot 4, consisting of two towers containing approximately 107 dwelling units, 12,994 gross square feet of ground floor retail space and up to 74 spaces of below grade parking. The project area, the area affected by the rezoning, also includes the adjacent parcel (Lot 1); however, this is a City-owned parcel of parkland that contains a pedestrian overpass landing and is not projected to be redeveloped as a result of the proposed actions. The project site is located between East 8th Street and Coney Island Avenue in the Windsor Terrace neighborhood of Brooklyn Community District 7. It should be noted that the project site is currently improved with a vacant one and partial three-story building.

During the October 2017 fieldwork, VHB installed four soil borings (SB-1 through SB-4), two groundwater monitoring wells (GW-1 and GW-2) and three soil vapor probes (SV-1 through SV-3) at the project site. Eight soil samples and two groundwater samples were collected and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) via United States Environmental Protection Agency (EPA) Method 8260, TCL semi-volatile organic compounds (SVOCs) via EPA Method 8270, pesticides via EPA Method 8081 polychlorinated biphenyls

(PCBs) via EPA Method 8082 and Target Analyte List (TAL) metals via EPA Methods 6010 and 7471 (filtered and unfiltered for groundwater). Three soil vapor samples were also collected and analyzed for VOCs via EPA Method TO-15.

The soil analytical results revealed VOCs, SVOCs and PCBs were either non-detect (ND) or below New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs). Three pesticides (4,4' DDD, 4,4' DDE and 4,4' DDT) and four metals (lead, nickel, zinc and mercury) were detected above NYSDEC Unrestricted Use SCOs. The groundwater analytical results revealed VOCs, SVOCs, pesticides and PCBs were either ND or below NYSDEC Division of Water Technical Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations for Class GA standards. Three metals (magnesium, manganese and sodium) were detected above NYSDEC Water Quality Guideline Values. The soil vapor analytical results revealed several VOCs including acetone, benzene, chloromethane, carbon disulfide, dichlorodifluoromethane, ethanol, ethylbenzene, heptane, n-hexane, isopropanol, tert-butyl alcohol, tetrachloroethene, toluene, m/p-xylene, styrene, o-xylene, 1,2,4-trimethylbenzene, 1,3-butadiene, 2-butanone, chloroform, tetrahydrofuran, cyclohexane, bromodichloromethane, 2,2,4-trimethylpentane, 4-methyl-2-pentanone, 2-hexanone, 4-ethyltoluene and 1,3,5-trimethylbenzene were detected.

The November 2017 RAP proposes proper handling, transportation and disposal of excavated soils from the site in accordance with applicable NYSDEC regulations; polyethylene sheeting as necessary to cover any soils that may require stockpiling; any potential petroleum spill incident will be handled in accordance with NYSDEC regulations; performance of a community air monitoring plan; dust suppression procedures; as well as the installation of a Stego Wrap 20-mil vapor barrier system, or similar product, beneath the building's slab and up the sidewalls.

Based upon our review of the submitted documentation, we have the following comments/recommendations to DCP:

RAP

- DCP should instruct the applicant that all known or found underground storage tanks and/or aboveground storage tanks (including dispensers, piping, and fill-ports) must be properly closed/removed in accordance with all applicable NYSDEC regulations.

- DCP should instruct the applicant that if de-watering into New York City storm/sewer drains will occur during the proposed construction, a New York City Department of Environmental Protection Sewer Discharge Permit must be obtained prior to the start of any de-watering.

- DCP should instruct the applicant that for all areas, which will either be landscaped or covered with grass (not capped), a minimum of two (2) feet of clean fill/top soil must be imported from an approved facility/source and graded across all landscaped/grass covered areas of the sites not capped with concrete/asphalt. The clean fill/top soil must be segregated at the source/facility, have qualified environmental personnel collect representative samples at a frequency of one (1) sample for every 250 cubic yards, analyze the samples for TCL VOCs, SVOCs, pesticides, PCBs, and TAL metals by a New York State Department of Health Environmental Laboratory Approval Program certified laboratory, compared to NYSDEC Part 375 Environmental Remediation Programs. Upon completion of the clean fill/top soil investigation activities, the applicant should submit a detailed clean soil report to

DEP for review and approval prior to importation and placement on-site The report should include, at a minimum, an executive summary, narrative of the field activities, laboratory data, and comparison of soil analytical results (i.e., NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs).

- DCP should inform the applicant that suspected lead based paint and polychlorinated biphenyls may be present in the on-site structures. These materials should be properly removed and/or managed prior to the start of the construction activities and disposed of in accordance with all federal, state, and local regulations.

DEP finds the November 2017 RAP and CHASP, which addresses worker and community health and safety during redevelopment acceptable, as long as the aforementioned information is incorporated into the RAP. DCP should instruct the applicant that at the completion of the project, a Professional Engineer (P.E.) certified Remedial Closure Report should be submitted to DEP for review and approval for the proposed project. The P.E. certified Remedial Closure Report should indicate that all remedial requirements have been properly implemented (i.e., proper transportation/disposal manifests and certificates from impacted soils removed and properly disposed of in accordance with all NYSDEC regulations; proof of installation of engineering control system; and two feet of DEP approved certified clean fill/top soil capping requirement in any landscaped/grass covered areas not capped with concrete/asphalt, etc.).

Future correspondence and submittals related to this project should include the following CEQR # **17DCP100K**. If you have any questions, you may contact Ms. Cassandra Scantlebury at (718) 595-6756.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

cc: R. Weissbard
T. Estesen
C. Scantlebury
M. Wimbish
W. Pugliese (DCP)
O. Abinader (DCP)

APPENDIX C

LPC Designation Report

PROSPECT PARK

DESIGNATION REPORT

1975

City of New York
Abraham D. Beame, Mayor

Landmarks Preservation Commission
Beverly Moss Spatt, Chairman
Morris Ketchum, Jr., Vice-Chairman

Commissioners

Edward S. Ames
Margaret Beyer
Elisabeth Coit
Barbaralee Diamonstein
Warren W. Gran
Stephen S. Lash
Hawthorne E. Lee
Paul E. Parker, Jr.

Landmarks Preservation Commission
November 25, 1975, Number 6
LP-0901

PROSPECT PARK (excluding the Friends' Cemetery), Borough of Brooklyn.

Landmark Site: Tax Map Block 1117, Lot 1.

BOUNDARIES

The Prospect Park Scenic Landmark consists of the property bounded by the eastern curb line of Prospect Park West, Bartel-Pritchard Circle roadway, the inner curb line of Bartel-Pritchard Circle enclosing the central island, Bartel-Pritchard Circle roadway, the northern and eastern curb lines of Prospect Park Southwest, Park Circle roadway, the inner curb line of Park Circle enclosing the central island, Park Circle roadway, the northern curb line of Parkside Avenue, the western curb line of Ocean Avenue, the western curb line of Flatbush Avenue, Grand Army Plaza roadway, the inner curb lines of the outer roadway enclosing the raised mall areas of Grand Army Plaza, Grand Army Plaza roadway, to the eastern curb line of of Prospect Park West.

TESTIMONY AT PUBLIC HEARING

On September 25, 1975, the Landmarks Preservation Commission held a public hearing on the proposed designation of this Scenic Landmark (Item No. 6). The hearing had been duly advertised in accordance with the provisions of law. Ten witnesses, including Thomas Cuite, Vice President of the City Council, a representative of Brooklyn Borough President Sebastian Leone, Joseph Merz, Curator of Prospect Park, and Joseph Bresnan, Director of Historic Parks, spoke in favor of designation. There were no speakers in opposition to designation. The witnesses favoring designation clearly indicate that there is great support for the designation of this Scenic Landmark. The Commission has also received many letters and other expressions of support for this designation.

DESCRIPTION AND ANALYSIS

Prospect Park, 526 acres of luxuriant landscape, is the pride of Brooklyn's park system. It was characterized by Frederick Law Olmsted and Calvert Vaux as one of their best and most successful creations of landscape architecture. Designed in 1865 and begun the following year, Prospect Park was Brooklyn's answer to New York's Central Park, as well as a response to the needs of the people in the City of Brooklyn.

The Background of the Park

The growth of the public park movement in this country was a reaction to increasing urbanization and the industrialization of American cities in the 19th century--cities which had originally made no provision for open green space or recreational areas. Those who began to agitate for a large public park in New York--men such as journalist and poet William Cullen Bryant and landscape gardener Andrew Jackson Downing--were influenced by parks they had seen in England and other parts of Europe. England felt the effects of industrialization even sooner than the United States, and in the 1830s a Select Committee was appointed by Parliament "to consider the best means of securing Open Spaces in the vicinity of populous Towns, as Public Walks and Places of Exercise, calculated to promote the Health and Comfort of the Inhabitants." The creation of Birkenhead Park in Liverpool, one of England's most industrialized cities, was the result of this act.

Such public parks in England were planned according to a tradition of landscape gardening which had begun a century earlier. Rather than using the geometric formality of such Continental gardens as those planned by the Frenchman Le Nôtre in the 17th century, the English landscapist created an environment which was an extension of the countryside--an environment both informal and unrestricted where the works of man were a complement to the works of Nature. The influence of such late 18th and early 19th century landscape gardeners as "Capability" Brown, Humphrey Repton, William Gilpin, and Sir Uvedale Price was felt by those landscape architects who later created America's public parks.

Central Park, a designated New York City Scenic Landmark, was begun in 1857 after over ten years of discussion and campaigning for such a park. Work began under the direction of Chief Engineer Egbert L. Viele. Frederick Law Olmsted was appointed Park Superintendent on September 11, 1857. In October the Park Commission announced a public competition for a design for the park, partially at the urging of Calvert Vaux. Acting on Vaux's initiative, Olmsted joined forces with him to produce the winning design, "Greensward." This led to their appointments as Architect-in-Chief and Assistant to the Architect-in-Chief of Central Park. Thus began a unique collaboration which was to have unforeseen and long-lasting consequences for the appearance of many American cities and the general well-being of the people who lived in them.

Frederick Law Olmsted (1822-1903) was introduced to the beauties of rural scenery as a boy by his parents. He also became familiar with the writings of several of the English landscape theorists at a young age. He had a background in engineering which he had studied for two-and-a-half years with Frederick A. Barton. His involvement in scientific farming in Owego, New York, and while living on Staten Island, his classic studies of the southern states for the New York Daily Times, and his travels through Britain and Europe had all stimulated his interest in landscape architecture and its role in urban development.

Calvert Vaux (1824-1895) was born in England where he received professional training in architecture while apprenticed to architects Lewis Nockalls Cottingham and George Truefitt. Truefitt developed Vaux's interest in landscape by taking him on walking tours of the English countryside and by encouraging him to capture his observations in a sketchbook. In 1850 Vaux came to the United States at the invitation of A. J. Downing, America's foremost landscape gardener who was looking for an architectural collaborator. The two partners received the prestigious commission to landscape the grounds of the Smithsonian Institution and the Capitol in Washington, D. C., in April 1851. After Downing's tragic death in 1852, Vaux remained in Newburgh, N. Y., to finish the firm's commissions. He moved to New York in 1857.

Each man with his unique background and training was able to bring to the design of Central Park, and later Prospect Park, a wide-ranging vision and a grasp of detail that would enable them to translate unsightly vacant land into magnificent parks with rich and varied rural landscape effects. So closely did they work together that in later years Olmsted was to write that he and Vaux were equally and indivisibly responsible for the design of Central Park. In the case of Prospect Park, Vaux, in the initial absence of Olmsted, was responsible for the boundaries, the plaza approach, and the placement of the Long Meadow and the lake, but in working out the specific details of the design, they claimed equal responsibility.

If Olmsted and Vaux were of like mind in determining what form the creation of a landscape should take, they had differing opinions on the significance of their profession. Vaux seemed to primarily view himself as an artist, and felt that their partnership should concentrate on developing the profession of landscape architecture in America. In fact Vaux was responsible for coining the term "landscape architecture" for a field which previously had been called "landscape gardening." The nomenclature initially bothered Olmsted who felt that the new term was not precise enough and did not convey the full extent of what they were doing.

Olmsted, on the other hand, regarded himself as "a sort of social engineer, an educator of hearts, a refiner of minds, one whose function was to civilize men, to develop in them communicativeness, and to raise the general level of American society by exerting a beneficient influence on environment and by modifying unfavorable surroundings through art," to quote his recent biographer Laura Wood Roper. Writing to Vaux on August 1, 1865, Olmsted characterized himself: "I can combine means to ends better than most, and I love beautiful landscapes and rural recreations, and people in rural recreations--better than anybody else I know. But I don't feel strong on the art side. I don't feel myself an artist." Nonetheless, Vaux believed Olmsted's contribution as an artist was indispensable to "the translation of the republican art idea in its highest form to the acres [Prospect Park] we want to control."

The concept of Prospect Park as envisioned by these two men was the result of certain ideas and attitudes about one's relationship to nature and the city and the effects that they have upon one. The park not only incorporates certain landscape traditions, but it also reflects the intellectual climate in which it was conceived.

The rise of Transcendentalism as a force in American intellectual life had its effect on Olmsted. While he was living on Staten Island, he was a neighbor of Judge William Emerson, elder brother of the leading spokesman for Transcendentalism, Ralph Waldo Emerson. He was also familiar with the Utopian movement in this country and had visited the Fourierist community in Red Bank, New Jersey. Although he thought highly of this community, he was not uncritical of it because it lacked the civilizing influence of urban life. Olmsted and Vaux were not members of any particular sect or philosophical school, but they did share with their contemporaries a belief in the salutary effect of nature upon man. They believed that the future health of society and our cities depended on the spiritual health of the people which could be insured by re-establishing their link with nature that had been broken by rapid growth and industrialization of urban centers. Moreover, Olmsted felt it was the obligation of a democratic society to provide facilities to re-establish such a link with nature.

Such views affected the conception of the landscape artist, whether a painter or a landscape architect. In Walks and Talks of an American Farmer in England (1851) Olmsted wrote: "What artist so noble has often been my thought, as he who with far reaching conception of beauty and designing power sketches the outline, writes the colors and directs the shadows of a picture so great that nature shall be employed upon it for generations before the work he has arranged for her shall realize his intentions." This is precisely what Olmsted and Vaux did when they created Prospect Park. Using the very materials of nature as an artist uses paint, they produced a result, developed over a period of years, that pictured the uplifting and spiritual qualities of nature at its highest. By using the materials and methods of nature, the landscape architects were able to achieve a perfect result, a result that nature, unaided, might not have been able to achieve.

History of the Park

The success of Central Park spurred interest among prominent citizens of Brooklyn for a similar facility for their city. By 1855, Brooklyn, with over 200,000 inhabitants, was the third largest city in the United States. Like New York it suffered from a restrictive street grid which made no provision for open green space. Greenwood Cemetery, established in 1838, was the prime recreational space for thousands of city dwellers. By 1858 Brooklyn's leaders clearly saw the need for a public park or series of parks. Naturally, there was the desire to compete with New York as well as to attract more people to the advantages of Brooklyn living. But a more altruistic and democratic conception was also present: such a park was perceived as vital if necessary to bring relief from the urban environment for many city dwellers.

On April 18, 1859, the New York State Legislature passed an act to authorize the selection and location of grounds for public parks in the City of Brooklyn. The Commission established by the act chose a number of

park sites including one which they called Mount Prospect Park. Another act authorizing the acquisition of the recommended site was passed on April 17, 1860, and a Board of Park Commissioners to oversee the planning and development of the park was also established. James S. T. Stranahan was named president.

James S. T. Stranahan (1808-1898) served for twenty-two years, until 1882, without remuneration as president of the Park Commission. Known as "the Father of Prospect Park," he consistently encouraged Olmsted and Vaux in their work. When Mayor Seth Low removed him from his position in 1882, a discrepancy of about $10,000 was found in the books. Stranahan unquestioningly wrote a personal check for the apparent deficit to balance the books. On his retirement the Brooklyn Eagle wrote: "Prospect Park is pre-eminently his work. But for his foresight and perseverance we should not now be in possession of that noble resort; . . . The truth is, that Mr. Stranahan is one of the very few men who have creative genius. In the not remote future, the question will be asked by intelligent writers, who were the real architects of Brooklyn? who were the men who lifted her out of the cow-paths of village advance and put her on the broad track of Metropolitan importance? When that question is answered, the name named with greatest honor will be that of James S. T. Stranahan." For his espousal of the parkway and boulevard system proposed by Olmsted and Vaux in 1868, he became known as "the Baron Haussman of Brooklyn." Stranahan also directed the Union Ferry Company and the Atlantic Docks; in addition he was one of the most active of the promoters of the Brooklyn Bridge, completed in 1883.

The Commissioners saw a great need for the park, as they stated in their First Annual Report (January 1861): "Already a population of 300,000 . . . demand space for exercise and recreation. How much more, when the population of the city has doubled, will a provision of this nature be required, to furnish to all the constant means of peaceful and healthful enjoyment, and to aid in the cultivation of cheerful obedience to law, and the general promotion of good order among its citizens."

Egbert L. Viele, Chief Engineer of the original plan for Central Park, was hired to design the new Prospect Park, according to boundaries established by the legislative authorization. The site was an awkward one, bisected by Flatbush Avenue, stretching north and east of Flatbush to Warren Street (now Prospect Place) and Washington Avenue, and extending south only as far as Ninth Street, with a jog from Ninth Avenue (the present Prospect Park West) to Tenth Avenue, between Third and Ninth Streets. The site included Prospect Hill with its commanding views and the Reservoir, both east of Flatbush Avenue.

The site also recommended itself for its historical associations. The battle of Long Island, the first major battle between the Continental Army under Washington and the British army in North America after the Declaration of Independence, took place on August 27, 1776, on land which is now a part of the park. Four hundred men from the Maryland and Delaware battalions under General Sullivan held off the British in a spot now known as Battle Pass to allow the American forces to retreat to Manhattan.

Viele's plan, a rather uneasily arrangement of such park attractions as a parade ground and flower garden, favored existing topographical features. As Viele wrote in 1861, the park "requires but little aid from art to fit it for all the purposes of health and recreation."

The outbreak of the Civil War in April 1861 prevented any work on the park for the duration of the hostilities. Nonetheless, the Park Commissioners wrote in 1862: ". . . the Prospect Park of the city of Brooklyn must always be conceded as the great natural park of the country; presenting the most majestic views of land and ocean, with panoramic changes more varied and beautiful than can be found within the boundaries of any city on this continent."

Apparently the Civil War interval brought doubts about Viele's plan to the minds of the Park Commissioners, for in early January 1865 Stranahan invited Calvert Vaux to survey the park site with him. Vaux was quick to recommend new park boundaries which he outlined in sketch form in a letter to his former partner, Frederick Law Olmsted, then in California.

At Stranahan's request, Vaux prepared a "Preliminary Report on Boundaries," published in February 1865 with the Commissioners' Fifth Annual Report. Vaux objected to the Flatbush Avenue bisection of the park site. He felt that the reservoir would seriously encroach on the eastern half of the park, and recommended that those lands east of Flatbush Avenue be sold. Instead, he recommended that the park site be expanded to the south and west to provide a "larger opportunity for landscape effect" and to make possible the excavation of a large lake, particularly suitable for a skating pond. Finally, Vaux offered a new idea for an approach and grand entrance to the park, namely the creation of an elliptical plaza at the junction of Flatbush, Vanderbilt, and Ninth (now Prospect Park West) Avenues.

Vaux's encouragement persuaded Olmsted that they should again join forces to plan Prospect Park; their report was submitted on January 24, 1866, to the Prospect Park Commissioners and was printed with the Sixth Annual Report. The Commissioners, who accepted the plan and Vaux's recommended boundary changes, noted that Messrs. Olmsted and Vaux were "landscape architects of acknowledged taste and skill." The Commissioners' report commended the three regions of distinct character which were planned: (1) a large open meadow with space for extensive playgrounds; (2) a hilly district with groves and shrubbery, shaded rambles and broad views; and (3) a lake district with ample provision for skating and rowing. The different sections were to be connected by a carefully adjusted system of rides, drives, and rambles, while existing natural features were to be "accepted and made available."

For Olmsted and Vaux such planning to create pastoral effects had a definite purpose, namely, to create "a pleasure, common, constant and universal to all town parks, . . .[which] results from the feeling of relief experienced by those entering them, on escaping from the cramped, confined and controlling circumstances of the streets of the town; in other words, a sense of enlarged freedom is to all, at all times, the most certain and most valuable gratification afforded by a park."

Olmsted and Vaux were officially appointed as landscape architects of Prospect Park on May 29, 1866; work began on July 1, 1866 and continued at a steady pace, weather permitting, through 1873 when the park was largely completed according to the original plan. Because the State Legislature did not authorize the acquisition of the recommended land in accordance with the new boundaries until 1868, initial work was, of necessity, undertaken on the Plaza and the northeast section of the park. A map appended to the Eighth Annual Report (January 1868) shows the progress of construction.

Work had advanced well enough to allow the first park visitors to be admitted to the eastern section of the park in October 1867. George Templeton Strong, noted New York attorney and diarist of the 19th century, wrote on October 19, 1867: "Had my first glimpse of the unfinished 'Prospect Park' of Brooklyn, which will soon become a formidable rival of our 'Central Park.' It begins its career with well-grown trees, and I am told it commands a noble outlook over the two cities, the harbor and the sea."

Because of financial problems caused by the panic of 1873, construction virtually halted after that year for a number of years. The area in the vicinity of the Litchfield Villa, between the West Drive and Ninth Avenues from Third to Ninth Streets, was not actually completed until after 1885. Most of the work on the various park entrances which gave them their present classical appearance was undertaken between 1895 and 1905.

The Design of the Park and Its Notable Features

The original appearance of the Prospect Park site was very different from the park one sees today. A series of hills lay along the ridge of the Harbor Hill (or Terminal) Moraine marking the furthest advance of the glacier that formed the western part of Long Island. Interspersed among the hills were gullies and swampy hollows. Below the hills the outwash plain was partially farmland; other land was vacant and covered with coarse grass and weeds. Clay and gravel pits as well as the excavations and embankments of old country roads also marred the site. The greatest advantage was a large group of trees, "not too old to be improved, yet already old enough to be of considerable importance in a landscape." Photographs in the collection of the Long Island Historical Society show the character of the land before construction was begun.

The skill and training of the landscape architects enabled them to see the possibilities in the site. A complete topographical survey, undertaken by Benjamin D. Frost, was necessary to know what preliminary work was essential. A thorough drainage of the ground and the construction of a vast underground drainage system were among the first things to be done. Almost simultaneously, the system of roads, bridle paths, and walks was laid out and graded, usually in accordance with the general topography of the ground. One of the largest tasks was the excavation and filling of the lake which took about four years. Of course, the collection, planting, and transplanting of trees and shrubs were essential for the creation of the desired landscape effects. The construction of a well and waterworks with adjacent reservoir was also necessary to supply the ponds, stream and lake with a sufficient supply of water.

The carefully planned circulation system is one of the more ingenious features of Prospect Park. Olmsted and Vaux successfully adapted the method they had used in Central Park of keeping carriage drives, bridle paths, and walks completely separate from each other. Each type was carefully planned to enable the park visitor to view and enjoy the natural scenery of the park and thereby be refreshed. However, in certain sections the drives, paths and walks functioned as a promenade running parallel to each other so persons could see and be seen, as well as enjoy each other's company. This was especially intended to be the case at the southern end of the park where the drive circles the lake. Olmsted and Vaux discussed this latter concern in the Eleventh Annual Report (January 1871).

Unlike Central Park, Prospect Park has no transverse roads. Instead, the park is surrounded by drives connected to parkways leading from one section of Brooklyn to another. These roads were suggested by and planned according to the recommendations of the landscape architects.

The main method used to separate the pedestrian from vehicular traffic is by means of a series of arches at strategic points which carry the drives over the walks. Two of these, Endale Arch, built 1867-69, and Meadowport Arch, buil 1868-70, lead the pedestrian from the park entrance at Grand Army Plaza, beneat the East and West Drives respectively, into the grand expanse of the Long Meadow. Endale Arch, originally known as Enterdale Arch, is constructed of alternating bands of yellow Berea sandstone and New Jersey brownstone. Meadowport Arch, built of sandstone, has an unusual double portal which allows pedestrians to enter from two intersecting directions. Because of the swampy ground in that section of the park the foundations of both arches float on an elaborate caisson system, described by engineer C. C. Martin in the Eighth Annual Report (January 1868). Eastwood Arch, built 1867-68, allowed the pedestrian arriving from the Willink entrance to pass beneath the East Drive and a bridle path into the Nethermead by the Lullwater. Nethermead Arches, built 1868-70, incorporate three arches which allow the pedestrian walk, the stream, and the bridle path to converge beneath the Central Drive. Cleft Ridge Span, built 1871-72, was constructed under Breeze Hill to carry the main walk from the Plaza entrance to the Concert Grove, now the Flower Garden. More elaborately detailed than the other arches, Cleft Ridge Span was constructed of a patented concrete known as béton Coignet. It was the intention of Olmsted and Vaux that the arches be as unobtrusive as possible, "consistent with their objects, with sound permanent construction, and with an honest expression of their purpose." This was to be achieved by setting them in thicket of foliage and allowing the masonry to become covered with vines and creepers.

As one strolls through the park, one encounters a wide variety of landscape features. Entering from Grand Army Plaza, the first pastoral expanse of the Long Meadow greets the eye. Over a mile in length and covering seventy-five acres, it was artfully planned to give the viewer an impression of infinite space. Bordering the Long Meadow are extensive wooded areas which Olmsted and Vaux called the East, West, and Mid Woods. These were skillfully adapted from old forest trees already in the area. Between the south end of the Long Meadow and the lake are the elevated lands of Quaker Hill, Breeze Hill, and Lookout Hill, 186 feet above sea level, the highest point in Prospect Park. The lower slopes of Lookout Hill gradually descend to the Nethermead by the Lullwater, a gently rolling meadow which was especially popular for picnics in the 19th century.

One of the most picturesque features of the park is the meandering water system which begins at Swan Boat Lake by the Long Meadow, originally known as the Pools. A stream, here known as the Ambergill, leads from Swan Boat Lake through a deep secluded ravine formed by glacial deposits which have left many boulders and continues on into the Mid Wood. As the woods open into the Nethermead the stream passes through the Binner Water Pool and Lily Pond Lake, then empties over a waterfall into the Lullwater. The serene Lullwater with its serpentine design eventually leads to the fifty-seven acre lake, one of the most impressive achievements of the park design. The lake, which was especially popular for ice-skating in the 19th century, boasted a larger skating area than Central Park. The entire water system was man-made with the exception of a portion of the stream.

Other interesting landscape features are the Vale of Cashmere and the Pools, located between Flatbush Avenue and the East Drive. Planned in 1895 by Park Superintendent Rudolph Ulrich, the Pools were originally known as the Rose Garden. They replaced a children's playground which formerly occupied the site.

The trees and other plantings are an integral part of the overall landscape effect. Neither Olmsted nor Vaux were professional horticulturists, so they had to rely on trained assistants who knew precisely what trees and plants were necessary to create the exact landscape effects that the landscape architects desired. Among those who supervised the details of the planting were Ignaz Pilat, who had also worked on Central Park, H. W. S. Cleveland, G. D. and William McMillan, George Stockford, and O. C. Bullard. One of Olmsted's and Vaux's successful horticultural effects was the judicious opening-up of the natural woodlands by transplanting trees from one spot to another, greatly facilitated by the invention of engineer John Y. Culyer of a tree-moving machine.

While the park is rich in such original native tree specimens as many varieties of oak and maple, it has always been known for its many exotic plants and trees which are far too numerous to list here. The Twenty-Fifth Annual Report (January 1886) gives an extensive listing of the many kinds of trees growing in the park at that time. Trees and Shrubs of Prospect Park (1902, 1906) by Louis Harmon Peet and Tree Trails in Prospect Park (1968) by George Kalmbacher and M. M. Graff provide detailed botanical tours of the park for those who are interested. The park's most famous tree, commemorated in a poem by Marianne Moore, is the Camperdown Elm (Ulmus glabra camperdownii) which is over 100 years old. Created by grafting a prostrate form of the Scotch elm onto a short trunk of the normal Scotch elm, it develops limbs that twist and curve back on themselves in an intricate and exotic manner.

Olmsted and Vaux planned a number of formal spaces for the park. The Concert Grove, now the Flower Garden, was executed in 1870-74 on the eastern shore of the lake to allow visitors to enjoy promenade concerts. The musicians were located on a small island in the lake while the audience faced them seated beneath a grove of plane trees. The terraced area is divided and lined by handsome stone railings, walls, and parapets. Flower planters and fountain basins are also a part of the architectural decoration. All are carved with Victorian Gothic ornament incorporating plants, flowers, animals, and birds. The designs were probably by Calvert Vaux, possibly assisted by his architectural partner Jacob Wrey Mould. The detail is very similar to that used on the Terrace in Central Park which is known to have been designed by Mould.

The other formal element planned by Olmsted and Vaux is the Plaza approach, later renamed Grand Army Plaza. Originally the center island was occupied only by a fountain and a statue of Abraham Lincoln, which was later moved to the Flower Garden. The present fountain, designed by Eugene Savage, dates from 1932. The island is framed by thickly planted crescent mounds. Sculptured figures of Gouverneur Kemble Warren, Henry Warner Slocum, and Alexander J. C. Skene were added in 1896 and 1905. Dominating the Plaza is Soldiers' and Sailors' Memorial Arch, a designated New York City Landmark, designed by John H. Duncan and built in 1889-92. Such formal classicism also manifests itself in the four giant Doric columns flanking the entrance drive--two were originally planned by Duncan--and the twelve-sided shelters between them, designed by Stanford White of McKim, Mead & White between 1894 and 1896.

The firm of McKim, Mead & White was also responsible for the classical appearance of a number of other park entrances. Limestone pedestals flanking the Third Street entrance, erected in 1895, were ornamented with bronze panthers designed by Alexander Phimister Proctor and unveiled on December 2, 1898. Flanking the entrance at Bartel-Pritchard Circle is a pair of giant columns with urns, inspired by a famous acanthus column of Delphi. Designed by Stanford White, they were erected in 1906. The Park Circle entrance is dominated by Frederick MacMonnies' Horse Tamers, completed in 1899. The pedestals and flanking walls designed by McKim, Mead & White were executed in 1895. The curved granite colonnade supporting a wisteria trellis at the Parkside-Ocean Avenue entrance was completed in 1904. Finally, the Willink entrance, flanked by twenty-foot high granite turrets, was executed in 1896. The Ninth Street entrance, although not by the firm, was also given a classical treatment by the addition of the Lafayette monument, executed by Daniel Chester French and unveiled in 1917.

This spirit of formal classicism, in contrast to the picturesque naturalism of Olmsted and Vaux, was inspired by the Chicago World's Columbian Exposition of 1893 which led to the "City Beautiful" movement and the use of classical architectural elements as a tool of urban planning.

Olmsted and Vaux felt strongly that any building in the park should serve a secondary function--the landscape and the preservation of the natural setting were their foremost considerations. Nonetheless, they designed a number of structures which they felt enhanced the general appearance of the park. Among the first of these to be erected were a number of rustic shelters, designed to provide pleasant shady resting places and cover from the rain. Several of these have been reconstructed along the shores of the lake in recent years. A dairy house, no longer standing, was built in the Mid Wood in 1868-69. A refreshment house, also no longer extant, was provided in the Concert Grove in 1871-72. Olmsted's and Vaux's recommendation for a lookout tower and refectory at the top of Lookout Hill was never carried out. A portion of the Oriental Pavilion, built according to Vaux's design in 1874 as an open air cafe, can still be seen in the Flower Garden. Although partially damaged by fire in 1974, one can still observe the intricate cast-iron elements of the original structure. The Music Pagoda was built in 1888 in a new concert grove created by the Nethermead. Recently restored, the structure has an exotic Chinese character.

A number of structures were built in the early 20th century in the newly popular revivals of classical styles. These buildings tend to dominate rather than be subordinate to the park setting. Three of them are the work of the firm of Helmle, Huberty & Hudswell: the Boathouse on the Lullwater (1905), a designated New York City Landmark, inspired by the Sansovino Library in Venice; the Tennis House (1909-10) in the Long Meadow which has the air of a casino; and the Willink Entrance Comfort Station (1912), a handsome yet functional building designed in the classical mode. The Grecian Shelter, a designated New York City Landmark, was erected in 1903-04 on the South Lake Drive. Designed by McKim, Mead & White, it is variously known as the Croquet Shelter or the Classical Peristyle.

Two residential buildings, both designated New York City Landmarks, are also situated within the park boundaries. The Lefferts Homestead on Flatbush Avenue near the Willink entrance was moved to the park in 1918. A fine example of Dutch Colonial architecture, the house was built by Lt. Peter Lefferts following the destruction of his previous home during the battle of Long Island. The Litchfield Villa, near Prospect Park West, is the work of architect A. J. Davis. Completed in 1857 in the Italianate style for Edwin Clark Litchfield, the mansion is now the Brooklyn head-

quarters of the Parks, Recreation and Cultural Affairs Administration.

In addition to the notable sculpture at the entrances, previously mentioned, a number of others should also be noted. Just inside the Grand Army Plaza entrance stands the bronze figue of James S. T. Stranahan, executed by Frederick MacMonnies and unveiled in 1891. Paid for by public subscription, this statue was a tribute to Stranahan's long years of service to Brooklyn and Prospect Park. MacMonnies, born and raised in Brooklyn, received also the city's commissions for the four eagles atop the Doric columns and the Quadriga and Army and Navy groups on the Memorial Arch, all of which can be seen at this entrance.

The largest group of sculptures can be found in the Flower Garden. Many are portrait statues of renowned musicians won for Brooklyn by local singing associations in national competition. Three monuments memorialize the battle of Long Island in 1776. The Battle Pass Marker by Frederick W. Ruckstuhl, erected in 1923, and the Dongan Oak Monument are both near the East Drive north of the Zoo. The Maryland Monument on Lookout Hill was erected in 1895.

Conclusion

Olmsted and Vaux had created Prospect Park for the people of Brooklyn, and the people were eager to enjoy its beauty and recreational benefits. Several years after the park was begun, the Park Commissioners "congratulated their fellow-citizens that Brooklyn has at length a Park worthy of the name, and commensurate with the wants of a great city. A spot richly garnished with natural beauty, whose quiet repose, luxuriant foliage, and ocean breezes may tempt from too engrossing business pursuits, and lead to better things. A broad precinct free of access; permanent in duration; guarded well from rude intruders--where genius may bring its offerings, and nature and art blend together to work out images of beauty; open to rich and poor; to the sick and well; the man of business and the man of work." Since the park's beginning, it has been the prime recreational site of Brooklyn and its most notable green space, offering a country-like respite from brick and concrete. Millions of New Yorkers visit the park every year, both to enjoy its scenery and to use its recreational facilities. In keeping with the original ideals of the park, it still belongs to all the people of New York.

FINDINGS AND DESIGNATIONS

On the basis of a careful consideration of the history, natural features, landscaping, waterways, architecture and other features of this park, the Landmarks Preservation Commission finds that Prospect Park has a special character, special historical and aesthetic interest and value as part of the development, heritage and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, Prospect Park is one of the largest and most beautiful urban parks in this country, that it was laid out in accordance with a carefully prepared plan, that it provided a large open space for recreational purposes in Brooklyn, that its creation was guided with imagination and foresight by landscape architects Frederick Law Olmsted and Calvert Vaux, that the creation of the park was greatly facilitated by the efforts of James S. T. Stranahan, president of the Park Commission for twenty-two years, that the park is noted for its varied landscape effects of meadow, woods and lake, that the extensive variety of native and exotic plants and trees contributes to the beauty of the park, that the circulation system successfully separates three types of traffic--pedestrian, equestrian and vehicular--without encroaching on the scenery, and that Prospect Park continues to be enjoyed every year by millions of New York City residents.

Accordingly, pursuant to the provisions of Chapter 63 of the Charter of the City of New York and Chapter 8-A of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Scenic Landmark, Prospect Park, Borough of Brooklyn, which consists of the property bounded by the eastern curb line of Prospect Park West, Bartel-Pritchard Circle roadway, the inner curb line of Bartel-Pritchard Circle enclosing the central island, Bartel-Pritchard Circle roadway, the northern and eastern curb lines of Prospect Park Southwest, Park Circle roadway, the inner curb line of Park Circle enclosing the central island, Park Circle roadway, the northern curb line of Parkside Avenue, the western curb line of Ocean Avenue, the western curb line of Flatbush Avenue, Grand Army Plaza roadway, the inner curb lines of the outer roadway enclosing the raised mall areas of Grand Army Plaza, Grand Army Plaza roadway, to the eastern curb line of Prospect Park West, and designates as its Landmark Site Borough of Brooklyn Tax Map Block 1117, Lot 1.

APPENDIX D

Transportation Data

Use: Local Retail (No-Action)

	Weekday	Saturday
Daily Rate (1)	205	240
Linkage	25%	
Units (K SF)	16.852	16.852
Trips	2591	3033
Temporal Distribution (1)		
AM	3%	
MD	19%	10%
PM	10%	
Directional Split ("Ins") (2)		
AM	50%	
MD	50%	50%
PM	50%	
Modal Split (2)		
Auto	2%	2%
Taxi	3%	3%
Bus	6%	6%
Subway	6%	6%
Walk/Other	83%	83%
Vehicle Occupancy (2)		
Auto	1.65	
Taxi	1.40	

Truck Deliveries

	Weekday		Saturday	
Daily Rate (1)	0.35	6	0.04	1
Temporal Distribution (1)				
AM	8%	0		
MD	11%	1	11%	0
PM	2%	0		

Local Retail Person Trips

	AM			MD			PM			SAT		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	1	1	2	5	5	10	3	3	5	3	3	6
Taxi	1	1	2	7	7	15	4	4	8	5	5	9
Bus	2	2	5	15	15	30	8	8	16	9	9	18
Subway	2	2	5	15	15	30	8	8	16	9	9	18
Walk	32	32	65	204	204	409	108	108	215	126	126	252
Total	39	39	78	246	246	492	130	130	259	152	152	303

Local Retail Vehicle Trips - Before balancing

	AM			Midday			PM			SAT MD		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	0	0	1	3	3	6	2	2	3	2	2	4
Taxi	1	1	2	5	5	10	3	3	6	3	3	6
Truck	0	0	1	0	0	1	0	0	0	0	0	0
Total	2	2	4	8	8	17	5	5	9	5	5	10

Local Retial Vehicle Trips (Balanced for Taxis)

	AM			Midday			PM			SAT MD		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	0	0	0	3	3	6	2	2	4	2	2	4
Taxi	2	2	4	10	10	20	6	6	12	6	6	12
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	4	13	13	26	8	8	16	8	8	16

Sources:
(1) *CEQR Technical Manual*, 2014
(2) *Seward Park Mixed-Use Development FEIS*, 2013

No-Action Development
16.852 K sf Local Retail

Vehicle Trips

Local Retail

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	0	0	0	3	3	6	2	2	4	2	2	4
Taxi	2	2	4	10	10	20	6	6	12	6	6	12
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	4	13	13	26	8	8	16	8	8	16

Person Trips

Local Retail

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	1	1	2	5	5	10	3	3	6	3	3	6
Taxi	1	1	2	7	7	14	4	4	8	5	5	10
Bus	2	2	4	15	15	30	8	8	16	9	9	18
Subway	2	2	4	15	15	30	8	8	16	9	9	18
Walk	32	32	64	204	204	408	108	108	216	126	126	252
Total	38	38	76	246	246	492	131	131	262	152	152	304

Total Vehicle Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	**0**	**0**	**0**	**3**	**3**	**6**	**2**	**2**	**4**	**2**	**2**	**4**
Taxi	**2**	**2**	**4**	**10**	**10**	**20**	**6**	**6**	**12**	**6**	**6**	**12**
Truck	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**2**	**2**	**4**	**13**	**13**	**26**	**8**	**8**	**16**	**8**	**8**	**16**

Total Person Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	**1**	**1**	**2**	**5**	**5**	**10**	**3**	**3**	**6**	**3**	**3**	**6**
Taxi	**1**	**1**	**2**	**7**	**7**	**14**	**4**	**4**	**8**	**5**	**5**	**10**
Bus	**2**	**2**	**4**	**15**	**15**	**30**	**8**	**8**	**16**	**9**	**9**	**18**
Subway	**2**	**2**	**4**	**15**	**15**	**30**	**8**	**8**	**16**	**9**	**9**	**18**
Walk	**32**	**32**	**64**	**204**	**204**	**408**	**108**	**108**	**216**	**126**	**126**	**252**
Total	**38**	**38**	**76**	**246**	**246**	**492**	**131**	**131**	**262**	**152**	**152**	**304**

Use: Local Retail (With-Action)

	Weekday	Saturday
Daily Rate (1)	205	240
Linkage	25%	
Units (K SF)	13	
Trips	1999	2340
Temporal Distribution (1)		
AM	3%	
MD	19%	10%
PM	10%	
Directional Split ("Ins") (2)		
AM	50%	
MD	50%	50%
PM	50%	
Modal Split (2)		
Auto	2%	2%
Taxi	3%	3%
Bus	6%	6%
Subway	6%	6%
Walk/Other	83%	83%
Vehicle Occupancy (2)		
Auto	1.65	
Taxi	1.40	

Truck Deliveries

	Weekday		Saturday	
Daily Rate (1)	0.35	5	0.04	0
Temporal Distribution (1)				
AM	8%	0		
MD	11%	1	11%	0
PM	2%	0		

Local Retail Person Trips

	AM			MD			PM			SAT		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	1	1	1	4	4	8	2	2	4	2	2	5
Taxi	1	1	2	6	6	11	3	3	6	4	4	7
Bus	2	2	4	11	11	23	6	6	12	7	7	14
Subway	2	2	4	11	11	23	6	6	12	7	7	14
Walk	25	25	50	158	158	315	83	83	166	97	97	194
Total	30	30	60	190	190	380	100	100	200	117	117	234

Local Retail Vehicle Trips - Before balancing

	AM			Midday			PM			SAT MD		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	0	0	1	2	2	5	1	1	2	1	1	3
Taxi	1	1	2	4	4	8	2	2	4	3.0	3.0	6
Truck	0	0	1	0	0	1	0	0	0	0	0	0
Total	2	2	3	7	7	13	3	3	7	4	4	9

Local Retial Vehicle Trips (Balanced for Taxis)

	AM			Midday			PM			SAT MD		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	0	0	0	2	2	4	1	1	2	1	1	2
Taxi	2	2	4	8	8	16	4	4	8	6	6	12
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	4	10	10	20	5	5	10	7	7	14

Sources:
(1) *CEQR Technical Manual*, 2014
(2) *Seward Park Mixed-Use Development FEIS*, 2013

Use: Residential (With-Action)

	Weekday	Saturday
Daily Rate (1)	8.075	9.6
Units (K SF)	107	107
Trips	864	1027
Temporal Distribution (1)		
AM	10%	
MD	5%	8%
PM	11%	
Directional Split ("Ins") (1)		
AM	15%	
MD	50%	50%
PM	70%	
Modal Split (2)		
Auto	18%	18%
Taxi	1%	1%
Bus	5%	5%
Subway	70%	70%
Walk/Other	6%	6%
Vehicle Occupancy (2)		
Auto	1.09	
Taxi	1.40	

Truck Deliveries

	Weekday		Saturday	
Daily Rate (1)	0.06	6	0.02	2
Temporal Distribution (1)				
AM	12%	1		
MD	9%	1	9%	0
PM	2%	0		

Residential - Person Trips

	AM			MD			PM			SAT		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	2	13	16	4	4	8	12	5	17	7	7	15
Taxi	0	1	1	0	0	0	1	0	1	0	0	1
Bus	1	4	4	1	1	2	3	1	5	2	2	4
Subway	9	51	60	15	15	30	47	20	67	29	29	58
Walk	1	4	5	1	1	3	4	2	6	2	2	5
Total	13	73	86	22	22	43	67	29	95	41	41	82

Residential Vehicle Trips - Before balancing

	AM			Midday			PM			SAT MD		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	2	12	14	4	4	7	11	5	16	7	7	14
Taxi	0	1	1	0	0	0	0	0	0	0	0	0
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	13	15	4	4	7	11	5	16	7	7	14

Residential Vehicle Trips (Balanced for Taxis)

	AM			Midday			PM			SAT MD		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	2	12	14	4	4	8	11	5	16	7	7	14
Taxi	1	1	2	0	0	0	0	0	0	0	0	0
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	13	16	4	4	8	11	5	16	7	7	14

Sources:
(1) *CEQR Technical Manual*, 2014
(2) 2009-2014 American Community Survey (ACS) Commute to Work Data for Brooklyn Cenus Tracts 500, 502.2 and 504.

With-Action Development
13 K sf Local Retail
107 Units Residential

Vehicle Trips

Local Retail

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	0	0	0	2	2	4	1	1	2	1	1	2
Taxi	2	2	4	8	8	16	4	4	8	6	6	12
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	4	10	10	20	5	5	10	7	7	14

Residential

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	12	14	4	4	8	11	5	16	7	7	14
Taxi	1	1	2	0	0	0	0	0	0	0	0	0
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	13	16	4	4	8	11	5	16	7	7	14

Total Vehicle Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	**2**	**12**	**14**	**6**	**6**	**12**	**12**	**6**	**18**	**8**	**8**	**16**
Taxi	**3**	**3**	**6**	**8**	**8**	**16**	**4**	**4**	**8**	**6**	**6**	**12**
Truck	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total	**5**	**15**	**20**	**14**	**14**	**28**	**16**	**10**	**26**	**14**	**14**	**28**

Person Trips

Local Retail

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	1	1	2	4	4	8	2	2	4	2	2	4
Taxi	1	1	2	6	6	12	3	3	6	4	4	8
Bus	2	2	4	11	11	22	6	6	12	7	7	14
Subway	2	2	4	11	11	22	6	6	12	7	7	14
Walk	25	25	50	158	158	316	83	83	166	97	97	194
Total	31	31	62	190	190	380	100	100	200	117	117	234

Residential

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	13	15	4	4	8	12	5	17	7	7	14
Taxi	0	1	1	0	0	0	1	0	1	0	0	0
Bus	1	4	5	1	1	2	3	1	4	2	2	4
Subway	9	51	60	15	15	30	47	20	67	29	29	58
Walk	1	4	5	1	1	2	4	2	6	2	2	4
Total	13	73	86	21	21	42	67	28	95	40	40	80

0

Total Person Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	**3**	**14**	**17**	**8**	**8**	**16**	**14**	**7**	**21**	**9**	**9**	**18**
Taxi	**1**	**2**	**3**	**6**	**6**	**12**	**4**	**3**	**7**	**4**	**4**	**8**
Bus	**3**	**6**	**9**	**12**	**12**	**24**	**9**	**7**	**16**	**9**	**9**	**18**
Subway	**11**	**53**	**64**	**26**	**26**	**52**	**53**	**26**	**79**	**36**	**36**	**72**
Walk	**26**	**29**	**55**	**159**	**159**	**318**	**87**	**85**	**172**	**99**	**99**	**198**
Total	**44**	**104**	**148**	**211**	**211**	**422**	**167**	**128**	**295**	**157**	**157**	**314**

57 Caton Rezoning
Trip Generation Summary - Increments (With-Action minus No-Action)

NO-ACTION
Total Vehicle Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	0	0	0	3	3	6	2	2	4	2	2	4
Taxi	2	2	4	10	10	20	6	6	12	6	6	12
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	2	4	13	13	26	8	8	16	8	8	16

NO-ACTION
Total Person Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	1	1	2	5	5	10	3	3	6	3	3	6
Taxi	1	1	2	7	7	14	4	4	8	5	5	10
Bus	2	2	4	15	15	30	8	8	16	9	9	18
Subway	2	2	4	15	15	30	8	8	16	9	9	18
Walk	32	32	64	204	204	408	108	108	216	126	126	252
Total	38	38	76	246	246	492	131	131	262	152	152	304

WITH-ACTION
Total Vehicle Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	12	14	6	6	12	12	6	18	8	8	16
Taxi	3	3	6	8	8	16	4	4	8	6	6	12
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	5	15	20	14	14	28	16	10	26	14	14	28

WITH-ACTION
Total Person Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	3	14	17	8	8	16	14	7	21	9	9	18
Taxi	1	2	3	6	6	12	4	3	7	4	4	8
Bus	3	6	9	12	12	24	9	7	16	9	9	18
Subway	11	53	64	26	26	52	53	26	79	36	36	72
Walk	26	29	55	159	159	318	87	85	172	99	99	198
Total	44	104	148	211	211	422	167	128	295	157	157	314

INCREMENT
Total Vehicle Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	12	14	3	3	6	10	4	14	6	6	12
Taxi	1	1	2	-2	-2	-4	-2	-2	-4	0	0	0
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	13	16	1	1	2	8	2	10	6	6	12

INCREMENT
Total Person Trips

	AM			Midday			PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Auto	2	13	15	3	3	6	11	4	15	6	6	12
Taxi	0	1	1	-1	-1	-2	0	-1	-1	-1	-1	-2
Bus	1	4	5	-3	-3	-6	1	-1	0	0	0	0
Subway	9	51	60	11	11	22	45	18	63	27	27	54
Walk	-6	-3	-9	-45	-45	-90	-21	-23	-44	-27	-27	-54
Total	6	66	72	-35	-35	-70	36	-3	33	5	5	10

B08006: SEX OF WORKERS BY MEANS OF TRANSPORTATION TO WORK -
Universe: Workers 16 years and over
2010-2014 American Community Survey 5-Year Estimates

Note: This is a modified view of the original table.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

	Census Tract 500, Kings County, New York	Census Tract 502.02, Kings County, New York	Census Tract 504, Kings County, New York	
	Estimate	Estimate	Estimate	Sum
Total:	1,716	1,333	2,724	
Car, truck, or van:	286	217	484	987
Drove alone	237	188	403	828
Carpooled:	49	29	81	
In 2-person carpool	49	29	68	146
In 3-person carpool	0	0	13	13
In 4-or-more-person carpoo	0	0	0	0
Public transportation (excluding	1,345	878	1,911	
Bus or trolley bus	122	12	106	
Streetcar or trolley car (carro publico	0	0	0	
Subway or elevated	1,213	866	1,764	
Railroad	10	0	41	
Ferryboat	0	0	0	
Bicycle	10	92	87	
Walked	9	54	79	
Taxicab, motorcycle, or other means	11	8	49	
Worked at home	55	84	114	

Auto	286	17%	217	17%	484	19%	**987**	**18.0%**
Taxi	11	1%	8	1%	49	2%	**68**	**1.2%**
Bus	122	7%	12	1%	106	4%	**240**	**4.4%**
Subway	1,213	73%	866	69%	1,764	69%	**3843**	**70.3%**
Walk/Bike	19	1%	146	12%	166	6%	**331**	**6.1%**
Total	1651	100%	1249	100%	2569	100%	**5469**	**100.0%**

Occupancy **1.09**

APPENDIX E

Jamaica Bay Watershed Protection Plan Form

Print Form

Jamaica Bay Watershed Protection Plan
Project Tracking Form

The Jamaica Bay Watershed Protection Plan, developed pursuant to Local Law 71 of 2005, mandates that the New York City Department of Environmental Protection (DEP) work with the Mayor's Office of Environmental Coordination (MOEC) to review and track proposed development projects in the Jamaica Bay Watershed (http://www.nyc.gov/html/oec/downloads/pdf/ceqr/Jamaica_Bay_Watershed_Map.jpg) that are subject to CEQR in order to monitor growth and trends. If a project is located in the Jamaica Bay Watershed, (the applicant should complete this form and submit it to DEP and MOEC. This form must be updated with any project modifications and resubmitted to DEP and MOEC.

The information below will be used for tracking purposes only. It is not intended to indicate whether further CEQR analysis is needed to substitute for the guidance offered in the relevant chapters of the CEQR Technical Manual.

A. GENERAL PROJECT INFORMATION

1. CEQR Number: TBD 1a. Modification ☐
2. Project Name: 57 Caton Place Rezoning
3. Project Description:

   The applicant is seeking a zoning map amendment to rezone the project area (Block 5322, Lots 1 and 4) from C8-2 to R7A, with a C2-4 overlay on the proposed development site (Lot 4), to facilitate the development of a 166,191 gross square foot (gsf) mixed-use residential and commercial building.

4. Project Sponsor:
5. Required approvals: Zoning map amendment; Zoning text amendment (extend MIH to OP[ZR 113-10])
6. Project schedule (build year and construction schedule): 2021

B. PROJECT LOCATION:

1. Street address: 57 Caton Place
2. Tax block(s): 5322 Tax Lot(s): 1 and 4
3. Identify existing land use and zoning on the project site: Commercial storage/warehouse; C8-2, OP
4. Identify proposed land use and zoning on the project site: Mixed Residential and Retail and Parki
5. Identify land use of adjacent sites (include any open space): PublicFac/Inst,Park(ped ovrpss),Stable
6. Describe existing density on the project site and the proposed density:

Existing Condition	Proposed Condition
25,361 gsf	166,191 gsf

7. Is project within 100 or 500 year floodplain (specify)? ☐ 100 Year ☐ 500 Year ☒ No

C. GROUND AND GROUNDWATER

1. Total area of in-ground disturbance, if any (in square feet): 23,702 sf
2. Will soil be removed (if so, what is the volume in cubic yards)? 23,805.4 cubic yards
3. Subsurface soil classification:
   (per the New York City Soil and Water Conservation Board): Pavement & buildings-Flatbush-River
4. If project would change site grade, provide land contours (**attach** map showing existing in 1' contours and proposed in 1' contours).
5. Will groundwater be used (list volumes/rates)? ☐ Yes ☒ No

   Volumes: Rates:
6. Will project involve dewatering (list volumes/rates)? ☐ Yes ☒ No

   Volumes: Rates:
7. Describe site elevation above seasonal high groundwater:

   The site has an elevation of 52-feet above mean sea level (amsl); depth to groundwater beneath the site is estimated to be approximately 43-feet below grade surface (bgs).

D. HABITAT

1. Will vegetation be removed, particularly native vegetation? ☐ Yes ☒ No

   If YES,
   - **Attach** a detailed list (species, size and location on site) of vegetation to be removed (including trees >2" caliper, shrubs, understory planting and groundcover).
   - **List** species to remain on site.
   - **Provide** a detailed list (species and sizes) of proposed landscape restoration plan (including any wetland restoration plans).
2. Is the site used or inhabited by any rare, threatened or endangered species? ☐ Yes ☒ No
3. Will the project affect habitat characteristics? ☐ Yes ☒ No

   If YES, describe existing wildlife use and habitat classification using "Ecological Communities of New York State." at http://www.dec.ny.gov/animals/29392.html.
4. Will pesticides, rodenticides or herbicides be used during construction? ☐ Yes ☒ No

   If YES, estimate quantity, area and duration of application.
5. Will additional lighting be installed? ☐ Yes ☒ No

   If YES and near existing open space or natural areas, what measures would be taken to reduce light penetration into these areas?

E. SURFACE COVERAGE AND CHARACTERISTICS

(describe the following for both the existing and proposed condition):

	Existing Condition	Proposed Condition
1. *Surface area:*		
Roof:	20,702 sf	18,178 sf
Pavement/walkway:	2,500 sf (estimated)	TBD - some portion of front yard and courtyard [5,524 sf total] (see Other)
Grass/softscape:	500 sf (estimated)	TBD - some portion of front yard and courtyard [5,524 sf total] (see Other)
Other (describe):	0 sf	Front yard and courtyard would be a combination of planting and hardscape
2. ***Wetland*** (regulated or non-regulated) area and classification:	0 sf	0 sf
3. ***Water surface area:***	0 sf	0 sf

4. ***Stormwater management*** (describe):

Existing – how is the site drained?

Combined Sewer

Proposed – describe, including any infrastructure improvements necessary off-site:

Combined Sewer