147-14 Northern Boulevard Rezoning Environmental Assessment Statement

CEQR Number: 23DCP025Q

Prepared For:
147-149 LLC

Prepared By:
Environmental Studies Corporation

Lead Agency:
NYC Dept. of City Planning

December 12, 2025

147-14 Northern Boulevard Rezoning
Environmental Assessment Statement
CEQR No.: 23DCP025Q

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Section I – EAS Form

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* 147-14 Northern Boulevard

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency) 23DCP025Q	BSA REFERENCE NUMBER (if applicable)
ULURP REFERENCE NUMBER (if applicable) 220415ZMQ; N220416ZRQ	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Dept. of City Planning			NAME OF APPLICANT 147-149 LLC		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shellooe, AICP, Director			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Hiram Rothkrug, ESC, Inc.		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 55 Watermill Lane		
CITY New York	STATE NY	ZIP 10271	CITY Great Neck	STATE NY	ZIP 11201
TELEPHONE 212-720-3328	EMAIL sshellooe@planning.nyc.gov		TELEPHONE	EMAIL hrothkrug@environmentalstudiescorp.com	

5. *Project Description*

147-149 LLC, (the "Applicant") seeks a zoning map amendment to rezone an R5 district with a C1-2 commercial overlay. The amendment would remove the existing C1-2 commerical overlay and map an R7X district with a C2-3 commercial overlay on Block 5016, Lots 18, 27, 33, 39 and portions of (p/o) Lot 47. The Applicant also seeks a zoning text amendment to establish a Mandatory Inclusionary Housing ("MIH") Area coterminous to the area being rezoned to an R7X/C2-3 district (with both Options 1 and 2 being mapped). An additional zoning text amendment would also modify the boundaries of the Transit Zone. The zoning map amendment and the two zoning text amendments are collectively referred to as the "Proposed Actions".

The Proposed Actions would affect an area that consists of Block 5016, Lots 18, 27, 33, 39, 47 and portions of Lots 7 and 11. These lots are collectively referred to as the "Project Area".

With the approval of the Proposed Actions, the Applicant intends to develop two eleven-story buildings; Building A and Building B. For the purpose of presenting a conservative analysis, some sections of this EAS assume the two buildings would be developed at the maximum allowable height of 140 Feet (14 Stories).

On "Projected Development Site 1" (Lots 18, 27, and p/o 47), Building A would contain a 253,363 gsf (165,215 zsf) mixed-use building. This building would contain 179,401 gsf (142,210 zsf) of residential area (190 dwelling units), 26,872 gsf (17,615 zsf) of commercial area and 5,390 gsf (5,390 zsf) of community facility area (FAR 6.0). In addition to residential, community facility and commercial uses, 139 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels. Of the 190 dwelling units, between 48 and 57 units would be affordable pursuant to MIH.

On "Projected Development Site 2" (Lot 33,39, and p/o 47), Building B would contain a 258,176 gsf (169,068 zsf) mix-used building. This building would contain 182,448 gsf (145,830 zsf) of residential area (199 dwelling units), 27,848 gsf (18,160 zsf) of commercial area, and 5,078 gsf (5,078 zsf) of community facility area. In addition to residential, community facility and commercial uses, 141 accessory parking spaces would be provided in an attended garage on

cellar and subcellar levels. Of the 199 dwelling units, between 50 and 60 units would be affordable pursuant to MIH.

Development is not anticipated to occur on the portions of Lots 7 and 11 affected by the Proposed Actions.

Project Location

BOROUGH	COMMUNITY DISTRICT(S)	STREET ADDRESS
Queens	7	147-14 Northern Blvd.
TAX BLOCK(S) AND LOT(S) Queens Block 5016 Lots 18, 27, 33, 39, 47 and portions of Lots 7 and 11		ZIP CODE 11103

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Lots fronting Northern Boulevard between 147th -149th Street

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY	ZONING SECTIONAL MAP NUMBER
R5/C1-2	10c

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

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

- ☐ CITY MAP AMENDMENT
- ☒ ZONING MAP AMENDMENT
- ☒ ZONING TEXT AMENDMENT
- ☐ SITE SELECTION—PUBLIC FACILITY
- ☐ HOUSING PLAN & PROJECT
- ☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

- ☐ ZONING CERTIFICATION
- ☐ ZONING AUTHORIZATION
- ☐ ACQUISITION—REAL PROPERTY
- ☐ DISPOSITION—REAL PROPERTY
- ☐ OTHER, explain:

- ☐ CONCESSION
- ☐ UDAAP
- ☐ REVOCABLE CONSENT
- ☐ FRANCHISE

***Board of Standards and Appeals*:** ☐ YES ☒ NO

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

- ☐ LEGISLATION
- ☐ 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
- ☒ TAX MAP
- ☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

- ☒ ZONING MAP
- ☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)

- ☒ SANBORN OR OTHER LAND USE MAP

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 118,389

Roads, buildings, and other paved surfaces (sq. ft.): 118,389

Waterbody area (sq. ft) and type:

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): 511,539

NUMBER OF BUILDINGS: 2

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 253,363 ; 258,176

HEIGHT OF EACH BUILDING (ft.): 125; 125 NUMBER OF STORIES OF EACH BUILDING: 11; 11

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: 54,644

The total square feet not owned or controlled by the applicant: 22,000

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: 54,644 sq. ft. (width x length) VOLUME OF DISTURBANCE: 1,639,320 (Area X 30ft) cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 54,644 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.)	361,849	54,720	10,468	
Type (*e.g.,* retail, office, school)	389 units	Retail	Medical Office	

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 1,070 NUMBER OF ADDITIONAL WORKERS: 189

Provide a brief explanation of how these numbers were determined: 389 D.U. * 2.75 (Average household size of renter occupied units in the Murray Hill NTA, 2020 Census) ; 1 worker/ 425 sf medical office; 3 worker per 1,000 sf commerical

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:

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2029

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 36

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO IF MULTIPLE PHASES, HOW MANY?

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: The Applicant's Proposed Development would be built in a single phase, over a 36-month period spanning from Q2 2026 to Q2 2029

10. *Predominant Land Use in the Vicinity of the Project* (check all that apply)

☒ RESIDENTIAL ☐ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☐ OTHER, specify:

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?	☐	☒
○ 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?	☐	☒
○ If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 200 or more residential units?	☒	☐
○ Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
○ Directly displace more than 500 residents?	☐	☒
○ Directly displace more than 100 employees?	☐	☒
○ Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ 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		
○ **Early Childhood Programs:** 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)	☐	☒
○ **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)	☒	☐
○ **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)	☐	☒
○ **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 project change or eliminate existing open space?	☐	☒
(b) Would the project generate more than 200 additional residents or 500 additional employees?	☒	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☐	☒
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		

	YES	NO
(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 LPC Letter 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?	☐	☒
○ 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?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Protection Plan Project Tracking Form, and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☒	☐
(b) Would the proposed project introduce new activities or processes using hazardous materials and increase the risk of human or environmental exposure?	☒	☐
(c) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(d) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in the Hazardous Materials Appendix (including nonconforming uses)?	☒	☐
(e) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(f) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(g) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☒	☐
(h) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☒	☐
(i) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Phase I Report	☒	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? YES	☒	☐
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 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?	☐	☒

	YES	NO
(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): 13,482		
○ 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): 34.2 BBTUs		
(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:		
○ 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.*	☐	☒
○ Would the proposed project result in more than 200 subway/rail, bus trips, or 50 Citywide Ferry Service ferry trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction), 200 subway/rail trips per station or line, or 25 or more Citywide Ferry Service ferry trips on a single route (in one direction), or 50 or more passengers at a Citywide Ferry Service landing?	☐	☐
○ 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, or Citywide Ferry Service landing?	☐	☒
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?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☐	☒
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
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 114 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed 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?	☐	☒
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		

	YES	NO
preliminary analysis, if necessary.		
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 EAS		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☒	☐
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☒	☐
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☒	☐
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ 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.		
As the Proposed Development is anticipated to result in a construction period spanning over 24 months (the Proposed Development would be developed in a single phase over 32 months), a preliminary construction analysis is warranted. See the "Construction" section of this EAS.		

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
Brian Kintish, Environmental Studies Corp	12/12/25

SIGNATURE Brian Kintish

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).

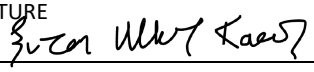
☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. 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
Deputy Director, Environmental Assessment and Review Division	City Planning Commission
NAME	DATE
Evren Ulker-Kacar, AICP	January 2, 2026

SIGNATURE



NEGATIVE DECLARATION

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS. The applicant, 147-149 LLC, seeks a zoning map amendment to rezone an existing R5 district with a C1-2 commercial overlay to an R7X district with a C2-3 commercial overlay and an R5 district with no commercial overlay affecting Queens Block 5016, Lots 18, 27, 33, 39, and 47 and portions of Lots 7 and 11 (the "Rezoning Area"), as well as zoning text amendments to establish a Mandatory Inclusionary Housing ("MIH") area coterminous to the Rezoning Area (collectively, the "Proposed Actions"). . The Proposed Actions would facilitate the development of two 11-story buildings: Project Development Site 1 (Lots 18, 27, and p/o 47) would contain 253,363 gross square feet (gsf) consisting of 179,401 gsf of residential area comprising 190 dwelling units (DUs), 26,872 gsf of commercial area, 5,390 of community facility area, and 139 accessory parking spaces on the cellar and subcellar levels. 20-30% (38-57) of the DUs would be permanently affordable pursuant to MIH depending on the option selected. Projected Development Site 2 (Lots 33, 39, and p/o 47) would contain 258,176 gsf consisting of 182,448 gsf of residential space comprising 199 DUs, 27,848 gsf of commercial area, 5,078 gsf of community facility area, and 141 accessory parking spaces on the cellar and subcellar levels. 20-30% (40-60) of the DUs would be permanently affordable pursuant to MIH depending on the option selected.

The Proposed Actions would not introduce land uses different from those in the surrounding study area, nor would they result in a concentration of residential uses dissimilar from the study area. Commercial retail and community facility uses on the development sites would be consistent with the uses in the surrounding area. Further, while the Proposed Actions would result in a change to the underlying zoning, the newly mapped district would not introduce new uses and would result in the development of buildings similar in height and density to existing buildings in the study area. Finally, the Proposed Actions would not conflict with any relevant public policies and would result in the development of dense mixed-use, mixed income buildings, consistent with relevant public policy goals. The Proposed Actions would not result in significant adverse impacts to land use, zoning, or public policy.

Community Facilities and Services

A detailed analysis related to community facilities and services is included in this EAS. The Proposed Actions would not directly affect any community facilities or result in indirect effects to public high schools, early childhood programs, libraries, police, fire, or medical services as a result of increased residential population. In the With-Action condition, Community School District (CSD) 25, Sub-district 2 middle schools would operate at above 100 percent utilization, though elementary schools would remain below 100 percent. The Proposed Actions would result in the introduction of 74 elementary school students and 25 intermediate school students, both which are below the thresholds of 100 elementary schools students or 100 intermediate school students above 100% utilization that would indicate a significant adverse impact. As a result, the Proposed Actions would not result in a significant adverse impact related to community facilities.

Open Space

A detailed analysis related to open space is included in this EAS. In the With-Action condition, the open space ratio (OSR) for the ½-mile radius residential study area would be 0.109, which would be a 2.7% decrease compared to the No-Action condition. In the With-Action condition, the active OSR would decrease by 2.6% and the passive OSR would decrease by 2.9%. As outlined in the 2021 CEQR Technical Manual, these decreases generally indicate that a significant adverse open space impacts could occur. However, as described in the qualitative open space analysis in the EAS, the development sites would incorporate private open space and there are numerous open space resources just outside of the ½-mile study area, including Bowne Park, Hart Playground, Leavitt Park, and Colden Playground. Given the proximity of these resources to the study area, as well as the inclusion of private open space on the development site, the Proposed Actions would not result in a significant adverse impact related on open space resources.

Shadows

A detailed analysis related to shadows is included in this EAS. A screening analysis concluded that the Proposed Actions would result in incremental shadows on one sunlight sensitive resource, the Voelker Orth Museum, on the May 6th and June 21st analysis days. Incremental shadows cast on May 6th would fall on the Voelker Orth Museum's façade from 5:14 PM until 5:18 PM, for a total duration of four minutes. Incremental shadows on the June 21st analysis day would be cast on the museum from 5:08 PM until 6:01 PM, for a total duration of 53 minutes. These shadows would move from east to west and cover the building's roof and eastern façade. Shadows cast by the Proposed Actions would only affect the resource for a limited period in the evening, outside of the hours of operation of the museum. These shadows are not expected to impact public use or enjoyment of the resource. As a result, the Proposed Actions would not result in a significant adverse shadows impact.

Urban Design and Visual Resources

A detailed analysis related to urban design and visual resources is included in this EAS. The Proposed Actions would create additional density and would allow for greater maximum height in an area along a busy commercial corridor, though the actions would not introduce new building types or uses. Instead, the Proposed Actions would introduce developments with similar heights and bulks to those found in the surrounding study area. The development facilitated by the Proposed Actions would not alter block forms, street patterns, or street hierarchies and would not affect public view corridors to notable features or buildings. As a result, no significant adverse impacts related to urban design and visual resources would occur.

Project Name: 147-14 Northern Boulevard Rezoning
CEQR # 23DCP025Q
SEQRA Classification: Unlisted

Construction
A detailed analysis related to Construction is included in the EAS. Construction associated with the two Projected Development Sites would adhere to the applicable laws, regulations, and building codes that govern construction in New York City. As detailed in the construction assessment in the EAS, the proposed actions 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. The applicant will enter a Restrictive Declaration requiring the implementation of project components related to the environment (PCREs) that would preclude any potential impacts to air quality or noise related to construction activities, including emission control measures, use of specified lower noise equipment and a construction noise barrier. With these measures in place, the proposed actions would not result in construction-period significant adverse impacts.

Disadvantaged Communities Assessment
The EAS includes an assessment of effects on Disadvantaged Communities (DAC). The Project Area is located within Queens Census Tract 1163, which is identified as a DAC with comparatively lower burdens and vulnerabilities according to New York State Department of Environmental Conservation's Disadvantaged Community Assessment Tool (DCAT). As the CEQR Technical Manual has not been updated to include guidance for an assessment of effects of DACs, the SEQRA Environmental Assessment Form (EAF) has been consulted for guidance for this analysis. The Proposed Actions would not result in significant adverse impacts in any technical areas analyzed in the EAS, including land use, zoning, and public policy, open space, shadows, historic and cultural resources, hazardous materials, urban design and visual resources, transportation, air quality, noise, neighborhood character, and construction. Based on this assessment, the Proposed Actions would not disproportionately affect disadvantaged communities, nor would they cause or increase a disproportionate pollution burden on disadvantaged communities.

Hazardous Materials, Air Quality, and Noise
An (E) designation (E-765) related to hazardous materials, air quality, and noise would be established as part of the approval of the Proposed Actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The hazardous materials, air quality, and noise analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to hazardous materials, air quality, or noise.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Jameson Mitchell at +1 212-720-3422.

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3493
NAME Evren Ulker-Kacar, AICP	DATE 1/2/2026
SIGNATURE	

TITLE	
Chair, City Planning Commission	
NAME Daniel R. Garodnick	DATE 1/5/2026
SIGNATURE	

Project Name: 147-14 Northern Boulevard Rezoning
CEQR # 23DCP025Q
SEQRA Classification: Unlisted

Determination of Significance Appendix

The Proposed Action(s) were determined to have the potential to result in changes to development on the following site(s):

Development Site	Borough	Block and Lot
Projected Development Site 1	Queens	Block 5016, Lots 18, 27, and p/o 47
Projected Development Site 2	Queens	Block 5016, Lots 33, 39, and p/o 47

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality, and noise an (E) designation (**E-765**) would be established as part of approval of the Proposed Actions as described below:

Block and Lot	Hazardous Materials	Air Quality	Noise
Block 5016, Lots 18, 27	X	X	X
Block 5016, p/o Lot 47	X		X
Block 5016, Lots 33, 39	X	X	X

Hazardous Materials

The (E) designation requirements applicable to **Projected Development Sites 1 and 2** for hazardous materials would apply as follows:

Task 1-Sampling Protocol

The applicant submits to OER, for review and approval, a Phase I of the site along with a soil, groundwater and soil vapor testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of samples should be selected to adequately characterize the site, specific sources of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2-Remediation Determination and Protocol

A written report with findings and a summary of the data must he submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed.

A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse

impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.

Air Quality

The (E) designation requirements for air quality would apply as follows:

Block 5016, Lots 18 and 27 : Any new residential, commercial, or community facility development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC), and hot water system(s), ensure that the stack is located at the building's highest level at a minimum of 155 feet above grade, and that the stack is located at least 120 feet from the eastern lot line facing 149th Street to avoid any potential significant adverse air quality impacts.

Block 5016, Lots 33 and 39 : Any new residential, commercial, or community facility development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC), and hot water system(s), ensure that the stack is located at the building's highest level at a minimum of 155 feet above grade, and that the stack is located at least 120 feet from the western lot line facing 147th Street to avoid any potential significant adverse air quality impacts.

Noise

The (E) designation requirements for noise would apply as follows:

Block 5016, Lots 18, 27, and p/o 47 (Projected Development Site 1): In order to ensure an acceptable interior noise environment, future residential/commercial office/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on the facades facing Northern Boulevard and the facades facing 147th Street within 50 feet of Northern Boulevard and the facades facing 149th Street within 50 feet of Northern Boulevard to maintain an interior L10 noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial office uses as illustrated in the EAS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 5016, Lots 33, 39 and p/o 47 (Projected Development Site 2): In order to ensure an acceptable interior noise environment, future residential/commercial office/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on the facades facing Northern Boulevard and the facades facing 147th Street within 50 feet of Northern Boulevard and the facades facing 149th Street within 50 feet of Northern Boulevard to maintain an interior L10 noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial office uses as illustrated in the EAS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Section II - Project Description

Project Description

Proposed Actions

147-149 LLC, (the "Applicant") seeks a zoning map amendment and zoning text amendments to facilitate the development of a site located in in the Flushing section of Queens, Community District 7. The Applicant seeks the following actions:

1. A zoning map amendment to rezone an R5 district with a C1-2 commercial overlay. The amendment would remove the C1-2 commercial, and map an R7X district with a C2-3 commercial overlay on Queens Block 5016, Lots 18, 27, 33, 39, and 47; and

2. A zoning text amendment pursuant to Appendix F to establish a Mandatory Inclusionary Housing ("MIH") Area coterminous to the area being rezoned to an R7X/C2-3 district.

Project Area

The actions described above (collectively the "Proposed Actions") affect an area that is bound by the Northern Boulevard to the north, 149th Street to the east, Block 5016, Lots 7 and 11 to the south and 147th Street to the west. The Project Area consists of Block 5016, Lots 18, 27, 33, 39, 47 and portions of Lots 7 and 11. The area described above is referred to as the "Project Area". The approval of the Proposed Actions would facilitate development within the Project Area.

The Applicant does not own Queens Block 5016, Lot 7 nor 11 although portions of these lots are within the Project Area. These lots are currently under separate ownership and contain medium density residential buildings (see Reasonable Worst-Case Development Scenario – Existing Conditions below).

The portion of the Project Area that is owned by the Applicant (Queens Block 5016, Lots, 18, 27, 33, 39 and 47 are referred to as "Projected Development Site 1" (Lots 18, 27, and

portions of Lot 47) and "Projected Development Site 2" (Lot 33, 39, and portions of Lot 47). The approval of the Proposed Actions would facilitate development on these Projected Development Sites only (See Reasonable Worst-Case Development Scenario below).

Proposed Development

With the approval of the Proposed Actions, the Applicant intends to develop two eleven-story buildings. On Projected Development Site 1, Building A would contain a 253,363 gsf (165,215 zsf) mixed-use building. This building would contain 179,401 gsf (142,210 zsf) of residential area (190 dwelling units), 26,872 gsf (17,615 zsf) of commercial area and 5,390 gsf (5,390 zsf) of community facility area (total FAR 6.0). Of these units, between 38 and 57 would be reserved as moderate to low-income units pursuant to the requirements of Mandatory Inclusionary Housing (MIH). MIH Options 1, 2, and 3 would be mapped on the Project Area as part of the Proposed Actions. The final compliance with MIH would be determined through the ULURP process. In addition to residential, community facility and commercial uses, 139 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels.

On Projected Development Site 2, Building B would contain a 258, 176 gsf (169,068 zsf) mix-used building. This building would contain 182,448 gsf (145,830 zsf) of residential area (199 dwelling units), 27,848 gsf (18,160 zsf) of ground-floor commercial area, and 5,078 gsf (5,078 zsf) of community facility area (total 6.0 FAR). Of these units, between 40 and 60 units would be reserved as moderate to low-income units pursuant to the requirements of Mandatory Inclusionary Housing (MIH). MIH Options 1, 2, and 3 would be mapped on the Project Area as part of the Proposed Actions. The final compliance with MIH would be determined through the ULURP process. In addition to residential, community facility and commercial uses, 141 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels.

Purpose and Need

The Proposed Actions are needed to facilitate the Proposed Development (described above). The current zoning does not allow for the development of moderate density residential developments on the Proposed Development Sites, nor does it require the development of affordable housing units pursuant to Mandatory Inclusionary Housing (MIH). The Proposed Development would introduce new affordable and market rate residential units to an area accessible to transit, furthering the goals of "Where We Live" and the "City of Yes" initiatives (particularly, Zoning for Housing Opportunity) introduced by Mayor Eric Adams. The creation of Transit Oriented Development (TOD) furthers the sustainability objectives laid out in the latest version of One NYC 2050.

Analysis Year

Based on an estimated duration of six months for the pre-certification process, a seven-month Uniform Land Use Review Procedure (ULURP) and a 36-month construction period, the proposed development is expected to be complete in 2029. The Build Year, or Analysis Year, used in this EAS reflects the date when all development expected to occur with the approval of the Proposed Actions is completed and occupied. The Build Year, or Analysis Year, used in this EAS is 2029.

Reasonable Worst-Case Development Scenario (RWCDS)

Discretionary actions sometimes permit a range of project characteristics, or development scenarios, to occur even though the action may be sought in order to facilitate a specific development. From the range of possible scenarios that are considered reasonable and likely, the scenario with the worst environmental consequences is chosen to present a conservative analysis. This development scenario is considered to be the Reasonable Worst-Case Development Scenario (RWCDS). By analyzing the potential for adverse impacts of the RWCDS the EAS ensures that, regardless of which scenario occurs, its impacts would be no worse than those considered in the environmental review. The EAS analyzes the incremental differences between the future with approval of the Proposed Actions (where the RWCDS occurs), the "With-Action condition" and the future without the approval of the Proposed Actions (where the RWCDS does not occur), the "No-Action condition"

Development Sites

As discussed above, the Proposed Actions would affect all of the lots within the Project Area. The Project Area includes all of Queens Block 5016, Lots, 18, 27, 33, 39, and 47. Additionally, the Project Area includes small portions of Block 5016 Lots 7 and 11. The Applicant does not own these lots and development is not expected to occur on these lots. Queens Block 5016, Lots, 18, 27, 33, 39, and 47 are controlled by the applicant and the proposed development described above is expected to be built on "Projected Development Site 1" (Lots 18, 27, and portions of Lot 47) and "Projected Development Site 2" (Lot 33, 39, and portions of Lot 47).

Existing Conditions

As discussed above the Project Area includes Block 5016, Lots 18, 27, 33, 39, 47 ("Projected Development Site 1 and Projected Development Site 2") as well as portions of Lots 7 and 11 which are not applicant-owned. The parcels that would comprise Projected Development Sites 1 and 2 are currently developed with a series of single-story buildings.

Block 5016, Lot 18 is a corner lot at 147th Street and Northern Boulevard which contains a 1,984 sf gas station (0.14 FAR). Lot 18 was the subject of an approval by the Board of Standards and Appeals (BSA) in the 1950s. This approval was renewed every 10 years until 2008 under 1098-83-BZ. The term of the most recent approval expired April 3, 2014.

Block 5016, Lot 27 contains a single-story, 6,330 sf commercial building (0.5 FAR).

Block 5016, Lot 33 contains a single-story, 7,800 sf commercial building (0.65 FAR).

Block 5016, Lot 39 contains a single-story, 16,600 sf commercial building (1.2 FAR).

Block 5016, Lot 47 is a narrow irregular-shaped sliver of land with approximately 2,000 square feet along the rear of the property. The property is vacant and contains a width of approximately 11 feet by 411 feet in length.

The remaining affected parcels (Lots 7 and 11) consist of an assemblage of six-story apartment buildings, with only the northern 50 feet of the parcels affected by the Proposed Actions. Lot 7 is developed at 1.23 FAR, while Lot 11 is developed at 3.26 FAR

This information is summarized in Table 1-Applicant Owned Properties and Table 2 - Non-Applicant Owned Properties below.

Table 1 - Applicant Owned Properties

Block	Lot	Projected Development Site	Lot Area (sf)	Land Use	# of Floors	Gross FA (sf)	Res. Floor Area	Com. Floor Area	Manu-Indust. Floor Area	Res. Unit	FAR
5016	18	1	14,300	Commercial (Automotive)	1	1,984	0	1,984	0	0	0.14
5016	27	1	12,546	Commercial	1	6,330	0	6,330	0	0	0.5
5016	33	2	12,000	Commercial	1	7,800	0	7,800	0	0	0.65
5016	39	2	13,800	Commercial	1	16,600	0	16,600	0	0	1.2
5016	47	1/2	2,000	Vacant	0	0	0	0	0	0	0.00

Table 2 – Non-Applicant Owned Properties

Block	Lot	Projected Development Site	Lot Area (sf)	Land Use	# of Floors	Gross FA (sf)	Res. Floor Area	Com. Floor Area	Manu-Indust. Floor Area	Res. Unit	FAR
5016	7	N/A	162,400	Residential	6	200,466	200,466	0	0	216	1.23
5016	11	N/A	26,743	Residential	6	87,223	87,223	0	0	95	3.26

Future No Action

In the future, if the Proposed Actions are not approved (the No-Action condition), no development would occur anywhere in the Project Area. As discussed above in the purpose and need section, the current R5/C1-2 zoning allows for low density commercial and residential uses. No expansion of the existing uses could occur on these sites. The existing zoning does not allow for enough additional FAR to warrant replacing the existing structures and uses.

Future With-Action

In the future, if the Proposed Actions are approved (the With-Action condition), the proposed development described above would be built on the Projected Development Sites. Although the Applicant's Proposed Development is expected to consist of two eleven story buildings, the RWCDS assumes that each building would be 140 feet in height—the maximum permitted by zoning—for conservative analysis purposes.

On Projected Development Site 1, Building A would contain 253,363 gsf (165,215 zsf) of mixed-use floor area in 14-stories (140ft). This building would contain 179,401 gsf (142,210 zsf) of residential area (190 dwelling units), 26,872 gsf (17,615 zsf) of commercial area and 5,390 gsf (5,390 zsf) of community facility area (total FAR 6.0). Of these units, between 38 and 57 would be reserved as moderate to low-income units pursuant to the requirements of Mandatory Inclusionary Housing (MIH). MIH Options 1, 2, and 3 would be mapped on the Project Area as part of the Proposed Actions. The final compliance with MIH would be determined through the ULURP process. In addition to residential, community facility and commercial uses, 139 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels.

On Projected Development Site 2, Building B would contain 258,176 gsf (169,068 zsf) of mix-used floor area in 14-stories (140ft). This building would contain 182,448 gsf (145,830 zsf) of residential area (199 dwelling units), 27,848 gsf (18,160 zsf) of ground-floor commercial area, and 5,078 gsf (5,078 zsf) of community facility area (total 6.0 FAR). Of these units, between 40 and 60 would be reserved as moderate to low-income units pursuant to the requirements of Mandatory Inclusionary Housing (MIH). Options 1, 2, and 3 would be mapped on the Project Area as part of the Proposed Actions. The final compliance with MIH would be determined through the ULURP process. In addition to residential, community facility and commercial uses, 141 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels.

As discussed above, although the Applicant's Proposed Development is expected to consist of two eleven story buildings, the RWCDS assumes that each building would be 140 feet in height—the maximum permitted by zoning—for conservative analysis

purposes. The Applicant's Proposed Development substantially maximizes the development potential within the Project Area.

Development is not expected to occur on the lots not controlled by the applicant. These lots are currently under separate ownership, and no single lot is large enough to warrant demolishing the existing structure and rebuilding. The R7X district would allow a maximum FAR of 5.0 (6.0 with inclusionary housing) however the Proposed Actions would affect less than 50% of these lots. The current density on these lots would not be changed by a large enough margin to warrant demolition and therefore redevelopment is not anticipated to occur at this location.

Table 4 -Analysis Framework below details the increment between the No-Action and the With-Action condition below. This increment is the subject of the analysis presented in Part III (Technical Analysis).

Building Heights

For assessments that consider building heights, the most conservative heights are assumed for their relevant sections with the maximum building envelope considered for assessments of Shadows and Urban Design. The building heights used for the relevant technical analyses are summarized in Table 2 below.

Table 3 – Building Heights and Height Analysis Framework

Building Height			
	Air Quality	**Shadows**	**Urban Design**
Projected Development Site 1	140 Ft	170 Ft	140 Ft

Analysis Framework Table

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Land Use				
Residential	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify the following:				
Describe type of residential structure	N/A	N/A	Multifamily	
No. of dwelling units	0	0	389	389
No. of low- to moderate-income unit	0	0	128	128
Gross floor area (sq. ft.)	0	0	361,849	361,849
Commercial	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No	
If "yes," specify the following:				
Describe type (retail, office, other)	Retail/Auto	Retail/Auto	Retail	Retail
Gross floor area (sq. ft.)	40,330	40,330	54,720	14,390
Manufacturing/Industrial	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
If "yes," specify the following:				
Type of Use	N/A	N/A	N/A	
Gross floor area (sq. ft.)	N/A	N/A	N/A	
Open storage area (sq. ft.)	N/A	N/A	N/A	
If any enclosed activities, specify:	N/A	N/A	N/A	
Community Facility	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify the following:				
Type of Use	N/A	N/A	Medical Office	
Gross floor area (sq. ft.)	N/A	N/A	10,468	10,468
Vacant Land	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes", describe:	N/A	N/A	N/A	
Publicly Accessible Open Space	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☑ No	
If "yes," specify type (mapped City, State, or Federal Parkland, wetland-mapped or otherwise known, other):	N/A	N/A	N/A	N/A
Other Land Uses	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☑ No	
If "yes," describe:	N/A	N/A	N/A	
Parking				
Garages	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify the following:				
No. of public spaces	N/A	N/A	0	
No. of accessory spaces	N/A	N/A	280	280
Operating hours	N/A	N/A		
Attended or non-attended	N/A	N/A		
Lots	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes," specify the following:				
No. of public spaces	N/A	N/A	N/A	
No. of accessory spaces	N/A	N/A	N/A	
Operating hours	N/A	N/A	N/A	
Other (includes street parking)	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
If "yes," describe:				
Population				
Residents	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	

Analysis Framework Table

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
If "yes," specify number:	0	0	1,070	1,070
Briefly explain how the number of residents was calculated:	**Based on 2.75 persons per renter occupied unit in Murray Hill Neighborhood Tabulation Area per 2020 Census**			
Businesses	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No	
If "yes," specify the following:				
No. and type	Retail/Auto	Retail/Auto	Retail/Medical	-Auto Uses
No. and type of workers by business	121 workers	121 workers	189 workers	68
No. and type of non-residents who are not workers	N/A	N/A	N/A	N/A
Briefly explain how the number of businesses was calculated:	Workers calculated based on an assumption of 1 employee per 450 sq ft for medical office and 3 employees per 1,000 sq ft retail/auto			
Other (students, visitors, concert-goers,	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If any, specify type and number:	N/A	N/A	N/A	
Briefly explain how the number was calculated:				
Zoning				
Zoning classification	R5/C1-2	R5/C1-2	R7X/C2-3	
Maximum amount of floor area that can be developed	1.25 Residential; 1.0 Commercial; 1.0 Com.Fac.	1.25 Residential; 1.0 Commercial; 1.0 Com.Fac.	6.0 Residential; 2.0 Commerical; 2.0 Com. Fac.	+4.75 Residential; +1.0 Commerical; +1.0 Com. Fac
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Residential/ Commercial/ Community Facility	Residential/ Commercial/ Community Facility	Residential/ Commercial/ Community Facility	N/A
Attach any additional information that may be needed to describe the project. If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

147-14 Northern Boulevard, Queens

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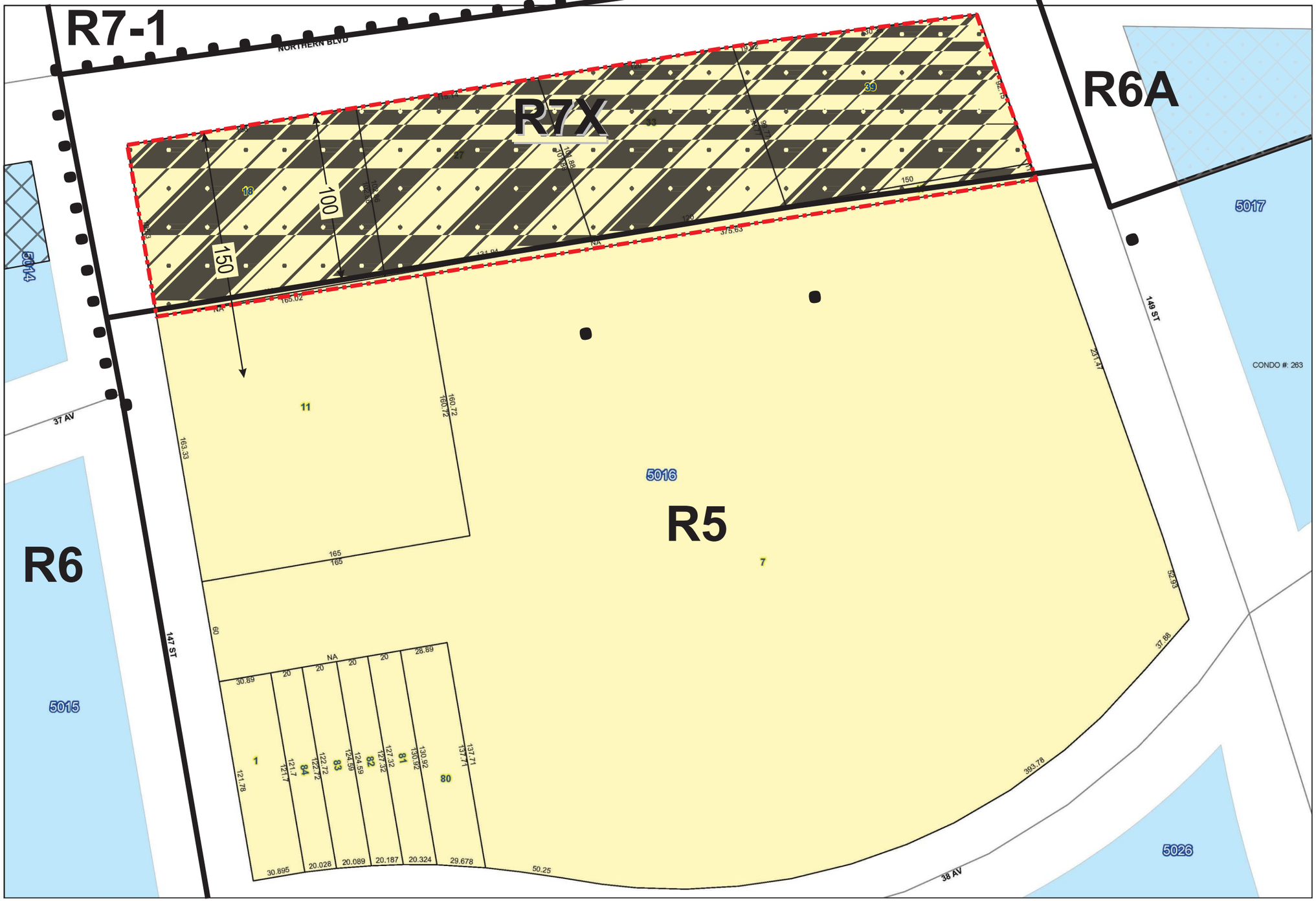
MARTHA E. STARK
COMMISSIONER

N
W E
S

NYC Digital Tax Map

Effective Date : 12-08-2008 05:16:59
End Date : Current
Queens Block: 5016



Legend

- Streets
- Miscellaneous Text
- Possession Hooks
- Boundary Lines
- Lot Face Possession Hooks
- Regular
- Underwater
- Tax Lot Polygon
- Condo Number
- Tax Block Polygon
- Development Site
- Area Proposed to be Rezoned
- Existing Zoning District Line
- Proposed Zoning District Line
- R5 — Existing Zoning District
- Existing C1-2 Overlay
- Existing C2-2 Overlay
- R7X — Proposed Zoning District
- Proposed C2-3 Overlay

Feet
0 10 20 40 60 80



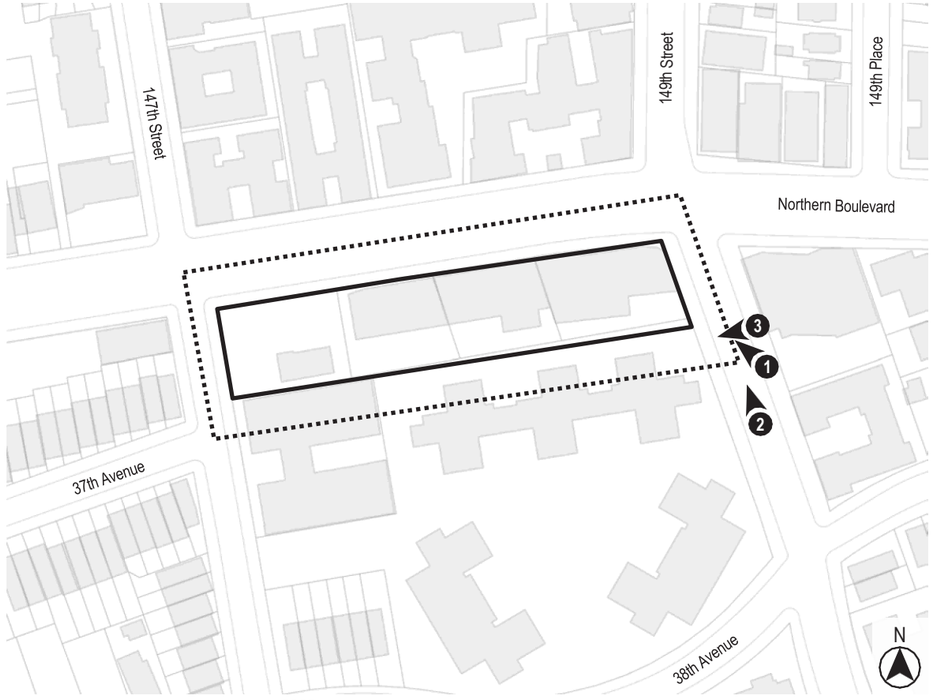
1. View of the Project Area facing northwest from 149th Street.



2. View of 149th Street facing northwest (Project Area at left).



3. View of the Project Area facing west from 149th Street.





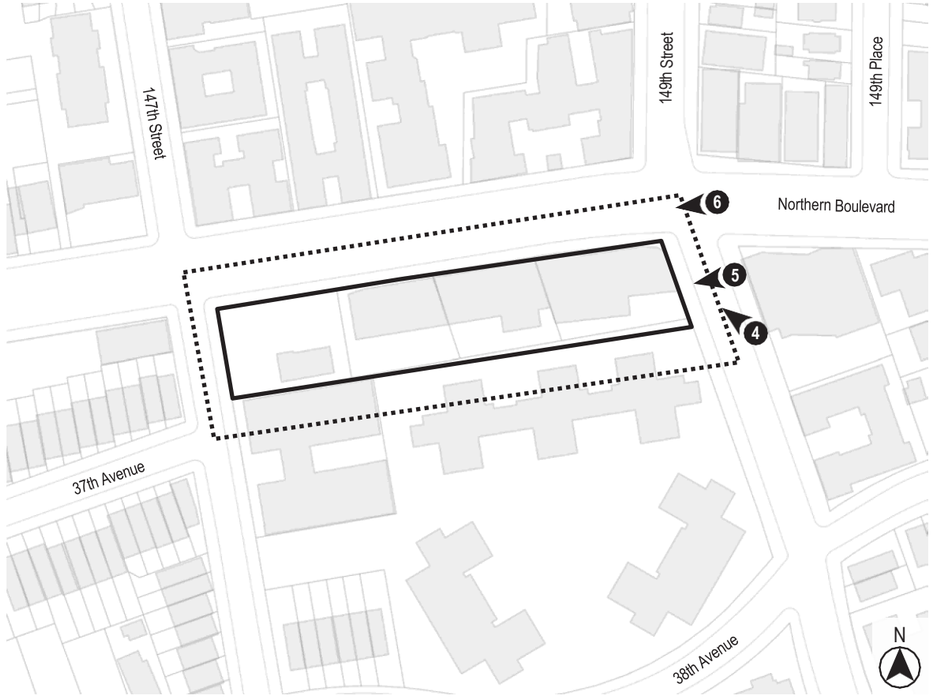
4. View of the Development Site facing northwest from 149th Street.



5. View of the Development Site facing west from 149th Street.



6. View of Northern Boulevard facing west from 149th Street (Development Site at left).





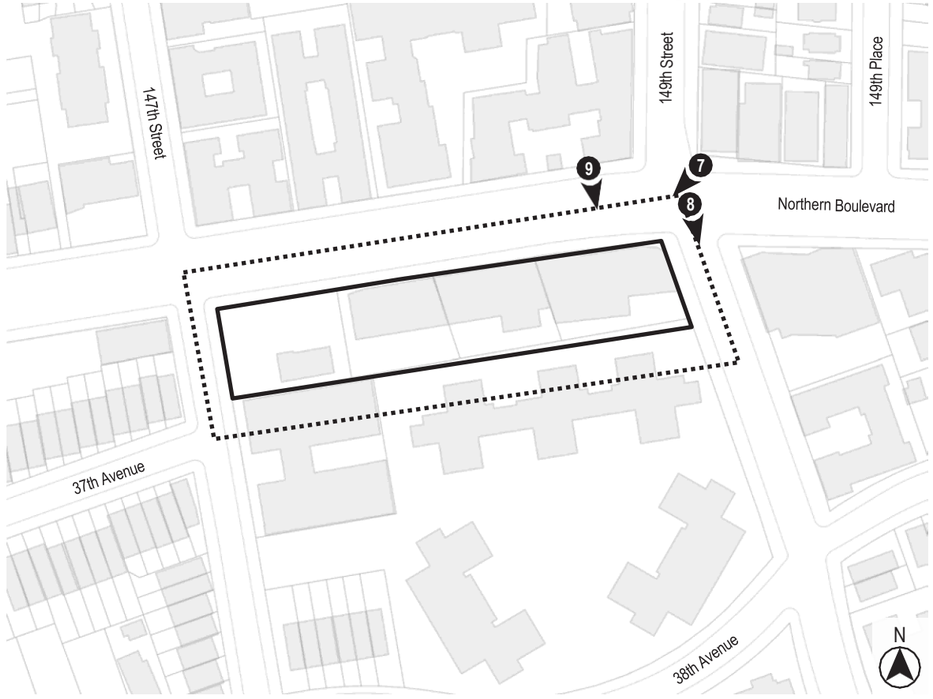
7. View of the Development Site facing southwest from the intersection of Northern Boulevard and 149th Street.



8. View of 149th Street facing south from Northern Boulevard (Development Site at right).



9. View of the Development Site facing south from Northern Boulevard.





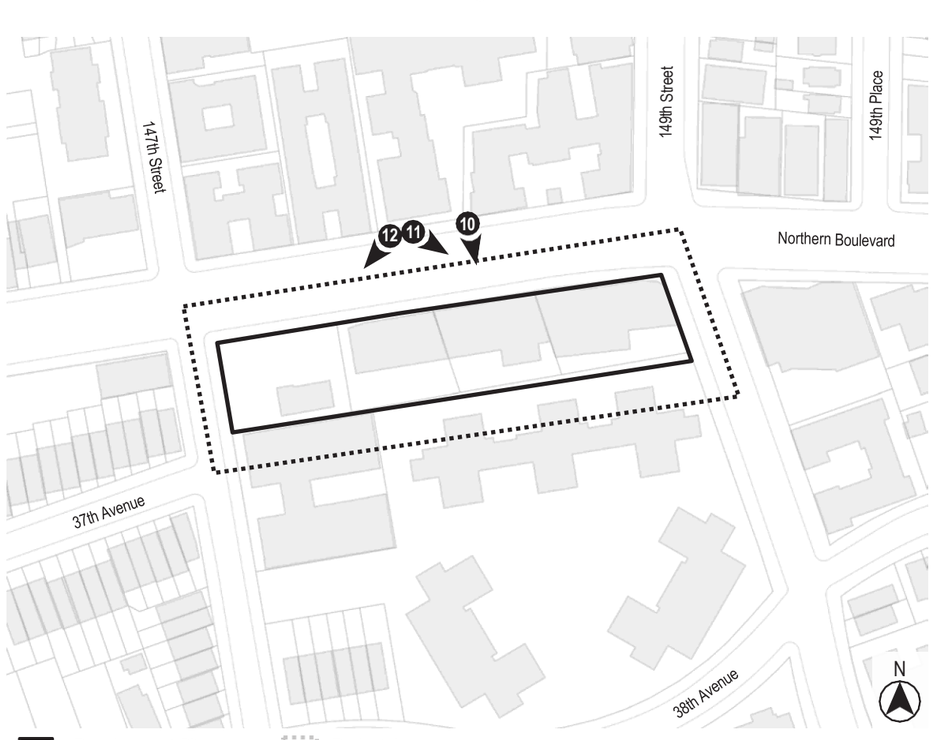
10. View of the Development Site facing south from Northern Boulevard.



11. View of the Development Site facing southeast from Northern Boulevard.



12. View of the Development Site facing southwest from Northern Boulevard.





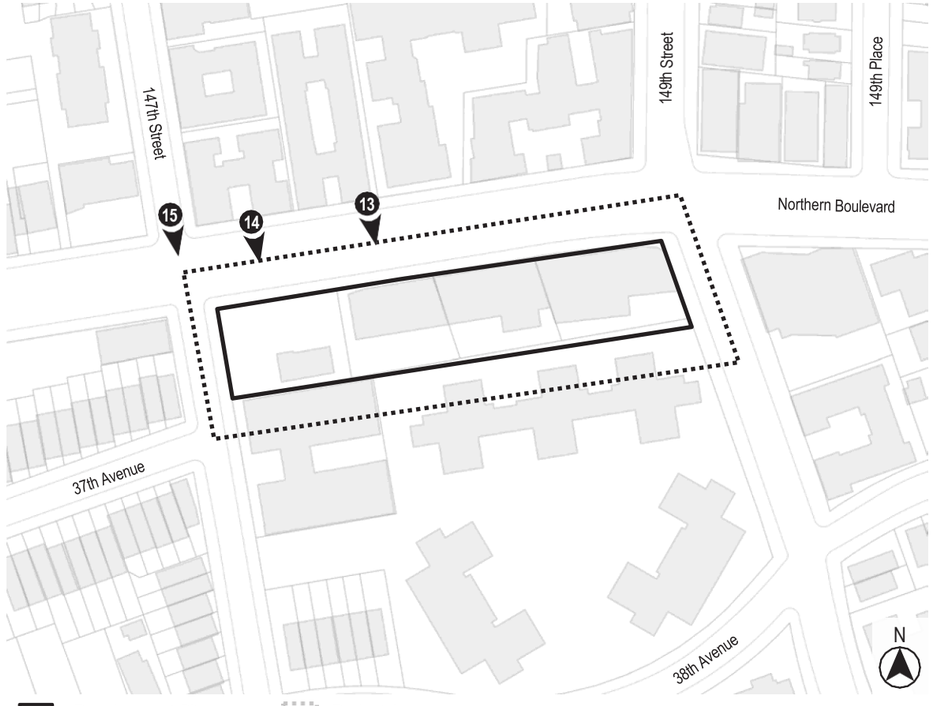
13. View of the Development Site facing south from Northern Boulevard.



14. View of the Development Site facing south from Northern Boulevard.



15. View of 147th Street facing south from Northern Boulevard (Development Site at left).



Urban Cartographics
Photographs Taken on April 20, 2022



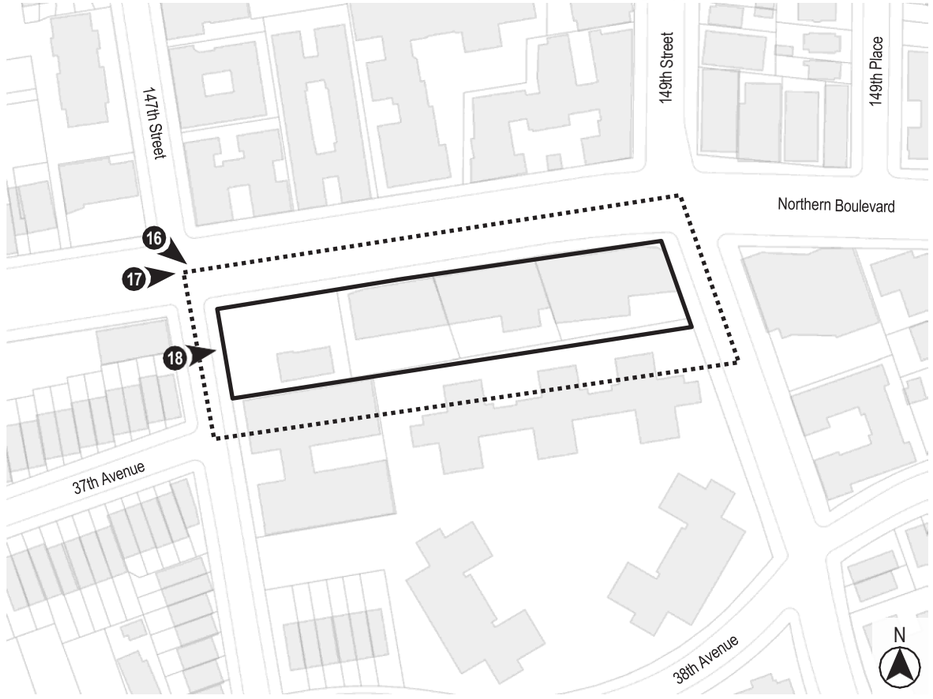
16. View of the Development Site facing southeast from the intersection of Northern Boulevard and 147th Street.



17. View of Northern Boulevard facing east from 147th Street (Development Site at right).



18. View of the Development Site facing east from 147th Street.



Urban Cartographics



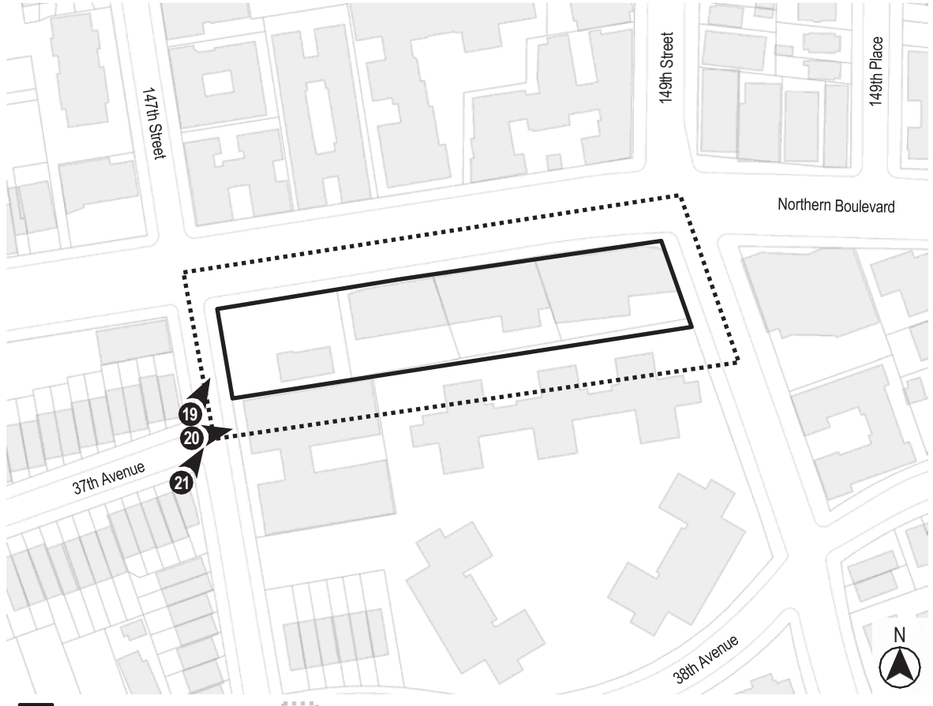
19. View of the Development Site facing northeast from 147th Street.



20. View of the Project Area facing east from 147th Street.



21. View of the Project Area facing northeast from 147th Street.





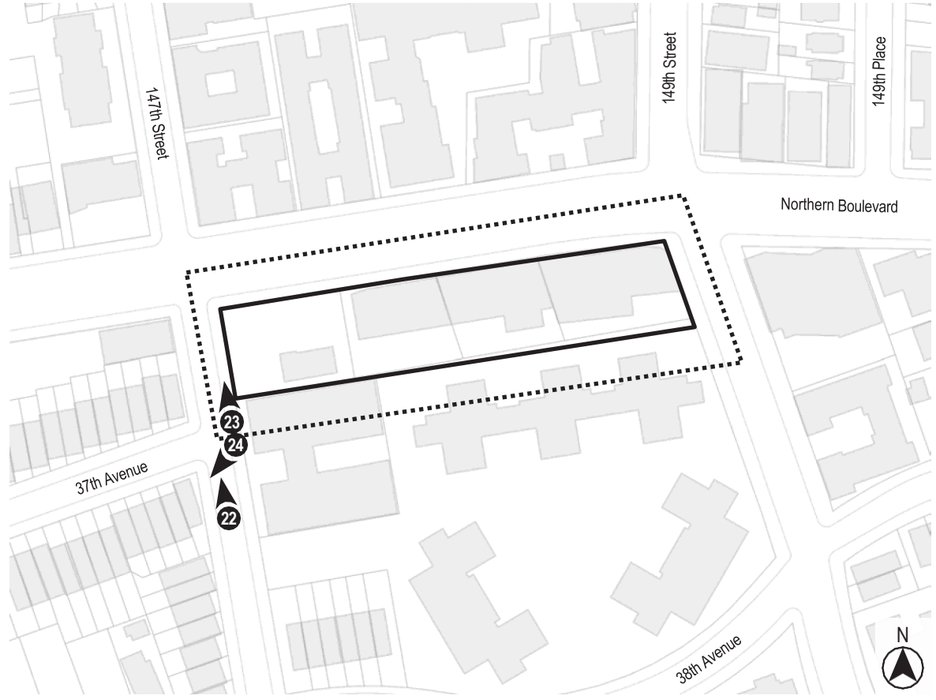
22. View of 147th Street facing north (Project Area at right).



23. View of the sidewalk along the east side of 147th Street facing north (Project Area at right).



24. View of the west side of 147th Street facing southwest from the Project Area.





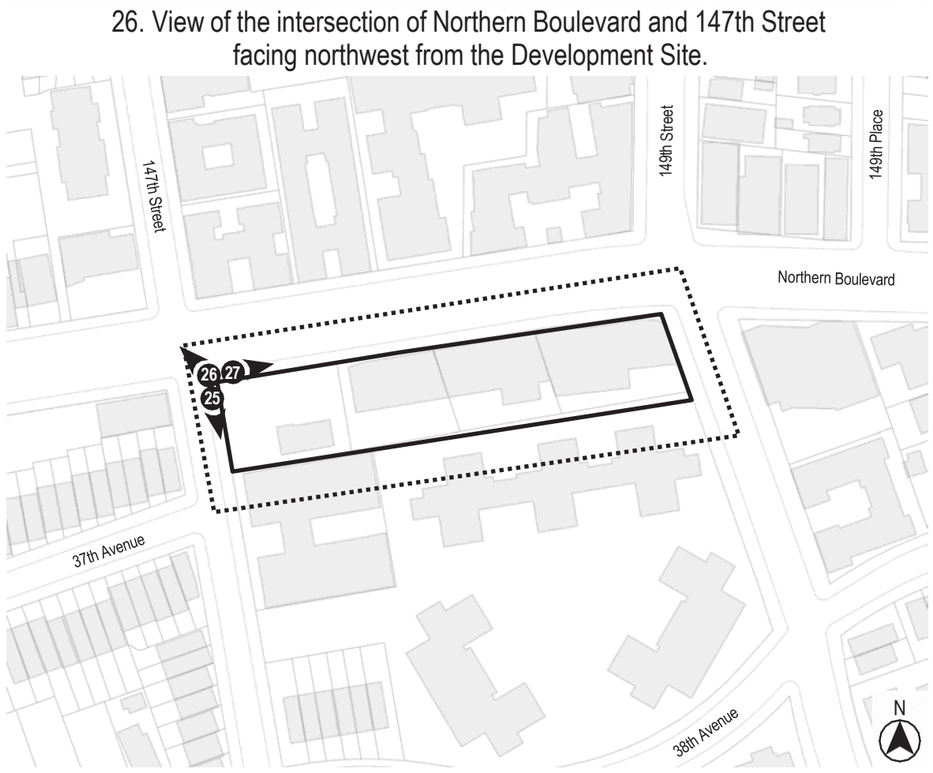
25. View of the sidewalk along the east side of 147th Street facing south from Northern Boulevard (Development Site at left).



27. View of the sidewalk along the south side of Northern Boulevard facing east from 147th Street (Development Site at right).



26. View of the intersection of Northern Boulevard and 147th Street facing northwest from the Development Site.



Urban Cartographics
Photographs Taken on April 20, 2022



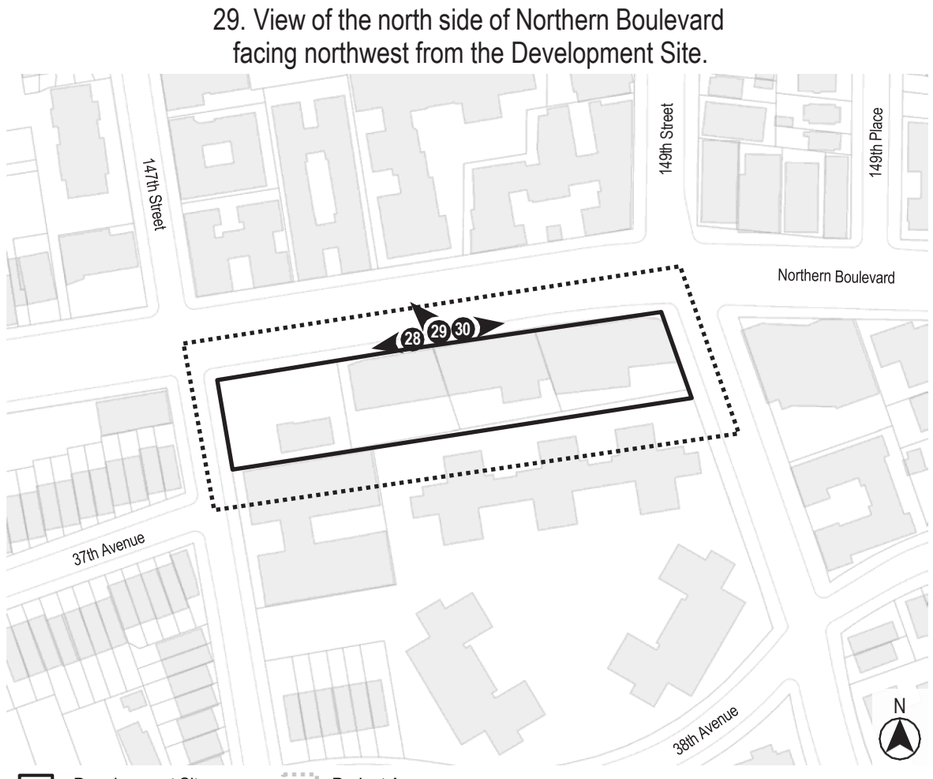
28. View of the sidewalk along the south side of Northern Boulevard facing west (Development Site at left).



30. View of the sidewalk along the south side of Northern Boulevard facing east (Development Site at right).



29. View of the north side of Northern Boulevard facing northwest from the Development Site.



Urban Cartographics
Photographs Taken on April 20, 2022



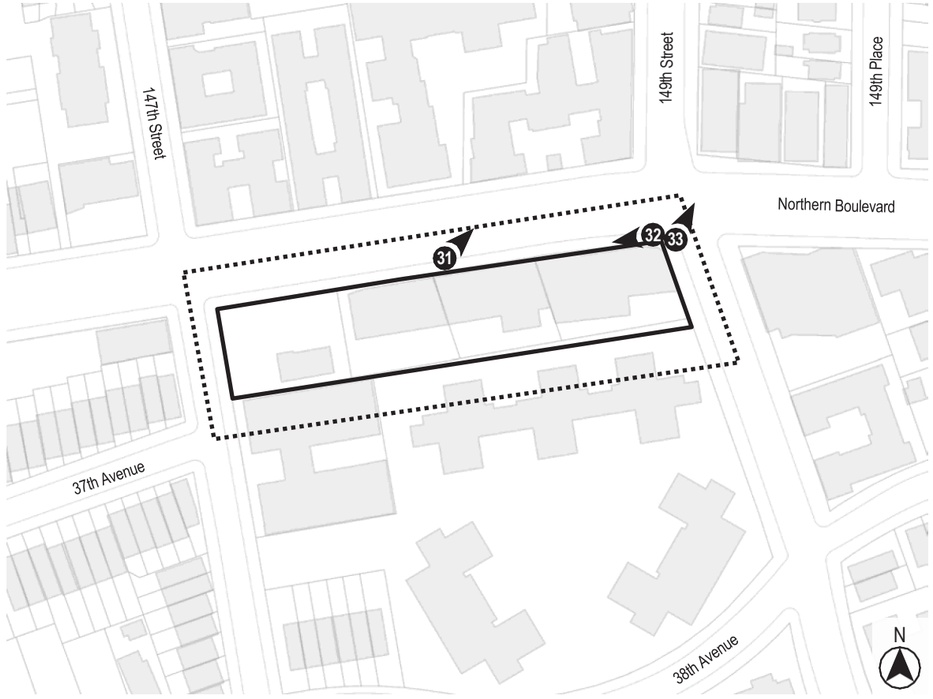
31. View of the north side of Northern Boulevard facing northeast from the Development Site.



32. View of the sidewalk along the south side of Northern Boulevard facing west from 149th Street (Development Site at left).



33. View of the intersection of Northern Boulevard and 149th Street facing northeast from the Development Site.





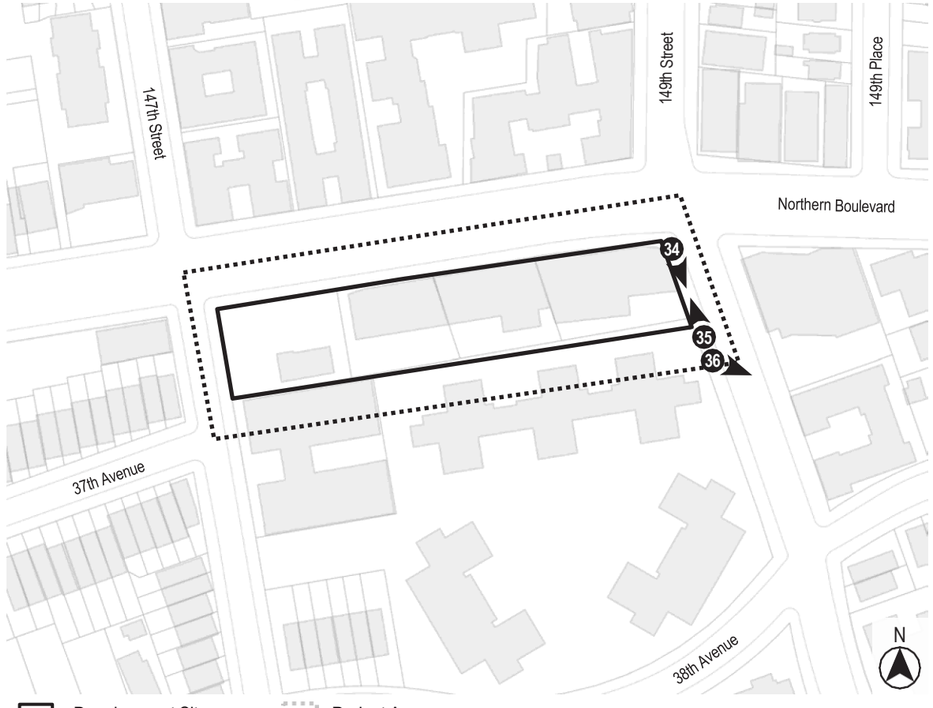
34. View of the sidewalk along the west side of 149th Street facing southeast from Northern Boulevard (Development Site at right).



36. View of the east side of 149th Street facing southeast from the Development Site.



35. View of the sidewalk along the west side of 149th Street facing northwest (Development Site at left).



Section III – Technical Analysis

- **Land Use, Zoning and Public Policy (Chapter 4)**
- **Socioeconomic Conditions (Chapter 5)**
- **Community Facilities (Chapter 6)**
- **Open Space (Chapter 7)**
- **Shadows (Chapter 8)**
- **Urban Design and Visual Resources (Chapter 10)**
- **Hazardous Materials (Chapter 12)**
- **Transportation (Chapter 16)**
- **Air Quality (Chapter 17)**
- **Noise (Chapter 19)**
- **Neighborhood Character (Chapter 20)**
- **Construction (Chapter 22)**

*The analysis areas noted above correspond to the chapter number of the CEQR Technical Manual.

4. Land Use, Zoning and Public Policy

The analysis of land use, zoning and public policy characterizes the existing conditions of the Project Area and the surrounding study area; anticipates and evaluates those changes in land use, zoning and public policy that are expected to occur independently of the proposed project; and identifies and addresses any potential impacts related to land use, zoning and public policy resulting from the project. Various sources have been used to prepare a comprehensive analysis of land use, zoning and public policy characteristics of the area, including field surveys, studies of the neighborhood, census data, and land use and zoning maps.

Land Use

Study Area

In order to assess the potential for project related impacts, the land use study area has been defined as the area located within a 400-foot radius of the site. Per the CEQR Technical Manual this is the area where land use and land use trends could be affected by the Proposed Development. This 400-foot radius is referred to as the "Study Area" and is generally bounded by the midblock 35th Avenue to the north; 150th Street to the east; Roosevelt Avenue to the South; and 146th Street to the west; (See Figure 4-1 – Land Use Map).

Existing Conditions

As discussed above, the Project Area includes Block 5016, Lots 18, 27, 33, 39, 47 ("Projected Development Site 1 and Projected Development Site 2") as well as portions of Lots 7 and 11 which are not applicant-owned. These lots contain commercial offices, local retail uses, and residential use (See RWCDS - Existing Uses).

147-14 Northern Boulevard, Queens

Area Map

Block: 5016, Lots: 7 (p/o), 11 (p/o), 18, 27, 33, 39, & 47

Project Information

- 600' Radius
- Development Site
- Area Proposed to be Rezoned

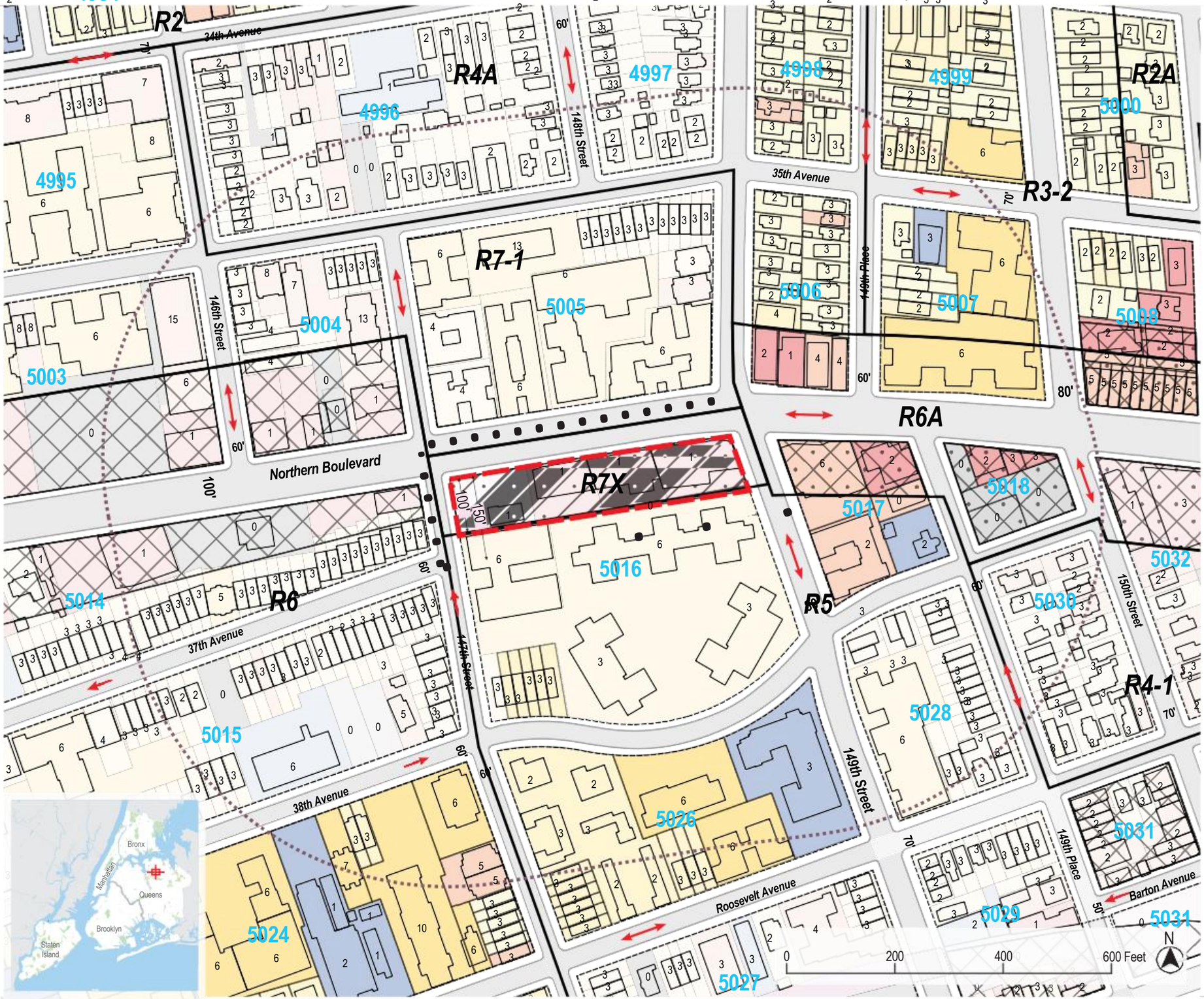
Existing Commercial Overlays & Zoning Districts

C1-1	C2-1	Zoning Districts	
C1-2	C2-2	Special Districts	
C1-3	C2-3		
C1-4	C2-4		
C1-5	C2-5		

- Subway Entries
- 5037 Block Numbers
- Property Lines
- 5 Number of Floors

Land Uses

- One & Two Family Residential Buildings
- Multi-Family Residential Buildings (Walk-up)
- Multi-Family Residential Buildings (Elevator)
- Mixed Residential & Commercial Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- No Data/Other



August 2019

Urban Cartographics

There are residential, commercial, community facility, and open space uses within the Study Area. The lots within the Study Area that have frontage on Northern Boulevard contain predominantly commercial and multifamily residential uses. Residential uses and some mixed-use commercial and residential uses are found in all portions of the Study Area. There are also a few community-facility uses located in the Study Area.

The Study Area contains a range of building types. Outside of the Northern Boulevard corridor, there are a mix of semi-detached and detached single, two, and multiple family residences. Generally, these do not exceed three floors and include side yards, and or front yards. The buildings on Northern Boulevard are also generally low-rise with most being single story commercial or mixed-use commercial and residential buildings. The majority of lots within the Study Area are occupied though a few vacant lots can be seen along Northern Boulevard.

The Study area is bisected by Northern Boulevard which runs east-west. 147th and 149th Streets both run perpendicular to Northern Boulevard and provide north-south access through the Study Area. The remainder of the streets within the Study Area are more narrow local streets that provide access to the residential areas within the Study Area.

No-Action Condition

As discussed above, if the Proposed Actions are not approved no development is anticipated to occur within the Project Area. The lots within the Project Area are anticipated to remain in their present condition (including those lots not controlled by the Applicant). As such there would be no change to the land use pattern within the Study Area.

With-Action Condition

As discussed above, with the approval of the Proposed Actions, with the approval of the Proposed Actions, the Applicant intends to develop two mixed-use buildings.

On Projected Development Site 1, Building A would contain 253,363 gsf (165,215 zsf) of mixed-use floor area in 14-stories (140ft). This building would contain 179,401 gsf (142,210 zsf) of residential area (190 dwelling units), 26,872 gsf (17,615 zsf) of commercial area and 5,390 gsf (5,390 zsf) of community facility area (total FAR 6.0). Of these units, between 38 and 57 would be reserved as moderate to low-income units pursuant to the requirements of Mandatory Inclusionary Housing (MIH). MIH Options 1, 2, and 3 would be mapped on the Project Area as part of the Proposed Actions. The final compliance with MIH would be determined through the ULURP process. In addition to residential,

community facility and commercial uses, 139 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels.

On Projected Development Site 2, Building B would contain 258,176 gsf (169,068 zsf) of mix-used floor area in 14-stories (140ft). This building would contain 182,448 gsf (145,830 zsf) of residential area (199 dwelling units), 27,848 gsf (18,160 zsf) of ground-floor commercial area, and 5,078 gsf (5,078 zsf) of community facility area (total 6.0 FAR). Of these units, between 40 and 60 would be reserved as moderate to low-income units pursuant to the requirements of Mandatory Inclusionary Housing (MIH). Both MIH Options 1, 2, and 3 would be mapped on the Project Area as part of the Proposed Actions. The final compliance with MIH would be determined through the ULURP process. In addition to residential, community facility and commercial uses, 141 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels.

The Proposed Actions do not introduce any land uses to the Study Area that are not already present in the existing condition. There are some mixed-use buildings in the Project Area, and the Proposed Action would result in the development of two buildings that are similar in size to other existing mixed-use buildings. Currently there are several multifamily apartment buildings that exceed four floors immediately adjacent to the Project Area.

Conclusion

The Proposed Actions are not anticipated to introduce land uses that are different from surrounding uses. The Proposed Actions would, result in a concentration of residential use than is similar to what is currently observed in the Study Area. The Proposed Actions would also generate new commercial retail space and community facility space. The introduction of additional local retail space and residential uses are not anticipated to lead to additional land use changes in the Study Area. The Proposed Actions are not anticipated to result in significant adverse impacts to land use within the Study Area.

Zoning

Study Area

In order to assess the potential for project related impacts, the "Zoning Study Area" has been defined as the area located within a 400-foot radius of the site. Per the CEQR Technical Manual this area is coterminous with the Land Use Study Area.

Existing Conditions

The Proposed Actions include a zoning map amendment and a zoning text amendment to rezone the Project Area from an R5/C1-2 district to an R7X/C2-3 district. All of the lots within the Project Area are located partially or wholly in this R5 /C1-2 district. The Proposed Action s would remove the commercial overlay currently mapped on portions of Lots 7 and 11, but not change the underlying R5 district.

There are several different zoning districts within the Study Area. An R3-2 district occupies the northeast corner of the Study Area (along 35th Avenue and 150th Street), an R4A district occupies the northwest corner of the Study Area (along 35th Avenue and 148th Street), an R7-1 district is immediately north of the Project Area across Northern Boulevard, an R5 district is immediately south of the Project Area, and an R6 district occupies the southwest corner of the Study Area (along 37th Avenue and 147th Street).

There have been two within the Study Area since the passage of the 1961 zoning resolution. These include the North Flushing Rezoning in 2009 (090281ZMQ) and the Amber Lantern Rezoning (880142ZMQ) in 1989.

The stated goals of the North Flushing Rezoning were to encourage new development on wide streets and reduce capacity on mid-blocks and other residential areas. The rezoning mapped new contextual zones and changes rear and side-yard requirements to ensuring that new development within the district would be contextual throughout the district. Similarly, the Amber Lantern Rezoning mapped a contextual district (R6A) along Northern Boulevard.

No-Action Condition

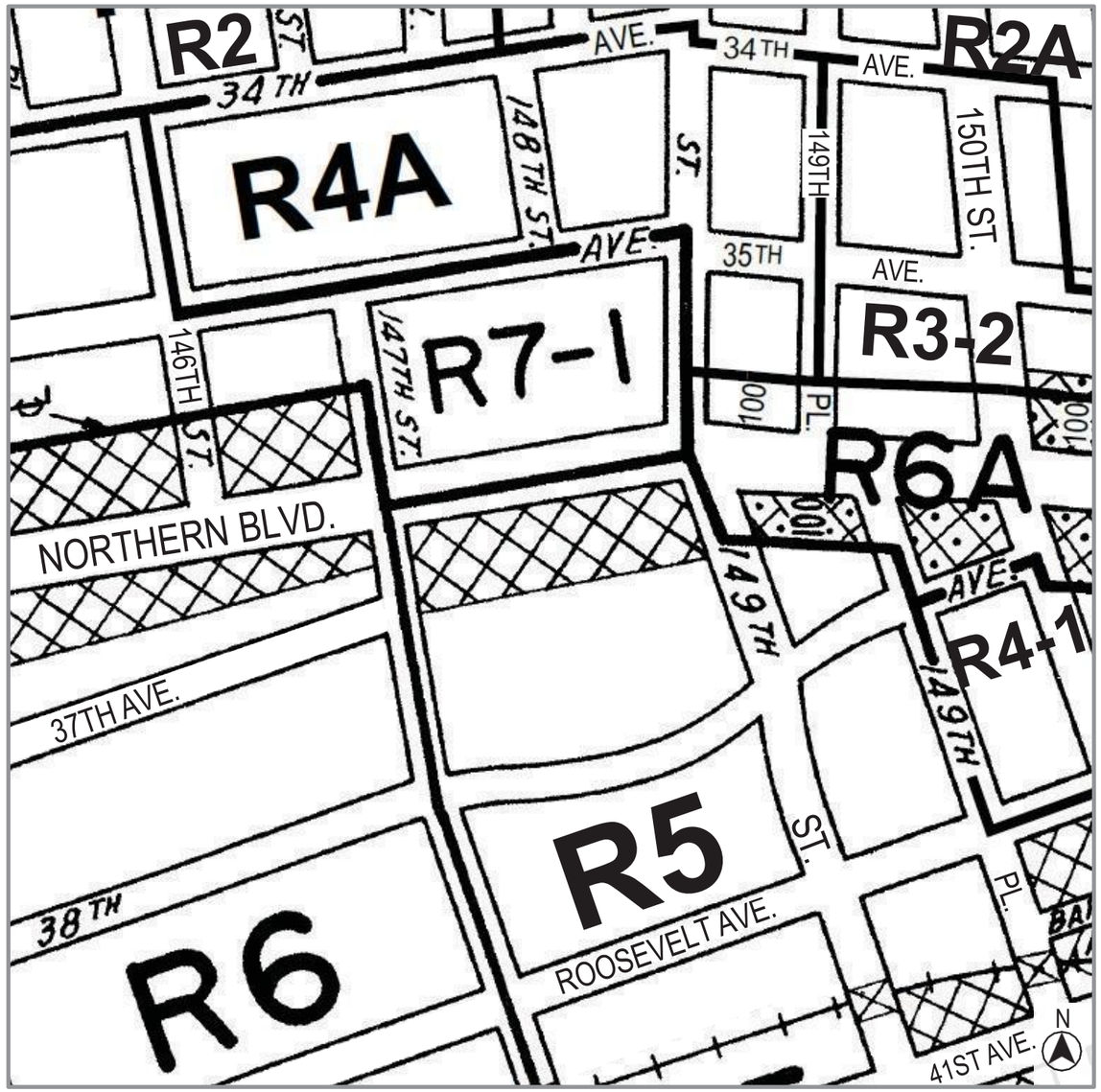
If the Proposed Actions discussed above are not approved, no changes would occur to the zoning on the Project Area. The Project Area would continue to be zoned R5/C1-2. No changes are anticipated to occur within the Project Area or the surrounding Study Area within the Analysis year of 2029.

With-Action Condition

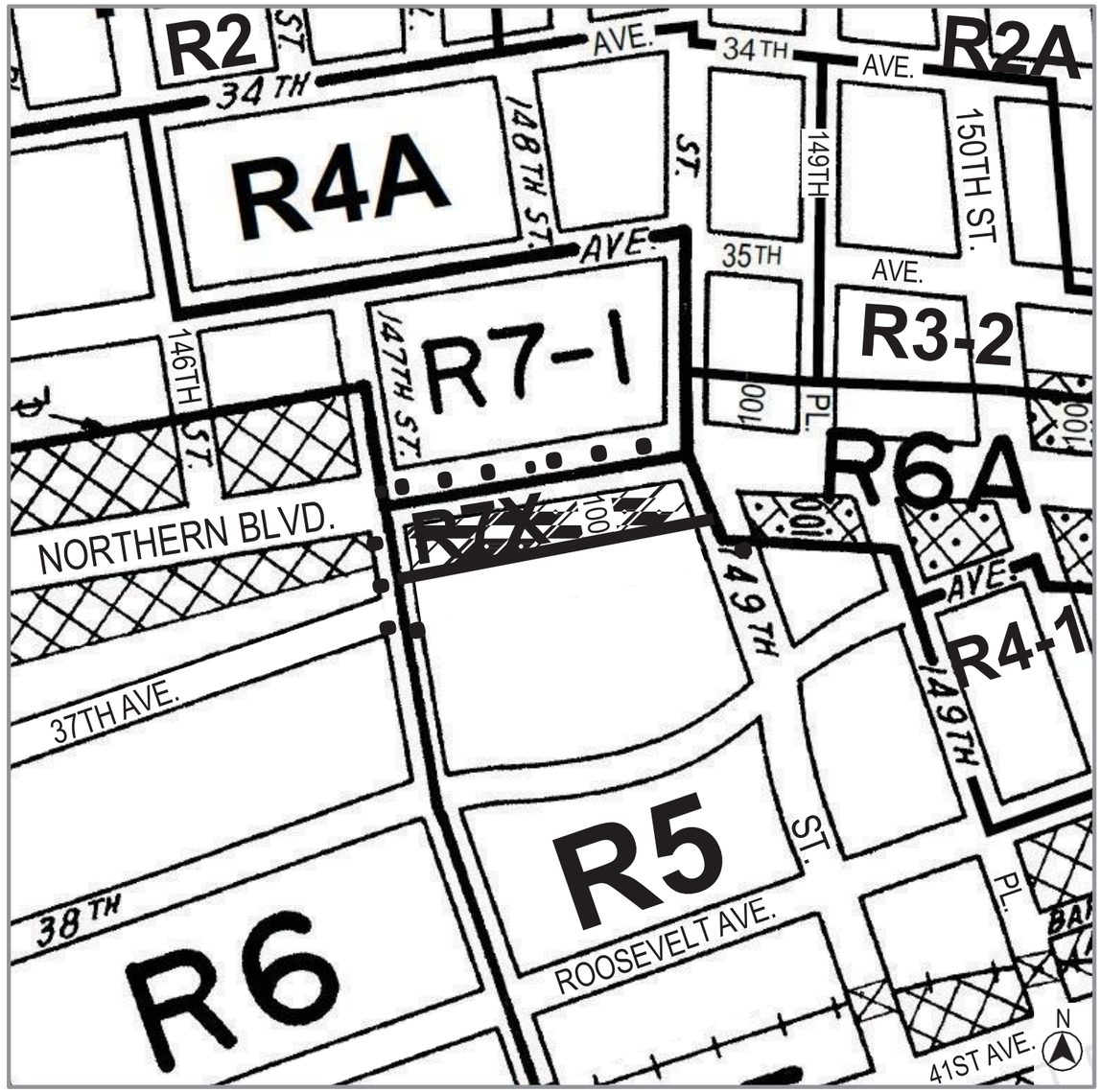
If the Proposed Actions discussed above are approved, the Project Area will be rezoned from an R5/C1-2 district to an R7X/C2-3 district. The Proposed Actions would remove the commercial overlay currently mapped on portions of Lots 7 and 11, but not change the underlying R5 district. The approval of the Proposed Actions will facilitate development on Projected Development Site 1 and Projected Development Site 2. These developments are described above (see RWCDS – With Action Scenario).

R7X zoning districts permit medium density residential buildings. The maximum floor area ratio (FAR) permitted in R7X zoning districts is 5.0 FAR for residential uses (6.0 FAR

Zoning Change Map



Current Zoning Map (10c)



Proposed Zoning Map (10c) - Area being rezoned is outlined with dotted lines

Rezoning from R5/C1-2 to R7X/C2-3
Rezoning from R5/C1-2 to R5

C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5

NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

if providing Inclusionary Housing), 5.0 FAR for community facility uses. The maximum height in R7X districts is 125ft or 145ft if providing a qualifying ground floor. Quality Housing regulations allow for 70-100% lot coverage based on the width of adjacent streets and the mapping of inclusionary housing areas. One parking space is required for 50% of dwelling units although parking for income-restricted units is required for only 15% of units. The C2-3 commercial overlay permits commercial uses at a maximum FAR of 2.0 when mapped above R7X districts. One parking space per 400 sf of commercial space is required.

Conclusion

Approval of the Proposed Actions would change the underlying zoning district in the Project Area. The Proposed Actions change the zoning in the Project Area from R5/C1-2 to R7X/C2-3. The CEQR Technical manual states that an analysis of land use and zoning should, "focus on the project's compatibility and consistency with surrounding uses and zoning as they would exist in the future without the project" and determine "whether the project would have the ability to generate land use change in the study area." The new zoning district introduced by Proposed Actions would not introduce any new uses to the Study Area. As discussed above the Study Area contains a mix of community facility, commercial and residential uses. The Proposed Actions would result in the development of buildings that are similar in height and density to the existing buildings in the Study Area. The introduction of new residential and commercial uses in these buildings remains compatible with the surrounding Study Area. The Proposed Actions are not anticipated to result in significant adverse impacts related to zoning within the Study Area.

Public Policy

Study Area

Per the CEQR Technical Manual, assessment of public policy accompanies a land use assessment because such policies may help determine whether or where land uses might change as the result of a proposed project. In addition, some projects may affect other specific public planning efforts by changing land uses in the area.

In order to assess the potential for project related impacts, the "Public Policy Study Area" has been defined as the area located within a 400-foot radius of the site. Per the CEQR Technical Manual this area is coterminous with the Land Use Study Area.

Existing Conditions

The Project Area is located in Murray Hill which is within Queens Community

District 7. Existing public policies that could affect the Rezoning Area include:

- City of Yes
- Where We Live NYC
- Food Retail Expansion to Support Health (FRESH)

*City of Yes, Housing Opportunity***:** An inclusive, citywide approach to expanding and diversifying the housing supply, in which every neighborhood does its part to help meet housing needs and provide equitable access to opportunity for New Yorkers advanced by Mayor Eric Adams

Where We Live NYC: An inclusive, comprehensive, and collaborative process for planning how to fight discrimination, confront segregation, and take action to advance opportunity for all, published under current Mayor Eric Adams.

The Food Retail Expansion to Support Health (FRESH) Program, designates areas where for zoning as well as tax incentives are available for the development of a grocery store that sells fresh fruits and vegetables.

No other public policies relate to the Project Area or to the surrounding 400-foot radius Study Area. The Project Area is not located within a Federal Empowerment Zone or covered by any 197-a Community Development Plans, and is not located within a critical environmental area, a significant coastal fish and wildlife habitat, a wildlife refuge, or a special natural waterfront area.

No-Action Condition

As discussed above, if the Proposed Actions are not approved, no development is anticipated to occur anywhere within the Project Area. All of the lots in the Project area are anticipated to remain in their current condition.

With-Action Condition

As discussed above, if the Proposed Actions are approved, development is expected to occur on Projected Development Site 1 within the Project Area.

City of Yes

The Proposed Actions include a zoning text amendment to map a Mandatory Inclusionary Housing Area on the Project Area. The Proposed Actions include a zoning text amendment to map a Mandatory Inclusionary Housing Area on the Project Area. The Proposed Action would include 389 units, 20-30% of which would be affordable

pursuant to MIH at an average of 60-80% AMI depending on the Option selected. The creation of new market rate and affordable units is consistent with this public policy as it furthers the goal of expanding housing opportunity on an underutilized site.

Where We Live NYC

The Proposed Actions would promote Goal 2 of the plan: facilitate equitable housing development in NYC through the creation of new housing in an amenity rich neighborhood with access to public transportation. The Applicant's proposed development would expand housing options in the Project Area through the creation of market rate and affordable housing.

The Food Retail Expansion to Support Health (FRESH) Program

The Applicant's proposed development does not include a supermarket nor is a supermarket anticipated to be constructed on Projected Development Site 1 in the With-Action scenario. The FRESH program aims to incentivize the construction of supermarkets in areas where access to fresh produce is limited.

In the Project Area, zoning incentives from the FRESH Program are not available, however discretionary tax incentives could be offered. There is a large supermarket within the Study Area currently in close proximity to the Project Area.

Conclusion

The Proposed Actions would advance several public policy objectives as they would result in the development of dense, mixed use, and mixed income, buildings. These are stated policy goals in both *Where we Live* and *City of Yes*. The Proposed Actions are not anticipated to result in for significant adverse impacts to Public Policy. Further analysis of the potential for significant adverse impacts to Public Policy is not warranted.

5. Socioeconomic Conditions

Introduction

According to the CEQR Technical Manual, the socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements. Even when socioeconomic changes would not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. In some cases, these changes may be substantial but not adverse. In other cases, these changes may be good for some groups but bad for others. The objective of the CEQR analysis is to disclose whether any changes created by the project would have a significant impact compared to what would happen in the No-Action Condition.

The CEQR Technical Manual indicates that two types of potential displacement relevant to socioeconomic conditions should be analyzed: (1) direct and (2) indirect displacement. For each category, the potential direct or indirect displacement effects for (1) residents and (2) businesses are independently assessed, as described below.

Direct displacement (sometimes called primary displacement, is the involuntary displacement of residents or businesses from a site or sites directly affected by a proposed project. Examples include a proposed redevelopment of a currently occupied site for new uses or structures, or a proposed easement or right-of-way that would take a portion of a parcel and thus render it unfit for its current use. The

occupants and the extent of displacement are usually known, and the disclosure of direct displacement can therefore focus on specific businesses and a known number of residents and workers.

Indirect displacement, also known as secondary displacement, is the involuntary displacement of residents, businesses or employees that results in a change in socioeconomic conditions created by the proposed project. Examples include lower-income residents forced out due to rising rents caused by a new concentration of higher- income housing introduced by a proposed project; a similar turnover of industrial to higher-paying commercial tenants spurred by the introduction of a successful office project in the area or the introduction of a new use, such as residential; or increased retail vacancy resulting from business closure retailer saturates the market for particular categories of goods. The assessment of indirect displacement usually identifies the size and type of groups of residents, businesses, or employees affected. In keeping with general CEQR practice, the assessment of indirect displacement assumes that the mechanisms for such displacement are legal.

Threshold Analysis

The Project Site does not contain any residential units. As such, there is no potential for direct residential displacement. The Project Site contains local retail establishments. Further analysis of direct business displacement is provided below.

The Proposed Actions furthermore would not generate more than 200,000 square feet of commercial square footage, nor would the Proposed Actions otherwise impact an established industry. As such, there is no potential for indirect business displacement. No further assessment is warranted. The Proposed Actions would, however, introduce more than 200 additional residential units. As such, an analysis of the potential effects of the Proposed Actions on indirect residential displacement is included below.

Study Area

Per the *CEQR Technical Manual,* the Study Area for an assessment of socioeconomic conditions may be 400 feet, a 0.25-mile radius, or a 0.5-mile radius depending on the size of the development facilitated by the Proposed Actions. The *CEQR Technical Manual* suggests that if a project increases the population of the 0.25-mile Study Area by more than 5%, a 0.5-mile radius should be used. Table 5-1 illustrates the anticipated population increase in the preliminary 0.50-mile study area as this larger study area is appropriate given the total number of additional residents that would arrive in the Project Area in the With Action scenario.

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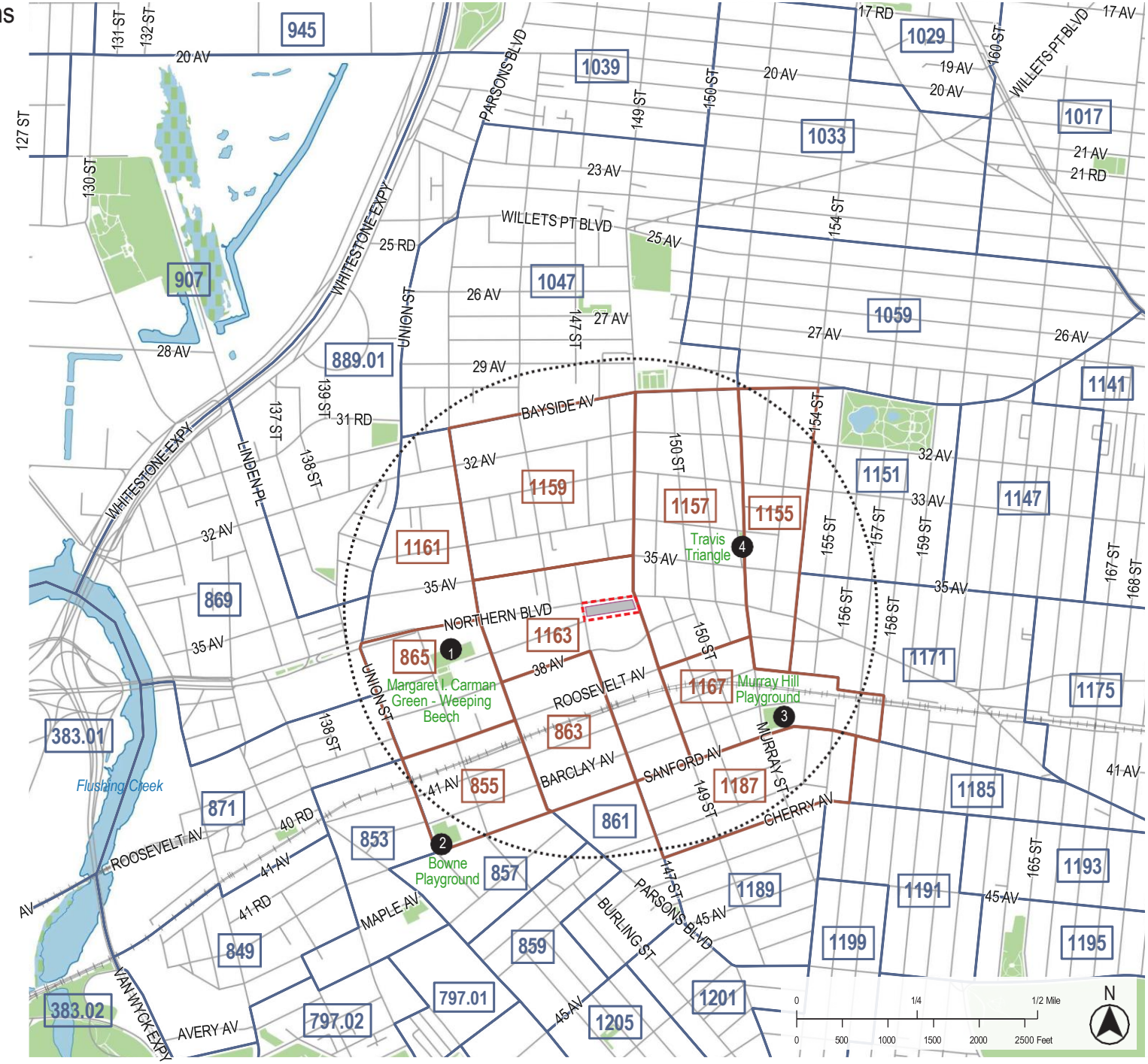
Socioeconomic Conditions Map

- Proposed Rezoning Area
- Projected Development Site (Applicant-Owned)
- 1/2-Mile Study Area
- Census Tract Boundaries
- 123 — 50% or More of Census Tract Within Study Area
- 123 — Less Than 50% of Census Tract Within Study Area



Urban Cartographics

Table 5-1 No-Action vs. With-Action Population in the 0.50 Mile Study Area

Census Tracts (Queens)	Existing Condition (Residents)	No-Action Scenario (Residents)	With-Action Scenario (Residents)	No-Action vs. With-Action Population (%)
855, 863, 865, 1187, 1167, 1163.01, 1163.02, 1161, 1159, 1157, 1155	47,606[1]	49,552[2]	50,622	1,070 (2.2%)

[1] Source: Population FactFinder, DCP; 2020 Census (46,780 residents). Includes 826 additional residents from 325 completed residential units from 4/1/20 to 12/31/23 with an assumed 5.21% vacancy rate. Data provided by DCP.

[2] Includes 1,946 additional residents from 766 active permits for residential units as of 12/31/23 with an assumed 5.21% vacancy rate. Data provided by DCP.

Direct Residential Displacement

There are currently no existing residential units on Projected Development Site 1. The CEQR Technical Manual states that directly displacing 500 or more people may cause a direct residential displacement impact. As the number cited is below this threshold, there would not be a direct residential displacement impact in the With-Action Scenario and no further analysis is required.

Direct Business Displacement

The CEQR Technical Manual states that there may be a direct business displacement impact when any of the following is true:

- The project would directly displace more than 100 employees;
- The businesses to be displaced provide products or services essential to the local economy that would no longer be available in its "trade area" to local residents or businesses due to the difficulty of either relocating the businesses or establishing new, comparable businesses; and/or
- A category of businesses is the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it.

In terms of direct business displacement, the With-Action Scenario would displace existing retail uses totaling 40,330 gsf within the Project Site. Theses uses include surface parking lots, a gas station and a bank, realtors' office, computer repair, florist, laundromat and take-out restaurants (in a single-story commercial building). These uses would be replaced in the Proposed Developments with expanded commercial and community facility uses which would provide more aggregate floor area than is being replaced (54,720 gsf in the With-Action versus 40,330 gsf in the No-Action Scenario).

Overall, in the With-Action Scenario less than 100 employees would be potentially displaced. No business or service which provides products or services essential to the local economy which would no longer be available would be displaced. The existing retail uses are commonplace in the surrounding area and the new commercial space provided in the Proposed Developments could substantially replace these uses or provide alternate uses. There are no regulations or publicly adopted plans to preserve, enhance, or otherwise protect any of the businesses that potentially would be displaced. As such, there would be no direct business displacement impacts related to the proposed project and no further analysis is required.

Indirect Business Displacement

The CEQR Technical Manual states that Proposed Actions that introduce more than 200,000 square feet of commercial uses to the Study Area may have the potential to create indirect business displacement. The Proposed Actions would not introduce any incremental commercial uses between the with-action and no-action conditions. Further analysis of indirect business displacement is not required.

Indirect Residential Displacement

The CEQR Technical Manual states that Proposed Actions that introduce more than 200 residential units to the Study Area may have the potential to create indirect residential displacement.

The Proposed Actions would, introduce 389 additional residential units in the With-Action condition compared to the No-Action condition. As such, an analysis of the potential effects of the Proposed Actions on indirect residential displacement is included below.

Preliminary Analysis

The CEQR Technical Manual states that "the objective of the indirect residential displacement analysis is to determine whether the proposed project may either introduce a trend or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of the neighborhood would change." The risk of indirect residential displacement is typically associated with rising rents. These rising rents may contribute to increased area housing costs to an extent that could potentially force lower-income residents out of the neighborhood. The potential for impact is generally limited to households in unprotected, private rental units.

Existing Conditions

Based on the 2020 Census, the study area contained 46,780 residents (in households) and 17,034 occupied housing units. The existing conditions reflect 47,606 residents to account for 826 additional residents from the 325 completed residential units from 4/1/20 to 12/31/23 with an assumed 5.21% vacancy rate. An estimated 75.3 percent of occupied units were renter-occupied, which is greater than the proportions for Queens (59.8 percent) and New York City (70.2 percent).

This analysis uses median household incomes to describe the household income characteristics of the study area population. As shown in Table 5-2, the median annual household income within the socioeconomic study area was $45,692 per the 2017-2021 American Community Survey (ACS). This is less than the median income for Queens ($75,886), and less than the median income for New York City ($70,663). Unlike median incomes for Queens and New York City, which have increased, the study area median income has decreased since 2010.

Table 5-2 Existing Median Household Income

	2006-2010 ACS	2017-2021 ACS	Change
Study Area	$53,658	$45,692	Decrease
Queens	$69,352	$75,886	Increase
New York City	$63,072	$70,663	Increase

Source: NYC Population Factfinder, DCP (ACS 5-year estimates)

As shown in Table 5-3, within the socioeconomic study area, median gross rent was approximately $1,589 per month, which was less than the median for Queens ($1,711) but there is no (statistically significant) difference between the Study Area and New York City as a whole ($1,579). Median gross rents have increased in the study area since 2010. Over the same period median gross rents also increased in Queens and in New York City.

Table 5-3: Existing Median Rent

	2006-2010 ACS	2017-2021 ACS	Change
Study Area	$1,518[1]	$1,589[1]	Increase[1]
Queens	$1,481	$1,711	Increase
New York City	$1,343	$1,579	Increase

Source: NYC Population Factfinder, DCP (ACS 5-year estimates)

[1]Note: There is no statistically reliable difference between the 2006-2010 ACS Study Area Median Rent Estimates and the 2017-2021 ACS Study Area Median Rent Estimates; however, a direction of change can be reported as the increase is larger than the margin of error

Table 5-4 summarizes online listings for apartments in the study area from StreetEasy.com within the Flushing-Murray Hill-Whitestone Neighborhood Tabulation Area. This is the same unit of analysis used in the Racial Equity Report produced for this project. The median monthly asking rents in the study area ranged from $1,625 for studio units to $2,500 for 2-Bedroom units.

Table 5-4: Market Rate Rents in the Neighborhood Tabulation Area

	Median Rent	Total Listings
Studio	$1,625	21
1-Bedroom	$1,900	77
2-Bedroom	$2,500	70

Source: Streeteasy.com (Dec. 2022, Active Listings)

No-Action Scenario

Absent the Proposed Actions (the "No Action" condition), the Development Site and remainder of the Project Area are assumed to remain in their existing condition and no new development is expected.

With-Action Scenario

Per the CEQR Technical Manual Step 1 of the preliminary indirect residential displacement analysis is to determine if the Proposed Project would add new population with higher average incomes compared to the average incomes of the existing populations and any new population expected to reside in the study area without the Proposed Actions.

As discussed above the Proposed Actions would introduce new market rate and affordable units to the study area. As a new housing product, the market-rate DUs would be expected to rent on the higher end of the range of market-rate asking rents in the study area. For purposes of analysis, the upper quartile of listed asking rents were utilized to estimate market-rate renters' incomes, and it was assumed that households would earn 40X the monthly rent. The resulting projected household incomes, shown in Table 5-5, range from $81,200 for households residing in studio units to approximately $117,500 for households in two-bedroom units.

Table 5-5: Projected Rent and Income for Market Rate D.U.s

	Projected Rent	Projected Household Income
Studio	$2,030	$81,200
1-Bedroom	$2,375	$95,000
2-Bedroom	$2,940	$117,600[1]

Source: Streeteasy.com (Dec. 2022, Active Listings)

The overall average income for market-rate households depends on the unit mixes on the Development Site. Across the two buildings created by the Proposed Actions, 69 Studios, 120 One-Bedroom, and 72 Two-Bedroom market rate apartments would be created per the building's current proposed plans. The exact unit distribution in the Proposed Development is subject to change prior to construction. Across the 261 market rate units, the average household would earn $97,558 per year. The study area's median household income in 2021 was $45,692. Occupants of market-rate units in the With-Action scenario would earn 147% more than the median household income within the Study Area.

The Proposed Actions include the application of the City's Mandatory Inclusionary Housing (MIH) Area zoning to the Rezoning Area. The MIH program sets forth three primary options that are characterized by different affordability levels, which promote a range of affordable development. The applicant intends to comply with MIH Option 2 which requires 30 percent of the residential floor area be set aside for households making an average 80 percent Area Median Income (AMI). AMIs are calculated yearly by the U.S Department of Housing and Urban Development (HUD).

Table 5-5: Projected Rent and Income for MIH D.U.s

	80% AMI Projected Rent	80% AMI Projected Household Income
Studio	$1,696	$79,120[1]
1-Bedroom	$2,119	$90,400[2]
2-Bedroom	$2,542	$112,960[3]

Source: NYC Housing Preservation and Development (HPD), 2023 AMI Levels
Note: [1]Based on a 1-person Household, [2]Based on a 2-person Household, [3]Based on a 4-person Household

The income of occupants of the affordable units is projected to be between $79,120 and $112,960. Occupants of the MIH units in the With-Action scenario would earn between 73% and 147% more than the median household income within the Study Area.

As stated above, the applicant intends to comply with MIH Option 2 which requires 30 percent of the residential floor area be set aside for households making an average 80 percent Area Median Income (AMI). The overall average income of households in the affordable units depends on the unit mixes on the Development Site. Across the two buildings created by the Proposed Actions, 34 Studios, 58 One-Bedroom, and 36 Two-Bedroom market rate apartments would be created. Across the 128 MIH units, the average household would earn $93,749 per year.

In the aggregate, the Proposed Project's expected average household income is expected to be higher than the median income in the Study Area. Across both buildings and both market rate and MIH units, the average household income of residents is expected to be $96,323. This is 113% more than the median household income within the Study Area.

Based on CEQR Technical Manual guidelines, if the expected average incomes of the new population would exceed the average incomes of the study area population, Step 2 of the preliminary assessment is warranted. Per the CEQR Technical Manual Step 2 of the preliminary residential assessment is to determine if the Proposed Project's increase in population is large enough relative to the size of the population expected to reside in the study area without the project to affect real estate market conditions in the study area. According to CEQR Technical Manual analysis thresholds, if the population increase is greater than 5 percent in a study area or identified subareas, the incremental population may be large enough to affect real estate market conditions.

As demonstrated in Table 5-1 above, the Proposed Actions are expected to introduce 1,064 new residents into the Study Area. This represents an increase of 2.6% of the ½ mile study area. No further analysis is needed as the Proposed Actions are not expected to introduce a total number of new residents to the Study Area than can affect real estate market conditions in the Study Area.

Conclusion

While Step 1 of the preliminary assessment could not rule out the possibility that the Proposed Project could result in new populations with higher average incomes than the existing and future study area population, Step 2 of the analysis determined that the

project's increase in population would not be large enough to substantively affect real estate market conditions in the study area. Therefore, based on CEQR Technical Manual guidelines, the Proposed Project would not result in significant adverse impacts due to indirect residential displacement, and no further analysis is warranted.

6. Community Facilities

Introduction

The community facilities and services considered under CEQR are public schools, public or publicly subsidized day care centers, public libraries, hospitals and other health care facilities, and police and fire protection services. Under the guidelines set forth in the *CEQR Technical Manual,* a detailed analysis is required only if a proposed action would displace or otherwise directly affect an existing community facility or if it would place significant new demands on facilities or services. Most of the demand for community facility services is generated by the introduction of new residents in an area.

Threshold Analysis

Direct Effects

The Proposed Actions would not physically displace or affect any existing community facilities and would therefore have no direct impact on any community facilities or services. Therefore, further assessment of direct impacts is not warranted.

Indirect Effects

The *CEQR Technical Manual* provides a set of thresholds to use in determining whether detailed studies of potentially significant adverse indirect impacts related to community facilities and services are warranted. The Proposed Actions would result in incremental development of 389 dwelling units in the Project Area.

The proposed actions include a text amendment mapping the project area as a MIH area. For CEQR purpose it is assumed that 20 percent of the units would be reserved as affordable to households with incomes not exceeding 80 percent of the AMI, or 78 dwelling units.

Libraries

According to the *CEQR Technical Manual*, a more than 5% increase in the ratio of residential units to library branches would warrant a detailed analysis. The minimum of residential units required in the Borough of the Queens to trigger a detailed analysis is 663 dwelling units. The With-Action Scenario would produce 389 incremental dwelling units. As this number is below the threshold provided in the *CEQR Technical Manual,* no further analysis is required.

Police/ Fire and Health Care Facilities

According to the *CEQR Technical Manual*, a detailed analysis for police/fire services and health care services is only required if the With-Action Scenario would introduce a "sizeable new neighborhood, e.g. Hunter's Point South." The With-Action Scenario would introduce an incremental 389 dwelling units in an already built-up area and would not therefore create a "sizeable new neighborhood." As such, no further analysis is required.

Early Childhood Programs

For the purposes of the childcare analysis, under the criteria in the CEQR Technical Manual (Table 6-1), the development of 76 dwelling units at or below 80% of AMI would not exceed the minimum number of 139 dwelling units in the Borough of Queens for conducting a detailed analysis of impacts to publicly funded childcare. As such, no further analysis is required.

Public Schools

The *CEQR Technical Manual* states that, in general, if a project would introduce more than 50 school-age children (elementary and intermediate grades), significant impacts on public schools may occur and further analysis of schools may be appropriate. The Project Area is located within Community School District (CSD) 25, Subdistrict 2 as illustrated in **Figure 6-1: Public Schools within CSD 25 Subdistrict 2**.

Based on *CEQR Technical Manual* criteria (Table 6-1), the development of 389 dwelling units would result in the introduction of an estimated 74 elementary school aged children, 25 middle school aged children, and 58 high school aged children. This information is summarized in **Table 6-1: School Seat Multipliers**. The minimum number of total elementary and intermediate school aged children to warrant a detailed analysis is 50 children. The minimum number of high school aged children to warrant a detailed analysis is 150 children. As such, the Proposed Actions have the potential to introduce the minimum number of children necessary to warrant a detailed analysis of impacts to public elementary and middle schools CSD School District 25.

Table 6-1: School Seat Multipliers

	Units	CDS 25 Multipliers	Total Students	Threshold
Elementary	389	0.19	86	50
Intermediate		0.06	25	
High School		0.15	58	150

Detailed Analysis

Existing Conditions

Primary Study Area (Sub-district Analysis)

The project site is located in CSD 25, Subdistrict 2. This district is considered to be the primary study area for the analysis of elementary and intermediate schools. Figure 6-1, Public Elementary and Intermediate Schools Within CSD 25 Subdistrict 1, illustrates the locations of these schools.

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Figure 1: Public Elementary and Intermediate Schools Within CSD 25, Sub-district 2

- Proposed Rezoning Area
- # Elementary Schools (see Table 6-1)
- # Elementary/Intermediate Schools (see Table 6-1)
- # Intermediate Schools (see Table 6-1)
- # High Schools (see Table 6-1)



Urban Cartographics

Table 6-2A provides a listing of the elementary schools within the CSD and Table 6-2B provides a listing of the intermediate schools within the CSD. The table identifies the schools by school name, address, and grades served, and includes the latest available enrollment and school capacity numbers. Elementary school capacity numbers are less than actual building capacities as they assume a class size reduction for Kindergarten through the third grades of 20 children per class, 28 children for grades 4-8; and 30 children for grades 9-12 ("target capacity").

Table 6-2A and Table 6-2B indicate that the elementary and intermediate schools within the Subdistrict are, as a whole, at or near capacity. Select schools however are over-utilized. The elementary /intermediate schools within Subdistrict 2 have a total enrollment of 5,788 elementary students relative to a target capacity of 5,405 seats, resulting in a deficit of 383 seats and a total enrollment of 2,209 intermediate school students relative to a target capacity of 2,205 seats, resulting in a deficit of four seats.

Table 6-2A: Elementary Schools within CSD 25 Subdistrict 2

Map ID	School Name	Address	Enrollment	Target Capacity	Available Seats	Utilization
1	P.S. 20 - Q	142-30 BARCLAY AVENUE	1,039	1,160	+121	90%
2	P.S. 22 - Q	153-33 SANFORD AVENUE	737	608	-130	121%
3	P.S. 24 - Q	45-57 UNION STREET	1,187	1,031	-156	115%
4	P.S. 107 - Q	167-02 45 AVENUE	824	974	+150	85%
5	P.S. 120 - Q	58-01 136 STREET	774	800	+26	97%
6	P.S. 163 - Q	159-01 59 AVENUE	766	553	-213	139%
7	P.S. 244 - Q	137-20 FRANKLIN AVENUE	460	279	-181	165%
TOTALS			**5,788**	**5,405**	**-383**	**107%**

1) Source: 2023-2024 Blue Book (Dept. of Education, NYC)

Table 6-2B: Intermediate Schools within CSD 25 Subdistrict 2

Map ID	School Name	Address	Enrollment	Target Capacity	Available Seats	Utilization
8	J.H.S. 189 - Q	144-80 BARCLAY AVENUE	620	844	+224	74%
9	J.H.S. 237 - Q	46-21 COLDEN STREET	1,296	1,111	-185	117%
10	EAST-WEST SCHOOL OF INTL STUDIES-Q	46-21 COLDEN STREET	293	250	-43	117%
TOTALS			**2,209**	**2,205**	**-4**	**100%**

1) Source: 2023-2024 Blue Book (Dept. of Education, NYC)

Per *CEQR Technical Manual* guidelines, charter school enrollments are not included in DOE enrollment projections. However, there are no elementary or intermediate level charter schools in the sub-district.

No-Action Scenario

This section presents an analysis of public-school enrollments (excluding Pre-Kindergarten enrollments) and capacities for the Project Analysis year of 2029 without the Proposed Actions. The analysis includes the primary study area of CSD 25, Sub-district 2 and is derived from NYC Department of Education (DOE) enrollment projections.

According to data from the School Construction Authority, approximately 2,744 new housing units are anticipated in CSD 25 Sub-District 2 by the 2029 build year (Projected Housing Starts for PS Level Analysis, SCA, 2020). This would result in 524 new elementary students anticipated to be added to the district from background residential development. This figure is calculated by using the school seat multiplier of 0.19 for elementary aged children (Projected Public School Ratio, SCA, 2024).

Further, data from the School Construction Authority, indicated that 2,744 new housing units are anticipated in this Sub-District by the 2029 build year (Projected Housing Starts for MS Level Analysis, SCA, 2020). This would result in 178 new intermediate school students anticipated to be added to the district from background residential development. This figure is calculated by using the school seat multiplier of 0.06 for intermediate school aged children (Projected Public School Ratio, SCA, 2024).

The 2022 Dept. of Education Five-Year Capital Plan indicates that three new capacity projects would be complete in District 25 Subdistrict 2 before the 2029 analysis year. There are three capacity projects slated for completion neighboring Subdistrict 1. Elementary school seat utilization would decrease to 73.6%. The increase in capacity for intermediate schools would bring the utilization to 99% by 2029, as demonstrated in the table below.

Table 6-3: No-Action Projected Enrollment[1]

Study Area District 25 - Subdistrict 2	**Projected 2029 Enrollment[1,2]**	**Students Introduced by No Action Residential Development[3]**	**Total No Action Enrollment**	**Projected Capacity**	**Available Seats**	**Utilization**
Elementary	3,969	524	4,493	6,101	+1,608	73.6%
Intermediate	2,006	178	2,184	2,205	+21	99%

1) Based on the projected enrollment in District 25 for the 2029-2030 School Year and 2025 Enrolment Percentage by Zone (Sub-District) of 36% (Elementary) and 27% (Intermediate) for Sub-District 2.
2) Enrollment Projections for New York City Public Schools by the Statistical Forecasting [2021-2030] including Pre-K enrollment.
3) Projected New Housing Starts as Used in Enrollment Projections [2020-2029]

With-Action Scenario

As stated above, the Proposed Actions would generate 74 elementary school students and 25 intermediate school students by the 2029 build year. The Proposed Actions are not anticipated to result in the addition of any new schools or additional capacity in the District. Table 6-4 presents the anticipated student enrollments that would be generated by the Proposed Actions and the effect of these enrollments on the available capacity of the schools within Sub-district 2.

The projected increase of 74 elementary and 24 middle school students resulting from the Proposed Actions in 2029 would have a minimal impact upon the utilization rates of the schools in the CSD. The utilization rate for elementary schools would be 74.9% while for intermediate schools it would be 100.2%.

Table 6-4: With-Action Scenario School Enrollment

Estimated School Enrollment, Capacity, and Utilization							
School Level	Projected Enrollment Without Project	Students Generated by Project	Projected Enrollment with Project	Projected Capacity	Available Seats	Utilization (%) with Project	Change in Utilization from No-Action
Primary Schools	4,493	74	4,567	6,101	+1,534	74.9%	+1.2%
Intermediate Schools	2,184	25	2,209	2,205	-4	100.2%	+1.1%

According to the *CEQR Technical Manual*, a significant impact on schools may occur if the following two conditions are met: if the project results in a collective utilization rate of the elementary or intermediate schools in the Sub-district study area that is greater than 100% in the With-Action Condition, and if the project results in an increase of 100 or more new students past the 100% utilization rate. The Proposed Actions would introduce 74 elementary school students in a Sub-district that would have a 74.9% utilization rate. Because utilization would be below 100%, the increase in enrollment would not result in a significant adverse elementary school impact. The Proposed Actions would introduce 25 intermediate school students in a Sub-district that would have a 100.2% utilization rate. Although utilization would exceed 100% utilization rate, the number of new students would be below the threshold of 100; therefore, the increase in enrollment would not result in a significant adverse intermediate school impact.

Conclusion

The proposed project would not physically displace or alter a community facility or cause a change that could affect the service delivery of a community facility. In addition, the development would not create a demand that would not overtax services or facilities. Development under the Proposed Actions would not adversely affect hospitals and other health care facilities, public libraries, publicly subsidized child-care centers, and police and fire protection services.

The proposed development would add 74 elementary school students and 25 intermediate school students to local schools (those in CSD 25, Sub-district 2), but elementary school utilization in the sub-district would remain below 100%, and the increase in enrollment would not exceed the threshold of 100 elementary students or 100 intermediate students above 100% utilization set in the *2021 CEQR Technical Manual*. Therefore, a significant adverse public school impact would not occur.

For these reasons, the Proposed Actions would not cause significant adverse impacts to community facility uses, and further analysis is not warranted.

7. Open Space

I. Introduction

This chapter assesses the potential impacts of the proposed project on open space resources. Open space is defined by the 2021 *City Environmental Quality Review (CEQR) Technical Manual* as publicly accessible, publicly or privately-owned land that operates or is available for leisure, play, or sport, or serves to protect or enhance the natural environment. The CEQR Technical Manual guidelines indicate that an open space analysis should be conducted if an action would result in a direct effect, such as the physical loss or alteration of public open space, or an indirect effect, such as when a substantial new population could place added demand on an area's open spaces. The proposed project would introduce new residential population to the project area that would create new demands for open space. Therefore, an open space assessment was conducted to determine if the Proposed Actions would significantly affect open space.

II. Methodology

Direct Effects

Per the CEQR Technical Manual, direct effects may occur when the proposed project would encroach on, or cause a loss of, open space. Direct effects may also occur if the facilities within an open space would be so changed that the open space no longer serves the same user population. Limitation of public access and changes in the type and amount of public open space may also be considered direct effects. Other direct effects include the imposition of noise, air pollutant emissions, odors, or shadows on public open space that may alter its usability. The Proposed Development would not remove or alter any existing publicly accessible open spaces. In addition, study area open spaces would not experience project-related significant adverse shadows, air quality, or operational noise impacts, as discussed in this EAS.

Indirect Effects

Per the CEQR Technical Manual, indirect effects may occur when the population generated by the proposed project overtaxes the capacity of existing open spaces so that their service to the future population of the affected area would be substantially or noticeably diminished. For the majority of projects, an assessment is conducted if the proposed project would generate more than 200 residents or 500 employees. The Proposed Actions would introduce 389 units, with approximately 1,070 residents to the Project Area. The Proposed Action would introduce 12 new workers. There would be no large daytime worker population in the With-Action scenario. As the Proposed Actions

are expected to result in the introduction of more than 200 residents to the Project Area a preliminary analysis is needed.

Study Area

Per the CEQR Technical Manual, the first step in any open space analysis is to define and map a study area. Once the study area is defined, the next step is to determine which analysis is required through calculating the percentage change in the open space ratio between the No-Action condition and the future With-Action condition.

Open space study areas are defined to allow analysis of both the nearby open spaces and the population using those open spaces. They are generally defined by a reasonable walking distance that users would travel to reach local open space and recreation areas—typically 0.5 mile for residential users and 0.25 mile from commercial projects with a worker population.

The Proposed Actions would introduce more than 200 residents to the Project Area. Per the CEQR Technical Manual it is necessary to examine the change in residential population in the study area relative to total, active, and passive publicly accessible open space in the area and to determine whether the increase in population would significantly impact the adequacy of open space resources in the study area. An assessment of the adequacy of open space for the nonresidential (worker) population is not needed.

As recommended in the *CEQR Technical Manual*, the open space study area comprises all census tracts that have at least 50 percent of their area located within a ½-mile of the Project Area, as shown in **Figure 7-1: Open Space Facilities and Census Tracts** .

Analysis Framework

Indirect Effects Analysis

The indirect effects of a proposed action on open spaces may occur when the action adds enough population to substantially or noticeably reduce the capacity of the open space to serve the population. This can occur when the population generated by the proposed action exceeds the capacity of existing public open spaces.

In evaluating the impact of a project on open space, it is important to consider its location in relation to the Walk to a Park Service Area (WPSA). The WPSA is a part of the OneNYC 2050 plan, which aims to have 85% of New York City residents living within walking distance of a park by 2030. According to the plan, an area is considered to be within the WPSA if it is within a half mile walking distance of a park. Areas that are not within the WPSA are known as "walk gap" areas, meaning they are not within walking distance of

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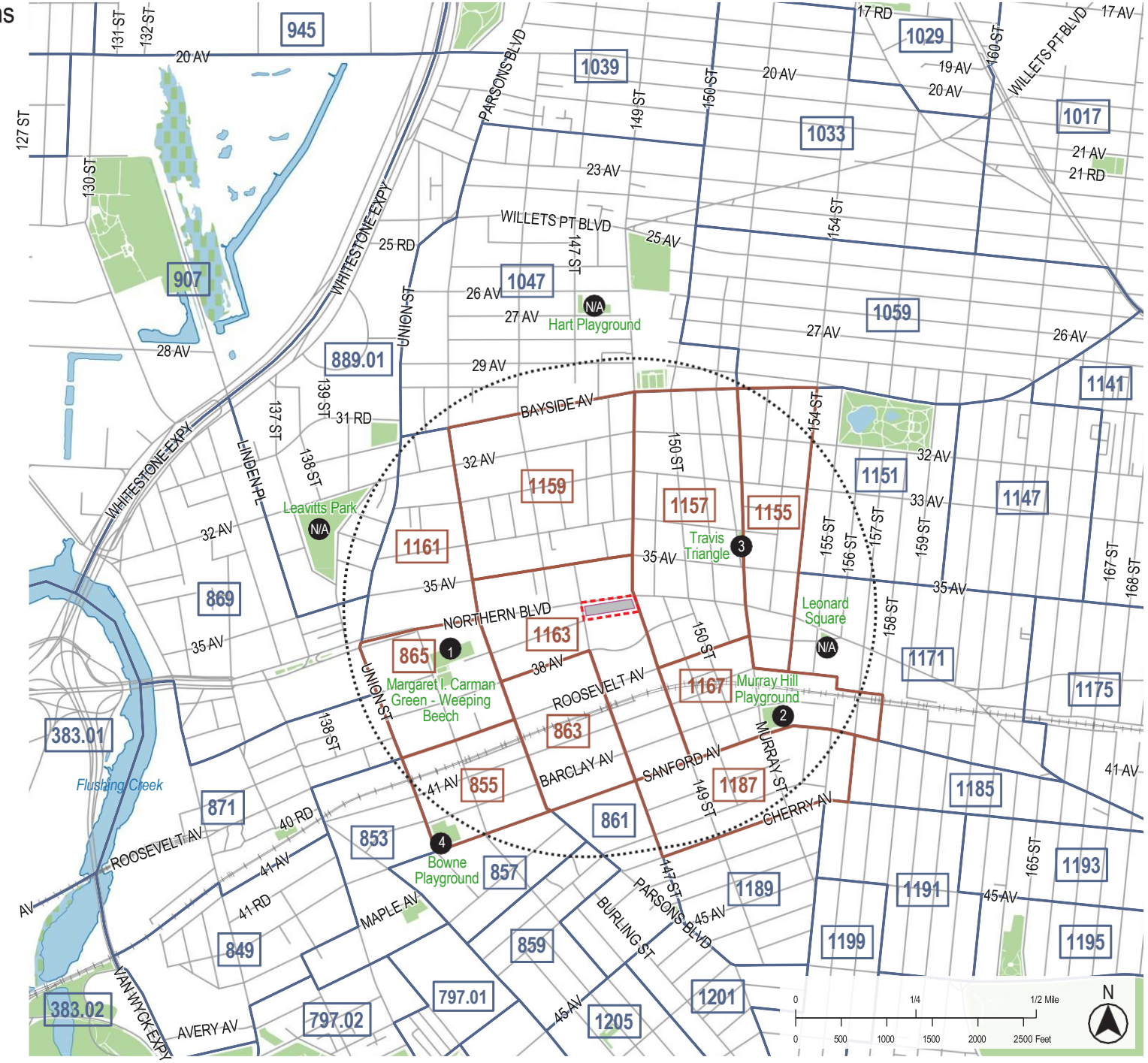
Figure 1: Open Space Facilities and Census Tracts

- Proposed Rezoning Area
- Projected Development Site (Applicant-Owned)
- 1/2-Mile Study Area
- Census Tract Boundaries
- 123 — 50% or More of Census Tract Within Study Area
- 123 — Less Than 50% of Census Tract Within Study Area
- 1 — Open Space Resources (see Table 7-1)



Urban Cartographics

a park. The project area, as shown in **Figure 7-2: WPSA**, is not located within the WPSA and is not within walking distance of a park.

To assess the adequacy of open space in the study area, both quantitative and qualitative methods can be used. The quantitative approach calculates the ratio of open space acreage to the population in the study area and compares it to guidelines. The qualitative assessment considers factors such as the proximity to additional resources beyond the study area, the availability of private recreational facilities, and the demographic characteristics of the area's population. This analysis is provided below.

Impact Assessment

The impact of a project on an area's open spaces is evaluated using both quantitative and qualitative factors. This evaluation takes into account the project's location, the quality and quantity of open space in the area after the project is completed, and any new open space provided by the project. The impact of the project is also based on how it will affect the ratio of open space in the area, as well as other qualitative factors. According to the CEQR Technical Manual, a project that significantly reduces the ratio of open space (as defined in Table 7-1) may be considered to have a significant impact. The acceptable amount of change in the open space ratio is determined based on the open space ratio in the area and whether the area is within a WPSA (as defined in the CEQR Technical Manual). In a WPSA, a larger percentage change may be allowed. As discussed above, the Project Area is not within a WPSA.

Table 7-1: Percent Change in Open Space Ratio

Open Space Ratio	Percent Change
2.01 to 2.50 or Greater	5%
1.51 to 2.0	4%
1.01 to 1.5	3%
0.51 to 1.0	2%
0.50 or Less	1%

Source: Table 7-1 in Chapter 7, "Open Space" of the 2021 CEQR Technical Manual.

III. Preliminary Assessment

Per the CEQR Technical Manual, projects in study areas where the open space ratio approaches or exceeds the city's planning goal of 2.5 acres per residence may generally tolerate up to a 5% decrease of the open space ratio before considering the need for more detailed analysis. For projects in study areas where the open space ratio is not near the

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Figure 7-2: Walk to Park Service Areas

Proposed Rezoning Area

Projected Development Sites
(Applicant-Owned)

1/2-Mile Study Area

Walk to Park Service Area



Urban Cartographics

city's planning goal of 2.5 acres per thousand residents the percentage decrease in open space ratio is weighted against how the open space ratio of the study area compares to the city's planning goal for open space. Per the 2021 CEQR Technical Manual, in areas of the city where the existing Open Space Ratio is between 0.50 or less (as is the case in our study area as demonstrated below) a reduction in Open Space Ratio by less than 1% typically indicates that detailed assessment of Open Space is not warranted. A detailed analysis of Open Space is needed for the Proposed Actions described in this EAS.

IV. Detailed Analysis

Existing Condition

Study Area Population

As recommended in the *CEQR Technical Manual*, the open space study area comprises all census tracts that have at least 50 percent of their area located within a ½-mile of the Project Area. These tracts and their populations are visualized in **Table 7-2: Existing Population**. The total population of the Study Area is 46,324.

Table 7-2 Existing Population

Census Tracts	Population
855, 863, 865, 1187, 1167, 1163.01, 1163.02, 1161, 1159, 1157, 1155	46,324[1]

Source: Population FactFinder, DCP; 2020 Census.

1 : Includes 708 additional residents from 279 completed residential units from 4/1/20 to 6/30/22 with an assumed 5.21% vacancy rate. Data provided by DCP.

The Study Area population was estimated using data from the 2020 U. S. Census data for the census tracts located fully or at least 50 percent within the one-half mile study area. As discussed above, the population the study area contained a total of 46,780 residents within the 11 relevant census tracts. **Table 7-3: Study Area Age Characteristics** summarizes the age distribution of the study area population and compares it to Queens and New York City as a whole. As shown, the study area has a **slightly smaller** distribution of children and teenagers through age 9; a **larger** share of people aged 20 to

64 years; and a **similar** share of seniors compared to Queens and New York City as a whole.

Table 7-3 Study Area Population Age Characteristics

SELECTED AGE CATEGORIES	Study Area	Queens	New York City
Ages 4 and younger	6.1%	6.2%	6.4%
Ages 5 to 9 years	3.4%	5.2%	5.5%
Ages 10 to 14 years	4.5%	5.6%	5.6%
15 to 19 years	3.7%	5.0%	5.3%
20 to 64 years	67.8%	66.4%	62.2%
65 years and over	14.5%	11.6%	15.0%
Source: 2016-2020 ACS 5-Year Estimate Data			

Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children 4 years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages 5 through 9 typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for such activities as ball playing, running, and skipping rope. Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 18 and 44 continue to use court game facilities and fields for sports, along with more individualized recreation such as rollerblading, biking, and jogging that require bike paths, promenades, and vehicle-free roadways. Adults also gather with families for picnicking, ad hoc active sports such as Frisbee, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

Given the range of age groups present in the study area population, the study area has need for both active and passive recreation facilities. However, the Study Area may have a greater need for passive open space that other areas of the city as there is a larger population of senior citizens over 65 years old when compared to Queens and similar

population when compared to New York City as a whole. As discussed above, senior citizens use passive recreational spaces more than active recreational spaces more than other age cohorts and the Study Area has a passive open space ratio that is less than the city target of 0.5 acres per thousand residents.

Inventory of Open Space

According to the CEQR Technical Manual, open space can be either public or private, and can be used for either active or passive recreation. Public open space is defined as facilities that are open to the public at designated hours on a regular basis and are evaluated for impacts under CEQR guidance. Private open space is not regularly accessible to the general public and is therefore only considered qualitatively. The number, availability, and condition of publicly accessible open space in the study area was determined using field surveys and secondary sources.

Open space is classified as active, or passive based on the activities that are allowed in the space. Active open space is used for active play such as sports or exercise and may include playground equipment, playing fields, courts, swimming pools, skating rinks, golf courses, and multi-purpose play areas. Passive open space is used for sitting, strolling, and relaxation and may include benches, walkways, and picnicking areas.

All publicly accessible open spaces in the defined study area were inventoried and identified by their location, size, owner, type, utilization, equipment, hours, and condition. This information was obtained from the New York City Department of Parks and Recreation's website. The condition of each open space was categorized as excellent, good, fair, or poor, based on a visual assessment of the facilities observed during a field survey conducted in November 2022. The intensity of use of the facilities was also determined qualitatively, based on observations of the degree of activity or utilization on a weekday afternoon. Table 7-4 lists the details of the active and passive open spaces in the study area, including their condition and utilization.

Table 7-4: Inventory of Open Space Resources

Map Key	Open Space Resource Name	Total Size (Acres)	Passive Acres	Active Acres	Condition	Utilization
1	Margaret Carmen Green-Weeping Beech	2.60	1.3	1.3	Good	Moderate
2	Murray Hill Playground	1.21	0.00	1.21	Fair	High

3	Travis Triangle	0.22	0.22	0.00	Good	Low
4	Bowne Playground	1.28	0.15	1.13	Good	Low
Total		**5.31**	**1.67**	**3.64**		

Source: NYC DPR (2021), ZoLa NYC's Zoning and and Use Map

As visualized in Figure 7-1, there are a total of four open space resources within the census tracts that are more than 50% contained in the ½ mile radius around the Project Area. These open space resources are described below and summarized in **Table 7-4: Inventory of Open Space Resources.**

1. **Margaret Carmen Green-Weeping Beech**

Margaret Carmen Green is a 2.60-acre NYC Parks operated open space located on a block bound by Northern Boulevard, Parsons Boulevard, 37th Avenue, and Bowne Street. The park was once home to a landmarked tree (Weeping Beech) and currently contains the historic Bowne House. Playground equipment, handball courts, spray showers and restrooms are also provided for public use within the park.

2. **Murray Hill Playground**

Murray Hill Playground is a 1.21-acre NYC Parks operated open space located on a block bound by Barclay Avenue, 156th Street, Sanford Avenue, and Murray Street. Playground equipment, handball courts, and fitness equipment are provided for public use within the park.

3. **Travis Triangle**

Travis Triangle is a 0.22-acre NYC Parks operated open space located on a block bound by Murray Street, Murray Lane, 34th Street and 35th Street. The triangle offers paved areas, large shade trees, benches for public use.

4. **Bowne Playground**

Bowne Playground is a 1.28-acre NYC Parks operated open space located on a block bound by Barclay Avenue, Sanford Avenue, Union Street and Bowne Street. Playground equipment, basketball courts, handball courts and spray showers are provided for public use within the park. The playground received major upgrades including a full playground reconstruction completed in 2019.

Quantitative Assessment

The quantitative assessment of open space is based on ratios of usable open space acreage to the study area populations (the "open space ratios"). In New York City, local open space ratios vary widely. The city's planning goal is a total of 2.5 acres of open space per 1,000 residents. This includes 0.50 acres of passive space and 2.0 acres of active open space per 1,000 residents.

Per the CEQR Technical Manual, projects in study areas where the open space ratio approaches or exceeds the city's planning goal of 2.5 acres per residence may generally tolerate up to a 5% decrease of the open space ratio before considering the need for more detailed analysis. For projects in study areas where the open space ratio is not near the city's planning goal of 2.5 acres per thousand residents the percentage decrease in open space ratio is weighted against how the open space ratio of the study area compares to the city's planning goal for open space. Per the 2021 CEQR Technical Manual, in areas of the city where the existing Open Space Ratio is 0.50 or less (as is the case in our study area as demonstrated below) a reduction in Open Space Ratio by less than 1%typically indicates that detailed assessment of Open Space is not warranted.

Table 7-5: Existing Open Space Ratios, summarizes the total, active and passive open space ratios within the study area.

The existing open space ratios within the study area are below the citywide target of 2.5 acres of total open space per 1,000 residents, 2 acres of active open space per 1,000 residents, and 0.5 acres of passive open space per 1,000 residents as summarized in the table below. The largest discrepancy between the city's open space ratio targets and the Study Area's open space ratios is the passive open space ratio.

Table 7-5: Existing Open Space Ratios

	Existing Conditions	CEQR TM Guideline
Publicly Accessible Open Space (Acreage)	5.31[1]	-
Active Open Space (Acreage)	3.64	
Passive Open Space (Acreage)	1.67	
Study Area Population	46,324	-
Open Space Ratio (Acres/1,000 Residents)	0.115	2.5
Active Open Space Ratio (Acres/1,000 Residents)	0.079	2
Passive Open Space Ratio (Acres/1,000 Residents)	0.036	0.5

1) See Table 4-3 "Inventory of Open Space Resources" for a breakdown total Open Space

Qualitative Assessment

A qualitative assessment of open space considers the presence of public open space that is excluded from the quantitative analysis, the condition and utilization of open space within the study area, and the presence of open and recreational facilities that do not meet the criteria of open space resources established in the CEQR Technical Manual.

The open space resources within the open space study area do not meet the City's guidelines for the provision of publicly accessible open space. The existing open space ratios per 1,000 residents are below the City's goal of 2.5 acres per 1,000 residents.

There are several factors that may partially offset this deficiency in open space resources. First, the open spaces in the study area are in good to fair condition. The study area does have a good mix of open space and recreational facilities as open space is available for both active and passive uses. Around 21% of the study area's residents are over the age of 65, indicating a need for additional passive recreation (benches, planted areas, plazas) within in the Study Area.

As demonstrated in Figure 7-1, there are open space resources immediately beyond the study area boundary. These include Bowne Park, Flushing Fields, Hart Playground, Leavitt Park, Leonard Square and the Colden Playground. It should again be noted that these resources do not contribute to the quantitative analysis of Open Space Ratios presented above as they are outside of the Study Area boundary. Nevertheless, these resources can be considered as part of the qualitative analysis of open space. Per the CEQR Technical Manual, a qualitative analysis of Open Space resources should consider that some residents would choose to travel slightly farther than 0.5 Mile Study Area radius used in the quantitative analysis. Bowne Park is 0.7 miles from the Study Area via 155th Street, a 17-minute walk. Flushing Fields are 0.5 miles from the Study Area, an 11-minute walk, Hart Playground is 0.7 miles from the Study Area, a 15-minute walk, Leavitt Park is 0.7 miles from the Study Area, a 13-minute walk, and lastly the Colden Playground is 0.8 miles from the Study Area, a 16-minute walk.

Bowne Park is an 11.79-acre NYC Parks operated open space located on a block bound by 32nd Avenue, 29th Avenue, 155th Street and 152nd Street. Playground equipment, basketball courts, handball courts and fitness equipment are provided for public use within the park. Major upgrades to the playground equipment at the park were completed in 2017. Major upgrades and restoration to the park’s pond and landscaped areas are ongoing and anticipated to be completed in early 2023.

Flushing Fields is a 7.67-acre NYC Parks operated open space located on a block bound by 25th Avenue, Bayside Avenue, 150th Street and 149th Street. Playground equipment, basketball courts, handball courts, baseball fields, and tennis courts are provided for public use within the park. The baseball fields in this park last received major rehabilitation in 2013.

Leavitt Park is bounded by 137th Street, 32nd Avenue, and Leavitt Street. Although the entire complex contains 7.46 acres, most of it consists of a fenced athletic field that is controlled by the Department of Education and is only periodically open to the public. However, the northeastern portion of the complex (0.42-acres), consists of publicly accessible passive recreation open space.

Hart Playground is a 0.82-acre NYC Parks operated open space located on a block bound by 26th Avenue, 27th Avenue, 147th Street and 149th Street. Playground equipment, basketball courts, and spray showers are provided for public use within the park.

Leonard Square is a 0.06-acre NYC Parks operated open space located on a block bound by Northern Boulevard, Roosevelt Avenue, and 155th Street. The triangle offers paved areas, large shade trees, benches for public use.

Lastly, the Colden Playground is a 1.47-acre NYC Parks operated open space located on a block bound by 31st Road, 31st Drive, Union Street and 140th Street. Playground equipment, basketball courts, handball courts, baseball fields, and tennis courts are provided for public use within the park.

The open spaces considered in the qualitative analysis of existing conditions offer a combined total of 22.23 acres of open space and are all located between an 11- and 17-minute walk from the study area boundary used in the quantitative analysis. Per the CEQR Technical Manual, these resources are not considered quantitatively and therefore do not contribute to the existing open space ratio. The improvements completed on these open space resources, and their relative proximity to the Study Area may lessen the potential for significant adverse impacts introduced by the Proposed Actions.

<u>No-Action Condition</u>

Study Area Population

In the future without the proposed actions, no development is expected to occur anywhere within the study area and therefore no additional residents would be introduced in the No-Action Condition. In the No-Action Scenario, the Study Area would have 47,532 residents. This total includes 1,208 additional residents from 476 active permits for residential units as of 6/30/22 with an assumed 5.21% vacancy rate. The amount of open space would remain unchanged in the No-Action condition.

Inventory of Open Space

There will be no changes to the open space resources in the study area in the 2024 No-Action condition. As a result, the open space in the half-mile study area will

remain at 4.09 acres, including 1.58 acres of passive open space and 2.51 acres of active open space.

Quantitative Assessment

Table 7-6 shows the open space ratios for the half-mile study area under the No-Action condition, based on the anticipated population increases. As shown in the table, the total, passive, and active open space ratios will be less than the City's goals of 2.5 acres of open space per 1,000 residents, including 0.5 acres of passive open space and 2 acres of active open space. The total open space ratio is expected to remain the same for total, active, and passive open space. It is anticipated that residents of the study area will continue to use open space resources outside of the study area, which were not included in the quantitative assessment.

Table 7-6: No-Action Open Space Ratios

	No-Action Conditions	**CEQR TM Guideline**
Publicly Accessible Open Space (Acreage)	5.31[1]	-
Active Open Space (Acreage)	3.64	
Passive Open Space (Acreage)	1.67	
Study Area Population	47,532	-
Open Space Ratio (Acres/1,000 Residents)	0.112	2.5
Active Open Space Ratio (Acres/1,000 Residents)	0.077	2
Passive Open Space Ratio (Acres/1,000 Residents)	0.035	0.5

1) See Table 7-3 "Inventory of Open Space Resources" for a breakdown total Open Space

Qualitative Assessment

In the No-Action scenario, the conditions of the open space resources described are likely to remain substantially similar to the existing conditions. As demonstrated in Figure 7-1, there are open space resources immediately beyond the study area boundary. Bowne Park is 0.7 miles from the Study Area via 155th Street, a 17-minute walk. Flushing Fields are 0.5 miles from the Study Area, an 11-minute walk, Hart Playground is 0.7 miles from the Study Area, a 15-minute walk, Leavitt Park is 0.7 miles from the Study Area, a 13-minute walk, and lastly the Colden Playground is 0.8 miles from the Study Area, a 16-minute walk.

As in the existing conditions, the strain placed on the open space sources within the Study Area boundary by the introduction of new residents may be reduced as some residents (particularly users of active open space) choose to travel slightly farther than 0.5 Mile Study Area radius used in the quantitative analysis.

With-Action Condition

Study Area Population

As discussed above, the With-Action Scenario includes the development of 389 incremental dwelling units in the Project Area. It is assumed that these units would have an average household size of 2.75 persons per household. The estimated household sizes are drawn from the 2020 Census. As such, the total incremental population introduced in the With-Action Scenario would be 1,070 people. Adding this population to the No-Action Scenario population would result in a total study area population of approximately 48,602 persons in the With-Action Scenario, as shown in Table 7-7 below.

Inventory of Open Space

No additional open space resources are anticipated to be introduced to the Study Area in the 2024 With-Action condition. As a result, the open space in the half-mile study area will remain at 5.31 acres, including 1.67 acres of passive open space and 3.64 acres of active open space.

Quantitative Assessment

When compared to the "No-Action" condition the total open space ratio would decline by 2.7% in the "With-Action" condition. The With-Action active open space ratio is expected to decline by 2.6% versus the No-Action condition but the With-Action passive open space ratio is expected to decrease by 2.9% versus the No-Action condition. These changes are summarized in **Table 7-7: Open Space Ratio Totals**, below.

Table 7-7: Open Space Ratio Totals

	Future No-Action	Future With-Action	CEQR TM Guideline	Percent Change
Publicly Accessible Open Space (Acreage)	5.31[1]	5.31[1]	-	-
Active Open Space (Acreage)	3.64	3.64	-	-
Passive Open Space (Acreage)	1.67	1.67	-	-
Study Area Population	47,532	48,602	-	+2.3%
Open Space Ratio	0.112	**0.109**	**2.5**	**-2.7%**
Active Open Space Ratio	0.077	0.075	2	-2.6%
Passive Open Space Ratio	0.035	0.034	0.5	-2.9%

1) See Table 4-3 "Inventory of Open Space Resources" for a breakdown total Open Space

The CEQR Technical Manual specifies that in areas where the existing open space ratio is 0.50 or less a decrease in the open space ratio between the No-Action and With-Action condition approaching 1 percent, is generally considered to be a substantial change which could potentially result in a significant adverse impact as demonstrated below in Table 7-8.

Table 7-8 Detailed Assessment – Percentage Change Guidance to determine possible Open Space Impact

Total Open Space Ratio Range	Active Open Space Ratio Range	Passive Open Space Ratio Range	Percentage Change in Open Space Ratio Signifying a Possible Adverse Open Space Impact
2.01 to 2.50* Or greater	1.61 to 2.0* Or greater	0.41 to 0.50* Or greater	5%
1.51 to 2.00	1.21 to 1.60	0.31 to 0.40	4%
1.01 to 1.50	0.81 to 1.20	0.21 to 0.30	3%
0.51 to 1.00	0.41 to 0.80	0.11 to 0.20	2%
0.50 or Less	0.01 to 0.40	0.01 to 0.10	1%

2) *2.5 OSR is the planning goal in NYC, with optimal distribution goal of 2.0 Active OSR and 0.5 Passive OSR

The Proposed Actions would exceed the guidelines listed in Table 7-8. As demonstrated above, the Proposed Actions would reduce the total open space ratio by 2.7%. As indicated in Table 7-8 above as the Open Space Ratio in the With-Action condition is 0.109, generally only a 1% decrease in the OSR is tolerated. The quantitative assessment therefore indicates that there is a possible adverse open space impact. The Active OSR in the With-Action Scenario is 0.075 which represents a 2.6% decrease compared to No-Action conditions. The Passive OSR in the With-Action Scenario is 0.034 which represents a 2.9% decrease compared to No-Action conditions. The quantitative assessment of Open Space, particularly the Total and Active Open Space ratios suggest that there is the potential for the Proposed Action to result in an adverse Open Space impact. However, according to the CEQR Technical Manual, these optimal open space ratios and percentage reductions do not solely determine the significance of an impact. Other factors, such as the project's location, the quality, quantity, and types of nearby open space, and the balance of passive and active open space, should also be considered. The open spaces in the study area are in fair condition, provide a variety of facilities, and are moderately used.

Projects that may affect open space quantitatively are usually further evaluated in a qualitative assessment to determine the overall significance of the impact. The qualitative assessment below indicates that several qualitative open space features, such as the quality and number of open spaces in the study area, combined with the availability of open spaces outside the study area, creates conditions where no significant adverse impact to open space is anticipated with the approval of the Proposed Actions.

Qualitative Assessment

The Proposed Actions would reduce the open space ratio in the study area when compared to the No-Action condition. According to the DCP's guidelines, the area should have 2.5 acres of open space per 1,000 residents, including 0.5 acres of passive open space and 2 acres of active open space. However, the With and No-Action conditions for the study area fall short of this goal, with 0.112 and 0.109 acres of open space per 1,000 residents, respectively. The Proposed Actions would decrease the OSR by 2.7%.

The open space resources in the study area are in fair condition and offer a variety of amenities for passive and active recreation, such as playgrounds, basketball courts, and sitting areas. The population added as a result of the Proposed Actions is not expected to have any characteristics that would place unusually heavy demands on facilities that cater to specific user groups, such as being disproportionately older or younger. The breakdown of the population is also expected to remain the same. As discussed above, The Active OSR in the With-Action Scenario is 0.075 which represents a 2.6% decrease compared to No-Action conditions. This exceeds the thresholds set by the CEQR Technical Manual for potential Open Space Impacts, as summarized in Table 7-8. The Passive OSR in the With-Action Scenario is 0.034 which represents a 2.9% decrease compared to No-Action conditions. New residents generated by the Proposed Actions are expected to have similar characteristics to current residents of the study area. The analysis above suggests that in the existing, No-Action and With-Action scenarios the study area is deficient in open space that offers passive recreation. The population within the Study Area has a higher demand for passive open space based on a larger population of seniors over 65 years old when compared to the borough and city as a whole.

As discussed above in "Existing Conditions: Qualitative Assessment", there are a total of six open space resources within a half-mile radius of the study area that have been left out of the quantitative analysis.

As discussed above, Bowne Park is 0.7 miles from the Study Area via 155th Street, a 17-minute walk. Flushing Fields are 0.5 miles from the Study Area, an 11-minute walk, Hart Playground is 0.7 miles from the Study Area, a 15-minute walk, Leavitt Park is 0.7 miles from the Study Area, a 13-minute walk, and lastly the Colden Playground is 0.8 miles from the Study Area, a 16-minute walk. The open spaces considered in the qualitative

analysis of existing conditions offer a combined total of 23.45 acres of open space and are all located between an 11- and 17-minute walk from the study area boundary used in the quantitative analysis. Per the CEQR Technical Manual, these resources are not considered quantitatively and therefore do not contribute to the existing open space ratio.

As discussed above, several of these sites, most notably Bowne Park has recently completed, or will soon complete, major upgrades and improvements. The improvements completed on these open space resources, and their relative proximity to the Study Area may lessen the potential for significant adverse impacts introduced by the Proposed Actions. These resources would continue to attract users within the study area and serve to reduce the pressure on open spaces resources.

The Proposed Development would also include indoor/outdoor recreational areas and residential terraces for the building's occupants. In total the Proposed Development would introduce 35,277 sf of green space for the use of building residents. Amenity spaces include a jogging track, landscaped gardens and paved areas, lawns, decks, and fitness equipment. These spaces have not been included in the quantitative assessment but would help to alleviate the deficiency of open space in the study area as the residents introduced by the Proposed Actions would likely use these spaces more frequently than public open spaces in the study area.

Conclusion

If the Proposed Actions are approved new development in the Project Area would introduce new residents to the Study Area. The Open Space Ratio in the With-Action condition is 0.109, which represents a 2.7% decrease compared to the No-Action scenario. Generally, only a 1% decrease in the OSR is tolerated. The quantitative assessment therefore indicates that there is a possible adverse open space impact. The Active OSR in the With-Action Scenario is 0.075 which represents a 2.6% decrease compared to No-Action conditions. The Passive OSR in the With-Action Scenario is 0.034 which represents a 2.9% decrease compared to No-Action conditions. The Study Area currently has a total open space ratio which is below the city's target of 2.5 acres of open space per 1,000 residents and both the active and passive OSRs are below the city's target of 2.0 and 0.5 acres of open space per 1,000 residents respectively.

The detailed analysis included above, indicates that the Study Area may have a greater need for passive open space than the citywide average, given seniors over the age of 65 make up a larger share of the Study Area population. The inclusion of private recreational spaces for residents may reduce additional pressure on existing passive open space resources from building residents. Although the reduction of open space ratios by 2.7% may be large enough to result in significant adverse impacts the qualitative factors of this assessment demonstrate that existing resources are in good condition (with some parks receiving recent infrastructure upgrades), there are additional open space resources

within a ½ mile radius of the Project Area and that new amenity spaces included in the Proposed Development may reduce the stress on existing open space resources. See "Open Space Appendix" for detailed plans of these proposed amenity spaces. Based on the quantitative and qualitative analysis provided above the Proposed Actions do not have the potential to result in significant adverse open space impacts and further assessment is not warranted.

8. Shadows

Introduction

Per the CEQR Technical Manual, the purpose of a shadows analysis is to assess whether new structures may cast shadows on sunlight sensitive publicly accessible resources or other resources of concern such as natural resources, and to assess the significance of their impact.

Sunlight sensitive resources of concern include Open Space Resources (see Open Space above), Architectural Resources (specifically features of landmark or historic structures that depend on direct sunlight), Natural Resources (see Natural Resources below), and "Green-streets".

Threshold Assessment

Per the CEQR Technical Manual, a shadows assessment is required if proposed actions would lead to the development of a a structure at least 50 feet tall. Shorter structures that might cast substantial new shadows on an adjacent park, historic resource, or an important natural resource also require an analysis. The tallest portion of the buildings on Projected Development Site 1 and Projected Development Site 2 is 170 feet. This height accounts for the bulkheads above the maximum allowable building height of 140ft in the R7X district. A preliminary shadows assessment is required.

Preliminary Screening Assessment

Per the CEQR Technical Manual, a preliminary assessment of shadows impact, determines whether shadows from a proposed development could reach a sunlight sensitive resource.

Per the CEQR Technical Manual, the first step in conducting the screening assessment is to develop a base map that illustrates the proposed site location in relationship to the sunlight-sensitive resources. This base map is incorporated in Figure 8-1: Tier I Screening

Assessment and demonstrates that the Proposed Development has the potential to cast shadows on a historic resource: the LPC Designated and State/ National Register Listed Voelker Orth Museum, Bird Sanctuary, and Victorian Gardens is located within the Study Area. The landmark is located at 149-19 38th Avenue. The development on the Projected Development Site, is not anticipated to cast shadows on any other sunlight sensitive resources. A Tier I shadow assessment is required.

Tier I Assessment

Per the CEQR Technical Manual, a Tier I shadow assessment creates a longest shadow study area. The longest shadow study area encompasses the Project Area and a perimeter around the area's boundary with a radius equal to the longest shadow that could be cast by the proposed structure. The longest shadow cast by the Proposed Development is 4.3 times the height of the structure: 731 Feet. Figure 8-1: Tier I Screening Assessment demonstrates that only one sunlight sensitive resource has the potential to receive shadows from the Proposed Development as a result of the Proposed Actions: Voelker Orth Museum, Bird Sanctuary, and Victorian Gardens. A Tier II assessment is required.

Tier II Assessment

Per the CEQR Technical Manual, because of the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area between -108 and +108 degrees from true north of any given project site. Figure 8-2: Tier II Screening Assessment demonstrates that the sunlight sensitive resource identified above still has the potential to receive shadows as a result of the Proposed Actions. A Tier III assessment is required.

Tier III Assessment

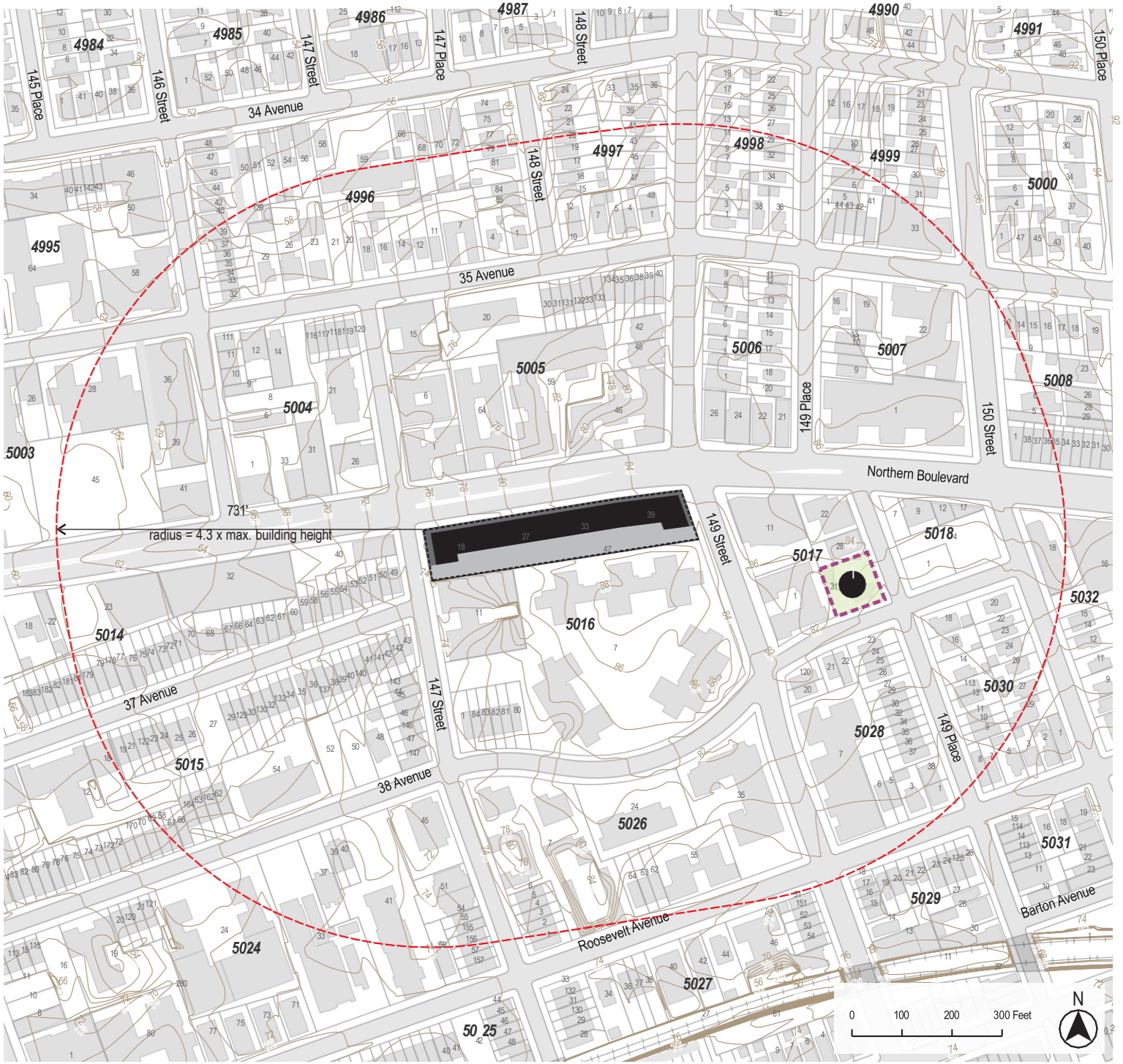
The Tier 3 screening assessment is used to determine whether shadows resulting from the proposed project can reach a sunlight-sensitive resource by introducing the use of three-dimensional computer modeling software with the capacity to accurately calculate shadow patterns. Because the sun rises in the east and travels across the southern part of the sky to set in the west, a project's earliest shadows would be cast almost directly westward. Throughout the day, they would shift clockwise (moving northwest, then north, then northeast) until sunset, when they would fall east. Also, because the direction and length of shadows vary throughout the course of the day and the time of the year, the assessment of shadows is focused on representative times of the year relevant to the use and function of the identified sunlight-sensitive resources.

Per the CEQR Technical Manual, the months of interest for an open space resource encompass the growing season (March through October) and one month between November and February (usually December) representing a cold-weather month.

147-14 Northern Boulevard, Queens

Figure 1: Tier 1 Screening Assessment

- Project Site
- Projected Building Footprint
- Roof Above Base (105')
- Roof Above Bulkheads (170')
- Longest Shadow Study Area Boundary
- # Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource

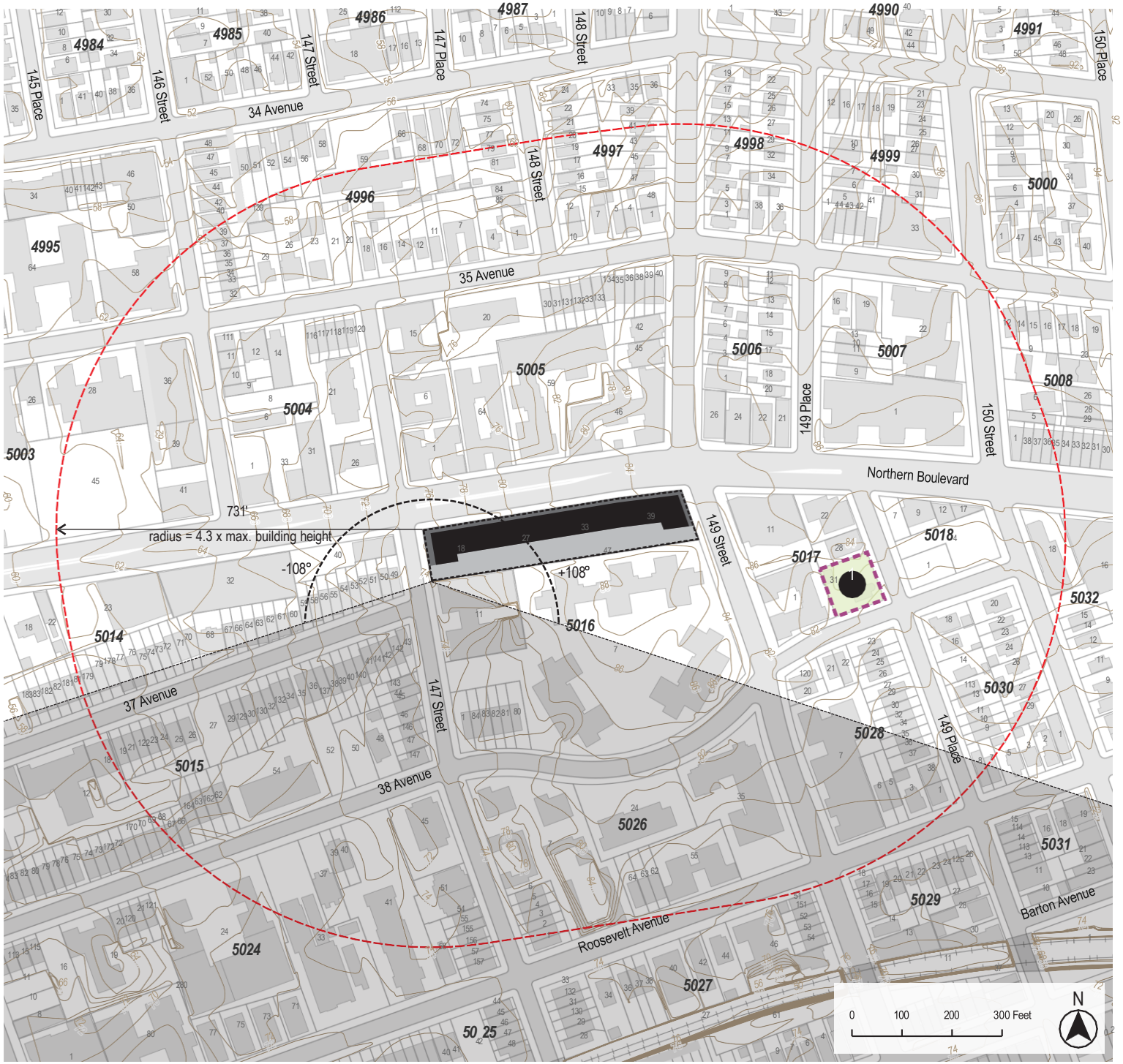


Urban Cartographics

147-14 Northern Boulevard, Queens

Figure 2: Tier 2 Screening Assessment

- Project Site
- Projected Building Footprint
- Roof Above Base (105')
- Roof Above Bulkheads (170')
- Longest Shadow Study Area Boundary
- # Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource
- Area That Cannot Be Shaded by the Proposed Building

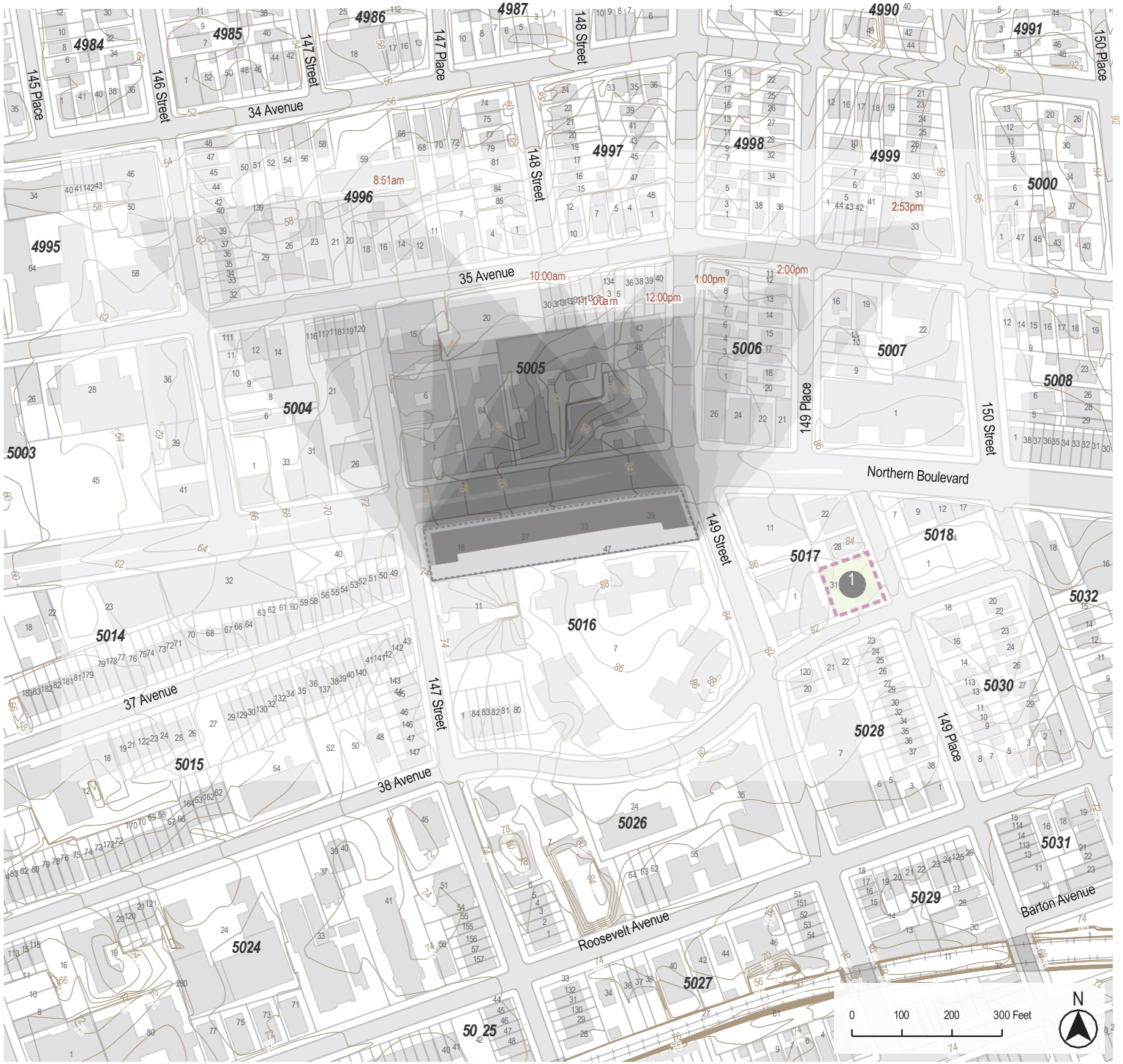


Urban Cartographics

147-14 Northern Boulevard, Queens

Figure 3: Tier 3 Screening Assessment for the December 21 Analysis Day

- Project Site
- Projected Building Footprint
- Roof Above Base (105')
- Roof Above Bulkheads (170')
- 8:51am Shadow Cast/Analysis Time
- # Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource

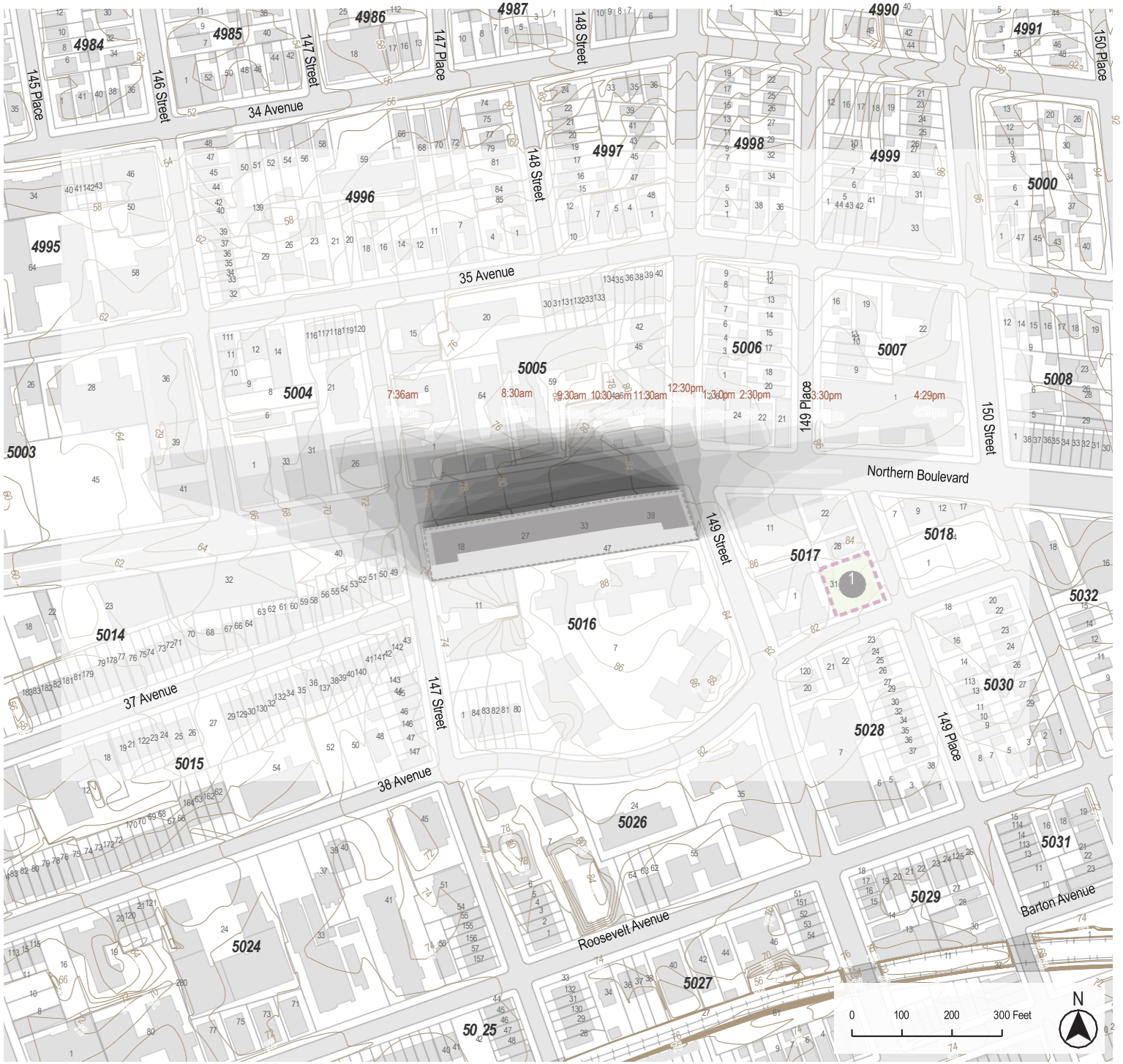


Urban Cartographics

147-14 Northern Boulevard, Queens

Figure 4: Tier 3 Screening Assessment for the March 21 Analysis Day

- Project Site
- Projected Building Footprint
- Roof Above Base (105')
- Roof Above Bulkheads (170')
- 8:51am Shadow Cast/Analysis Time
- # Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource



Urban Cartographics

147-14 Northern Boulevard, Queens

Figure 5: Tier 3 Screening Assessment for the May 6 Analysis Day

- Project Site
- Projected Building Footprint
- Roof Above Base (105')
- Roof Above Bulkheads (170')
- 8:51am Shadow Cast/Analysis Time
- # Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource

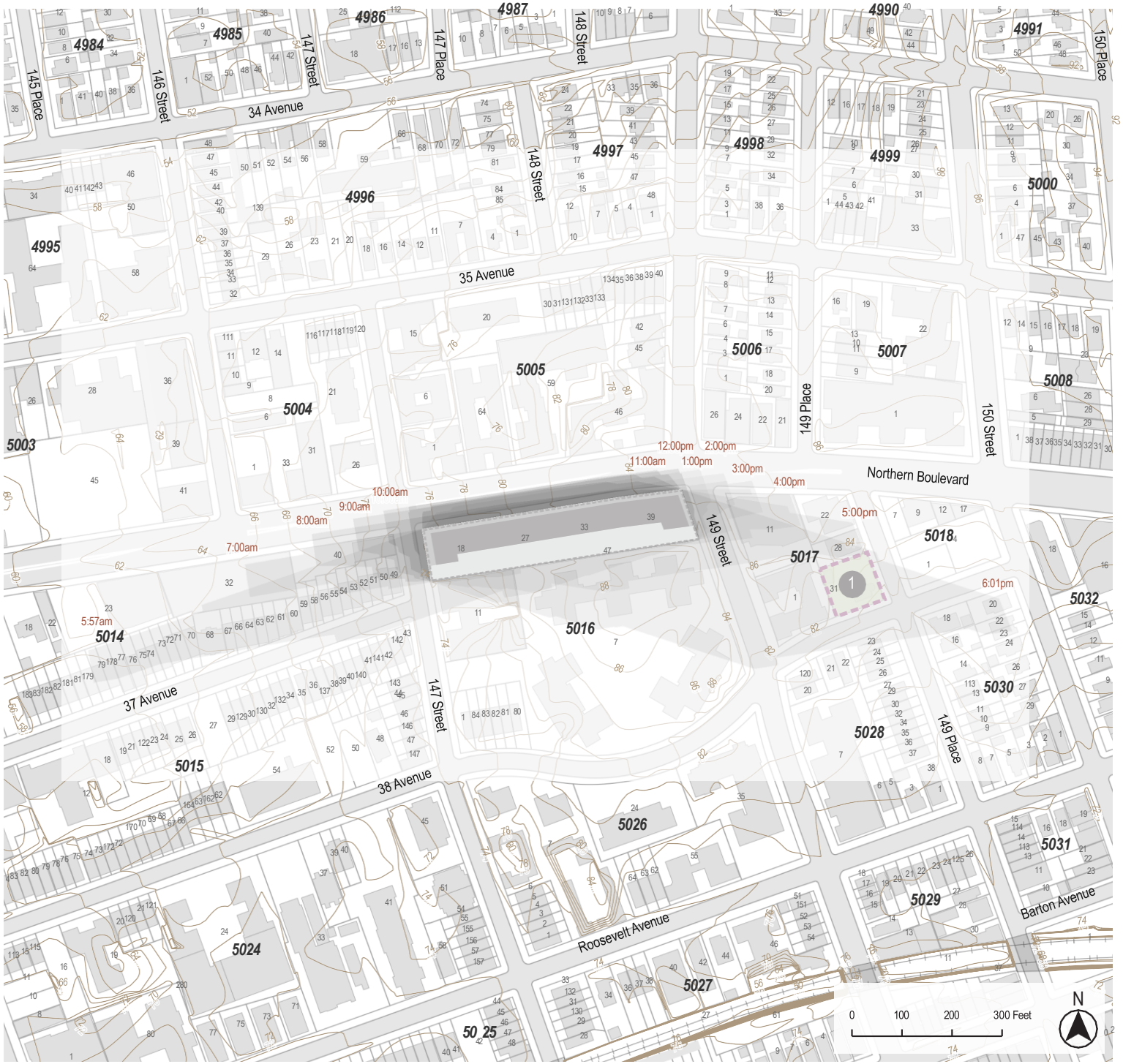


Urban Cartographics

147-14 Northern Boulevard, Queens

Figure 6: Tier 3 Screening Assessment for the June 21 Analysis Day

- Project Site
- Projected Building Footprint
- Roof Above Base (105')
- Roof Above Bulkheads (170')
- 8:51am Shadow Cast/Analysis Time
- # Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource



Urban Cartographics

Representative days for the growing season are generally the March 21 vernal equinox (or the September 21 autumnal equinox, which is approximately the same), the June 21 summer solstice, and a spring or summer day halfway between the summer solstice and equinoxes such as May 6 or August 6 (which are approximately the same). For the cold weather months, the December 21 winter solstice is usually included to demonstrate conditions during cold weather when people who do use open spaces rely most heavily on available sunlight for warmth. Project shadows that reach a sunlight-sensitive open space resource during any of these months could be of concern. These months and days are also used for assessing shadows on historic or natural sunlight-sensitive resources as they represent the full range of possible shadows.

The Proposed Actions would facilitate the development of the Applicant's proposed project and generate additional development within the Project Area. The following figures demonstrate the extent of the shadows cast by the Proposed Development throughout the year:

As demonstrated in **Figure 8-3: Tier III Screening Assessment for Dec. 21st**, the Proposed Development will not cast shadows over the Voelker Orth Museum at any point throughout the day.

As demonstrated in **Figure 8-4: Tier III Screening Assessment for Mar. 21st**, the Proposed Development will not cast shadows over the Voelker Orth Museum at any point throughout the day.

As demonstrated in **Figure 8-5: Tier III Screening Assessment for May. 6th**, the Proposed Development will cast shadows over 10% of the Voelker Orth Museum from 5:18 PM.

As demonstrated in **Figure 8-6: Tier III Screening Assessment for Jun. 21st**, the Proposed Development will cast shadows over 100% of the Voelker Orth Museum from 5:00 PM.

As the Proposed Development has the potential to cast shadows on one or more of the analysis days on the sunlight sensitive resource (Voelker Orth Museum) a detailed analysis of shadows is needed.

Detailed Analysis

Per the CEQR Technical Manual, a detailed shadow analysis is warranted when the screening analyses described above does not rule out the possibility that project-generated shadows would reach any sunlight-sensitive resources. The detailed shadow analysis establishes a baseline condition (future No-Action) that is compared to the future condition resulting from the proposed project (future With-Action) to illustrate the

shadows cast by existing or future buildings and distinguish the additional (incremental) shadow cast by the project. The purpose of the detailed analysis is to determine the extent and duration of new incremental shadows that fall on a sunlight-sensitive resource as a result of the proposed project. To evaluate the extent and duration of new shadow that would be cast on a sunlight-sensitive resource as a result of the proposed project, shadows that would exist in the future without the proposed project are also defined. Because existing buildings may already cast shadows on a sun-sensitive resource (or a future building could be expected to cast shadows), the proposed project may not result in additional, or incremental, shadows upon that resource.

No Action Condition

As discussed above, if the Proposed Actions are not approved, no development is anticipated to occur anywhere within the Project Area. All of the lots in the Project Area are anticipated to remain in their existing conditions.

With Action Condition

If the Proposed Actions are approved, development is anticipated to occur on the applicant owned site. **Figure 8-7: Detailed Analysis** provides further detail to the Tier III analysis presented in Figures 8-3 through 8-6 above by modeling all shadows created by the Proposed Project within the Project Area.

As demonstrated in **Figure 8-7: Detailed Analysis** the building on Projected Development Site 1 would cast shadows on the Voelker Orth Museum. The shadows cast on May 6th would be cast on the building at 5:14 PM and remain on the facade until 5:18 PM. Shadows would be cast on the building for 4 minutes. These shadows would move from west to east during this period and cover 10% of the grounds. No shadows would be cast on the building itself. The shadows cast on June 21st would be cast on the building at 5:08 PM and remain on the building until 6:01 PM. Shadows would be cast on the building for 53 minutes. These shadows would move from west to east during this period and cover the building's roof and eastern façade.

Conclusion

Per the LPC Designation Report associated with the the Voelker Orth House, the building is two stories high, with a variety of rooflines, materials and projecting bays and angles. The roofs are faced with wooden shingles and the walls of the first story are faced with wooden clapboards with wooden framing. The second story is faced with shingles in alternating rows of fish scale, sawtooth and chisel shapes. The windows are all wood and are original unless otherwise noted. The main part of the building is two bays wide and

147-14 Northern Boulevard, Queens

Figure 7: Detailed Analysis

Shadows Cast on Sunlight-Sensitive Resource

May 6 - 5:14pm – 5:18pm

June 21 - 5:08pm – 6:01pm

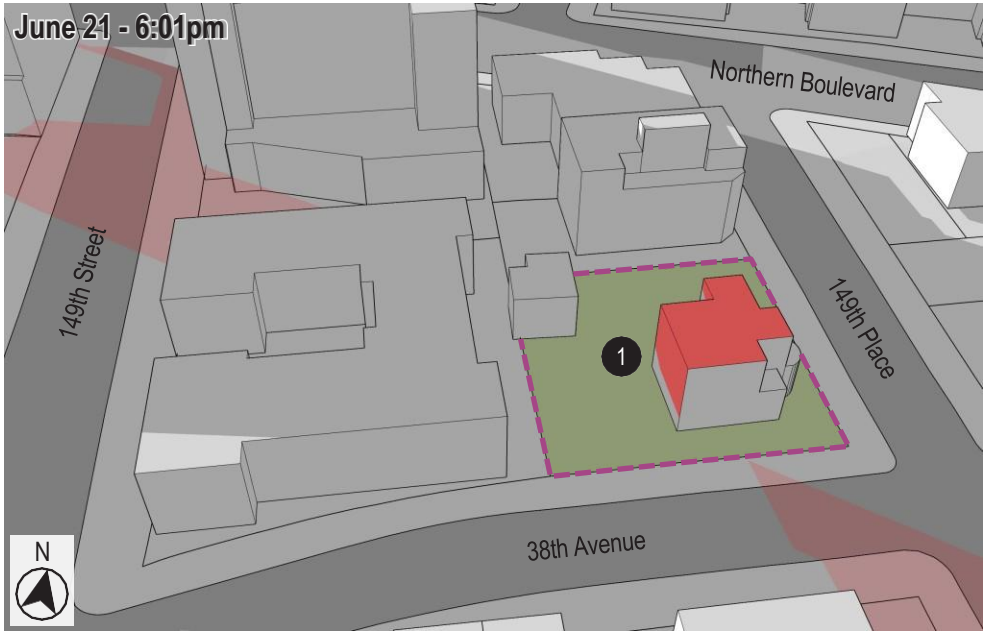


Incremental Shadow - On Sunlight Sensitive Resource

Incremental Shadow - Not on Sunlight Sensitive Resource

Sunlight-Sensitive Open Space Resource





Urban Cartographics

faces 38th Street. It should be noted that the façade facing 38th Street contains colored glass and other ornamentation that may be impacted by shadows. However, this façade would not receive any project generated shadows as visualized in **Figure 8-7: Detailed Analysis.** Only the eastern façade and roof are anticipated to be covered by project generated shadows. These portions of the house are not detailed within the designation report and do not appear to contain ornamentation or any architectural features. It should be noted that the house is surrounded by large trees that shade large portions of the house. Public use and enjoyment of the historic landmark is not expected to be affected by shadows cast by the Proposed Project. Further, shadows from the Proposed Project will only be cast over the landmark in the evening (outside of hours of operation) and last for no more than 53 minutes. Approval of the Proposed Actions is not expected to result in significant adverse shadows impacts.

9. Historic and Cultural Resources

Introduction

Historic and cultural resources include both architectural and archaeological resources. The 2021 City Environmental Quality Review (CEQR) Technical Manual identifies historic and cultural resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes designated New York City Landmarks (NYCL); properties calendared for consideration as landmarks by the New York City Landmarks Preservation Commission (NYCLPC); properties listed in the State/National Registers of Historic Places (S/NR) or contained within a district listed in or formally determined eligible for S/NR listing; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHL); and properties not identified by one of the programs listed above, but that meet their eligibility requirements.

An assessment of historic/archaeological resources is usually needed for projects that are located adjacent to historic or landmark structures or within historic districts, or projects that require in-ground disturbance, unless such disturbance occurs in an area that has already been excavated. As discussed in this chapter, the Project Area contains no individual landmarks and eligible resources however it is located immediately adjacent to a historic landmark. Therefore, it is necessary to assess the potential impacts of the Proposed Actions on historic architectural resources.

Archaeological resources are considered only in those areas where new excavation or ground disturbance is likely and would result in new in-ground disturbance compared to No-Action conditions; these are limited to any area that may be developed in the Project Area and include projected as well as potential development sites. Because the Proposed Actions would induce development that could result in new in-ground

disturbance, they have the potential to affect archaeological resources, and therefore an assessment of the potential effects on archaeological resources is also provided in this chapter.

Study Area

According to CEQR Technical Manual guidance, impacts on historic architectural resources are considered on those sites affected by the Proposed Actions and in the area surrounding identified development sites. The historic resources study area is therefore defined as the area to be rezoned plus an approximate 400-foot radius around the Project Area, which is typically adequate for the assessment of historic architectural resources, in terms of physical, visual, and historical relationships.

Preliminary Assessment

Archeological Resources

Archaeological resources are the physical remnants, usually buried, of past activities on a site. They can include pre-contact archaeological resources associated with the Native American populations who used or occupied a site, or archaeological resources associated with the historic period, which began with the settlement of Europeans in the New York area beginning in the 17th century. In developed areas and in urban regions, archaeological resources are often disturbed or destroyed by grading, excavation, and the installation and improvement of infrastructure. However, some archaeological resources do survive in an urban environment and are often sealed beneath the surface and protected from further disturbance.

In accordance with CEQR Technical Manual guidance, archaeological resources are assessed only in areas where excavation is likely and would result in new 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. For projects that would result in new in-ground disturbance, assessment of both prehistoric and historic archaeological resources is appropriate.

As discussed above, the Proposed Actions would facilitate construction on the Projected Development Site within the Study Area, resulting in new in-ground disturbances. As such, an assessment of archaeological resources is necessary for the Proposed Actions. As detailed in the CEQR Technical Manual, only the area of subsurface work for a project is considered the impact area for archaeological resources. Environmental review for archaeological resources is a predictive endeavor. For prehistoric resources, it is appropriate to determine whether there are known prehistoric archaeological resources

within a half- mile radius of the site. For historic archaeological resources, it is appropriate to determine if there are known historic archaeological resources in the nearby area, such as on the present-day full tax lot or within the boundaries of the nearest adjacent mapped streets.

As discussed above (see Project Description) all lots within the Project Area are currently occupied. However, the Proposed Actions would result in incremental excavation on the Projected Development Site. In a letter dated May 26th, 2022 the New York City Landmarks Preservation Commission (NYCLPC) determined that the Projected Development site consisted of properties with no archeological or architectural significance.

Architectural Resources

The NYCLPC designates historically significant properties in the City as NYCLs and/or Historic Districts, following the criteria provided in the Local Laws of the City of New York, NYC Charter, Administrative Code, Title 25, Chapter 3. Buildings, properties, or objects are eligible for landmark status when a part is at least 30 years old. Landmarks have a special character or special historical or aesthetic interest or value as part of the development, heritage, or cultural characteristics of the city, state, or nation. There are four types of landmarks: individual landmark, interior landmark, scenic landmark, and historic district.

In a letter dated May 26th, 2022 the New York City Landmarks Preservation Commission (NYCLPC) determined that the Projected Development site consisted of properties with no archeological or architectural significance. However, the LPC Designated and State/ National Register Listed Voelker Orth Museum, Bird Sanctuary, and Victorian Gardens is located within the Study Area. The landmark is located at 149-19 38th Avenue. The landmark is not immediately contiguous to the Project Area. As such, the Proposed Actions would not result in direct impacts related to Noise, Air Quality, Neighborhood Character or Construction on the landmark. The Proposed Actions are anticipated to create incremental shadows on the landmark between the No-Action and With-Action Conditions. As discussed in Shadows, above, the Proposed Actions would not result in significant adverse shadow impacts on this light sensitive resource. LPC has reviewed the Shadows section of this EAS and has determined that further assessment is not warranted.

Conclusion

Excavations within the Project Area that occur as a result of the approval of the Proposed Actions would be conducted with the consultation of the New York City Landmarks Preservation Commission. Further, no direct, indirect, or construction related impacts are anticipated as a result of the approval of the Proposed Actions. Shadows analysis has

determined that the Proposed Actions would not result in significant adverse impacts to the landmark located within the Study Area. The Proposed Actions would not result in significant adverse impacts to historic or cultural resources within the Study Area and further analysis is not warranted.

10. Urban Design and Visual Resources

Introduction

Per the CEQR Technical Manual, an urban design assessment considers whether and how a project may change the experience of a pedestrian in the project area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment.

A preliminary assessment 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, including the following:

1. Projects that permit the modification of yard, height, and setback requirements.
2. Projects that result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the Proposed Actions.

The Study Area used in Urban Design and Visual Resources, is generally consistent with the Land Use study area (400' radius around the Project Area). In areas where significant visual resources exist, it may be appropriate to look beyond the Land Use study area to encompass views that are outside of the area (this is often the case in waterfront sites, or within historic districts.

As discussed above in "Land Use, Zoning, and Public Policy", the Proposed Actions include zoning map and text amendments. These actions would both permit the

modification of yard, height, and setback requirements and result in an increase in built floor area beyond what would be allowed 'as-of-right'.

The current R5/C1-2 district allows for low to medium density residential uses with commercial uses on the ground floor. Community Facility uses are also permitted by the commercial overlay and these are present in the study area. The Proposed Actions would rezone the Project Site to an R7X/C2-3 district. R7X/C2-3 districts permit medium density mixed-use buildings. The maximum floor area ratio (FAR) permitted in R7X zoning districts is 5.0 FAR for residential uses (6.0 FAR if providing Inclusionary Housing), and 5.0 FAR for community facility uses. C2-3 Commercial Overlays permit up to 2.0 FAR for commercial uses. The maximum height in R7X districts is 125ft or 145ft under Quality Housing regulations. Quality Housing regulations allow for 60-100% lot coverage based on the width of adjacent streets and the mapping of inclusionary housing areas. One parking space must be provided for every two dwelling units although less parking for income-restricted units is required.
As discussed above with the approval of the Proposed Actions, development is expected to occur on Projected Development Site 1 and Projected Development Site 2. As the development on these sites is anticipated to result in a different built form at the street level, an assessment of urban design and visual resources is warranted.

Urban Design

The Urban design characteristics of a neighborhood are composed of various components that define the character of the area: building bulk, use, type and arrangement, block form and street pattern, streetscape elements, street hierarchy, and natural features. These components are discussed below.

Methodology

Per the CEQR Technical Manual, should provide concise narrative of the existing project area, the future No-Action condition, and the future With-Action condition that includes information related to changes in proposed floor area, lot coverage, building height(s), setbacks, changes in land use(s) and any other urban design aspect that may affect the surrounding built environment and natural environment. Aerial maps, land use maps, and ground level photographs should also be included to show the context of the study area, including major uses and view corridors, vehicular and pedestrian access, open spaces, community facilities, public transit corridors, bike paths and any other elements of urban design that affect the pedestrian experience of the project study area, as applicable. Imposition of no action and with action scenario on aerial imagery/three-dimensional model to understand the larger context of development should also be included.

The study area for urban design is the area where the project may influence land use patterns, the built environment and pedestrian's experiences in the public realm surrounding the project area. The land use study area may serve as the initial basis for analysis.

Existing Building Bulk, Use, Type, and Arrangement

The Study Area contains a range of building types. Outside of the Northern Boulevard corridor, there are a mix of semi-detached and detached single, two, and multiple family residences. Generally, these do not exceed three floors and include side yards, and or front yards. The buildings on Northern Boulevard are generally mid-rise with most being multifamily residential or community facility buildings. The majority of lots within the Study Area are occupied though a few vacant lots can be seen along Northern Boulevard.

Building bulk, use, and type differs within the Study Area between those lots with frontage on wider streets (where buildings are larger) and lots with frontage on narrow streets (where buildings are generally smaller). Larger residential buildings within the Study Area range from 5 floors to 13 floors.

Future No-Action – Project Area

If Proposed Actions are not approved, the built form, use, type, and arrangement of the Project Area will remain unchanged as no new development is expected to occur.

Future No-Action – Study Area

If Proposed Actions are not approved, the built form, use, type, and arrangement of the Study Area and surrounding area would remain unchanged as no development is projected in the No-Action.

Future With-Action- Project Area

The Proposed Actions would facilitate the construction on Projected Development Sites 1 and 2. The bulk and height of these developments are visualized in the context of the Study Area in Figures 10-1 and Figures 10-2: Urban Design Diagram. On Projected Development Sites 1 and 2, the existing commercial building would be replaced with a larger mixed-use building with ground floor commercial use.

Future With-Action- Study Area

The buildings on Projected Development Sites 1 and 2 would be similar in height but have a higher lot coverage than most mixed-use building in the Study Area. The buildings

on Projected Development Sites 1 and 2 in the with-action scenario would create a continuous street-wall with ground floor commercial uses. As discussed above, the buildings on Northern Boulevard are generally mid-rise with most being multifamily residential or community facility buildings. The Proposed Actions would not introduce a new building type to the Study Area, and would introduce uses and buildings with similar arrangement, bulk to the surrounding Study Area.

Block Form, Street Pattern, and Street Hierarchy

The Study area is bisected by Northern Boulevard which runs east-west. 147th and 149th Streets both run perpendicular to Northern Boulevard and provide north-south access through the Study Area. The remainder of the streets within the study area are more narrow local streets that provide access to the residential areas within the Study Area.

Future No-Action- Project Area

If the Proposed Actions are not approved the block form, street pattern and street hierarchy would remain as per existing conditions.

Future No-Action- Study Area

If the Proposed Actions are not approved the block form, street pattern and street hierarchy would remain as per existing conditions.

Future With-Action- Project Area

If the Proposed Actions are approved the block form, street pattern and street hierarchy would remain as per existing conditions as the Proposed Actions would not result in any alterations to the surrounding road network.

Future With-Action- Study Area

No new street would be built within the Study Area.

Streetscape Elements

The Study Area includes some street trees, along Northern Boulevard. Generally, the residential area surrounding Northern Boulevard has several street trees, as well as sidewalks in various states of repair. There are no bus shelters within the Study Area. Local buses run along Northern Boulevard and 150th Street.

Larger streets within the Study Area (Northern Boulevard, 35th Avenue, and Roosevelt Avenue) all have wide crosswalks that are clearly marked. Some of the neighboring residential streets also have crosswalks, though these are often less visible. There are many curb-cuts within the Study Area. Along Northern Boulevard, many commercial uses have parking facilities.

Future No-Action- Project Area

The No-Action scenario is not expected to alter any streetscape elements within the Project Area.

Future No-Action- Study Area

In the future without the Proposed Actions, the streetscape elements would remain. Development within the Study Area is not expected to occur without the approval of the Proposed Actions.

Future With-Action- Project Area

No street infrastructure (such as benches, plazas, or bus shelters) would be removed as a result of the approval Proposed Actions. In total the Proposed Actions would retain the existing curb cuts on 147th and 145th Street within the Project Area and would not add any additional curb-cuts within the Project Area. The remaining streetscape elements would otherwise remain.

Future With-Action- Study Area

In the future with the Proposed Actions, the amount of street trees within the Study Area is expected to remain the same. No street infrastructure (such as benches, plazas, or bus shelters) would be removed as a result of the approval Proposed Actions within the Study Area. The remaining streetscape elements would otherwise remain.

Natural Features

There are no natural features in the Rezoning Area or within the surrounding 400 feet. Therefore, no natural features are visible from the Rezoning Area.

Assessment

Based on the above, the Proposed Actions would result in similar density buildings than currently exist within the Study Area. Further, previous city sponsored actions rezoned areas to the northeast of the Study Area, to encourage development on larger commercial corridors and discourage large developments from being constructed in the surrounding

residential neighborhood. The larger mixed-use developments facilitated by the Proposed Actions are similar in height, bulk and use to the surrounding lots along the commercial corridor along Northern Boulevard. The Proposed Project is therefore keeping in context with the existing surrounding development. For an illustrative display of buildings resulting from the Proposed Actions, as well as the newly permitted maximum permitted building envelopes, see Figure 10-1 and Figure 10-2 (Urban Design Diagrams). As discussed in Section II of this EAS, each building would be analyzed at 145 feet in height—the maximum permitted by zoning—for conservative analysis purposes. The Applicant's proposed development would be shorter; however this height is used in the Urban Design Assessment in conformance with the methodology established by the CEQR Technical Manual. Therefore, these buildings would rise 14 stories or a maximum permitted height of 140 feet after under the proposed R7X/C2-3 zoning district with MIH. Street wall regulations would require that these new buildings would be aligned, forming a more uniform street wall compared to the existing development.

The R7X/C2-3 district is anticipated to result in near continuous ground-floor commercial retail activity in the Future With-Action scenario. This will serve to further activate segments of Northern Boulevard within the Project Area. While these new buildings would be taller than adjacent properties, similar-sized developments exist in the surrounding area, as noted above, and would be consistent with the mixed-use character of the immediate area. The Proposed Actions would not adversely affect the residential and mixed-use character of buildings within the Study Area. Lastly, the Proposed Actions would not affect any natural features.

Visual Resources

The Proposed Actions would not block the view of any natural resources, as no natural resources are within vicinity of the study area. Furthermore, there are no notable features or buildings in the immediate vicinity of the study area. Therefore, based on the criteria in the *CEQR Technical Manual,* the Proposed Actions would not result in the obstruction of views of a natural or built visual resource. In this context, the Proposed Actions would not result in the significant alteration of views from streets. Therefore, no significant impacts related to visual resources are expected.

Conclusion

The Proposed Actions would create additional density and allow a greater maximum height in an area along a commercial corridor. As discussed above, the Proposed Actions would not introduce a new building type to the Study Area, and would instead, introduce uses and buildings with similar arrangement, height and bulk to those found in the surrounding Study Area. The Proposed Project would not alter the block form, street pattern or street hierarchy within the surrounding Study Area. Furthermore, the

147-14 Northern Boulevard, Queens

Figure 2: Urban Design Diagram

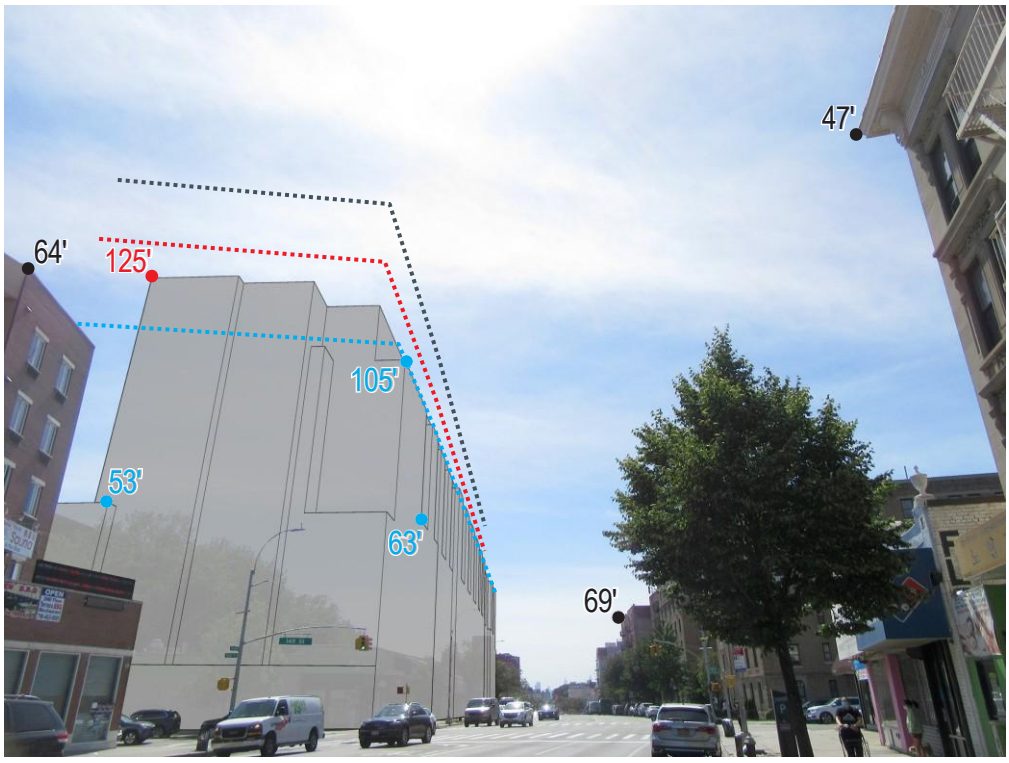
No-Action Scenario

Northern Boulevard facing west (Site at left)



With-Action Scenario

Northern Boulevard facing west (Site at left)



Maximum Permitted Base Height (105') | Maximum Permitted Building Height (145') | Maximum Permitted Bulkhead Height (170')

Proposed Base Height | Proposed Building Height | Proposed Bulkhead Height

Urban Cartographics

147-14 Northern Boulevard, Queens

Figure 1: Urban Design Diagram

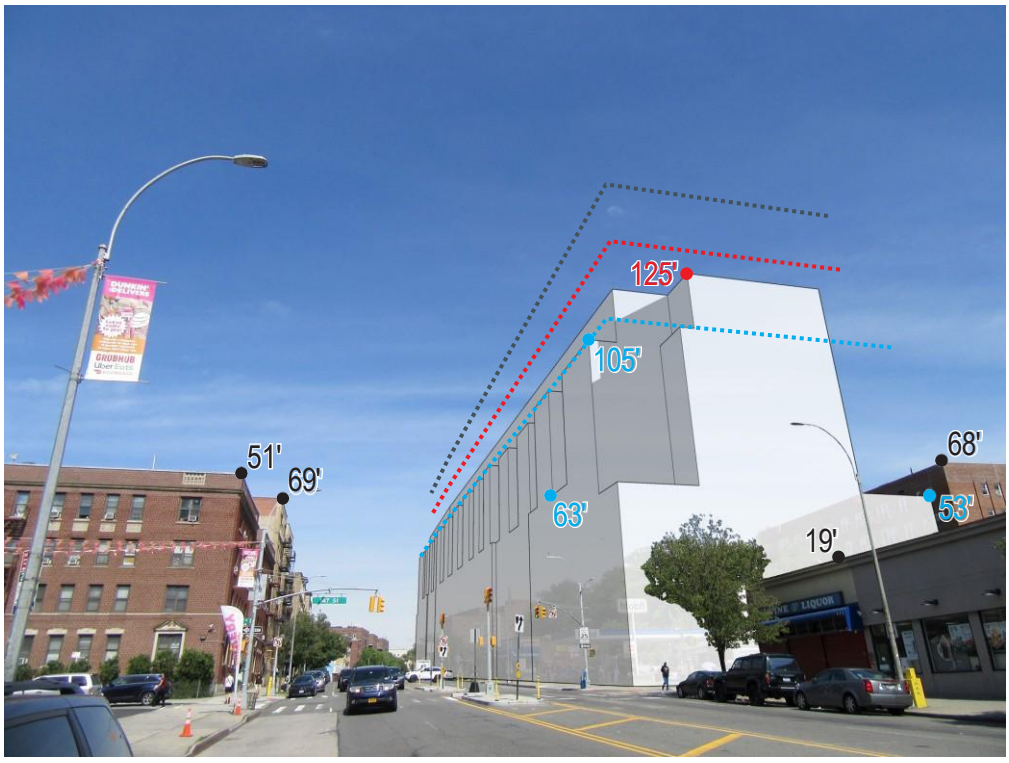
No-Action Scenario

Northern Boulevard facing east (Site at right)



With-Action Scenario

Northern Boulevard facing east (Site at right)



Maximum Permitted Base Height (105') Maximum Permitted Building Height (145') Maximum Permitted Bulkhead Height (170')

Proposed Base Height Proposed Building Height Proposed Bulkhead Height

Urban Cartographics

Proposed Actions would not affect any natural resources or public view corridors to notable features or buildings in the immediate vicinity of the Rezoning Area. Accordingly, no impacts to the urban design and/or visual resources of the area are expected.

12. Hazardous Materials

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 semivolatile organic compounds, methane, polychlorinated biphenyls, and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic). According to the CEQR Technical Manual, the potential for significant adverse 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.

In accordance with the CEQR Technical Manual guidelines, an assessment was conducted to determine whether the proposed action could lead to increased exposure of people or the environment to hazardous materials and whether the increased exposure would result in significant adverse public health impacts or environmental damage. The Project Area (Queens Block 5016, Lots 18, 27, 33, 39 and 47) contains one-story commercial uses. Since the Proposed Actions are anticipated to result in increased ground disturbance an assessment of Hazardous Materials is required.

Preliminary Analysis

Environmental Studies Corp. has performed a Phase I Environmental Site Assessment (ESA) of the subject property located at 147-22 through 147-32 Northern Boulevard, in the Borough of Queens, New York City, New York. This Phase I ESA was prepared in accordance with the latest ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E 1527-13).
This assessment has revealed no evidence of Recognized Environmental Conditions in connection with the property, with the following exceptions:

- The potential for site contamination from past dry-cleaning operations at the subject property.

- The potential for groundwater contamination in the area of the subject property from off-site, potential sources of contamination.

- The potential for site contamination from any past spills, leaks or discharges of petroleum products from the in-service underground storage tanks and gasoline dispensing system since December of 2015.

- The potential for contaminated soil at the subject property from past gasoline

filling station operations and auto repair operations.

- The possible presence of one or more out-of-service underground petroleum storage tanks at the project site.

- The potential for groundwater contamination in the area of the subject property from off-site, potential sources of contamination.

The conclusion of the Phase I ESA is that more work is required to determine the nature of contamination on this site so that potential for significant adverse impacts be fully disclosed and, if necessary, develop mitigation. A Phase II ESA should be performed to determine the nature and extent of possible contamination.

A Phase II Investigation Work Plan should be completed in order to determine the scope of work for the testing analysis that should be conducted in the Phase II ESA. The Investigation Work Plan should contain:

1) A plan for site characterization, that includes a description of laboratory analytical methods and investigative sampling
2) A Health and Safety Plan (HASP)
3) Quality Assurance and Quality Control for the acquisition, handling and analysis of samples collected.

Phase II ESA

As discussed in the Phase I ESA and in this EAS, all of the lots affected by the Proposed Actions are currently occupied and contain active business. Completing an Investigation Work Plan requires an understanding of the subsurface sampling conditions expected in order to include a plan for site characterization that describes sampling and analysis methodology. At this time, the consistent occupation of these buildings by customers and staff during business hours does not allow for easy access to the subject sites to characterize the sampling site. The sites are described in further detail below:

Block 5016 Lot 39

The subject property at 147-34 through 147-50 Northern Boulevard is approximately 13,800 square feet in area. There is a 1-story (plus basement), masonry and steel frame commercial/retail building on the north side of the lot. This building contains a grocery store (Hansol Food), four restaurants (Yi Jia Kitchen, Gossip House Korean Restaurant, KTV Cinderella Lounge, Appetizing Grill), a bank (Flushing Bank), a clothing store (New York Fashion Street), and a florist (Happy Flowers). Exterior portions of this lot consist of an asphalt-paved parking area on the south side of the lot.

Block 5016 Lot 18

The subject property at 147-10 Northern Boulevard, Queens, New York is approximately 14,350 square feet in area, and is occupied by a gasoline filling station and auto repair garage/convenience store. There is a 1-story (on slab) garage building on the south side of the lot. The building contains 3 repair bays, a small convenience store, an office, and general storage areas. The center of the site contains a steel-frame canopy and two dispenser islands with three fuel dispensers. There is a chain-link fence enclosure located on the southeast corner of the site with a shipping container and general storage areas. There is also a small, temporary structure located behind the garage building which is used for general storage purposes. The in-service, underground tanks for the site are located on the southwest corner of the lot.

Block 5016 Lot 27

The subject property at 147-14 through 147-20 Northern Boulevard, Queens, N.Y., is approximately 12,700 square feet in area. There is a 1-story (plus basement), masonry and steel frame commercial/retail building on the north side of the lot. This building contains a florist (Flushing Garden Florist at 147-20A Northern Blvd.), a pizzeria (X-Tra Cheese Pizzeria at 147-20 Northern Blvd.), a restaurant (Try Dynasty Chinese Restaurant at 147-18 Northern Blvd.), a book store (Teachers Choice at 147-16 Northern Blvd.), a grocery store (Star Mini Mart at 147-16 Northern Blvd.), a Subway sandwich shop at 147-16 Northern Blvd., and a self-service, coin operated laundromat (Family Laundromat at 147-14 Northern Blvd.). Exterior portions of the property consist of an asphalt-paved parking area on the south side of the lot.

Block 5016 Lots 33 and 47

The subject property at 147-22 through 147-32 Northern Boulevard is approximately 12,000 square feet in area. There is a 1-story (plus basement), masonry and steel frame commercial/retail building on the north side of Lot 33. This building contains a book store (Bandi Books at 147-22 Northern Blvd.), an adult day care center (Silver Town Adult Day Care at 147-28 Northern Blvd.), and a consumer electronics store (Pioneer Home Electronics at 147-32 Northern Blvd.). Exterior portions of this lot consist of an asphalt-paved parking area on the south side of the lot. Lot 47 is a narrow, triangular-shaped sliver of land approximately 541 feet long and 12 feet wide at its widest point. The lot is covered by grass and contains several mature trees. No building foundations or other indications of former buildings or structures were observed on Lot 47.

The presence of heavy trucks, passenger vehicles and logistics equipment (including semi-truck deliveries, the on-site motor vehicle repair shop at the gas station, and a

consistent presence of smaller truck/utility vehicles refueling at the site) preclude the provision of a Phase II ESA before certification.

Testing is not possible because uses cannot be disrupted for a day. There are a total of 17 independent businesses on the Project Site it is not feasible to coordinate cessation of business across all sites. Some sites (like the gas station) operate 24/7 and a cessation of activity would represent a substantial economic burden.

The 4 Phase I ESAs provide some insight into the subsurface sampling conditions however a quantity control plan cannot be prepared for the commercial sites at this time as it is not feasible to coordinate amongst the business owners at this time. Further, it would not be possible to provide an methodology for Quality Assurance and control for soil acquisition and handling with the presence of active commercial activity.

Conclusion

Prior to any soil disturbance on these properties, an (E) Designation would be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution.

To avoid any potential impacts associated with hazardous materials, an (E) designation (E-765) will be established on "Projected Development Site 1" (Lots 18, 27, and portions of Lot 47) and "Projected Development Site 2" (Lot 33, 39, and portions of Lot 47).

The text of the (E) designation (E-765) is as follows:

Task 1-Sampling Protocol

The applicant submits to OER, for review and approval, a Phase I of the site along with a soil, groundwater and soil vapor testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of samples should be selected to adequately characterize the site, specific sources of suspected contamination (i.e., petroleum-based contamination and non-petroleum-based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2-Remediation Determination and Protocol

A written report with findings and a summary of the data must he submitted to OER after completion of the testing phase and laboratory analysis for review and approval.

After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER. If remediation is indicated from test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed.

A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.

The implementation of the preventative and remedial measures outlined in the (E) designation would preclude the potential for significant adverse hazardous materials impacts from the Proposed Actions. Therefore, no further analysis is warranted.

16. Transportation

Introduction

To determine the potential for the Proposed Actions to result in significant adverse transportation impacts, trip generation (Level 1) and trip assignment (Level 2) screening analyses were performed pursuant to the methodologies identified in the 2021 *CEQR Technical Manual*. Based on the proposed mixed-use development trip generation (Level 1) and trip assignment screening (Level 2) analyses results, it was determined that the Proposed Actions would not result in significant adverse impacts, as further discussed below.

Project Area

The Proposed Project Area consists of Block 5016, Lots 18, 27, 33, 39, 47 (The Development Site), as well as portions of (p/o) Lots 7 and 11, which are not Applicant-owned. The Proposed Project Area is located at 147-14 Northern Boulevard, Queens NY, within a block bounded by Northern Boulevard, a two-way eastbound/westbound roadway on the north; 149th Street, a two-way northbound/southbound roadway on the east; 147th Street, a one-way southbound roadway on the west; and 38th Avenue, a one-way eastbound roadway on the south, as shown in **Figure 1** (Transportation Appendix).

Project Development Site

The transportation analyses are based on the Project Development Sites, as listed below, and shown in **Figure 1,** and on the proposed Site Plan.

- Development Site: Block 5016, Lots 18, 27, 33, 39, 47, and p/o 7, and 11.

Existing Conditions

Lot 18 is a corner lot at 147th Street and Northern Boulevard and is improved with a gas station containing 1,984 square feet (0.14 FAR). The adjacent parcels to the east (Lots 27, 33 and 39) are developed with a single-story commercial building containing approximately 17 retail stores, for a total 30,730 gsf of local retail space. The remaining lot (Lot 47) is a narrow irregular-shaped sliver of land with approximately 2,000 square feet along the rear of the property. The property is vacant and contains a width of approximately 11 feet by 411 feet in length. Lots 7 and 11 are developed with a series of 6-story apartment buildings, which are anticipated to remain.

No-Action Scenario

Absent the Proposed Actions, it is assumed that the existing developments on the Proposed Project Development Site within the Project Area would remain the same as the existing condition. However, Lot 18 would be converted into a conforming commercial use (retail) for a total of 32,714 gsf of local retail space.

Table 1 – Existing, No-Action Scenario, With-Action Scenario, and Increment on Projected Development Sites

Land Use	Existing	No-Action	With-Action	Increment
Residential d.u.	0	0	389 d.u. (288,040 gsf)	389 d.u. (288,040gsf)
Local Retail (gsf)	30,730 gsf	32,714 gsf	35,775gsf	3,061 gsf
Medical Office (gsf)	0	0	10,468 gsf	10,468 gsf
Accessory Parking	0	0	280	280

Source: Approved RWCDS.

With-Action Scenario

The Proposed Project would include two buildings, and result in a total development of 389 residential dwelling units (288,040 gsf), 35,775 gsf of commercial local retail space, and 10,468 gsf of medical office space. The Proposed Project would also provide two on-site accessory parking garages in the buildings A and B with a total capacity of 280 spaces, as described below.

Building A, located at the corner of Northern Boulevard and 147th Street, would include an on-site accessory parking garage with a capacity of 139 spaces and egress/ingress from 147th Street.

Building B, located at the corner of Northern Boulevard and 149th Street, would include an on-site accessory parking garage with a capacity of 141 spaces and egress/ingress from 149th Street.

Increment

The transportation analyses are based on the net difference between the proposed with action and no-action scenarios. The Proposed Actions would result in an increase of 389 new residential dwelling units (288,040 gsf), 3,061 gsf of net commercial retail (local) space, 10,468 gsf of new medical office space, as summarized in **Table 1**. The Proposed Project would also provide two on-site accessory parking garages in buildings A and B

with a total capacity of 280 parking spaces.

Principal Conclusions

The following detailed trip generation (Level-One Screening) and trip assignment (Level-Two Screening) analyses have been conducted for the project increment, which is summarized in **Table 1**.

Traffic and Parking

Based on the results of trip generation (Level-One) and trip assignment (Level-Two) screening analyses, it is concluded that in the future with the Proposed Actions, none of the intersections in the study area would experience 50 or more peak hour vehicle trip-ends, as summarized in **Table 4 (**Transportation Appendix) and shown in **Figures 2 through 5** (Transportation Appendix) for the AM, MD, PM, and Saturday MD peak hours, respectively. Therefore, in accordance with the *CEQR Technical Manual* 50-vehicle trip-ends threshold, the vehicular trip-ends generated by the Proposed Actions would not result in any conditions that would require a detailed assessment of traffic and parking impacts.

Parking

The Proposed Project would provide two on-site accessory parking garages with a total capacity of 280 spaces, required by the proposed zoning, in the two proposed A and B buildings, as described, below.

Building A, located at the corner of Northern Boulevard and 147th Street, would include an on-site accessory parking garage with a capacity of 139 spaces and egress/ingress from 147th Street.

Building B, located at the corner of Northern Boulevard and 149th Street, would include an on-site accessory parking garage with a capacity of 141 spaces and egress/ingress from 149th Street.

The proposed project would screen for vehicular traffic as detailed below, and per the *CEQR Technical Manual,* no detailed parking assessment would be required.

Transit

Subway

Based on the results of the trip generation screening analysis (Level-One Screening), the Proposed Actions would generate fewer than 200 peak hour subway trip-ends, as summarized in **Table 3** (Transportation Appendix) for the AM and PM peak hour periods, respectively. Therefore, in accordance with the *CEQR Technical Manual* 200

subway trip-ends threshold, the subway trip-ends generated by the Proposed Actions would not result in any conditions requiring a detailed assessment of subway impacts.

Bus

Based on the results of the trip generation screening analysis (Level-One Screening), the Proposed Actions would generate fewer than 50 peak hour bus trip-ends in one direction along a bus route during any peak hour, as summarized in **Table 3** (Transportation Appendix) for the AM and PM peak hour periods, respectively. Therefore, in accordance with the *CEQR Technical Manual* 200 bus trip-ends threshold/50 or more peak hour bus trip-ends in one direction along a bus route during any peak hour, the bus trip-ends generated by the Proposed Actions would not result in any conditions requiring a detailed assessment of bus impacts.

Pedestrian

Based on the results of the trip generation (Level-One Screening) **Table 3** (Transportation Appendix) and trip assignment (Level-Two Screening) **Figures 6, 7, 8, and 9** (Transportation Appendix) analysis, it is concluded that in the future with the Proposed Actions, none of the pedestrian elements in the study area would experience 200 or more peak hour pedestrian trip-ends, as summarized in **Table 3 (**Transportation Appendix) and shown in **Figures 6 through 9** (Transportation Appendix) for the AM, MD, PM, and Saturday MD peak hours, respectively. Therefore, in accordance with the *CEQR Technical Manual* 200 pedestrian trip-ends threshold per pedestrian element, a detailed assessment of pedestrian impacts will be conducted as detailed below.

Build Year

It is assumed that the Proposed Actions would be approved by 2026 with two phases of construction. The first building would be constructed in 16 months, following a period of approximately 6 months, a second construction period of 16 months would follow with the second building, resulting in full occupancy by 2029.

Transportation Planning Assumptions

Trip generation factors for the Proposed Actions were determined based on information from the 2021 *City Environmental Quality Review (CEQR) Technical Manual*, U.S. Census Data, trip generation and modal split data provided by the NYCDOT, and other approved EASs and EISs. The travel demand assumptions and trip generation sources are summarized in **Table 2** (Transportation Appendix) and detailed below.

<u>Residential Development</u>

The 2021 *CEQR Technical Manual* Table 16-2 was utilized for trip generation rates, including truck trips, and daily temporal distribution. The 2015-2019 American

Community Survey (ACS) Journey-to Work (JTW) data for Census Tract #'s 863, 865, 1157, 1159, 1161, 1163, 1167, and 1187 in Queens, NY was used for modal split information and auto occupancy rates, as is estimated in **Exhibits A and B** and summarized in **Table 2** (Transportation Appendix).

The estimated modal split data for residential use found that approximately 33.4% would travel by car, 0.3% would travel by taxi, 12.6% would travel by bus, 32.6% would travel by subway, and 21.1% would travel by foot and other mode of travel, such as bicycle/motorcycle, as shown and summarized in **Exhibit A**. The auto occupancy rate would be at 1.37, based on the 2015-2019 ACS JTW data for Census Tract #'s 863, 865, 1157, 1159, 1161, 1163, 1167, and 1187 in Queens, NY, as summarized in **Exhibit B**. Taxi occupancy rate is 1.4, based on *Astoria Cove FEIS.*

Local Commercial Retail Development

The 2021 *CEQR Technical Manual* Table 16-2 was utilized for trip generation rates, including daily temporal distribution and truck trip rates. Modal split information and vehicle occupancy rates are based on NYCDOT survey results for a similar local retail space in Queens, located beyond a ¼-mile radius of a subway station (Queens Non-Transit Zone), as is summarized in **Table 2** (Transportation Appendix).

The estimated modal split results for local commercial retail use found that approximately 11% would travel by car, 0% would travel by taxi, 2% would travel by bus, 3% would travel by subway, and 84% would travel by foot, as is summarized in **Table 2** (Transportation Appendix).

Medical Office Development

The 2021 *CEQR Technical Manual* Table 16-2 was utilized for trip generation rates and daily temporal distribution. Modal split information and vehicle occupancy rates are based on NYCDOT survey results for a similar medical office space in Queens, located beyond a ¼-mile radius of a subway station (Queens Non-Transit Zone)- Main Street subway station for train number 7, located within one mile radius from the proposed project. Truck trip rates are based on *East New York Rezoning FEIS, Table 13-8.*

The surveyed modal split results for medical office use found that approximately 69% would travel by car, 7% would travel by taxi, 6% would travel by bus, 2% would travel by subway, and 16% would travel by foot and other, such as motorcycle. The above information is summarized in **Table 2** (Transportation Appendix).

Person And Vehicular Trips

Person Trips

The Proposed Actions would generate a total of 430, 357, 447, and 489 person trip ends during the AM, Midday, PM, and Saturday Midday peak hour time periods, respectively,

as summarized in **Table 3** (Transportation Appendix).

Vehicle Trips

The Proposed Actions would generate a total of 127 (48 inbound and 79 outbound), 104 (54 inbound and 50 outbound), 112 (60 inbound and 52 outbound), and 120 (65 inbound and 55 outbound) vehicle trip-ends during the AM, Midday, PM, and Saturday Midday Peak hour periods, respectively, as summarized in **Table 4** (Transportation Appendix).

Preliminary Analysis Methodology and Screening Assessments

The *CEQR Technical Manual* recommends a two-tier screening procedure for the preparation of a "preliminary analysis" to determine if quantified analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation analysis (Level 1) to estimate the volume of person and vehicle trip-ends attributable to the Proposed Actions. If the Proposed Actions are expected to result in fewer than 50 peak hour vehicle trip-ends and fewer than 200 peak hour transit or pedestrian trip-ends, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trip-ends at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Actions would result in 50 or more peak hour vehicle trip-ends at an intersection, 200 or more peak hour subway trip-ends at a station, 50 or more peak hour bus trip-ends in one direction along a bus route, or 200 or more peak hour pedestrian trip-ends traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, and parking.

Level 1 Screening Assessments

A Level 1 trip generation screening assessment was conducted for the project increment, as summarized in **Table 1,** to estimate the numbers of person and vehicle trip-ends by mode, generated by the Proposed Actions during the Weekday AM, midday, PM, and Saturday peak hours, as summarized in **Tables 2 through 4** (Transportation Appendix). These trip estimates were then compared to the *CEQR Technical Manual* thresholds to determine if a Level 2 screening and/or quantified operational analyses would be warranted.

The Proposed Actions would generate a total of 127 (48 inbound and 79 outbound), 104 (54 inbound and 50 outbound), 112 (60 inbound and 52 outbound), and 120 (65 inbound and 55 outbound) vehicle trip-ends; 100, 62, 93, and 102 subway trip-ends; 43, 30, 40,

and 44 bus trip-ends; and 259, 213, 293, and 326 pedestrian trip-ends, during the Weekday AM, Midday, PM, and Saturday Midday peak hours, respectively. Based on the results of trips, generated by the Proposed Actions, as summarized in **Tables 3 and 4** (Transportation Appendix), a Level 2 vehicle and pedestrian assessment would be required, per the *CEQR Technical Manual thresholds*, for Weekday AM, Midday, PM, and Saturday Midday peak hours, as described below.

Level 2 Screening Assessments

A Level 2 screening assessment involves the distribution and assignment of projected trips to the transportation network and the determination of whether specific locations are expected to experience incremental trips exceeding *CEQR Technical Manual* thresholds. Typically, if the results of this analysis show that the Proposed Actions would result in 50 or more peak hour vehicle trip-ends through an intersection, 50 or more peak hour bus trip-ends on a bus route in a single direction, 200 or more peak hour subway trip-ends per station, or 200 or more peak hour pedestrian trip-ends per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts.

Vehicle Trips

Vehicular Trip-Ends

The Proposed Actions would generate a total of 127 (48 inbound and 79 outbound), 104 (54 inbound and 50 outbound), 112 (60 inbound and 52 outbound), and 120 (65 inbound and 55 outbound) net vehicle trip-ends during the AM, Midday, PM, and Saturday Midday Peak hour periods, respectively. Vehicular trips are assigned to the proposed on-site parking garages on 147 and 149th Streets. Based on trip assignments, and as shown in **Figures 2 through 5** (Transportation Appendix) for Weekday AM, Midday, PM, and Saturday Midday peak hours**,** none of the intersections in the study area would experience 50 or more vehicle trip-ends (**Figures 2 through 5** show the highest vehicle trip-ends of 49 at the intersections of Northern Boulevard and 147th Street and Northern Boulevard and 149th Streets, in the AM peak hour, 38 at the intersection of Northern Boulevard and 149th Street, in the Weekday Midday peak hour, 39 at the intersection of Northern Boulevard and 149th Street in the PM peak hour, and 42 at the intersection of Northern Boulevard and 149th Street in the Saturday Midday peak hour. Therefore, in accordance with the *CEQR Technical Manual* 50-vehicle trip-end threshold, the vehicular trip-ends generated by the Proposed Actions would not result in any conditions that would require a detailed assessment of traffic and parking impacts.

Transit

Bus Trip-Ends

The Proposed Actions would generate a total of 43, 30, 40, and 44 net bus trip ends during

the AM, Midday, PM, and Saturday Midday peak hour time periods, respectively, as summarized in **Table 3** (Transportation Appendix). Currently four bus lines serve the Project Area, including bus lines Q13, Q28, and QM3 which run along Northern Boulevard; and bus line Q15/Q15A which runs along 150th Street, in the study area. The Proposed Actions would generate less than 50 or more peak hour bus trip-ends in one direction along a bus route during any peak hour period, and in accordance with the *CEQR Technical Manual* criteria, would not result in any conditions that would typically trigger the need for a detailed assessment of bus impacts.

Subway Trip-Ends

The Proposed Actions would generate a total of 100, 62, 93, and 102 net subway trip-ends during the AM, Midday, PM, and Saturday Midday peak hour time periods, respectively, as summarized in **Table 3** (Transportation Appendix). Currently there is one subway station in the study area. The Main Street subway station for the number 7 train, located within one mile radius of the Project Area (Queens Non-Transit Zone). The Proposed Actions would generate less than 200 subway trip-ends per subway station during the AM and PM peak hour time periods, and in accordance with CEQR *Technical Manual* criteria, would not result in any conditions that would typically trigger the need for a detailed assessment of subway impacts.

Pedestrian Trip-Ends

The Proposed Actions would generate a total of 259, 213, 293, and 326 net pedestrian trip-ends during the AM, Midday, PM, and Saturday Midday peak hour periods, respectively. Based on the results of the trip generation **Table 3** (Transportation Appendix) and trip assignment **Figures 6, 7, 8, and 9** (Transportation Appendix) analyses, it is concluded that in the future with the Proposed Actions, no pedestrian elements in the study area would experience 200 or more peak hour pedestrian trip-ends. Therefore, in accordance with the *CEQR Technical Manual* 200 pedestrian trip-ends threshold per pedestrian element, no detailed assessment of pedestrian impacts will be required.

Conclusion

In accordance with the threshold guidelines as detailed in the 2021 *CEQR Technical Manual,* the Proposed Actions are not expected to result in significant adverse impacts related to transportation. Specifically, the Proposed Actions are unlikely to have a significant effect on the neighborhood traffic, parking, transit, and pedestrian movement

17. Air Quality

Introduction

Analysis Framework

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project. The analysis framework, as mandated by the State Environmental Review Act, followed the *New York City Environmental Quality Review 2021 Technical Manual*.

Air Pollutants and Applicable Standards and Guidelines

Criteria Pollutants

The EPA has established national ambient air quality standards (NAAQS) for seven of the most common air pollutants—known as "criteria" pollutants. The presence of these pollutants in ambient air is generally due to numerous diverse and widespread sources of emissions. The NAAQS primary standards are designed to protect public health with an adequate margin of safety. The NAAQS secondary standards are designed to protect the public welfare from adverse effects, including those related to effects on soils, water, vegetation, visibility, and other aspects. As required by the Clean Air Act, EPA periodically conducts comprehensive reviews of the scientific literature on health and welfare effects associated with exposure to the criteria air pollutants. The NAAQS have been adopted as the ambient air quality standards for the State of New York.

The New York State Department of Environmental Conservation (NYSDEC) measures air pollutants at more than 50 sites across the state using continuous and/or manual instrumentation. These sites are a mix of federally-mandated and supplemental monitoring networks. The primary NAAQS and background concentrations from the nearest federally-mandated monitoring station(s) of the pollutant(s) that a detailed analysis was conducted for are presented in **Table 17-1.**

Table 17-1: NAAQS and Background Concentration Published in the NYSDEC 2019 Report

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
NO_2	1-Hour	188 µg/m^3	103.6 µg/m^3	Queens College 2
	Annual	100 µg/m^3	26.8 µg/m^3	
CO	1-Hour	35 ppm	1.51 ppm	
	8-Hour	9 ppm	1.10 ppm	
$PM_{2.5}$	24-Hour	35 µg/m^3	18.1 µg/m^3	
	Annual	12 µg/m^3	7.0 µg/m^3	

NYC Guidelines

The City's *de minimis* criteria are used to determine the significance of the incremental increase in CO and $PM_{2.5}$ concentrations that would result as a consequence of the proposed project. The CO criteria set the minimum change in 8-hour average CO concentration that constitutes a significant environmental impact. Significant increase of CO concentrations in New York City are:

- An increase of 0.5 parts per million (ppm) or more in the maximum 8-hour average CO concentration at a location where the predicted No-Action 8-hour concentration is equal to 8 ppm or between 8 ppm and 9 ppm; or
- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8 ppm.

The following criteria are used for determination of significant adverse $PM_{2.5}$ incremental impacts for projects subject to the CEQR:

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.1 µg/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 for mobile sources, at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 µg/m^3 at any receptor location for stationary sources.

Accordingly, the 8-hour CO *de minimis* design value is 3.95 ppm. $PM_{2.5}$ *de minimis* design values are 24-hour $PM_{2.5}$ concentration increment of 8.45 $\mu g/m^3$, and annual $PM_{2.5}$ concentration increments of 0.3 $\mu g/m^3$ for stationary source and 0.1 $\mu g/m^3$ for mobile source.

Non-Criteria Pollutants

As mentioned, New York State has adopted the national standard, NAAQS. In addition, the NYSDEC has established guidelines for maximum allowable concentration of "noncriteria pollutants," which are potentially toxic or carcinogenic pollutants. These include hazardous air pollutants (HAPs) which are also regulated by the EPA. The maximum allowable guidelines set maximum 1-hour and annual averaging time concentrations and are published in the DAR-1 AGC/SGC Table (February 12, 2021 publication), where AGC/SGC refers to Annual and Short-term Guideline Concentrations. In addition, DAR-1 also includes a standard for pollutants cumulative risk assessment. In addition, NYSDEC also regulates pollutants that produce discomfort due to odors, where significant discomfort is evaluated on quantity, characteristic, or duration.

Mobile Source

According to the *CEQR Technical Manual,* projects may result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic, create any other mobile sources of pollutants (e.g., diesel trains, helicopters, boats), or add new uses near mobile sources (e.g., roadways, garages, parking lots). Detailed analyses are required to predict whether a proposed action could potentially result in a significant adverse air quality impact if certain threshold criteria are met or exceeded. Proposed actions that do not meet or exceed the threshold criteria (screen out) are not expected to result in mobile source impacts.

Screening Assessment

Project-Generated Traffic

The screening analyses for the project's peak hour auto traffic and peak hour heavy-duty diesel vehicle (HDDVs) traffic are presented in this section. Per the *CEQR Technical Manual*, a detailed analysis for carbon monoxide (CO) is required if the generated peak hour auto traffic or diversion of existing peak hour traffic would result in an increment of 170 auto trips (in this area of the city). A detailed analysis for particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$) is required if the generated peak hour HDDVs traffic or its equivalent in vehicular emissions, depending on the type of road, would be met or exceeded.

According to the transportation analysis for this project, the Proposed Project would generate a total of 127, 104, 112, and 120 net vehicle trip ends (inbound and outbound combined) during the AM, Midday, PM, and Saturday Midday peak hour periods, respectively. The peak-hours project-generated traffic would not exceed the threshold of 170 vehicular trips (condition outlined in Sections 210 of Chapter 17 of *the CEQR Technical Manual*). Therefore, no CO detailed analysis is required.

The $PM_{2.5}$ equivalent truck calculation in vehicular emission screen ranges from 12 to 23 HDDVs depending on the type of road. All autos were assumed to be LDGT1 class vehicles, based on guidance from the New York City Department of City Planning (DCP) on similar projects. Project-generated traffic on selected roadways (the transportation analysis for this project detailed trip assignment Level 2 screening) was used to calculate the HDDVs or its equivalent in vehicular emissions. Table 17-2 shows the project-generated traffic (inbound and outbound combined) and the results of the *CEQR Technical Manual* Equivalent Truck Calculation.

Table 17-2: *CEQR Technical Manual* Equivalent Truck Calculations

Intersection	Peak-Hour Period	Auto Per Hour		Truck Per Hour		Equ. Truck (score / threshold) (2)
		Road A	Road B	Road A	Road B	
Northern Boulevard & 147th Street	1.4	1.4	1.4	1.4	1.4	1.4
	0.9	0.9	0.9	0.9	0.9	0.9
	0.9	0.9	0.9	0.9	0.9	0.9
	1.0	1.0	1.0	1.0	1.0	1.0
Northern Boulevard & 149th Street	1.0	1.0	1.0	1.0	1.0	1.0
	0.6	0.6	0.6	0.6	0.6	0.6
	0.6	0.6	0.6	0.6	0.6	0.6
	0.7	0.7	0.7	0.7	0.7	0.7
Roosevelt Avenue & 147th Street	0.1	0.1	0.1	0.1	0.1	0.1
	0.1	0.1	0.1	0.1	0.1	0.1
	0.2	0.2	0.2	0.2	0.2	0.2
	0.2	0.2	0.2	0.2	0.2	0.2
Roosevelt Avenue & 149th Street	0.9	0.9	0.9	0.9	0.9	0.9
	0.6	0.6	0.6	0.6	0.6	0.6
	0.6	0.6	0.6	0.6	0.6	0.6
	0.7	0.7	0.7	0.7	0.7	0.7
37th Avenue & 147th Street	0.8	0.8	0.8	0.8	0.8	0.8
	0.9	0.9	0.9	0.9	0.9	0.9
	1.0	1.0	1.0	1.0	1.0	1.0

	1.1	1.1	1.1	1.1	1.1	1.1
38th Avenue & 147th Street	0.7	0.7	0.7	0.7	0.7	0.7
	0.7	0.7	0.7	0.7	0.7	0.7
	0.9	0.9	0.9	0.9	0.9	0.9
	0.9	0.9	0.9	0.9	0.9	0.9
38th Avenue & 149th Street	1.2	1.2	1.2	1.2	1.2	1.2
	0.97	0.97	0.97	0.97	0.97	0.97
	1.1	1.1	1.1	1.1	1.1	1.1
	1.1	1.1	1.1	1.1	1.1	1.1

Note:

1. Northern Blvd and Roosevelt Avenue are arterial roadways (23 HDDVs threshold). All other roadways are local (12 HDDVs threshold).
2. Equivalent truck calculated for each roadway and score divided by the HDDVs threshold. The aggregate result is the sum of ratios. A score greater than 1 indicates

As seen in Table 17-2, the Proposed Actions $PM_{2.5}$ equivalent truck calculation in vehicular emissions exceeds the HDDVs screening threshold criterion at the intersections of Northern Boulevard and 147th Street, 37th Avenue and 147th Street, and 38th Avenue and 149th Street. Therefore, a detailed analysis is required.

The worst-case exceedances, shown in Table 17-2, occurred at the intersection of Northern Blvd and 147th Street, next to Project Development Site 1, during the AM peak-hour period. As such, that intersection was chosen for a detailed analysis.

Parking Garage

Based on CEQR guidance, the incremental capacity of parking facilities is evaluated with a threshold capacity to determine whether a detailed analysis is required. Based on DCP guidance, the threshold increment is an increment of 85 off-street parking spaces. The Proposed Actions would result in an increment of 280 accessory parking spaces (139 in Projected Development Site 1 and 141 in Projected Development Site 2). Therefore, a detailed air quality analysis is required.

Existing Mobile Source of Pollutants

According to the *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadway or near other major mobile source of pollutant may result in significant adverse mobile source air quality impacts. The Proposed Project is not located near a highway or a very large parking facility. Therefore, no detailed analysis is required.

Parking Facility Detailed Analysis

The Proposed Project includes a total of 280 spaces enclosed parking facilities distributed as follow: Projected Development Site 1 would include 86 spaces parking facility dedicated to the residential use in the building in the cellar and sub-cellar levels, and 53 spaces on the first floor (above the basement level) dedicated to the commercial and medical office uses in the building. Projected Development Site 2 would include 87 spaces parking facility dedicated to the residential use in the building in the cellar and sub-cellar levels, and 54 spaces on the first floor (above the basement level) dedicated to the commercial and medical office uses in the building. Projected Development Site 1 parking garage Ingress/egress is located on 147th Street, and Projected Development Site 2 parking garage Ingress/egress is located on 149th Street. The parking garages facilities dimensions, ramps length and gradients, and number of spaces on each floor level were obtained from the Site Plans, provided by the building architect for this project. Incoming/outgoing vehicles were assumed to travel half the width and two-third the length of the garage plus ramp(s) length(s), and cars were assumed to idle for 1-minute prior to traveling out of the parking facility, based on the *CEQR Technical Manual*. Each Projected Development Site was assumed to have a single vent, and a combined vent was assumed for cumulative concentrations (ventilation rate corresponded to the smaller garage as it results in greater concentration). The analysis included the on-street traffic on Northern Boulevard, 147th Street and 149th Street.

The parking accumulation (ingress and egress) was provided by the transportation analysis for this project. Pollutants' concentrations were analyzed based on the worst-case outbound vehicles and corresponding inbound vehicles for the short-term period, and the daily average for the annual period analysis. Accordingly, Projected Development Site 1 peak-hour garage traffic would be 46 incoming and 48 outgoing vehicles during the Midday peak-hour period of 1-2 PM and a daily average of 29 inbound/outbound vehicles per hour (overnight hours, when traffic is significantly less, were not accounted for in the analysis). Projected Development Site 2 peak-hour garage traffic would be 46 incoming and 47 outgoing vehicles during the Midday peak-hour period of 1-2 PM and a daily average of 29 inbound and 31 outbound vehicles per hour (overnight hours, when traffic is significantly less, were not accounted for in the analysis). No-Action and With-Action on street traffic, accounted for in the model, are discussed in the Project-Generated Traffic Detailed Analysis section of this Chapter.

Factors of mobile source analysis are associated with vehicular related emissions and pollutants' dispersion. The emissions of vehicular mechanical and combustion related components were calculated with the EPA's Mobile Vehicle Emission Simulator 2014 (MOVES) version 2014b, and emission of dust generated by vehicles travelling on roadways were added to estimate total particulate matter emissions. Dispersion analysis for the parking garage vent were calculated using the spreadsheet referenced in the *CEQR Technical Manual Appendices*. Pollutants' concentrations at the sidewalk across the street from the parking garage, resulting from the on-street traffic, were modeled with the EPA's CAL3QHCR Gaussian dispersion model.

The EPA's MOVES2014b emission factor algorithm was used to compile the CO and $PM_{2.5}$ emission rates. MOVES can be used to calculate emission rates of criteria air pollutants, greenhouse gas emissions, and some hazardous air pollutants for both on-road motor vehicles and non-road equipment. MOVES models calculate emissions at the national, county, and project level by use of databases and by specifying the characteristics (Run Specification) of the scenario that is modeled. For microscale (project level) analyses, MOVES require the use of traffic and roadways characteristics for each link (roadway segment) that is modeled and county data.

County database for the MOVES model was obtained from the NYSDEC. The county data included inspection and maintenance, passenger car/truck distribution, fuel data (fuel properties, distribution, and engine technology), age distribution, and meteorology data. Vehicles age distribution was projected for the Build year 2029 using the EPA tool.[1] Emissions of vehicles inside the parking garage were modeled with an ambient temperature of 45-degree Fahrenheit, based on the *CEQR Technical Manual*. Emissions inside the parking garage were modeled with MOVES inventory mode run specification, generating emission rates (grams per hour). On-street traffic was modeled in emission factor run specification scale, generating emission factors (grams per vehicle mile).

$PM_{2.5}$ emissions of dust generated by vehicles traveling on paved roadways were added to estimate total particulate matter emissions for the short-term analysis (annual fugitive dust emission is negligible, based on similar types of projects). Fugitive dust emissions were calculated using the methodology in the EPA's AP-42 manual.[2] Silt loading factors of 0.1 g/m^2 and 0.4 g/m^2 for paved arterial and local roadways, respectively, were applied, based on value in the *CEQR Technical Manual*. In addition, a conservative assumption of "dry" road condition was used for the short-term calculation (precipitation reduced silt loading).

The EPA's CAL3QHCR dispersion model version 13196 was used for the dispersion analysis of the on-street traffic. 1-Hour concentrations were predicted with the emulate CAL3QHC meteorology data, specifying 10-deg incremental wind vector direction, 1-meter per second wind speed, natural stability, and 285.5 Kelvin, and 1,000-meter mixing height. $PM_{2.5}$ concentrations were predicted with model-ready JFK Airport meteorology data, obtained from the DCP for another project. In addition, a Tier II approach was used to predict the 24-hour $PM_{2.5}$ concentration. All models specified settling and deposition velocities of 0-meter per second, 60-minute averaging time, and urban surface roughness of 370-centimeter corresponding to apartment residential land-use. Receptors were placed at the sidewalks across the streets from the Projected Development Sites (at Northern Boulevard, 147th Street, and 149th Street).

Emissions from the garage were assumed to be vented through a single vent. The *CEQR Technical Manual Appendices* worksheet calculation was used to calculate dispersion of a pollutant emitted at a rate of 1 gram per second. A persistence factor of 0.7 was used to

[1] https://www.epa.gov/moves/tools-develop-or-convert-moves-inputs

[2] EPA. Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1: Paved Roads Chapter 13: Miscellaneous Sources https://www3.epa.gov/ttn/chief/ap42. January 2011.

evaluate the 8-hour CO concentration and a persistence factor of 0.1 was used to evaluate the annual $PM_{2.5}$ concentration. The garage vent was located 10-foot above grade (adjoining grade) and vent at the minimum ventilation rate. A wind speed of 1-meter per second, based on CAL3QHC input, was conservatively assumed. Receptors were located on the adjacent and opposite sidewalks at a height of 6 feet above grade, and 5-foot directly above the vent simulating an operable window. The concentrations corresponding to the 1 gram per second emission rate were multiplied by the calculated emissions in the parking garage to predict the concentrations.

Table 17-3 shows the parking garage(s) dispersion analysis results, where the concentration increments were evaluated with the *de minimis* design value.

Table 17-3: Parking Facility Dispersion Analysis Results

Pollutant	Concentration			*de minimis* Design Value	**Concentration Unit**
	Adjacent	Across the Street (1)	Window Above		
Projected Development Site 1 Parking Garage (garage vent facing 147th Street)					
8-Hour CO	0.09	0.42	0.07	3.95	**ppm**
24-Hour $PM_{2.5}$	1.3	7.88	1.0	8.45	***µg/m³***
Annual $PM_{2.5}$	0.09	0.21	0.07	0.3	***µg/m³***
Projected Development Site 2 Parking Garage (garage vent facing 149th Street)					
8-Hour CO	0.09	0.40	0.07	3.95	**ppm**
24-Hour $PM_{2.5}$	1.3	7.70	1.0	8.45	***µg/m³***
Annual $PM_{2.5}$	0.09	0.20	0.07	0.3	***µg/m³***
Projected Development Sites 1 and 2 Parking Garage (garage vent facing Northern Blvd.)					
8-Hour CO	0.18	0.44	0.14	3.95	**ppm**
24-Hour $PM_{2.5}$	2.6	8.19	2.0	8.45	***µg/m³***
Annual $PM_{2.5}$	0.17	0.24	0.24	0.3	***µg/m³***
Note: 1. Concentration increments include on-street traffic emissions.					

As seen in Tables 17-3, the 8-hour CO and $PM_{2.5}$ concentrations do not exceed the *de minims* design values. Therefore, no impact is predicted from mobile source emissions associated with the Proposed Actions parking facility(ies).

Project-Generated Traffic Detailed Analysis

$PM_{2.5}$ detailed analysis was conducted for the intersections of Northern Boulevard at 147th Street and Northern Boulevard at 149th Street, using MOVES2014b and CAL3QHCR. Existing traffic counts and vehicle classifications on Northern Boulevard were obtained from the New York State Department of Transportation (NYSDOT) Station 050086. Existing traffic counts and vehicle classifications on 147th Street were obtained from the NYSDOT Station 056146. Existing traffic counts and vehicle classifications for 149th Street were obtained from NYSDOT Station 056005, which is 150th Street south of Northern Boulevard, and Station 052026, which is 150th Street north of Northern Boulevard (vehicle classification on 149th Street roadway segments north of Northern Boulevard were assumed to be similar to that of the roadway south of Northern Boulevard). Traffic annual background growth rates, obtained from the *CEQR Technical Manual,* were used to project the No-Action traffic. The project increment was added to the No-Action traffic to project the With-Action traffic, where for the Tier II analysis AM peak-hour increment was assumed from midnight to 10 AM and PM peak-hour increment from 4 PM to midnight. With-Action traffic was assumed to travel at 10 miles per hour and No-Action traffic at 15 miles per hour.

Vehicular emissions were compiled with the EPA MOVES version 2014b (MOVES run specification and databases are discussed in the Parking Facility Detailed Analysis section above). Fugitive dust emissions were added to the MOVES output to calculate the short-term $PM_{2.5}$ emission factors (annual fugitive dust emissions are negligible, based on similar projects). Silt loading factors for all roadways were obtained from the *CEQR Technical Manual*. In addition, a conservative assumption of "dry" road conditions was used for the short-term calculation (precipitation reduced silt loading).

Dispersion analysis was conducted with the EPA's CAL3QHCR dispersion model version 13196. $PM_{2.5}$ concentrations were predicted with model-ready JFK Airport meteorology data, obtained from the DCP for another project. In addition, a Tier II approach was used to predict the 24-hour $PM_{2.5}$ concentrations (concentration at each intersection). Models specified settling and deposition velocities of 0-meter per second, 60-minute averaging time, and urban surface roughness of 370-centimeter (applicable to apartment residential land use). Links were modeled as free flowing, at grade, links. Short-term receptors were placed in the middle of sidewalks at 1.8-meter height around the intersection in spaced intervals. Annual receptors were placed 15-meters from the curb side at 1.8 meters height in spaced intervals. Satellite imagery was used to spatially locate links and receptors. The satellite imagery is a map application built into Lakes Environmental, Inc. CALRoad commercial version of CAL3QHC/R.

The With-Action 24-hour $PM_{2.5}$ concentrations and the annual $PM_{2.5}$ increments between the With-Action and No-Action concentrations, at each intersection, were evaluated with the NYC Guideline, *de minimis*. Table 17-4 shows the dispersion analysis results.

Table 17-4: Project-Generated Traffic Dispersion Analysis Results

Pollutant and Averaging Time	Increment (Modeled) Concentration	Threshold Concentration	Threshold Standard
147th Street and Northern Boulevard			
$PM_{2.5}$ 24-hour (1)	**6.57 µg/m³**	**8.45 µg/m³**	***de minimis***
$PM_{2.5}$ Annual Increment	**0.08 µg/m³**	**0.1 µg/m³**	***de minimis***
149th Street and Northern Boulevard			
$PM_{2.5}$ 24-hour (1)	**6.86 µg/m³**	**8.45 µg/m³**	***de minimis***
$PM_{2.5}$ Annual Increment	**0.08 µg/m³**	**0.1 µg/m³**	***de minimis***

Note:

1. **24-Hour $PM_{2.5}$ concentration increment correspond to the With-Action traffic.**
2. **Annual $PM_{2.5}$ concentration increment is the difference between the With-Action to No-Action conditions.**

As seen in Table 17-4, the Proposed Actions $PM_{2.5}$ increment concentrations do not exceed the *de minimis* (24-hour or annual averaging times). Therefore, no significant adverse air quality impacts are expected at intersections affected by the Proposed Actions.

Stationary Source

Heating and Hot Water Systems

The heating/hot water, ventilation, and air conditioning (HVAC) systems analysis considers the potential for emissions from the HVAC system(s) of a proposed action to result in development that significantly impacts existing land uses (project-on-existing), and the potential of a proposed project to significantly impact each other (project-on-project). Based on the *CEQR Technical Manual*, a preliminary screening assessment is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system(s) boiler emissions can be significant. The screening analysis determines the threshold of development size below which the action would not have a significant impact. This CEQR screening procedure is applicable to buildings that are not less than 30 feet from

the nearest building of similar or greater height. Otherwise, a detailed dispersion analysis is required.

Screening Assessment

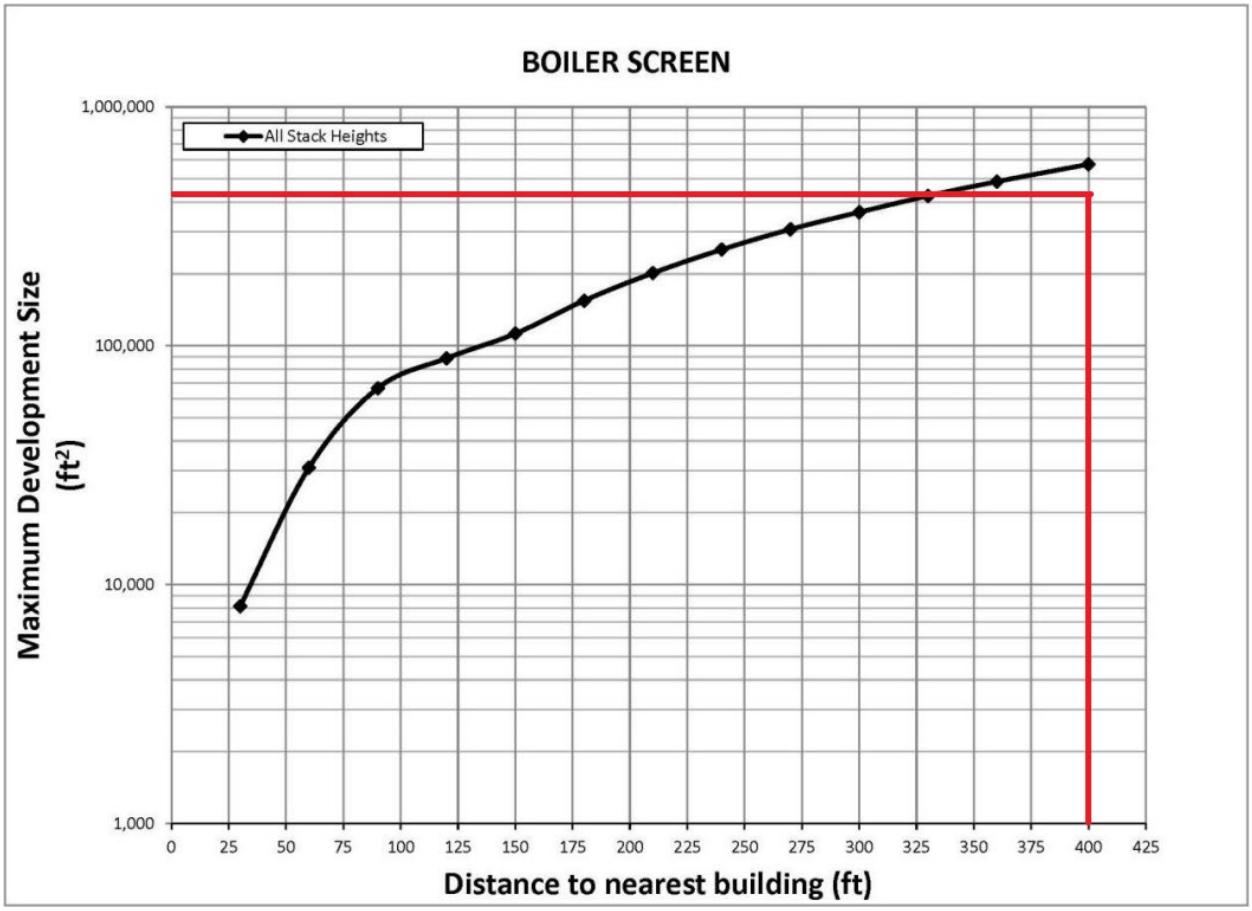
The potential for the heat and hot water system(s) to have a significant adverse impact on nearby receptors depends on the type of fuel used in the HVAC system, the height of the stack venting the emissions, the distance to the nearest building of similar or greater height, and the building's use and the square footage of the development that would be served by the system, both of which affect the amount of fossil fuel consumed. The *CEQR Technical Manual* screening assessment is based on these factors. A detailed analysis is required if the screening assessment fails.

The *2021 CEQR Technical Manual* Figure 17-3 nomograph was used for the screening assessment. This stationary source screen is a generic screen for heat and hot water systems. The nomograph depicts the size of the development versus the distance below which the potential impact can occur and provides a conservative estimate of the threshold distance. In addition, as screening analysis is only applicable to a single smokestack, for the purposes of a cumulative screening analysis emissions from multiple stacks were combined in a single stack situated as close as possible to the receiving building.

The following screening assessments were conducted:

- Project-on-Existing – Projected Development Sites 1 and 2 on existing land uses: Based on the methodology above, Projected Development Sites 1 and 2 Reasonable Worst Case Development Scenarios (RWCDSs) were combined and analyzed as a 145-foot-tall residential building, containing 427,037 gsf (Projected Development Sites 1 and 2 combined gsf, excluding parking floor areas). A distance of 400 feet was applied in the screening assessment as no other building 145 feet or taller is located within 400 feet of the Proposed Project. Figures 17-1 show the cumulative project-on-existing screening assessment nomograph.

Figure 17-1: Project-on-Existing - HVAC Screen Fuel Oil #2 Nomograph



As seen in the screening analysis (see Figure 17-1), using the nomograph provided in the *CEQR Technical Manual*, the Proposed Project (Projected Development Sites 1 and 2 combined gsf, excluding the parking garages gsf) on the closest existing building with a similar or taller building height falls below the boiler screen curve. As such, the Proposed Actions passes the HVAC screening assessment on existing land uses.

- Project-on-Project: As Projected Development Site 1 abuts Projected Development Site 2 (less than 30 feet, which is the minimum distance applicable to HVAC systems screening analysis), the screening analysis is not applicable. Therefore, a detailed analysis is required for the project-on-project scenario.

Detailed Analysis

A stationary source modeling was conducted to evaluate the potential impacts associated with the boilers stacks emissions. Lakes Environmental MPI executable was used in the analysis. The MPI executable take advantage of computers with multiple processors, reducing run-time significantly. Lakes Environmental has adjusted the US EPA AERMOD source code and recompiled the model to parallelize the processing of receptors. The latest MPI executable (used in the analysis) modified the EPA's AERMOD latest executable model version 22112. The AERMOD model incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources and simple and complex terrain. The model was run with the regulatory default option and for both with and without downwash effect options, where the Building Profile Input Program (BPIP) was run with the downwash effect enabled. All analyses were conducted using five consecutive years of meteorological data (2015-2019) processed by the NYSDEC. Surface data used in the analysis is from LaGuardia Airport, and upper air data is from Brookhaven station, New York. The meteorological data provided hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the five years of data. Population in Queens County, obtained from the U.S. Census Bureau (July 2019), was specified to account for the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions.

Natural gas would be the type of fossil fuel. If any, used in the Projected Development Sites HVAC system(s). The pollutants of concern of natural gas-fueled boilers are NO_2 and $PM_{2.5}$. The boilers' energy intensities were calculated based on an energy consumption rate, obtained from the *CEQR Technical Manual Appendices*, corresponding to residential use in the buildings. Emissions were calculated based on emission factors obtained from the EPA's AP-42 manual for external combustion sources.[3] All fuel was assumed to be consumed during the 100-day (or 2,400-hour) heating season. Table 17-5 shows the boilers' energy intensities and pollutant emission rates.

Table 17-5: HVAC Systems Short-term and Annual Emission Rates

Site ID	RWCDS (gsf)	Fossil Fuel & Stack Height (ft)	Pollutant	Averaging Time	Emission Rate (g/s)
Projected Development Site 1	211,663	Natural Gas; 155 ft	NO_2	1-hour	6.57E-02
				Annual	1.80E-02
			$PM_{2.5}$	24-hour	4.99E-03

[3] EPA. *Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1:* Chapter 1: External Combustion Sources, https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf. July 1998.

				Annual	1.37E-03
Projected Development Site 2	215,374	Natural Gas; 155 ft	NO_2	1-hour	6.68E-02
				Annual	1.83E-02
			$PM_{2.5}$	24-hour	5.08E-03
				Annual	1.39E-03

The boiler stacks' diameters and exit temperatures were estimated based on values obtained from the New York City Department of Environmental Protection (DEP) "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million Btu per hour).[4] Initially, the Projected Development Sites 1 and 2 boiler stacks were placed 3 feet above the roofline and as close as possible to the receiving building. If a significant adverse impact was predicted, the stack(s) was set back from the receiving building and/or raised.

The Projected Development Sites were modeled as buildings that cover their entire lot(s) area(s) (the wall façade located on the outer lot lines) and rise to their RWCDS heights. Buildings in the surrounding area were accounted for in the downwash effect on plume dispersion (BPIP). This included buildings that are under construction (dimensions obtained from the zoning diagrams published in the New York City Department of Building (DOB) online application). Receptors on the receiving building were placed on all wall façade from the ground floor to rooftop height in spaced intervals.

The USGS National Elevation Dataset (NED) 1/3 arc-second resolution (GeoTIFF dataset), the terrain data set recommended by the EPA for use in the United States for regulatory purposes, was used to process buildings base elevations. The base elevations of receptors and stacks were set to their buildings base elevations. Roof heights of buildings in the area were obtained from the NYC Building Footprint database[5], and satellite imagery was consulted to identify buildings that were constructed recently or are being developed.

The 1-hour NO_2 concentrations were modeled as the 8th highest concentration (the NAAQS design value) and a Tier 2 (ARM 2) approach. For determining compliance with the 1-hour NO_2 standard, the EPA has developed a three-tiered modeling approach. Tier 1 approach assumes a full conversion of NOx to NO_2, which is the most conservative approach. Tier 2 Ambient Ratio Method 2 (ARM 2) assumes ambient equilibrium between NO and NO_2. ARM 2 adjusts the modeled NOx concentrations based on an empirical relationship between ambient NOx and ambient NO_2 concentrations. Tier 3, which is the most precise approach, accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations. The national

[4] DEP "CA Permit" database obtained from the New York City Department of City Planning, February 2020.

[5] City of New York, nyc-geo-metadata (May 03, 2016); https://data.cityofnewyork.us/Housing-Development/Building-Footprints/nqwf-w8eh

default in-stack and ambient ratio of 0.5 and 0.9, respectively, were applied in the Tier 2 approach.

Concentrations were modeled twice; with the building wake effect enabled/disabled. The predicted concentrations are the highest concentration of these. Table 17-6 shows the HVAC dispersion analysis results.

Table 17-6: HVAC Dispersion Analysis Results

Pollutant and Averaging Time	Modeled Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Evaluated Concentration ($\mu g/m^3$)	Threshold Concentration ($\mu g/m^3$)	Threshold Standard
Concentration at Projected Development Site 1					
1-hour	75.61	103.59	179.2	188	NAAQS
Annual	1.64	26.8	28.4	100	NAAQS
24-hour	2.61	18.1	2.61	8.45	*de*
Annual	0.12	7.0	0.12	0.3	*de*
Concentration at Projected Development Site 2					
1-hour	79.80	103.59	183.4	188	NAAQS
Annual	0.98	26.8	27.7	100	NAAQS
24-hour	2.13	18.1	2.13	8.45	*de*
Annual	0.07	7.0	0.07	0.3	*de*

Note:

1. 1-hour NO_2 modeled concentration is the 8th highest (NAAQS design value), using Tier 2 (ARM2) approach.

As seen in Table 17-6, the NO_2 predicted concentrations are within the NAAQS and $PM_{2.5}$ concentrations do not exceed the *de minimis*. These results were predicted with certain restrictions to ensure that no impact would occur. The stacks' restrictions, specified in the E-Designation language below, is as follows:

(E-765)

Block 5016, Lots 18 and 27 (Projected Development Site 1): Any new residential, commercial, or community facility development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC), and hot water system(s), ensure that the stack is located at the building's highest level at a minimum of 155 feet above grade, and that the stack is located at least 120 feet from the eastern lot line facing 149th Street to avoid any potential significant adverse air quality impacts.

Block 5016, Lots 33 and 39 (Projected Development Site 2): Any new residential, commercial, or community facility development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC), and hot water system(s), ensure that the stack is located at the building's highest level at a minimum of 155 feet above grade, and that the stack is located at least 120 feet from the western lot line facing 147th Street to avoid any potential significant adverse air quality impacts.

Industrial Source

Identifying Potential Emission Sources

Per the *CEQR Technical Manual*, projects that would result in new uses (particularly schools, hospitals, parks, and residences) within 400 feet of manufacturing processing facilities may result in potentially significant adverse impacts. The analysis first determines if there are any existing manufacturing uses within the 400-foot study area containing exhaust stacks, vents, or other emission sources that may have the potential to adversely affect the uses introduced by the project. If warranted, an air dispersion analysis is then conducted for any existing industrial source(s) located in the study area.

Existing manufacturing uses with exhaust stacks, vents, or other emission sources that may have the potential to adversely affect the uses introduced by the project were identified by reviewing the DEP online Clean Air Tracking System (CATS) database, the NYSDEC map application (DECinfo Locator), and through a field survey. The field survey took place on May 26th, 2021.

The study area encompasses all or part of Blocks 5004, 5005, 5006, 5007, 5014, 5015, 5016, 5017, 5018, and 5028, and includes properties along Northern Boulevard, 35th Avenue, 37th Avenue, 38th Avenue, 147th Street, 149th Street and 149th Place. Land uses in the study area are predominantly residential, with commercial/retail uses located along Northern Boulevard, and one church. The results of the study are as follows:

- There are two cancelled processing permits for a retail dry cleaner at 146-13 Northern Boulevard, Block 5004, Lot 13 (Moon Light Cleaners). 146-13 Northern Boulevard is

currently occupied by a restaurant, and there are no dry cleaners at this location. Therefore, no analysis is required.

- There is an expired permit for an engine/generator issued to the Long Island Care Center at 144-61 38th Avenue, Block 5015, Lot 54 (PA012480). This permit expired on 12/24/2005. According to DOB records, on 12/27/1991 an application was approved to install an emergency generator and 275-gallon fuel storage tank at this location (Job Number 400228552). This application was signed-off on 3/5/1992. Therefore, the generator located at 144-61 38th Avenue was for emergency use. Emergency generators are exempt, and no analysis is required.

This facility also contains a NYSDEC Air Facility Registration Certificate (Registration ID 2-6302-00296/00002) with a total of 1 emission point. The Description on the Certificate reads "General medical and surgical hospital. One boiler using distillate oil." Boilers, which are used for heating and hot water systems, are not considered processing manufacturing equipment. As such, no analysis is required.

- The property at 147-25 Northern Boulevard (Block 5005, Lot 59) has a NYSDEC Air Facility Registration Certificate (Registration ID 2-6302-00390/00003) with a total of 1 emission point. The Description on the Certificate reads "1 boiler 19.7 mmBTU/hr burning #4 fuel oil." The facility has no DEP processing manufacturing permit application on file. Boilers, which are used for heating and hot water systems, are not considered processing manufacturing equipment. As such, no analysis is required.
- The property at 149-45 Northern Boulevard (Block 5007, Lot 1) has a NYSDEC Air Facility Registration Certificate (Registration ID 2-6302-00316/00002) with a total of 1 emission point. The Description on the Certificate reads "One AL Eastmond & Sons FST-250 boiler, rated at 10.5 mmBTU/hr heat input, burning natural gas." The facility has no DEP processing manufacturing permit application on file. Boilers, which are used for heating and hot water systems, are not considered processing manufacturing equipment. As such, no analysis is required.
- There is a retail dry cleaner (In & Out Cleaners) located at 35-29 149th Street (Block 5006, Lot 26). There were no DEP Processing permits or NYSDEC Air Facility Registration Certificates found on file for this site. Retail dry cleaners are regulated, and therefore, no analysis is required.

No other potential source(s) of toxics air emissions was identified in the study area.

Major and Large Source

As outlined in the *CEQR Technical Manual*, projects that would introduce new uses near major sources, large sources, and odor producing facilities may result in potentially significant adverse air quality impacts. The study area considers major sources, large sources, and odor producing facilities within 1,000 feet of the Project Area. Major emission sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits; large emission sources are identified as sources located at facilities which require a State facility permit. Solid waste or medical waste incinerators,

asphalt and concrete plants, power generating plants, large boilers of large public facilities for example, and large industrial facilities are typical type of sources requiring these permits. Odor producing facilities are operations that have the potential to cause discomfort, such as: solid waste management facilities, water pollution control plants (i.e., sewage treatment plants), and incinerators.

No existing large combustion source(s), such as power plants, cogeneration facilities, etc., located within 1,000 feet of the Proposed Project, was identified[6], and no odor producing facility was identified within 1,000 feet of the Proposed Project. The nearest major/large source is the Flushing Hospital Medical Center Air State facility, which is located approximately 3,300 feet south of the Proposed Project. As such, no analysis is warranted, and no significant adverse air quality impacts are predicted from these types of facilities.

Conclusion

Based on the analysis, conditions associated with the Proposed Actions would not result in any violations of the ambient air quality standards. Therefore, there is no reason to believe that the Proposed Actions would result in any potentially significant adverse stationary or mobile source air quality impacts, and further assessment is not warranted.

[6] https://gisservices.dec.ny.gov/gis/dil/

19. Noise

Environmental Studies Corp (ESC) conducted noise monitoring on Thursday, June 17, 2021, in support of zoning map amendment. The Rezoning Area includes Block 5016, Lots 18, 27, 33, 39, 47, as well as portions of (p/o) Lots 7 and 11 in the Murray Hill neighborhood of Queens, Community District 7.

The Proposed Project Area consists of Block 5016, Lots 18, 27, 33, 39, 47 (The Development Site), as well as portions of (p/o) Lots 7 and 11, which are not Applicant-owned. The Proposed Project Area is located at 147-14 Northern Boulevard, Queens NY, within a block bounded by Northern Boulevard, a two-way eastbound/westbound roadway on the north; 149th Street, a two- way northbound/southbound roadway on the east; 147th Street, a one-way northbound roadway on the west; and 38th Avenue, a one-way eastbound roadway on the south, as shown in Figure 19- 1.

An assessment of the potential for adverse effects on project occupants from ambient noise is warranted. The projected development would not create a significant stationary noise generator. Additionally, project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. Therefore, this noise assessment is limited to an assessment of ambient noise that could adversely affect occupants of the development. The predominant noise source at the Affected Area is

vehicular traffic on surrounding streets.

Noise Fundamentals

Noise is defined as any unwanted sound, and sound is defined as any pressure variation that the human ear can detect. Humans can detect a large range of sound pressures, from 20 to 20 million micropascals, but only those air pressure variations occurring within a particular set of frequencies are experienced as sound. Air pressure changes that occur between 20 and 20,000 times a second, stated as units of Hertz (Hz), are registered as sound.

Because the human ear can detect such a wide range of sound pressures, sound pressure is converted to sound pressure level (SPL), which is measured in units called decibels (dB). The decibel is a relative measure of the sound pressure with respect to a standardized reference quantity. Because the dB scale is logarithmic, a relative increase of 10 dB represents an acoustic energy that is 10 times higher. However, humans do not perceive a 10-dB increase as 10 times louder. Instead, they perceive it as twice as loud.

Sound is often measured and described in terms of its overall energy, taking all frequencies into account. However, the human hearing process is not the same at all frequencies. Humans are less sensitive to low frequencies (less than 250 Hz) than mid-frequencies (500 Hz to 1,000 Hz) and are most sensitive to frequencies in the 1,000- to 5,000-Hz range. Therefore, noise measurements are often adjusted, or weighted, as a function of frequency to account for human perception and sensitivities. The most common frequency weightings used are the A- and C-weightings. These weight scales were developed to allow sound level meters, which use filter networks to approximate the characteristic of the human hearing mechanism, to simulate the frequency sensitivity of human hearing. The A-weighting is the most commonly used for environmental measurements, and sound levels measured using this weighting are denoted as dBA. The letter "A" indicates that the sound has been filtered to reduce the strength of very low and very high frequency sounds, much as the human ear does. C-weighting gives nearly equal emphasis to sounds of most frequencies. Mid-range frequencies approximate the actual (unweighted) sound level, while the very low and very high frequency bands are significantly affected by C-weighting.

Table 19-1: Noise Levels of Common Sources

Sound Source	SPL (dB(A))
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110

On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0
Notes: A change in 3dB(A) is a just noticeable change in SPL. A change in 10 dB(A)Is perceived as a doubling or halving in SPL.	
Source: 2021 CEQR Technical Manual	

The following is typical of human response to relative changes in noise level:

- 3-dBA change is the threshold of change detectable by the human ear;
- 5-dBA change is readily noticeable; and
- 10-dBA change is perceived as a doubling or halving of the noise level.

The SPL that humans experience typically varies from moment to moment. Therefore, various descriptors are used to evaluate noise levels over time. Some typical descriptors are defined below.

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the mean energy, or intensity, level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.

- L_{max} is the highest SPL measured during a given period of time. It is useful in evaluating L_{eq}s for time periods that have an especially wide range of noise levels.

- $L_{eq(24)}$ is the continuous equivalent sound level over a 24-hour time period.

The sound level exceeded during a given percentage of a measurement period is the percentile- exceeded sound level (L_X). Examples include L_{10}, L_{50}, and L_{90}. L_{10} is the A-weighted sound level that is exceeded 10% of the measurement period.

The decrease in sound level caused by the distance from any single noise source normally follows the inverse square law (i.e., the SPL changes in inverse proportion to the square of the distance from the sound source). In a large open area with no obstructive or reflective surfaces, it is a general rule that at distances greater than 50 feet, the SPL from a point source of noise drops off at a rate of 6 dB with each doubling of distance away from the source. For "line" sources, such as vehicles on a street, the SPL drops off at a rate of 3 dBA with each doubling of the distance from the source. Sound energy is absorbed in the air as a function of temperature, humidity, and the frequency of the sound. This attenuation can be up to 2 dB over 1,000 feet. The drop-off rate also will vary with both terrain conditions and the presence of obstructions in the sound propagation path.

Noise Standards and Guidelines

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Quality Review (CEQR) noise exposure guidelines for exterior noise levels. As shown in Table 19-2 below, noise standards classify noise exposure into four categories based on noise level limits and land use, for vehicular traffic, rail, and aircraft noise sources: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable. Table 19-3 of the *CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise exposure levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower (L_{10} *or Ldn, depending on the source*).

Table 19-2: Noise Exposure Guidelines for Use in City Environmental Impact Review

Table 19-2
Noise Exposure Guidelines For Use in City Environmental Impact Review[1]

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

Notes:

(i) In addition, any new activity shall comply with Impact Thresholds detailed in Section 410.

[1] Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

[2] Tracts of land where serenity and quiet are extraordinarily important and serve as important public need, and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and nursing homes.

[3] One may use the FAA-approved DNL contours supplied by the Port Authority of New York and New Jersey (PANYNJ), or the noise contours may be computed from the federally approved Aviation Environmental Design Tool (AEDT) Computer Model using flight data supplied by the PANYNJ.

[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are listed by octave bands).

Sources: New York City Department of Environmental Protection (adopted policy 1983).

Table 19-3 CEQR TM: Attenuation Values to Achieve Acceptable Interior Noise Levels

Table 19-3
Required Attenuation Values To Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Aircraft[A]	$65<DNL\leq68$	$68<DNL\leq71$	$71<DNL\leq73$	$73<DNL\leq75$	$75<DNL$
Train	$65<L_{dn}\leq68$	$68<L_{dn}\leq71$	$71<L_{dn}\leq73$	$73<L_{dn}\leq75$	$75<L_{dn}$
Attenuation[B]	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	See note [C]

Note:

[A] DNL descriptor based on average values of L_{dn} over a year period.

[B] The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.

[C] The required attenuation value is the difference between L_{build} and $L_{interior,}$, using the appropriate noise descriptor

Where:

L_{build} is the projected noise level under the build condition rounded up to the whole number

$L_{interior}$ is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

Source: New York City Department of Environmental Protection

Measurement Location and Equipment

Noise measurement was conducted during peak weekday vehicular travel periods (AM, Midday, PM) on a typical midweek day. The weather condition is normal with calm wind and is considered suitable for an ambient noise measurement.

A Type 1 sound level meter (Larson Davis 831) with wind shield was used to conduct the noise monitoring. The meter was calibrated prior to and following each monitoring session. The meter was placed on a tripod at a height of approximately five feet above the ground, away from any reflective surfaces.

The noise measurements were conducted at the following locations (as shown in Figure 19-1):

L1: Midblock of 149th Street, in front of the back alley, between Northern Boulevard and 38th Avenue (Figure 19-2);

L2: Midblock of Northern Boulevard, between 147th Street and 149th Street (Figure 19-3);
L3: Midblock of 147th Street, between Northern Boulevard and 38th Avenue (Figure 19-4).

Measurement Conditions

Monitoring was conducted during typical midweek conditions, on June 17, 2021 (Thursday). The weather was dry and wind speeds were moderate during all monitoring periods. The sound meter was calibrated before and after each monitoring session.

Existing Conditions

Based on the noise measurements, the predominant source of noise is vehicular traffic.
Table 19-4, 19-5, and 19-6 below *contains the results for the measurements taken at the Project Sites:*

Table 19-4 *Noise Levels (dB) at Location 1*			
June 17, 2021 (Thursday)			
Time	**7:34 am – 7:54 am**	**13:18 pm – 13:38 pm**	**17:12 pm – 17:32 pm**
L_{eq}	65.0	67.2	65.0
L_{max}	80.8	91.6	83.8
L_{10}	67.0	66.9	67.2
L_{50}	61.5	61.6	62.8
L_{90}	57.4	58.4	59.2
L_{min}	54.7	54.8	55.2

Table 19-5 *Noise Levels (dB) at Location 2*			
June 17, 2021 (Thursday)			
Time	**8:01 am – 8:21 am**	**12:30 pm – 12:50 pm**	**16:49 pm – 17:09 pm**
L_{eq}	70.9	71.8	70.9
L_{max}	82.8	92.3	85.2
L_{10}	74.2	73.8	73.7
L_{50}	68.5	68.3	69.6
L_{90}	61.1	57.4	60.7
L_{min}	52.6	53.0	56.0

Table 19-6 *Noise Levels (dB) at Location 3*			
June 17, 2021 (Thursday)			
Time	**8:27 am – 8:47 am**	**12:53 pm – 13:13 pm**	**16:25 pm – 16:45 pm**
L_{eq}	67.1	61.0	61.0
L_{max}	90.8	72.9	77.4
L_{10}	67.6	64.4	63.2
L_{50}	60.2	58.6	59.0
L_{90}	55.7	55.0	56.2
L_{min}	51.2	51.0	50.9

Table 19-7, 19-8, and 19-9 *below contains the traffic counts and vehicle classifications during each monitoring period:*

Table 19-7 ***Location 1:*** *Traffic volumes and vehicle classifications*			
	7:34 am – 7:54 am	**13:18 pm – 13:38 pm**	**17:12 pm – 17:32 pm**
Car/ Taxi/ Van/SUV	44 (45)	69 (53)	74 (98)
Bus	1 (3)	0 (0)	1 (2)
Medium Truck	2 (0)	3 (1)	7 (1)
Heavy Truck	1 (0)	1 (0)	2 (1)
Motorcycle	0 (0)	0 (0)	1 (0)

*Near side traffic volume (far side traffic volume)

Table 19-8 ***Location 2:*** *Traffic volumes and vehicle classifications*			
	8:01 am – 8:21 am	**12:30 pm – 12:50 pm**	**16:49 pm – 17:09 pm**
Car/ Taxi/ Van/SUV	197 (389)	247 (280)	499 (267)
Bus	12 (12)	4 (4)	4 (5)
Medium Truck	4 (4)	7 (5)	2 (6)
Heavy Truck	2(2)	7 (4)	3 (4)
Motorcycle	1 (1)	0 (0)	0 (1)

*Near side traffic volume (far side traffic volume)

Table 19-9 ***Location 3:*** *Traffic volumes and vehicle classifications*			
	8:27 am – 8:47 am	**12:53 pm – 13:13 pm**	**16:25 pm – 16:45 pm**
Car/ Taxi/ Van/SUV	61	74	87
Bus	1	1	0
Medium Truck	1	0	0
Heavy Truck	0	0	0
Motorcycle	0	0	0

*Northbound one-way road

Stationary Source

It is assumed that the building mechanical systems (i.e., HVAC systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, the Proposed Actions would not result in any significant adverse noise impacts related to building mechanical equipment.

Determination of Impacts/Building Attenuation Requirements

The 2021 CEQR Technical Manual Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the proposed action, an L_{10} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure. An L_{10} of between 70 and 80 dB(A) is identified as marginally unacceptable general external exposure. The highest recorded L_{10} at Location 1 was 67.2 dBA during the PM monitoring period. The highest recorded L_{10} at Location 2 was 74.2 dBA during the AM monitoring period. The highest recorded L_{10} at Location 3 was 67.6 dBA during AM monitoring period. Therefore, noise sensitive uses at Projected Development Sites 1 and 2 under the Future With- Action Condition would experience general external noise exposure at a marginally unacceptable level.

As measured noise levels facing Northern Boulevard is between 73 and 76 dBA, 31 dBA attenuation would be required for the façade facing Northern Boulevard as well as for facades facing 147th street within 50 feet of Northern Boulevard and the facades facing 149th Street within 50 feet of Northern Boulevard. As measured noise levels at Location 1 and 2 are both below 70 dBA, no noise mitigation would be required for other facades.

To implement these attenuation requirements, it is anticipated that an (E) Designation (E-765) for noise would be established on "Projected Development Site 1" (Lots 18, 27, and portions of Lot 47) and "Projected Development Site 2" (Lot 33, 39, and portions of Lot 47) specifying the appropriate amount of window/wall attenuation and an alternate means of ventilation. The text for the (E) Designation would be as follows:

Block 5016, Lots 18, 27, and p/o 47 (Projected Development Site 1): In order to ensure an acceptable interior noise environment, future residential/commercial office/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on the facades facing Northern Boulevard and the facades facing 147th Street within 50 feet of Northern Boulevard and the facades facing 149th Street within 50 feet of Northern Boulevard to maintain

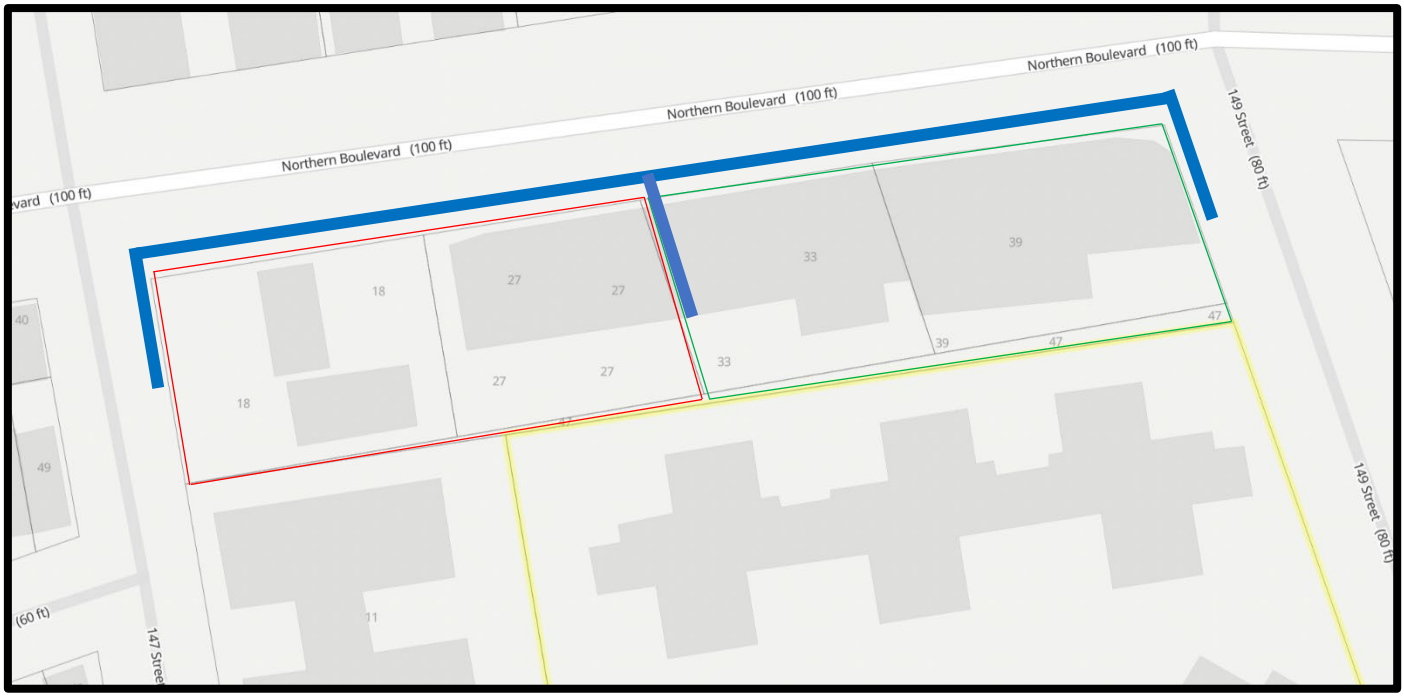
an interior L10 noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial office uses as illustrated in the EAS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 5016, Lots 33, 39 and p/o 47 (Projected Development Site 2): In order to ensure an acceptable interior noise environment, future residential/commercial office/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on the facades facing Northern Boulevard and the facades facing 147th Street within 50 feet of Northern Boulevard and the facades facing 149th Street within 50 feet of Northern Boulevard to maintain an interior L10 noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial office uses as illustrated in the EAS. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Conclusion

With this commitment, no significant adverse impacts related to noise are expected and no further analysis is warranted.

Noise Attenuation Requirements



Legend

Projected Development Site 1

Projected Development Site 2

31 dB(A) Attenuation Requirement

Note: Window/wall attenuation requirements shown are for residential / community facility uses only; commercial office uses would require 5 dBA less attenuation.

20. Neighborhood Character

Introduction

According to the CEQR Technical Manual, an assessment of neighborhood character considers how elements of the environment combine to create the context and feeling of a neighborhood and how a project may affect that context and feeling. The assessment focuses on how proposed project may have the potential to alter long established characteristics of a neighborhood. Per the CEQR Technical Manual, if a project has the potential to result in significant adverse impacts to a neighborhood's land use, zoning, public policy, urban design, visual resources, historic resources, traffic, noise, and or socioeconomics, it may have the potential to result in an impact to neighborhood character. An impact in any one of these categories, analyzed elsewhere in this EAS, does not automatically result in an impact to neighborhood character. This chapter will consider whether the potential for significant adverse impacts in the areas described above has the potential to result in an alteration in the context and feeling of a neighborhood.

Principal Conclusions

No significant adverse impacts to neighborhood character are anticipated as a result of development facilitated by the approval of the Proposed Actions. As discussed above, the Proposed Actions would facilitate the development of a mixed use residential an commercial building containing 389 dwelling units in the Study Area. As discussed in the relevant chapters of this EAS and below, the Proposed Actions are not expected to result in significant adverse land use, zoning, public policy, urban design, visual resources, historic resources, traffic, noise, or socioeconomic impacts. The Proposed Actions would introduce new residential development including both market rate and affordable units. The introduction of new residential uses would no, when considered cumulatively, negatively affect nor alter the surrounding neighborhood's context or feeling.

Methodology

Per the CEQR Technical Manual, a preliminary assessment of the potential for the Proposed Actions to result in significant adverse impacts to neighborhood character will answer the following questions:

1. What are the defining features of the neighborhood?

2. Does the project have the potential to affect the defining features of the neighborhood, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas?

As described in the CEQR Technical Manual, a neighborhood's character is the result of the combination of various contributing elements. This chapter will identify the salient features of the neighborhood. This analysis will identify the major characteristics of the neighborhood and discuss how they relate to the area's overall character.

Preliminary Assessment

Study Area

Per the CEQR Technical Manual, the study area for an assessment of neighborhood character resources is 0.25 mile radius around the Project Site.

Defining Neighborhood Features

There are residential, commercial, community facility, and open space uses within the Study Area. The lots within the Study Area that have frontage on Northern Boulevard contain predominantly commercial and multifamily residential uses. Residential uses and some mixed-use commercial and residential uses are found in all portions of the Study Area. There are also a few community-facility uses located in the study area.

The Study Area contains a range of building types. Outside of the Northern Boulevard corridor, there are a mix of semi-detached and detached single, two, and multiple family residences. Generally, these do not exceed three floors and include side yards, and or front yards. The buildings on Northern Boulevard are also generally low-rise with most being single story commercial or mixed-use commercial and residential buildings. The majority of lots within the Study Area are occupied though a few vacant lots can be seen along Northern Boulevard.

Land Use, Zoning, and Public Policy

As discussed above the Proposed Actions are not anticipated to create a significant impact to Land Use, Zoning or Public Policy. The introduction of increased residential density is not anticipated to lead to additional land use changes in the Study Area. The Proposed Actions are not anticipated to result in significant adverse impacts to land use within the Study Area. The Proposed Actions would result in the development of buildings that are taller and denser than the existing buildings in the Study Area. The introduction of new residential uses in these buildings remains compatible with the surrounding Study Area. Further, the Proposed Actions mirror past rezonings that allow for the introduction of medium density residential buildings at the edge of commercial

and manufacturing districts. The Proposed Actions would advance several public policy objectives as they would result in the development of dense, mixed use, and mixed income, buildings. These are stated policy goals in both Where we Live and Housing New York.

Socioeconomic Conditions

As discussed above the Proposed Actions are not anticipated to create a significant impact to Socioeconomic Conditions. As stated above, the Project Site does not contain any residential units and contains only one active business. As such, there is no potential for direct residential or business displacement. The Proposed Actions furthermore would not generate more than 200,000 square feet of commercial square footage, nor would the Proposed Actions otherwise impact an established industry. An assessment regarding the potential effects on indirect residential displacement was conducted. This analysis found that the Proposed Actions would not create any potential significant adverse impact.

Community Facilities

As discussed above the Proposed Actions are not anticipated to create a significant impact to most community facilities. Utilization rates at both elementary and intermediate schools are expected to drop significantly due to the capacity projects included in the 2020-2024 Capital Plan, the introduction of 87 elementary school students in the With-Action scenario does not exceed the threshold of 100 students above 100% utilization set in the 2021 CEQR Technical Manual.

Open Space

As discussed above the Proposed Actions are not anticipated to create a significant adverse Open Space impact. Although the Proposed Actions would reduce the "Total" and "Active" Open Space Ratios of the Study Area, the qualitative assessment of Open Space resources in the Study Area supports the determination that the Proposed Actions are not anticipated to create a significant adverse impact to Open Space.

Shadows

As discussed above the Proposed Actions are not anticipated to create a significant impact to Shadows. A Tier I Screening Assessment demonstrates that no sunlight sensitive resources have the potential to receive shadows from the Proposed Development as a result of the Proposed Actions. No additional assessment is required.

Historic and Cultural Resources

As discussed above, there are no significant historic or cultural resources in the Study Area. As such, the defining neighborhood features in the Study Area are not defined by the presence of historical or architectural landmarks. The Proposed Development's impacts to historic and cultural resources therefore do not alter the defining neighborhood features identified above.

Urban Design and Visual Resources

The Proposed Actions are not anticipated to negatively impact existing building bulk, use, type, and arrangement. The Proposed Actions are not anticipated to negatively impact block form, street pattern, and street hierarchy nor are the Proposed Actions anticipated to negatively impact streetscape elements within the Study Area. The defining neighborhood characteristics do not include the presence of significant visual resources in the Study Area. Therefore, the Proposed Actions would not affect any natural resources or public view corridors to notable features or buildings in the immediate vicinity of the Rezoning Area. Accordingly, no impacts to the urban design and/or visual resources of the area are expected, and further analysis is not warranted.

Transportation

As discussed above the Proposed Actions are not anticipated to create a significant impact to Transportation. The proposed actions would generate less than the maximum permitted vehicle, transit and pedestrian trips and therefore is not expected to result in significant adverse transportation impacts, as detailed above.

Noise

No potential significant adverse noise impacts would be generated by the proposed project on the surrounding area.

Conclusion

The Proposed Development, facilitated by the approval of the Proposed Actions, does not have the potential to significantly alter long established characteristics of a neighborhood. The Proposed Project does not have the potential to result in significant adverse impacts to the Study Area's land use, zoning, public policy, urban design, visual resources, historic resources, traffic, noise, and or socioeconomics. When considered cumulatively, the Proposed Project does not have the potential to result in an impact to neighborhood character as the Proposed Actions do not have the potential to result in an alteration in the context and feeling of the neighborhood.

22. Construction

Introduction

A preliminary construction analysis may be required because future development facilitated by the Proposed Actions could result in:

- Construction activities lasting longer than 2 years
- Construction activities along a major thoroughfare
- The operation of several pieces of diesel equipment in a single location at peak construction; and
- Activity within 400 Feet of an historic resource

Proposed Construction Schedule

Construction would occur on Projected Development Sites 1 and 2 (Applicant-owned Sites) It is assumed that the Proposed Actions would be approved in 2024. The Proposed Developments on the Applicant Controlled Projected Development Sites 1 and 2 are expected to be completed by 2029 after an up to 36-month construction period. Both buildings would be constructed simultaneously.

Applicant-owned Site

Construction of both Projected Development Sites 1 and 2 are expected to begin in the third quarter of 2026 and be completed within 36 months by Q3 2029. The construction sequence and timeline for Projected Development Site 1 is listed below.

Proposed Construction Activities

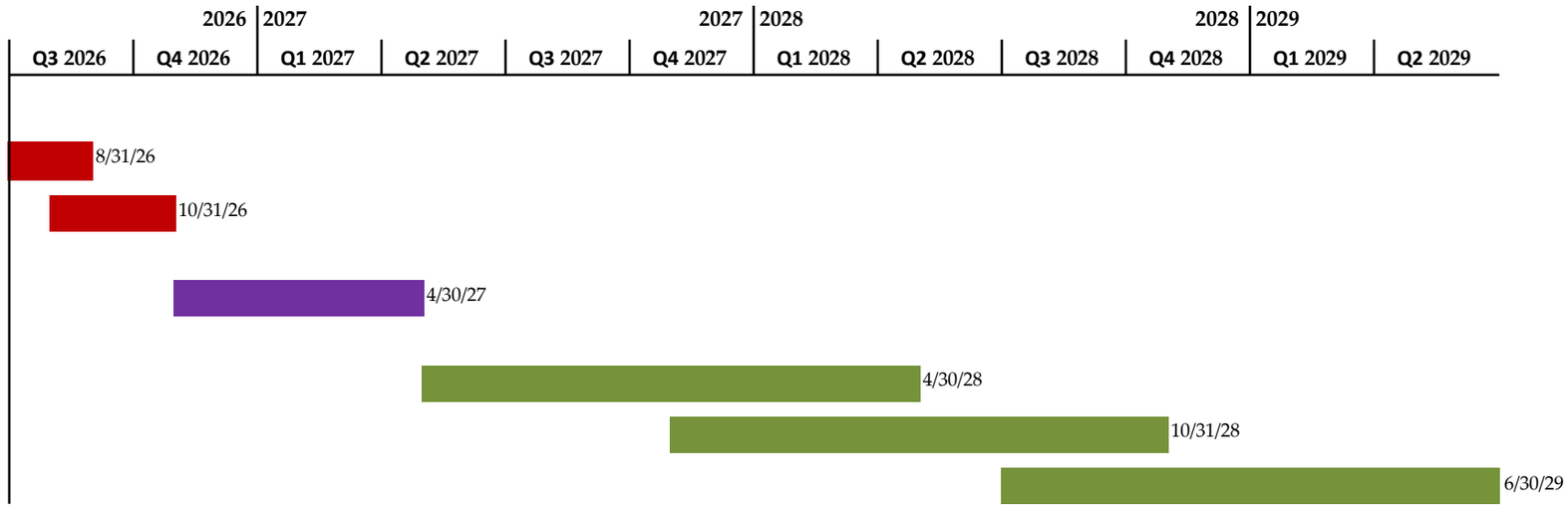
Construction activities on Projected Development Sites 1 and 2 would be as detailed below and illustrated in the Construction Timeline graphic which follows. Approximately 4 months would be needed for demolition and excavation and an additional 6 months would be needed for foundation work. Superstructure/ Exterior, Core and Shell construction, and Interior Fit-Out activities on the Proposed Project would each last approximately 12 months There would be an approximately 6 month-overlap between Superstructure/Exterior and Core & Shell, and a 4 month overlap between Core & Shell and Interior Fit-Out so that the total construction period would be 36 months.

Abbreviated Demolition/Construction Schedule - PRELIMINARY

Northern 147-149 LLC

SINGLE PHASE PROJECT[1]

Phase	Duration	Start	Finish
Demolition			
Demolition[2]	**2 months**	7/1/26	8/31/26
Support of Excavation	**3 months**	8/1/26	10/31/26
Foundations			
Foundations	**6 months**	11/1/26	4/30/27
Construction			
Superstructure/Exterior	**12 months**	5/1/27	4/30/28
Core & Shell	**12 months**	11/1/27	10/31/28
Interior Fit-Out	**12 months**	7/1/28	6/30/29



Notes

1. Assumes one New Building Application
2. Start date determined by existing lease end dates. Date could be ealier if spaces become available prior to lease end dates.

- Demolition is scheduled to last approximately 2 months (July 2026 to September 2026); Excavation work is scheduled for approximately 3 months (August 2026 to November 2026), Foundation work is scheduled for approximately 6 months (November 2026 to May 2027)

- Superstructure and exterior work would last approximately 12 months (May 2027 to May 2028); Core and Shell enclosure work would run approximately 12 months and start approximately 6 months before completion of all superstructure work (November 2027 to November 2028)

- Interior Finishes will take place over approximately 12 months and commence approximately 4 months before core and shell work is complete (July 2028 to July 2029)

Project construction activities are expected to be typical for larger building construction projects in New York City. Construction activities would predominantly occur Monday through Friday, although limited delivery of certain critical pieces of equipment (e.g., cranes) may be necessary on weekend days if required in order to minimize traffic disruptions. Any weekend work would be contingent upon any conditions that may be imposed by City agencies that approve and monitor construction activities such as the NYC Department of Buildings (DOB) and the NYC Department of Transportation (DOT). DOB also regulates the permitted hours of construction. In accordance with those regulations, typical construction activities in New York City begin no earlier than 7 AM during the week, and workers typically arrive and begin to prepare work areas between 6 and 7 AM. The standard weekday construction workday ends by 3:30 PM with an occasional extended shift until 6 PM.

Potential Construction Impacts

In accordance with the 2021 *CEQR Technical Manual*, the proposed project was reviewed to determine whether further analysis of the proposed construction activities is needed for any technical area, as follows.

Transportation

Principal Conclusion

Peak construction conditions during the third quarter of 2025 through the second quarter of 2026 were considered for the analysis of potential transportation (traffic, parking, transit, and pedestrian) impacts during construction. Based on the trip generation and trip assignment of anticipated incremental construction worker vehicle trips and truck delivery trips during the 2027 Q3-2028 Q2 peak construction period, it is concluded that

the vehicular traffic demand from construction workers and truck delivery on the Projected Development Site would not meet the 50 trips/hour/intersection CEQR Technical Manual threshold for a detailed traffic and parking analysis. Therefore, significant adverse impacts to vehicular traffic are not expected to occur during the 2027 Q3-2028 Q2 peak construction period.

During the 2027 Q3-2028 Q2 peak construction period, transit demand from construction workers on the Projected Development Site would not meet the 200 trips/hour CEQR Technical Manual threshold for a detailed transit analysis. Therefore, significant adverse impacts to transit services are not expected to occur during the 2025 Q3-2026 Q2 peak construction period.

Similarly, during the 2027 Q3-2028 Q2 peak construction period, pedestrian demand from construction workers on the Projected Development Site (both walk-only trips and trips from transit services) would not meet the 200 trips/hour CEQR Technical Manual analysis threshold for a detailed pedestrian analysis. Significant adverse pedestrian impacts are therefore not expected to occur during the 2027 Q3-2028 Q2 peak construction period.

Analysis

According to the CEQR Technical Manual, a number of factors should be considered before determining whether a preliminary assessment of the effect of construction on transportation is needed including:

- Whether the project's construction would be located in a Central Business District (CBD) or along an arterial or major thoroughfare;

- Whether the project's construction activities would require closing, narrowing, or otherwise impeding moving lanes, roadways, key pedestrian facilities, parking lanes and/or parking spaces, bicycle routes and facilities, bus lanes or routes, or access points to transit; and
- Whether the project would involve construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap, and last for more than two years overall.

The Projected Development Site would involve construction activity along Northern Boulevard, 147th Street and 149th Street. It is not anticipated that the construction on

The Projected Development Site would require the closing of any transportation elements adjacent to the Project Site. The large site layout of Projected Development Site should allow for many different approaches by heavy machinery and provides for onsite staging of construction materials. It is anticipated that there would be adequate space on the Projected Development Sites to accommodate construction vehicles without blocking any transportation elements along Northern Boulevard.

Project-Generated Construction Worker and Truck Delivery Traffic

Construction activities would generate construction worker auto trips and truck trips. Similar to other construction projects in New York City, most of the construction activity at the Development Site is expected to take place during the typical construction shift of 7:00 AM to 3:30 PM. The estimated daily vehicle trips were distributed throughout the workday based on projected work shift allocations and conventional arrival/departure patterns of construction workers and trucks. For analysis purposes, each truck delivery was assumed to result in two truck trips during the same hour (one "in" and one "out"), and each truck trip was assumed to have a passenger car equivalent (PCE) of 2.0, consistent with CEQR Technical Manual guidance. For construction workers, the majority (80 percent) of arrival and departure trips are expected to take place during the hour before and after each shift. For construction trucks, deliveries would typically peak during the early morning, with an estimated 25 percent overlapping with construction worker arrival traffic.

Based on 2000 U.S. Census Reverse Journey-to-Work Means of Transportation for workers in the construction and excavation industry for census tracts in proximity to the Project Development Site, it is estimated that approximately 73.1 percent of construction workers would travel to the Project Area by motor vehicle (approximately 73.1 percent by private autos and 0 percent by taxis/rideshare services), 22.3 percent by public transportation, and 4.6 percent by walking, bicycle or other modes. It is also estimated that the auto occupancy would average approximately 1.13 persons per vehicle. These trip generation assumptions were used as the basis for assessing the potential transportation-related impacts during construction. Because the Project Site would remain the same as the existing conditions and no construction work would be anticipated under the No Action condition, there is no need to consider the construction traffic under the No Action condition when analyzing the construction effects associated with the Proposed Actions.

The number of workers and trucks associated with material deliveries varies with the scale of the project and the general construction task. **Table 1** below shows the estimated daily number of construction workers and truck deliveries to the Projected Development Site by calendar quarter, based on the proposed construction schedule and projections of construction activities from other approved EASs and EISs. Because the interior fit-out stage will begin before the completion of the exterior/core & shell construction in July 2026, it will result in a four-month overlap between the two construction stages in July through October 2028. Given the overlap between the final phase of core & shell construction and the initial phase of interior fit-out, it is reasonable to expect that the construction worker and truck trips during this overlap period will not reach the peak demand projected for both stages. This transportation analysis assumes that 50% of the peak construction worker and truck trips from both the exterior/core & shell construction stage and the interior fit-out stage will occur during the overlapping months of July through October 2028. Consequently, the projected daily construction worker and truck trips during the overlapping period will be fewer than those of the non-overlapping period in the exterior/core & shell construction stage, but greater than those of the non-overlapping period in the interior fit-out stage. As shown in **Table 1**, the number of workers and trucks would peak in the third quarter of 2027 through the second quarter of 2028 at approximately 140 workers and 18 trucks per day. Based on the modal splits and vehicle occupancy data as discussed above, it was estimated that the number of worker vehicle trips and truck trips would peak in the third quarter of 2027 through the second quarter of 2028, with an estimated 182 worker vehicle trips and 72 truck PCE trips (one "in" and one "out") per day, as shown in **Table 2**. The average daily construction worker trips by other means of transportation during the projected peak construction period from the third quarter of 2027 to the second quarter of 2028 are summarized and shown in **Table 3**.

Table 1 Average Number of Daily Construction Workers and Trucks by Year and Quarter

		2026				***2027***			
		1	***2***	***3***	***4***	***1***	***2***	***3***	***4***
Total	*Workers*			*36*	*36*	*36*	*105*	*140*	*140*
	Trucks			*13*	*13*	*13*	*16*	*18*	*18*
		2028				***2029***			
		1	***2***	***3***	***4***	***1***	***2***	***3***	***4***
Total	*Workers*	*140*	*140*	*121*	*108*	*101*	*101*		
	Trucks	*18*	*18*	*12*	*8*	*6*	*6*		

Table 2 Average Number of Daily Vehicle Trips of Construction Workers and Truck Delivery Trips by Year and Quarter

		2026				***2027***			
		1	***2***	***3***	***4***	***1***	***2***	***3***	***4***
Total	*Worker Auto Trips*			*48*	*48*	*48*	*136*	*182*	*182*
	Worker Taxi Trips			*0*	*0*	*0*	*0*	*0*	*0*
	Truck Trips (PCEs)			*52*	*52*	*52*	*64*	*72*	*72*
Total				*100*	*100*	*100*	*200*	*254*	*254*
		2028				***2029***			
		1	***2***	***3***	***4***	***1***	***2***	***3***	***4***
Total	*Worker Auto Trips*	*182*	*182*	*156*	*140*	*132*	*132*		
	Worker Taxi Trips	*0*	*0*	*0*	*0*	*0*	*0*		
	Truck Trips (PCEs)	*72*	*72*	*48*	*32*	*24*	*24*		
Total		*254*	*254*	*204*	*172*	*156*	*156*		

Table 3 Average Daily Construction Worker Transit and Walk Trips during the Peak Construction Period 2027 Q3 – 2028 Q2

Peak Construction Period	***2027 Q3 – 2028 Q2***
Construction Worker Transit Trips	*62*
Construction Worker Walk & Other Trips	*12*
Total	*74*

Traffic

As discussed above, the third quarter of 2027 through the second quarter of 2028 was selected as the reasonable worst-case analysis time period for assessing potential traffic impacts from vehicle trips associated with construction activities. **Table 4** shows a forecast of hourly construction worker auto and truck delivery trips during the peak construction period between the third quarter of 2027 through the second quarter of 2028. The temporal distribution for these vehicle trips was based on typical work shift allocations and conventional arrival/departure patterns for construction workers. The majority (80 percent) of construction worker arrival and departure trips are expected to take place during the hour before and after each shift, whereas construction truck delivery trips are expected to peak during the early morning, with an estimated 25 percent overlapping with construction worker arrival traffic. Each truck delivery was assumed to result in two truck trips during the same hour (one inbound and one outbound). For analysis purposes, truck trips were converted into PCEs based on one truck being equivalent to an average of two PCEs.

As shown in **Table 4** below, during the peak construction period (2027 Q3-2028 Q2), construction-related traffic is expected to peak during the 6 to 7 AM morning peak hour and the 3 to 4 PM afternoon peak hour.

Table 4 Hourly Construction Worker Vehicle Trips and Truck Delivery Trips during the Peak Construction Period 2027 Q3 – 2028 Q2

	Trucks (PCEs)			Workers			Taxi			Tot al
	I	O	Tot al	I	O	Tot al	I	O	Tot al	
6-7AM	9	9	18	7	0	73	0	0	0	91
7-8AM	4	4	8	1	0	18	0	0	0	26
8-9AM	4	4	8	0	0	0	0	0	0	8
9-10AM	4	4	8	0	0	0	0	0	0	8
10-11AM	4	4	8	0	0	0	0	0	0	8
11AM-12PM	4	4	8	0	0	0	0	0	0	8
12-1PM	4	4	8	0	0	0	0	0	0	8
1-2PM	2	2	4	0	0	0	0	0	0	4
2-3PM	1	1	2	0	4	4	0	0	0	6
3-4PM	0	0	0	0	73	73	0	0	0	73
4-5PM	0	0	0	0	14	14	0	0	0	14
Daily Total	3	36	72	9	91	182	0	0	0	254

As shown above, construction traffic during the peak construction period is expected to result in 91 PCEs during the 6-7 AM peak hour and 73 PCEs during the 3-4 PM peak hour. Therefore, in accordance with 2021 CEQR Technical Manual 50 vehicle trips threshold, a Level-2 traffic assignment analysis was conducted for the AM and PM peak hour and shown in **Figures 1 and 2 (Construction Appendix)**. The traffic assignment analysis shows that no intersections in the Project Area would exceed the CEQR threshold of 50 vehicle trips for any peak hour during the peak construction period. It is concluded that a detailed assessment of traffic impact of the construction of the Proposed Actions would not be required.

Parking

As shown in **Table 4**, during the peak construction period, it is estimated that the maximum daily parking demand from construction workers would be 91 in the morning peak period (6-8 AM). The workers are expected to park on-street and in off-street public parking facilities in proximity to the Projected Development Site throughout the Project Area. Because the construction of the Proposed Actions would screen for detailed vehicular traffic analysis, and per the CEQR Technical Manual, no detailed parking assessment would be required.

Transit

As shown above in **Table 3**, the construction of the Proposed Actions would result in 62 daily transit trips during the peak construction period. Therefore, in accordance with the CEQR 200 subway/bus trips threshold, a detailed transit impact analysis would not be required for the peak construction period of the Proposed Actions.

Pedestrians

As shown above in **Table 3**, the construction of the Proposed Actions would result in 74 daily pedestrian trips (a sum of walk-only trips and transit trips) during the peak construction period. Therefore, in accordance with the CEQR 200 pedestrian trips threshold, a detailed pedestrian impact analysis would not be required for the peak construction period of the Proposed Actions.

Transportation Conclusion

In accordance with the threshold guidelines as detailed in the 2021 CEQR Technical Manual, the construction work of the Proposed Actions is not expected to result in significant adverse impacts related to transportation.

Construction Air Quality

The need for a quantitative air quality analysis is determined by several factors, such as the type of construction activity and the construction equipment used, the duration of any heavy construction activity, the physical relationship of the project site to nearby sensitive receptors (e.g., residential, hospital, school), and the commitment to use emission control measures.

Construction under the Proposed Actions is anticipated to last approximately 36 months (July 2026 to June 2029). The level of construction activity would vary among the stages of construction. Demolition, excavation, and foundation work will occur in the first stage of the construction, during a 10-month period (July 2026 to April 2027), where the demolition will last approximately two months. The support of the excavation stage will last about three months, starting a month after the onset of the construction, and the foundation stage will begin right after that, completing the first stage of the construction. The superstructure and exterior buildout will last 18 months (May 2027 to October 2028), where the superstructure buildout and the shell and core buildout will each last approximately 12 months. The interior fit-out will last about 12 months (July 2028 to June 2029), overlapping with the core and shell buildout. The emissions generated in the demolition, excavation, and foundation stages are mainly related to on-site diesel equipment, truck emissions, and particulate matter (as fugitive dust) generated by earth-moving operations. Generally, there is significantly more particulate emission during the excavation and foundation stage of the construction. In addition to on-site emission sources, the construction air quality analysis also accounted for the emissions of construction-related on-road trucks and passenger vehicles used by construction workers.

Since there are sensitive receptors in the area surrounding the Project Site, the construction activities would involve heavy-duty diesel equipment and earth-moving operations, and the construction phase will last more than two years. Therefore, a quantitative air quality analysis was undertaken to evaluate the potential for significant adverse impact. The analysis included emissions from non-road construction equipment, construction-related dust emissions, and on-road vehicles.

In addition to the construction quantitative air quality analysis, a mobile source screen was conducted to determine if the project-increment construction traffic will exceed the *CEQR Technical Manual* thresholds for carbon monoxide (CO) and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$).

Mobile Source Screen

As indicated in the Transportation section of this Chapter, the vehicular traffic demand from construction workers and truck delivery on the Projected Development Site would

not meet the 50 trips/hour/intersection. Therefore, the projected traffic volumes would be within the CO screening threshold defined in the 2021 *CEQR Technical Manual* (170 peak-hour vehicle trips at any intersection in the study area).

Heavy-duty diesel vehicles (HDDVs) screens were conducted for the construction workers' auto trips and truck traffic during the AM and PM peak hours. Using the New York City Department of Environmental Protection's ("DEP's") Equivalent Truck Calculation Matrix, the $PM_{2.5}$ vehicular emission screening threshold ranges from 12 to 23 HDDVs depending on the type of roadway. All autos were assumed to be LDGT1 class vehicles for analysis purposes, based on guidance from the New York City Department of City Planning (DCP) for similar projects. To account for both roadways in an intersection (HDDV screening assessment applies to single roads), based on DCP methodology, the ratios of the equivalent truck calculation to the HDDV threshold for each roadway were summed. If the sum of ratios for an intersection (for each peak-hour period) is less than 1, the intersection passes the HDDV screen. **Table 14-1** shows the AM and PM peak hours incremental construction workers and delivery truck traffic volumes at the most affected intersections and the *CEQR Technical Manual* Equivalent Truck Calculation Matrix results.

Table 14-1: Peak traffic demand from construction workers and truck delivery and HDDVs Truck Calculation Matrix

Intersection	Peak-Hour Period	Auto Per Hour		Truck Per Hour		Equ. Truck (score / threshold) (2)
		Road A	Road B	Road A	Road B	
Northern Boulevard & 147th Street	AM	7	0	5	5	0.5
	PM	0	20	0	0	0.8
Northern Boulevard & 149th Street	AM	17	3	4	4	0.6
	PM	0	20	0	0	0.8
Roosevelt Avenue & 147th Street	AM	14	3	0	0	0.1
	PM	0	0	0	0	0.0
Roosevelt Avenue & 149th Street	AM	14	2	0	0	0.1
	PM	0	16	0	0	0.6
37th Avenue & 147th Street	AM	0	30	0	0	1.2
	PM	0	17	0	0	0.7
38th Avenue & 147th Street	AM	13	17	0	0	0.7
	PM	0	0	0	0	0.0
38th Avenue & 149th Street	AM	0	16	0	0	0.6
	PM	0	16	0	0	0.6

Note:
3. Northern Blvd and Roosevelt Avenue are arterial roadways (23 HDDVs threshold). All other roadways are local (12 HDDVs threshold).
4. Equivalent truck calculated for each roadway and score divided by the HDDVs threshold. The aggregate result is the sum of ratios. A score greater than 1 indicates HDDVs failed.

As shown in **Table 14-1**, the HDDV equivalent truck to HDDV threshold aggregate ratio is more than one at the 37th Avenue and 147th Street intersection during the AM peak hour period, and less than one at all other intersections. However, since a detailed analysis was conducted for the project operation (see the Air Quality Chapter of the EAS) at an intersection with a more significant potential for impact (higher aggregate ratio) and construction traffic will only affect intersections during weekday work hours (the daily average traffic increment will be significantly less than during the project operation), it is unlikely that the construction phase of the construction will result in mobile source $PM_{2.5}$ impact. As such, no detailed analysis was undertaken. However, the exhaust and fugitive emissions from the construction vehicle trips and delivery truck trips would be assessed in the dispersion analysis below.

Pollutants of Concern

National and state regulations identify seven air pollutants that are of concern nationwide and statewide. The seven key pollutants are known as "criteria" pollutants. As required by the Clean Air Act (CAA), National Ambient Air Quality Standards (NAAQS) have been established for the criteria pollutants. Determination of significant impact related to criteria pollutants accounts for pollutant concentrations in the ambient air, which include background concentrations. Background concentration(s) at the nearest New York State Department of Environmental Conservation (NYSDEC) federally-mandated monitoring station (Queens College) was used in the analysis. In addition to the NAAQS, New York City's *de minimis* criteria are used to determine the significance of the incremental increases in 8-hour CO concentration and the 24-hour and annual $PM_{2.5}$ concentrations. The NAAQS and *de minimis* are also discussed in Chapter 10, "Air Quality."

The U.S. Environmental Protection Agency (EPA) mandates the use of ultra-low sulfur diesel (ULSD) fuel for all highway and non-road diesel engines. As such, sulfur oxides (SOx) emissions associated with the construction activities would be negligible. Therefore, the pollutants analyzed for the construction period were annual average nitrogen dioxide (NO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), $PM_{2.5}$, and CO.

Emission Reduction Program

Emission reduction measures concerning dust suppression measures, idling vehicles, and use of clean fuel would be implemented to reduce pollutants emissions. The following emission reduction measures are specified in the New York City Air Pollution Code (New York City Administrative Code and Rules of the City of New York (RCNY)):

- *Dust Control.* Dust suppression measures would be implemented. Such actions would include, but not be limited to, wetting of construction material and particulate matter

kept on-site (e.g., soil or debris piles), wetting where certain construction activities (e.g., drilling and grinding) occur, covering of spoil or loose material during transport and wetting of material before loading into trucks, removal of dust from adjacent streets and sidewalks, and requiring that vehicles entering or exiting the site travel at low speed.

- *Restrictions on Vehicle Idling.* Idling restrictions require that no motor vehicle idle for longer than three minutes unless the engine is used to operate a loading, unloading, or processing device (e.g., concrete mixing trucks and concrete pump trucks).

- *Diesel Equipment Reduction.* Construction of the proposed project would minimize the use of diesel engines and maximize the use of electric equipment to the extent practicable. This would reduce the need for on-site generators, using line-electric powered equipment instead of diesel, where feasible.

- *Clean Fuel.* Ultra-low sulfur diesel (ULSD) would be used for all diesel-fueled nonroad equipment, where the sulfur content in ULSD is 15 parts per million (ppm). The EPA regulates the use of USLD under diesel fuel regulations. Diesel fuel contained as much as 5,000 ppm of sulfur before the EPA began regulating the sulfur content.

In addition to the required emission reduction measures specified above, the construction activities under the Proposed Actions are expected to implement additional measures. These control measures aim to reduce particulate matter emissions during construction (implementing these measures could decrease emissions of other pollutants). Commitments were specified to use the following emission control measures:

- *Best Available Tailpipe Reduction Technologies.* Under the Proposed Actions, all diesel-powered non-road construction equipment with a hp rating of 50 hp or greater would meet at least the Tier 3 emissions standards, and the equipment would utilize diesel particulate filters (DPFs). The DPFs would either be installed by the original equipment manufacturer or retrofitted. The retrofitted DPFs would adhere to the specifications in the New York City Air Pollution Code.

- *Line-electric power: Under the Proposed Action, line-electric power will be used for the hoist(s).*

- *Dust suppression*: A DustBoss system or a like system would be utilized to remove dust from the air during the construction's demolition, excavation, and foundation stage.

Emissions Profile – Air Quality

Construction emission sources include non-road construction equipment, on-road vehicles, and dust-generating construction activities. Non-road construction equipment

may consist of equipment operating on Site, such as a crane, excavators, and a front-end loader. On-road vehicles may include trucks (e.g., dump trucks) traveling on Site and roadways and worker vehicles traveling on roads.

A representative construction equipment schedule was developed based on similar projects under CEQR and the stages of construction. Each Development Site was modeled separately, distributing truck traffic based on the development gsf. Truck distribution (dump, concrete, and delivery trucks) was based on the stages of construction, equipment schedule, and to maximize emission (dump trucks traveling on-site generate a significant amount of emission). As such, a reasonable minimum number of delivery or concrete mixing trucks was assumed during the construction's demolition, excavation, and foundation stage. During the superstructure build-out, truck trip generation will comprise mainly concrete mixing trucks. Concrete mixing trucks' emissions during unloading were based on 60 minutes of idle time. Dump and delivery trucks were assumed to idle for 3 minutes while loading/off-loading. All on-street project-increment vehicles (trucks and worker vehicles) were assigned to travel on Northern Boulevard to concentrate emissions. Stationary equipment was placed close to the apartment complex at 147-35 38th Avenue, just south of the Project Site.

Pollutant emission factors emitted by non-road construction equipment and on-road vehicles were developed with the EPA's Motor Vehicle Emission Simulator version 3 (MOVES3) emission model or based on Tier 3 engines retrofitted with DPF to achieve 90 percent removal efficiency for particulate matter. Tier 3 nonroad diesel engine standard for PM is 0.30 g/kW-hr for engine power category 100≤hp<175 and 0.20 g/kW-hr for engine power category 175 ≤ hp < 300. The MOVES3 model was discussed in Chapter 10, "Air Quality." Fugitive dust emissions (PM_{10} and $PM_{2.5}$) generated by traveling vehicles (on paved or unpaved roads) and material handling were calculated using the EPA's AP-42 manual *Chapter 13: Miscellaneous Source.*[7] Silt loading factors for paved and unpaved roadways, obtained from the *CEQR Technical Manual*, were used in the analysis. Wetting of piles and unpaved roads (trucks and equipment travel on Site) accounted for fifty percent control measure efficiency. Utilizing the water mist system (DustBoss or a like system to remove dust from the air) accounted for an additional 50 percent removal efficiency. A worst-case analysis period was derived for each pollutant averaging time. The maximum 12-month rolling average emission for each pollutant was applied for the annual time frame analysis.

Dispersion Analysis – Air Quality

Pollutant concentrations were predicted with AERMOD. AERMOD MPI version 22112 executable was used in the dispersion analysis. Lakes Environmental, Inc. adjusted the

[7] EPA. "Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1: Stationary Point and Area Sources." Accessed April 3, 2023. https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-fifth-edition-volume-i-chapter-13-miscellaneous-0.

EPA AERMOD source code and recompiled the model to parallelize the processing of receptors, reducing run-time significantly. The MPI executable (used in the analysis) modified the EPA AERMOD executable model version 22112. The AERMOD model incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources and simple and complex terrain. The model was run with the regulatory default option, where applicable, and for both with and without downwash effects options, where the Building Profile Input Program (BPIP) was run with the downwash effect enabled. All analyses used five consecutive years of meteorological data (2017-2021) from the NYSDEC. Meteorology surface data is from LaGuardia Airport, and upper air data is from Brookhaven station, New York. The meteorological data provided hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the five years of data. Population in Queens, obtained from the DCP 2020 annual report, was specified to account for the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions.

Receptors at nearby existing buildings were placed on all wall façade from the ground floor (6-foot above grade) to rooftop height, in spaced intervals. Receptors were also placed on sidewalks and at ground level (6 feet above grade) at open spaces within 400 feet of the Project Site, such as at the housing complex at 147-35 38 Avenue (Block 5016, Lot 7) which is just south of the Project Site. Lakes Environmental, Inc.'s commercial application of AERMOD (AERMOD View) was used to spatially locate features (buildings, emission sources, and receptors). The U.S. Geological Service (USGS) National Elevation Dataset (NED) 1/3 arc-second resolution (GeoTIFF dataset), the terrain data set recommended by the EPA for use in the United States for regulatory purposes, was used to process buildings, receptors, and sources base elevations. The base elevations of receptors at receiving buildings were set to the base elevations of their buildings. On-street vehicular emissions were modeled as line area sources, where the sources' dispersion parameters were calculated based on the EPA's guidance manual.[8] CO concentrations (1-hour and 8-hour averaging times) were predicted with construction-related emissions during weekday (Monday to Friday) activity (6 AM to 4 PM) using AERMOD's variable emission tool.

The model was run twice (with the building wake effect enabled/disabled). The predicted concentration is the highest concentration of these. The criteria pollutants dispersion analysis results are presented in **Table 14-2**.

[8] EPA. 2021. *PM Hot-spot Guidance, Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*. EPA-420-B-10-040, Transportation and Regional Programs Division, Office of Transportation and Air Quality, U. S. Environmental Protection Agency, October 2021.

Table 14-2: Criteria Pollutants Dispersion Analysis Results

Criteria Pollutant	Increment Conc.	Background Conc.(1)	Evaluated Conc.	Standard Conc.	Standard	Conc. Unit(2)
$PM_{2.5}$ 24-Hour	2.88	18.1	2.88	8.45	*de minimis*	$\mu g/m^3$
$PM_{2.5}$ Annual	0.295	7.0	0.295	0.3	*de minimis*	$\mu g/m^3$
PM_{10} 24-Hour	7.1	28	35	150	NAAQS	$\mu g/m^3$
CO 1-Hour	7.65	1.51	9.16	35	NAAQS	ppm
CO 8-Hour	2.30	1.10	2.30	9	*de minimis*	ppm
NO_2 Annual	19.6	26.8	46	100	NAAQS	$\mu g/m^3$

Note:
1. NYSDEC. 2019. "New York State Ambient Air Quality Report for 2019." Accessed April 3, 2023. dec.ny.gov/docs/air_pdf/2019airqualreport.pdf.
2. Part per million – ppm; Micrograms per cubic meter $\mu g/m^3$.

Table 14-2 shows that $PM_{2.5}$ and 8-hour CO concentrations are within the *de minimis*, and all other pollutants are within the NAAQS. As the annual PM2.5 stationary source increment concentration is within the de minimis, exceedance of the neighborhood scale PM2.5 (annual increase in concentration representing the average over an area of approximately 1 square kilometer) is unlikely.

Conclusion – Air Quality

Predicted pollutant concentrations at nearby sensitive land uses will not exceed the NAAQS, and the increment concentrations will be within the *de minimis*. Therefore, by adhering to the below-listed commitments, there is no reason to believe that the Proposed Action construction phase would result in any potentially significant adverse air quality impact:

Air Quality Restrictive Declaration

Under the Proposed Actions, all diesel-powered non-road construction equipment with a hp rating of 50 hp or greater would meet at least the Tier 3 emission standard, and the equipment would utilize diesel particulate filters (DPFs). The DPFs would either be

installed by the original equipment manufacturer or retrofitted. The retrofitted DPFs would adhere to the specifications in the New York City Air Pollution Code.

Under the Proposed Action, a water mist system (a DustBoss system or a like system) would be utilized to remove dust from the air during the construction's demolition, excavation, and foundation stage.

Under the Proposed Action, the hoist(s) will operate by line-electric power.

Construction Noise

Construction activities have the potential to affect the noise conditions of receptors near the Proposed Development. Construction noise can vary widely depending on the phase of construction (e.g., demolition, excavation, foundation, steel, and concrete erection, mechanical and interior fit out) and the specific equipment and methods being used. The most significant construction noise sources at a construction site are generally back-up alarms, and equipment such as excavators, drill rigs, and cranes. The noisiest phase of construction is typically during demolition, excavation, and foundation work. The superstructure phase of construction can also have higher noise levels associated with concrete trucks and cranes. Similar to air emissions, interior fit out typically results in lower noise emissions, since it requires fewer pieces of heavy-duty diesel equipment.

As discussed in the 2021 CEQR Technical Manual, the need to conduct a qualitative analysis of construction noise emissions or a quantitative analysis is considered based on factors such as the location of the Development Site in relation to existing residential uses or other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate noise control measures.

Construction Noise Code

As described in Construction Regulations and General Practices, the project will follow guidelines set forth by the NYCDEP Noise Code (Section 24-228). The DOB regulations require a perimeter barrier or "construction noise barrier" and when 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 perimeter noise barrier made from wood or other suitable material be constructed where a new building is being constructed or a building is being demolished to grade.

For the Proposed Project, a perimeter noise barrier 8 feet in height has been included surrounding each phase of construction as each of the phases are constructed. During entire construction of project, an 8-foot-tall plywood perimeter wall would be located along Northern Blvd, 147th Street, 149th Street, and southern boundary.

Sound Level Descriptors

The Leq(1) is the noise descriptor recommended for use in the CEQR Technical Manual for vehicular traffic and construction noise impact evaluation and is used to provide an indication of highest expected sound levels. The 1-hour L10 is the noise descriptor used in the CEQR Technical Manual noise exposure guidelines. The maximum 1-hour equivalent sound level (Leq(1)) and maximum 1-hour L10 were selected as the noise descriptors used in the construction noise impact evaluation.

Construction Noise Analysis Fundamentals

The CEQR Technical Manual states that an assessment of construction noise is warranted if a proposed project's construction activities include any of the following:

- Is considered long-term construction (greater than two years);
- Is located near sensitive receptors;
- Involves the construction of multiple buildings where there is a potential for onsite receptors on buildings to be completed before the final build-out;

The construction that would occur as a result of the Proposed Actions is considered long-term construction that would be approximately 3 years at the Projected Development Site (see construction schedule above). The Project Area is located near various sensitive receptors.

In order to determine the possible increased noise level from the construction equipment operations and movement, all equipment used on site is to be generally calculated by computing the sum of the noise produced by all pieces of equipment operating at the construction site as a worst-case scenario. For each piece of equipment, the noise level at each sensitive receptor is a function of the following:

- The noise emission level of the equipment;
- A usage factor, which accounts for the percentage of time the equipment is operating at full power;
- The distance between the Project Site and the receptor;
- Topography and ground effects; and
- Shielding.

Construction-related traffic noise levels are a function of the following:

- The noise emission levels of each vehicle type (car, light-duty truck, heavy-duty truck, bus, etc.);
- Volume of vehicular traffic produced by construction activities on each road segment;
- Distance between roadway and the receptor;
- Vehicular speed;
- Topography and ground effects; and
- Shielding.

Construction Noise Impact Criteria

The potential for construction noise impact depends on the intensity and duration of construction activities.

The noise impact criteria described in Chapter 19, Section 410 of the CEQR Technical Manual serve as a screening-level threshold for potential construction noise impacts. If the construction of a proposed project does not result in an exceedance at a specific sensitive receptor, that receptor screens out of any further analysis. However, if the construction of a proposed project exceeds the screening-level threshold, further analysis would be warranted. The screening-level noise impact criteria for mobile and on-site construction activities are as follows:

- If the No-Action noise level is less than 60 dB(A) Leq(1), a 5 dB(A) Leq(1) or greater increase would require further action;

- If the No-Action noise level is between 60 dB(A) Leq(1) and 62 dB(A) Leq(1), a resulting Leq(1) of 65 dB(A) or greater would require further action;

- If the No-Action noise level is equal to or greater than 62 dB(A) Leq(1), or if the analysis period is a nighttime period (between 10PM and 7AM). The threshold required for further consideration would be 3 dB(A) Leq(1).

If noise levels at a given receptor are predicted to exceed the screening criteria described above, further consideration of the intensity and duration of construction noise at a receptor would be warranted. Noise level increases that would be considered objectionable (i.e., equal to or greater than 15 dB(A)) lasting 12 consecutive months or more and noise level increases considered very objectionable (i.e., equal to or greater than 20 dB(A)) lasting three consecutive months or more would be considered significant impacts.

For receptors representing interior spaces (i.e. not open space) that are predicted to experience construction noise exceeding the incremental increase and duration criteria described above, and where façade attenuation can be determined based on readily available information, interior noise level may also be considered in the determination of impact significance. Portions of the construction period during which predicted interior noise level would be in the acceptable range (i.e., not greater than 45 dBA(A) for residential and community facility uses or not greater than 50 dB(A) for commercial office uses), would not be counted toward the consecutive duration of construction noise impact as described above.

Mobile Source Construction Noise Analysis

According to Chapter 19, Section 111 of the *CEQR Technical Manual*, mobile sources are those noise sources that move in relation to a noise-sensitive receptor—principally automobiles, buses, trucks, aircraft, and trains. Each has its own distinctive noise character, and, consequently, an associated set of noise assessment descriptors.

For mobile sources, an initial noise assessment may be appropriate if a proposed action would generate additional project-generated vehicular traffic in an area where roadways currently carry no or very low traffic volumes. Receptors are generally the subject of most noise impact analyses. A noise-sensitive location (known as a "receptor") is usually defined as an area where human activity may be adversely affected when noise levels exceed predefined thresholds of acceptability or when noise levels increase by an amount exceeding predefined thresholds of change.

Automobile noise is a function of vehicle speed and engine noise. With changing gears, the noise levels tend to increase in a sawtooth kind of pattern as vehicular speed increases. The interaction of the road surface with the tires generates noise that increases with vehicle speed. At vehicular speeds below 30 miles per hour, the typical automobile noise spectrum is dominated by engine noise. At speeds higher than 30 miles per hour, the automobile noise signature is composed of a combination of lower frequency engine noise and higher frequency tire noise. The engine and tire noise for vehicular speeds above 30 miles per hour are comparable in noise level. Noise generated by buses and heavy trucks is also composed of engine and tire noise, but tire noise tends to dominate the noise signature at vehicular speeds above 30 miles per hour in trucks and buses. Cargo load normally does not significantly affect noise levels because increased load usually results in decreased vehicular speed and the effects cancel each other out. Because individual trucks and buses are noisier than individual automobiles, the concept of noise passenger car equivalents (PCEs) is used.

The 2021 CEQR Technical Manual describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs based on typical vehicles speeds:

- Each automobile or light truck: 1 noise PCE
- Each medium truck: 13 noise PCEs
- Each bus: 18 noise PCEs
- Each heavy truck: 47 noise PCEs

Increases in noise due to construction mobile sources are calculated using the following equation:

$$Sound\ Level\ Increase\ (Leq) = 10 * \log\left(\frac{Existing\ and\ Construction\ PCEs}{Existing\ PCEs}\right)$$

To determine if the Proposed Actions would result in an increase to existing noise PCE values by 100 percent or more, a preliminary screening was conducted. This screening assesses the noise PCE values of the vehicles projected to arrive at the construction site during peak arrival and departure hours as determined by the construction traffic forecast, compared to the PCE values of existing background traffic recorded during

noise monitoring at Noise Locations 2 (Northern Blvd). According to construction transportation, majority of construction vehicle trips would travel along Northern Blvd.

Noise PCE Screening

The With-Action project generated construction vehicular volumes were referenced to determine the worst-case PCE year and quarter over the period of construction activities (May 2025 through June 2026) In worst-case PCE years, the With-Action AM peak hour is 6:00 to7:00 AM. The 6:00 AM to 7:00 AM hour was selected as the analysis hour because this would be the hour when the highest number of construction worker auto and construction truck trips to and from the construction site would simultaneously occur. Based on the Constriction Traffic Analysis, these AM vehicles were assigned to the local network. The existing vehicle classifications collected during noise monitoring were used for the PCE screening.

Worst-case construction generated truck and auto-mobile volumes were applied to the existing traffic counts to determine whether significant noise impact would occur during construction. It is assumed that all construction related traffic would come from Northern Blvd. Table 14-3 below show the result of the construction Noise PCE screening during the worst-case construction phase along Northern Blvd (May 2028 through June 2029).

Table 14-3 Construction Noise PCE Screening

Peak Period	Existing Noise PCEs	Construction Noise PCEs	Increment	%
AM	3930	4473	543	14%

Per the *CEQR Technical Manual*, if existing PCE noise values would not increase by 100 percent or more due to a proposed action, a detailed analysis is not required. A noise PCE screening was conducted for Location 2. The Proposed Actions would not result in an increase to existing noise PCE values by greater than 100% at the bounding roadways during the any of the AM or PM peak hours. Therefore, a detailed mobile source noise analysis is not warranted.

Noise Receptor Sites

A noise-sensitive receptor is defined in Chapter 19, "Noise," Section 114 of the 2021 CEQR Technical Manual and includes indoor receptors such as residences, hotels, health care facilities, nursing homes, schools, houses of worship, court houses, public meeting facilities, museums, libraries, theaters, and commercial offices. Outdoor sensitive receptors include parks, outdoor theaters, golf courses, zoos, campgrounds, and beaches.

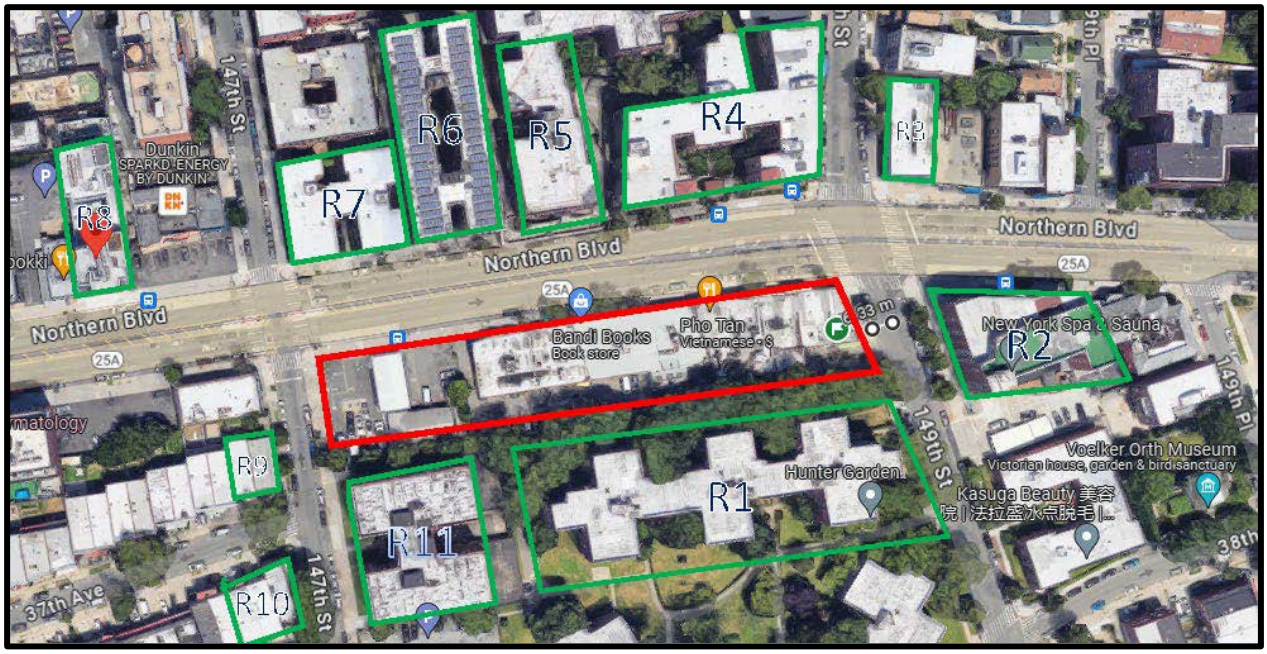
Within the study area, multiple receptor locations close to the construction areas were selected for the construction noise analysis to represent buildings or noise-sensitive open

space locations that have the potential to experience elevated noise as a result of construction. These receptors were located adjacent to planned areas of activity or streets where construction trucks would pass. At some buildings, multiple façades were analyzed as receptors. At buildings with multiple floors, noise receptors at multiple elevations were analyzed. Receptors at street level were used to represent open space locations. The receptor sites (as listed in Table 14-4) selected for detailed analysis represented locations where maximum project effects due to construction noise would be expected.

Table 14-4 Noise Receptors Summary

ID	Address	Land Use
R1	147-37 38th Avenue	Multi-Family Elevator Buildings
R2	149-06 Northern Blvd	Mixed Residential & Commercial
R3	149-01 Northern Blvd	Commercial & Office Buildings
R4	148-09 Northern Blvd	Multi-Family Elevator Buildings
R5	147-25 Northern Blvd	Multi-Family Elevator Buildings
R6	147-27 Northern Blvd	Multi-Family Elevator Buildings
R7	35-33 147th Street	Multi-Family Walk-Up Buildings
R8	146-17 Northern Blvd	Mixed Residential & Commercial
R9	144-99 37th Avenue	Multi-Family Walk-Up Buildings
R10	147-94 37th Avenue	Multi-Family Walk-Up Buildings
R11	37-07 147th Street	Multi-Family Elevator Buildings

Figure 22-3 Noise Receptors



On-Site Construction Noise Analysis

Methodology

As outlined in the CEQR Technical Manual, construction noise analysis modeling methodologies have been developed by a variety of Federal agencies, including the Federal Highway Administration, the Federal Transit Administration, and the U.S. Environmental Protection Agency. To determine potential significant impacts caused by the construction activity, construction noise levels were compared to existing noise levels and to applicable standards in the CEQR TM.

A detailed modeling analysis was conducted to quantify potential construction noise effects at existing noise receptors (e.g., residences, schools, etc.) near the Project Area as well as at completed and occupied proposed projected buildings. The construction noise methodology involves the following process:

1. Select analysis hours for construction mobile source noise analysis. The 6:00 AM to 7:00 AM hour was selected as the analysis hour because this would be the hour when the highest number of construction worker auto and construction truck trips to and from the construction site would simultaneously occur.
2. Conduct construction mobile source noise analysis. At each of the roadway segments analyzed for construction traffic, the construction worker vehicle and construction truck trips during the analysis hour were converted to Noise Passenger Car Equivalents (PCEs) and compared to the existing level of Noise PCEs to determine whether there would be a potential doubling, which would result in an exceedance of CEQR construction noise screening thresholds (i.e., a 3 dBA increase in noise levels).
3. Select analysis hours for cumulative on-site equipment and construction truck noise analysis. The 7:00 AM to 8:00 AM hour was selected as the analysis hour because this would be the hour when the highest number of truck trips to and from the construction site would overlap with on-site equipment operation.
4. Select receptor locations for cumulative on-site equipment and construction truck noise analysis. Selected receptors represent open space, residential, commercial office, or other noise-sensitive uses potentially affected by the construction associated with the Proposed Actions during operation of on-site construction equipment and/or along routes taken to and from the development site by construction trucks. Project elements (e,g., buildings, open spaces) that would be completed and occupied while construction under the Proposed Actions is still ongoing were also included in the analysis as receptors.
5. Establish existing noise levels at selected receptors. Measured noise levels from the operational noise analysis were used for the construction noise analysis as well. A CadnaA model representing the existing conditions (including existing building geometry and existing condition traffic levels) was calibrated based on

the measured existing noise levels and used to calculate baseline noise levels at the other noise receptor locations included in the analysis.

6. Establish worst-case noise analysis periods under the anticipated construction schedule. The worst-case noise analysis periods were selected to be the periods during the construction schedule that would be expected to have the greatest potential to result in construction noise effects. The selected time periods are described below in the "Analysis Periods" section.
7. Calculate construction noise levels for each analysis period at each receptor location. Given the on-site equipment and construction truck trips expected during each of the analysis periods, and the location of the equipment, which is based on construction logistics diagrams and construction truck and worker vehicle trip assignments, a CadnaA model file for each analysis period was created. All models include each of the construction noise sources during the analysis period and hour, calculation points representing multiple locations on various façades and floors of the associated receptors previously identified, as well as the noise control measures that would be used on the construction site.
8. Determine total noise levels and noise level increments during construction. For each analysis period and each noise receptor, the calculated level of construction noise was logarithmically added to the existing noise level to determine the cumulative total noise level. The existing noise level at each receptor was arithmetically subtracted from the cumulative noise level in each analysis period to determine the noise level increments.
9. Compare construction noise increments to impact criteria. For each analysis period and each noise receptor, the predicted noise increments due to construction was compared to CEQR noise impact thresholds and additional incremental noise impact criteria as described below.
10. Estimate interior noise levels. At receptors representing interior locations where noise increments due to construction are predicted to exceed incremental construction noise impact thresholds, window/wall attenuation will be estimated based on field observations. Predicted construction noise levels and estimated window/wall attenuation will be used to estimate interior noise levels.
11. Establish construction noise duration. For each receptor, the noise level increments and estimated interior noise levels in each analysis period were evaluated to determine the duration during construction that the receptor would experience exceedances of impact criteria.
12. Identify potential construction noise impacts. At each existing receptor where exceedances of construction noise impact criteria were predicted, a determination was made as to whether the Proposed Actions would have the potential to result in significant adverse construction noise impacts.

The calculations to determine the sound pressure levels due to the on-site equipment were performed using the DataKustik's CadnaA model. Modeled results showed both the total resulting noise levels at each receptor and the contributing noise levels from each

item of equipment. Receptor points were placed at windows on all floors on nearby existing and future buildings around the Project Site.

For the purposes of the construction noise analysis and based on the construction schedule, the construction timeframes assigned analysis periods as shown below in **Table 14-5.**

Table 14-5: Analysis Periods

Analysis Periods	1	2	3	4	5	6
Dates	2024/7-2024/8	2024/9-2024/10	2024/11-2025/4	2025/5-2025/10	2025/11-2026/5	2026/7-2027/6
Duration	2	2	6	6	6	12

Table 14-6 presents the type of equipment, the maximum sound level at 50 feet, the utilization factors (percentage of time the equipment is operating at full power), and the number of each piece of equipment that is used during each phase of construction based on the 2021 CEQR Technical Manual. This table does not include trucks at the Development Site such as box trucks, pickup trucks, tractor trailers, packer trucks, container trucks, and dump trucks since they are not allowed to idle more than three minutes in accordance with New York City Administrative Code §24-163. The number of concrete mixer trucks that have been included in the analysis typically includes one on each site at any given time.

Table 14-6 Construction Equipment by Month of Analysis for each Construction Site

Equipment	Maximum Sound Level at 50 feet (dBA, L_{max})	Utilization Factor (%)	Month 2	Month 4	Month 10	Month 12	Month 18	Month 24
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Excavator	85	40	1	1	1	0	0	0
Pile Driver	95	20	1	1	0	0	0	0
Front End Loader	80	40	1	1	1	0	0	0
Concrete Pump	82	20	0	1	1	1	1	0
Crane	85	16	0	1	1	1	1	1
Troweling Machine 1	70	50	0	1	1	0	0	0
Troweling Machine 2	70	50	0	0	0	1	1	0
Forklift	64	40	0	0	0	0	1	1
Hoist	75	50	0	0	0	1	1	1
Compressor	80	40	1	1	1	1	1	1
Rebar Bender	80	20	1	1	1	1	1	0
Concrete Mixer	85	40	0	1	1	1	1	0

Validation and Calibration

Noise generated by construction activities (calculated using the CadnaA model as described above) were added to baseline (i.e., non-construction) noise levels, including noise generated by non-construction traffic on adjacent roadways, to determine the total noise levels at each receptor location. Baseline noise levels were calculated using the CadnaA model using existing condition traffic data. The existing condition CadnaA model included the noise measurement locations described in Chapter 19, "Noise," for the purpose of validating and calibrating the calculated existing condition noise level modeling. However, the measured noise level at Monitoring Location 3 seems to include noise sources other than traffic. Therefore, the receptors that are represented by Monitoring Location 3 will be represented by Monitoring Location 2 in this construction noise assessment, considering that Northern Boulevard traffic was one of the dominant noise sources.

Noise Reduction Measures

The construction of the Projected Development Sites would be required to follow the requirements of the New York City Noise Control code (known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) for construction noise

control measures. In addition to the minimum requirements, the Applicants would utilize additional noise control measures to reduce the potential noise effects on the surrounding sensitive noise receptors. Specific noise control measures would be incorporated into a Noise Mitigation Plan required under the New York City Noise Code. The measures to be taken for noise control include source controls and path controls.

Source controls are known as measures that reduce noise at the source. The following source controls included under New York regulations would be implemented:

- Equipment that meets the sound level standards specified in Subchapter 5 of the New York City Noise Control Code would be utilized during the entirety of construction;
- The construction site would be configured to minimize backup alarm noise where possible. Additionally, trucks would not be allowed to idle more than three minutes at the Projected Development Site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the New York City Administrative Code; and
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In addition, source controls listed below would be implemented as PCREs beyond New York regulations for the construction of the Proposed Project:

- There will only be one concrete mixer truck operating on each development site at a time.
- Electric service is to be provided to the Site. Generators will not be the primary source of electricity.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures, under New York City regulations, would be implemented:

- Equipment with high noise emissions, such as cranes and concrete trucks, would be located away from and shielded from sensitive receptor locations when possible;
- Noise barriers that will be constructed of plywood or other materials will surround the entire construction site perimeter. This barrier will provide noise shielding. The barrier would be at least 8 feet tall. Truck deliveries would park behind these barriers where possible; and
- Path noise control measures such as portable noise barriers and enclosures would be utilized where feasible for certain dominant noise equipment such as generators and compressors.

In addition, path controls listed below would be implemented as PCREs beyond New York regulations for the construction of the Proposed Project:

- Concrete operation should be located behind the construction barrier.

Assessment

Table 14-7 presented total combined construction noise levels (Leq) in each construction period and increments. Interior L10 noise levels are based on minimum of 25 dB window/wall noise attenuation for each of the noise sensitive receptor buildings.

Table 14-8 presented the construction noise impact as compared to the criteria mentioned above.

Table 14-7 Combined Construction Noise Levels and Increments

ID	Address	Maximum Existing Noise Level (dBA)	Phase 1 Construction Noise (dBA)	Phase 2 Construction Noise (dBA)	Phase 3 Construction Noise (dBA)	Phase 4 Construction Noise (dBA)	Phase 5 Construction Noise (dBA)	Phase 6 Construction Noise (dBA)	Min Noise Increase (dBA)	Max Noise Increase (dBA)	Max Interior L10 (dBA)
R1	147-37 38th Avenue	63.7	75.3-82.7	76.0-83.2	73.3-79.1	71.4-77.2	71.6-77.3	67.8-73.1	4.1	20.3	61.2
R2	149-06 Northern Blvd	63.1	72.0-76.0	72.8-76.8	70.3-73.7	68.9-71.6	68.9-71.7	67.5-69.3	4.4	14.5	54.8
R3	149-01 Northern Blvd	70.1	73.9-76.2	74.7-76.9	73.1-74.1	72.6-73.0	72.6-73.1	71.9-72.0	1.9	7.5	54.9
R4	148-09 Northern Blvd	70.9	75.9-79.0	77.1-79.9	75.0-76.9	74.4-75.9	74.4-75.9	72.6-73.3	1.8	10.0	57.9
R5	147-25 Northern Blvd	69.8	76.6-78.2	77.3-78.8	74.9-76.2	74.2-75.1	74.2-75.1	71.6-72.1	1.8	10.0	56.8
R6	147-27 Northern Blvd	71.5	78.4-80.4	78.8-80.8	76.0-77.2	75.3-76.1	75.3-76.1	72.7-73.5	1.6	10.2	58.8
R7	35-33 147th Street	71.3	78.1-80.1	78.7-80.5	75.3-77.1	74.7-76.0	74.8-76.1	73.3-73.8	2.1	10.1	58.5
R8	146-17 Northern Blvd	66	73.2-74.8	73.8-75.4	71.1-72.5	70.1-71.3	70.2-71.3	68.2-69.3	2.9	9.7	53.4
R9	144-99 37th Avenue	64.2	73.2-77.3	74.5-78.1	72.3-75.0	71.8-73.9	71.8-74.0	70.7-71.7	6.5	14.6	56.1
R10	147-94 37th Avenue	59.7	69.9-73.7	71.2-74.4	68.9-70.2	68.5-69.5	68.6-69.6	67.2-67.8	7.5	15.5	52.4
R11	37-07 147th Street	63.6	77.4-82.2	77.8-82.6	73.9-79.2	73.1-77.3	73.2-77.4	71.1-74.8	7.5	19.7	60.6

Table 14-8 Combined Construction Noise Impact Determination

ID	Address	Consecutive Months With Noise Increase Of 20 dBA or more	Less than 3 consecutive months Of 20 dBA noise increase	Consecutive Months With Noise Increase Of 15 dBA or more	Less than 12 consecutive months Of 15 dBA noise increase
R1	147-37 38th Avenue	2	y	10	y
R2	149-06 Northern Blvd	0	y	0	y
R3	149-01 Northern Blvd	0	y	0	y
R4	148-09 Northern Blvd	0	y	10	y
R5	147-25 Northern Blvd	0	y	0	y
R6	147-27 Northern Blvd	0	y	0	y
R7	35-33 147th Street	0	y	0	y
R8	146-17 Northern Blvd	0	y	0	y
R9	144-99 37th Avenue	0	y	0	y
R10	147-94 37th Avenue	0	y	2	y
R11	37-07 147th Street	0	y	10	y

147-37 38th Avenue

This is a 6-story residential building located approximately 25 feet south of the project site. Construction noise (including baseline) ranges from 67.8 to 83.2 dBA. Noise Increment ranges from 4.1 to 20.3 dBA. Noise levels (Leq) would increase by 15 dBA or more for less than 12 consecutive months. Noise levels (Leq) would increase by 20 dBA or more for less than 3 consecutive months. Assuming single glazed window, the projected maximum interior L10 noise level is 61.2 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

149-06 Northern Blvd

This is a 6-story mixed-use building with residential units in its higher level, which located at the east side of 149th Street. Construction noise (including baseline) ranges from 67.5 to 76.8 dBA. Noise Increment ranges from 4.4 to 14.5 dBA. Noise levels (Leq) would not increase by 15 dBA or more. Assuming single glazed window, the projected maximum interior L10 noise level is 54.8 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

149-01 Northern Blvd

This is a 2-story commercial building, which located at the northeast corner of the intersection of 149th Street and Northern Blvd. Construction noise (including baseline) ranges from 71.9 to 76.9 dBA. Noise Increment ranges from 1.9 to 7.5 dBA. Noise levels (Leq) would not increase by 15 dBA or more. Assuming single glazed window, the projected maximum interior L10 noise level is 54.9 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

148-09 Northern Blvd

This is a 6-story residential building located at the north side of Northern Blvd. Construction noise (including baseline) ranges from 72.6 to 79.9 dBA. Noise Increment ranges from 1.8 to 10.0 dBA. Noise levels (Leq) would not increase by 15 dBA. Assuming single glazed window, the projected maximum interior L10 noise level is 57.9 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

147-25 Northern Blvd

This is a 6-story residential building located at the north side of Northern Blvd. Construction noise (including baseline) ranges from 71.6 to 78.8 dBA. Noise Increment ranges from 1.8 to 10.0 dBA. Noise levels (Leq) would not increase by 15 dBA or more. Assuming single glazed window, the projected maximum interior L10 noise level is 56.8 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

147-27 Northern Blvd

This is a 6-story residential building located at the north side of Northern Blvd. Construction noise (including baseline) ranges from 72.7 to 80.8 dBA. Noise Increment ranges from 1.6 to 10.2 dBA. Noise levels (Leq) would not increase by 15 dBA or more. Assuming single glazed window, the projected maximum interior L10 noise level is 58.8 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

35-33 147th Street

This is a 4-story residential building located at the northeast corner of the intersection of 147th Street and Northern Blvd. Construction noise (including baseline) ranges from 73.3 to 80.5 dBA. Noise Increment ranges from 2.1 to 10.1 dBA. Noise levels (Leq) would not increase by 15 dBA or more. Assuming single glazed window, the projected maximum interior L10 noise level is 58.5 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

146-17 Northern Blvd

This is a 6-story residential building located at the north side of Northern Blvd. Construction noise (including baseline) ranges from 68.2 to 75.4 dBA. Noise Increment ranges from 2.9 to 9.7 dBA. Noise levels (Leq) would not increase by 15 dBA or more Assuming single glazed window, the projected maximum interior L10 noise level is 53.4 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

144-99 37th Avenue

This is a 3-story residential building located at the west side of 147th Street. Construction noise (including baseline) ranges from 70.7 to 78.1 dBA. Noise Increment ranges from 6.5 to 14.6 dBA. Noise levels (Leq) would not increase by 15 dBA or more. Assuming single glazed window, the projected maximum interior L10 noise level is 56.1 dBA.

Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

147-94 37th Avenue

This is a 3-story residential building located at the west side of 147th Street. Construction noise (including baseline) ranges from 67.2 to 74.4 dBA. Noise Increment ranges from 7.5 to 15.5 dBA. Noise levels (Leq) would increase by 15 dBA or more for less than 12 consecutive months. Assuming single glazed window, the projected maximum interior L10 noise level is 52.4 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

37-07 147th Street

This is a 6-story residential building located approximately 15 feet south of the project site. Construction noise (including baseline) ranges from 71.1 to 82.6 dBA. Noise Increment ranges from 7.5 to 19.7 dBA. Noise levels (Leq) would increase by 15 dBA or more for less than 12 consecutive months. Assuming single glazed window, the projected maximum interior L10 noise level is 60.6 dBA. Consequently, construction noise associated with the Proposed Actions would not rise to the level of a significant adverse impact.

Conclusion

Construction of the Proposed Action is predicted to result in elevated noise levels, which represent existing residential buildings, commercial offices, and outdoor recreational spaces. At these receptors, construction under the Proposed Action would, for some portion of the construction period, result in noise level increases that would be perceptible to noticeable and at times, "objectionable" and "very objectionable." However, at these receptors, any objectionable noise level increases would occur for less than 12 consecutive months and any very objectionable noise level increases would occur for less than 3 consecutive months. Consequently, while construction noise at these receptors would be perceptible, it would not rise to the level of a significant impact according to the impact criteria described above. Construction under the Proposed Action would typically occur during weekday daytime hours and would therefore not produce noise during nighttime hours when residents would be most sensitive to noise. Further, construction would comply with **New York City Noise Control Code** regulations, as well as commit to use additional source and path controls to reduce noise levels at surrounding receptors.

Per **New York City Noise Control Code** regulations, the Proposed Development would be required to prepare a Construction Noise Mitigation Plan, which may identify more control measures that would further reduce construction noise levels. Therefore, the

predicted levels of construction noise were determined not to rise to the level of a significant adverse impact at any noise receptors.

Attachment A
NYC Landmarks Preservation Commission Letter

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-Q
Project: 147-10 NORTHERN BLVD
Date Received: 5/17/2022

Properties with no Architectural or Archaeological significance:

1) 147-35 38 AVENUE, BBL: 4050160007
2) 37-07 147 STREET, BBL: 4050160011
3) 147-10 NORTHERN BOULEVARD, BBL: 4050160018
4) 147-14 NORTHERN BOULEVARD, BBL: 4050160027
5) 147-22 NORTHERN BOULEVARD, BBL: 4050160033
6) 147-34 NORTHERN BOULEVARD, BBL: 4050160039
7) 149 STREET, BBL: 4050160047

Comments:

LPC DESIGNATED AND S/NR LISTED VOELKER-ORTH MUSEUM, BIRD SANCTUARY AND VICTORIAN GARDEN, 149-19 38TH AVENUE WITHIN RADIUS.

Gina Santucci

5/26/2022

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 36363_FSO_DNP_05262022.docx

Attachment B
DEP Correspondence

Environmental Protection

Rohit T. Aggarwala
Commissioner

Angela Licata
Deputy Commissioner
Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

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

October 4, 2022

Jameson Mitchell
Project Manager
Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Re: 147-14 Northern Boulevard Rezoning
Block 5016, Lots 7, 11, 18, 27, 33, 39, and 47
CEQR # 23DCP025Q

Dear Mr. Mitchell:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the May 2022 Environmental Assessment Statement (EAS) and the April 2021 and May 2021 Phase I Environmental Site Assessments (Phase I) prepared by Environmental Studies Corporation on behalf of 147-149 LLC (applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment and zoning text amendments from the New York City Department of City Planning (DCP) to facilitate the development of a site located in the Flushing neighborhood of Queens Community District 20. The applicant seeks the following actions: A zoning map amendment to rezone an R5 district with a C1-2 commercial overlay to both an R5 district (with no overlay) and an R7X district with a C2-3 commercial overlay; 2) A zoning text amendment pursuant to Appendix F to establish a Mandatory Inclusionary Housing Area coterminous to the area being rezoned, with both Options 1 and 2 being mapped; and 3) A zoning text amendment pursuant to Appendix I to modify the boundaries of the Transit Zone. The Proposed Actions affect an area that is bound by Northern Boulevard to the north, 149th Street to the east, Block 5016, Lots 7 and 11 to the south and 147th Street to the west. The Project Area consists of Block 5016, Lots 18, 27, 33, 39, 47 and portions of Lots 7 and 11. The approval of the Proposed Actions would facilitate development on Lots 18 and 27 (Projected Development Site 1) and Lot 33 and 39 (Projected Development Site 2) which are owned by the applicant. The applicant intends to develop two eleven-story buildings. On Projected Development Site 1, Building A would contain a 165,215 gross square feet (gsf) mixed-use building with 142,210 gsf of residential area (190 dwelling units), 17,615 feet of ground-floor commercial area and 5,390 gsf of community facility area. On Projected Development Site 2, Building B would contain a 169,068 gsf mixed-use building with 145,830 gsf of residential area (199 dwelling units), 18,160 of ground-floor commercial area, and 5,078 gsf of community facility area. Development is not anticipated to occur on Lot 47, nor on the portions of Lots 7 and 11 affected by the proposed actions.

Block 5016, Lot 18

The May 2021 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of residential and commercial uses including a filling station, an auto repair garage, a convenience store, apartment buildings, auto sales, a church, a chapel, garages, a social hall, etc. Regulatory databases identified 16 spills, 3 historical auto sites, and 6 historical cleaner sites within 1/8 mile; 45 underground storage tank sites, 29 aboveground storage tank sites, and 6 dry cleaners within 1/4 mile; 50 leaking storage tank sites within 1/2 mile; and 2 manufactured gas plant sites within 1 mile of the project site.

Block 5016, Lot 27

The April 2021 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of residential and commercial uses including a florist, a pizzeria, restaurants, a bookstore, a grocery store, a laundromat, parking, a dry cleaner, apartment buildings, a filling station, an auto repair garage, a stationary store, beauty salons, a plumbing contractor, a computer store, etc. Regulatory databases identified 16 spills, 3 historical auto sites, and 6 historical cleaner sites within 1/8 mile; 45 underground storage tank sites, 29 aboveground storage tank sites, and 6 dry cleaners within 1/4 mile; 50 leaking storage tank sites within 1/2 mile; and 2 manufactured gas plant sites within 1 mile of the project site.

Block 5016, Lot 33

The April 2021 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of residential and commercial uses including restaurants, a sporting goods store, a hardware store, a clothing store, a carpet store, a barber shop, a furniture store, a consumer electronic store, a radio and appliance company, an apartment complex, a filling station, auto sales, a school, etc. Regulatory databases identified 16 spills, 3 historical auto sites, and 6 historical cleaner sites within 1/8 mile; 45 underground storage tank sites, 29 aboveground storage tank sites, and 6 dry cleaners within 1/4 mile; 50 leaking storage tank sites within 1/2 mile; and 2 manufactured gas plant sites within 1 mile of the project site.

Block 5016, Lot 39

The April 2021 Phase I report revealed that historical on-site and surrounding area land uses consisted of a variety of residential and commercial uses including grocery stores, restaurants, a bank, a clothing store, a florist, parking, a locksmith, consumer electronics stores, mattress and bedding stores, a novelty and collectables store, a pastry shop, a medical supply business, computer stores, a delicatessen, apartment buildings, a filling station, etc. Regulatory databases identified 16 spills, 3 historical auto sites, and 6 historical cleaner sites within 1/8 mile; 45 underground storage tank sites, 29 aboveground storage tank sites, and 6 dry cleaners within 1/4 mile; 50 leaking storage tank sites within 1/2 mile; and 2 manufactured gas plant sites within 1 mile of the project site.

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

Projected Development Site 1 and Projected Development Site 2: Block 5016, Lots 18, 27, 33, and 39 (Sites under the control or ownership of the applicant)

- Based on prior on-site and/or surrounding area land uses which could result in environmental contamination and testing is not physically possible during the CEQR process, DEP concurs with the EAS recommendation that an (E) Designation for hazardous materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject properties. The (E) Designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation.

Future correspondence and submittals related to this project should include the following CEQR # **23DCP025Q**. If you have any questions, you may contact me at (718) 595-4358.

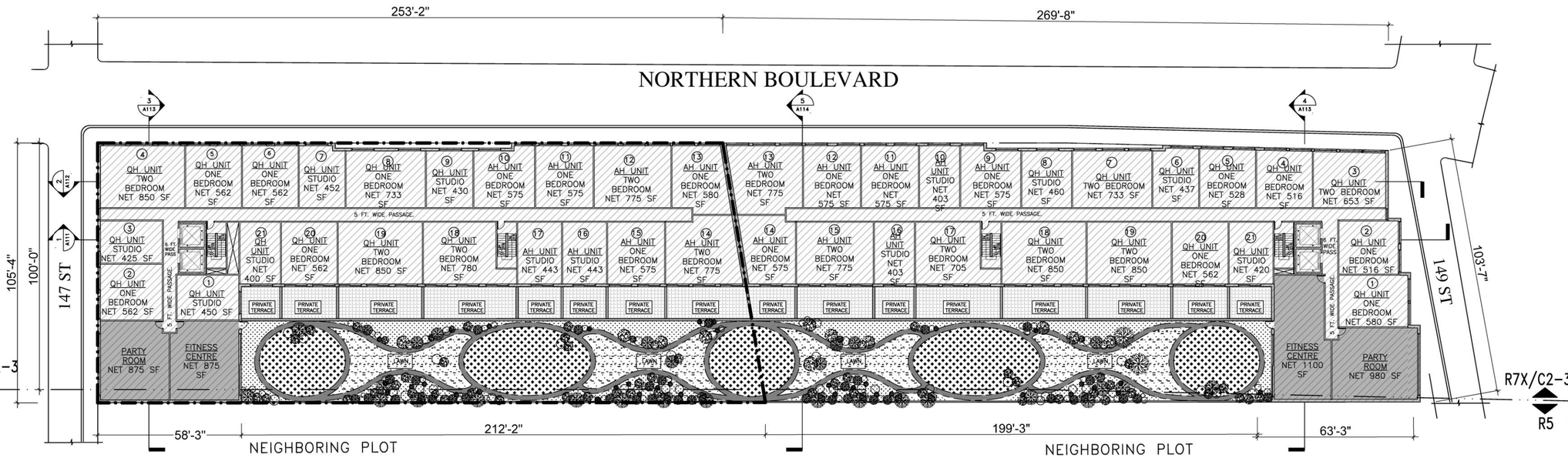
Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
T. Estesen
M. Wimbish
S. Shellooe – DCP
E. Ulker Kacar – DCP
M. Bertini – OER

Attachment C
Open Space Appendix

No.	DATE	DESCRIPTION



1 RESIDENTIAL FLOOR PLAN (2ND FLOOR)

SCALE: 3/64"= 1'-0"

N

OUTDOOR AREA CALCULATION (2ND FLOOR – FOR BOTH BUILDING A & B)

TYPE	S.F.
LANDSCAPE AREA /VEGETATION / VEGETABLE GARDEN	8,196.75
LAWN	2,964.05
JOGGING TRACK	2,398.00
PRIVATE TERRACES	5,178.55
TOTAL	18,737.35

*NOTE: THESE ARE APPROX. VALUES AND ARE SUBJECT TO CHANGE.

LEGEND

- PROPERTY LINE
- ZONING BOUNDARY LINE
- BUILDING A
- BUILDING B
- FITNESS ROOM & SOCIAL WELFARE ACTIVITY ROOM
- VEGETATION
- LAWN
- VEGETABLE GARDEN
- JOGGING TRACK

PROPOSED C2–3 / R7X

NOTE:
THIS IS A SCHEMATIC DESIGN & SHALL SUBJECT TO REVIEW & INTERPRETATION BY NYC DEPT. OF BLDGS ON ZONING AND BUILDING CODES.

PLANS SHALL ALSO SUBJECT TO REVIEW & COMMENTS BY DEPT. OF HOUSING PRESERVATION AND DEVELOPMENT AND ALL OF ITS PREDESSOR AGENCIES.

PROJECT:

147-14, NOTHERN BOULEVARD, NY-11354

DRAWING TITLE:

FLOOR PLAN

STRUCTURAL ENGINEER:

MEP ENGINEER:

SEAL & SIGNATURE:

RAYMOND CHAN ARCHITECT PC
ARCHITECTS • PLANNERS
136-40 39TH AVENUE FLUSHING, NEW YORK 11354
Tel: (718) 445-2345 Fax: (718) 359-8809
Email: info@raymondchanarchitect.com
Web: www.raymondchanarchitect.com

DATE: 07/21/2022
PROJECT No.: 21907
PROJECT MANAGER: RCA
DRAWN BY: RM
CADD FILE No.:

DWG. No.: A–105.1

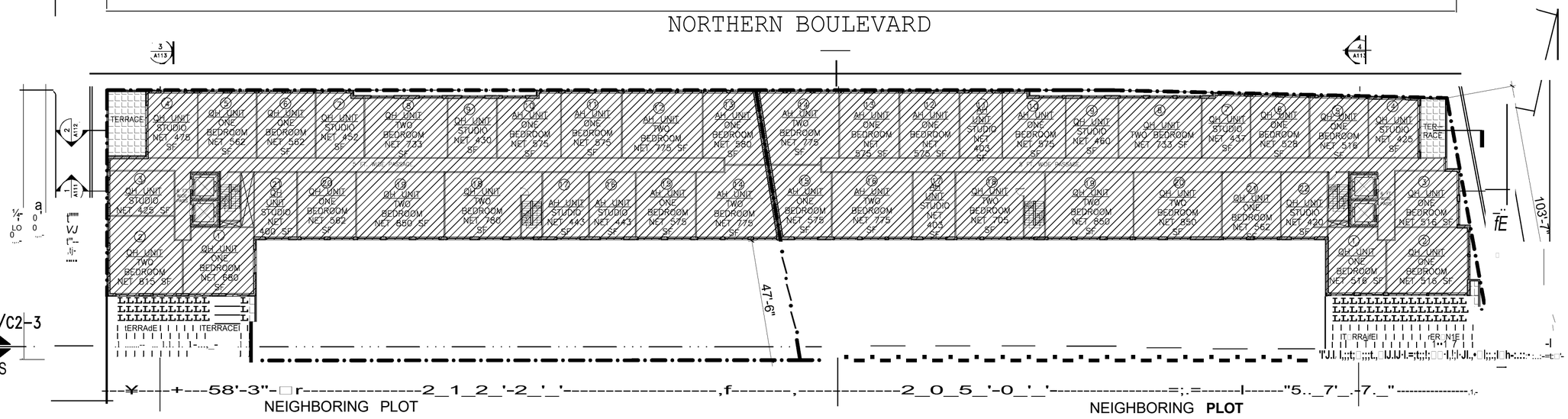
No.	DATE	DESCRIPTION

253'-2"
DEVELOPEMNT A

269'-8"
DEVELOPMENT B

7

NORTHERN BOULEVARD



1 RESIDENTIAL FLOOR PLAN | 5TH FLOOR |

SCALE: 3/64"= 1'-0"

NOTE:
THIS IS A SCHEMATIC DESIGN & SHALL SUBJECT TO REVIEW & INTERPRETATION BY NYC DEPT. OF BLDGS ON ZONING AND BUILDING CODES.

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PROJECT

147-14, NOTHERN BOULEVARD, NY-11354

DRAWING TITLE

FLOOR PLAN

STRUCTURAL ENGINEER

MEP ENGINEER

LEGEND

	PROPERTY LINE
	ZONING BOUNDARY LINE
Wffi'.1/A	**BUILDING A**
t:0mA	**BUILDING B**

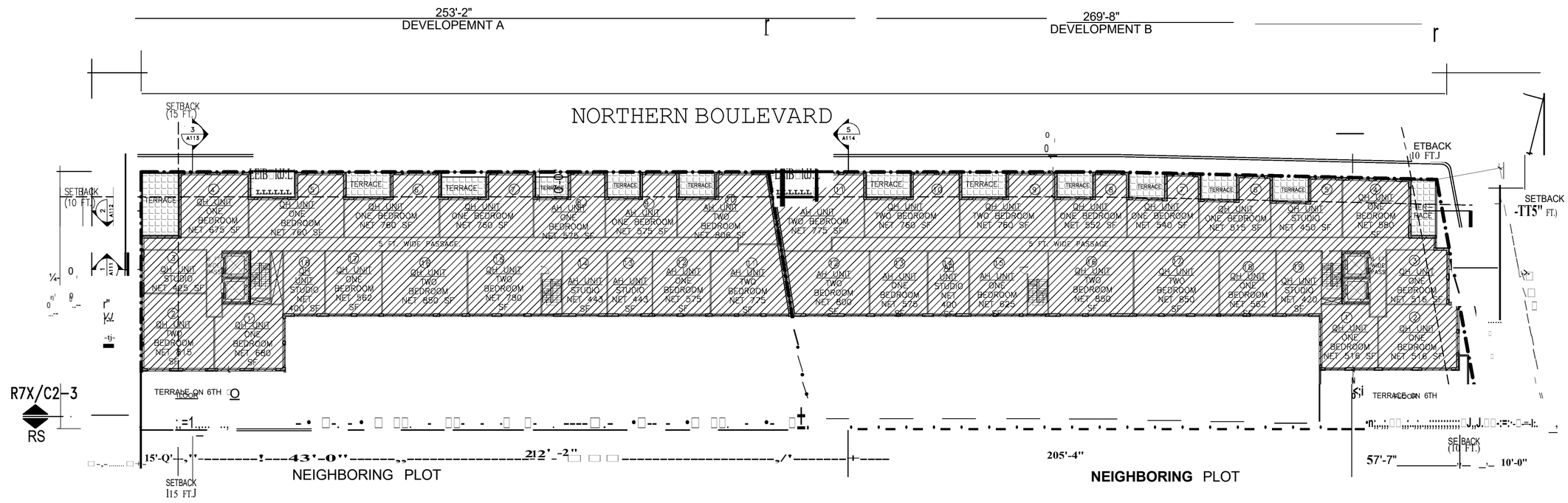
SEAL & SIGNATURE

RAYMOND CHAN ARCHITECT PC
ARCHITECTS • PLANNERS
136-40 **39TH AVENUE** FLUSHING NEW YORK 11354
Tel: (718) 445-2345 Fax (718) 359-8809
Email: info@raymondchanarchitect.com
Web: www.raymondchanarchitect.com

DATE: 07.21.2021
PROJECT No 21907 DWG. No.
PROJECT MANAGER: RCha A-107
DRAWN BY
ADD **FILE** No

PROPOSED C2-3 / R7X

No.	DATE	DESCRIPTION



1 RESIDENTIAL FLOOR PLAN | 6TH-9TH FLOOR |

SCALE: 3/64"= 1'-0"

LEGEND

- PROPERTY LINE
- ZONING BOUNDARY LINE
- Wffi'.1/A BUILDING A
- t:0mA BUILDING B

NOTE:
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PLANS SHALL ALSO SUBJECT TO REVIEW & COMMENTS BY DEPT. OF HOUSING PRESERVATION AND DEVELOPMENT AND ALL OF ITS PREDESSOR AGENCIES.

'ROJECT!

147-14, NOTHERN BOULEVARD, NY-11354

RAWING TITLE·

FLOOR PLAN

STRUCTURAL ENGINEER

MEP ENGINEER

SEAL & SIGr AT IRE·

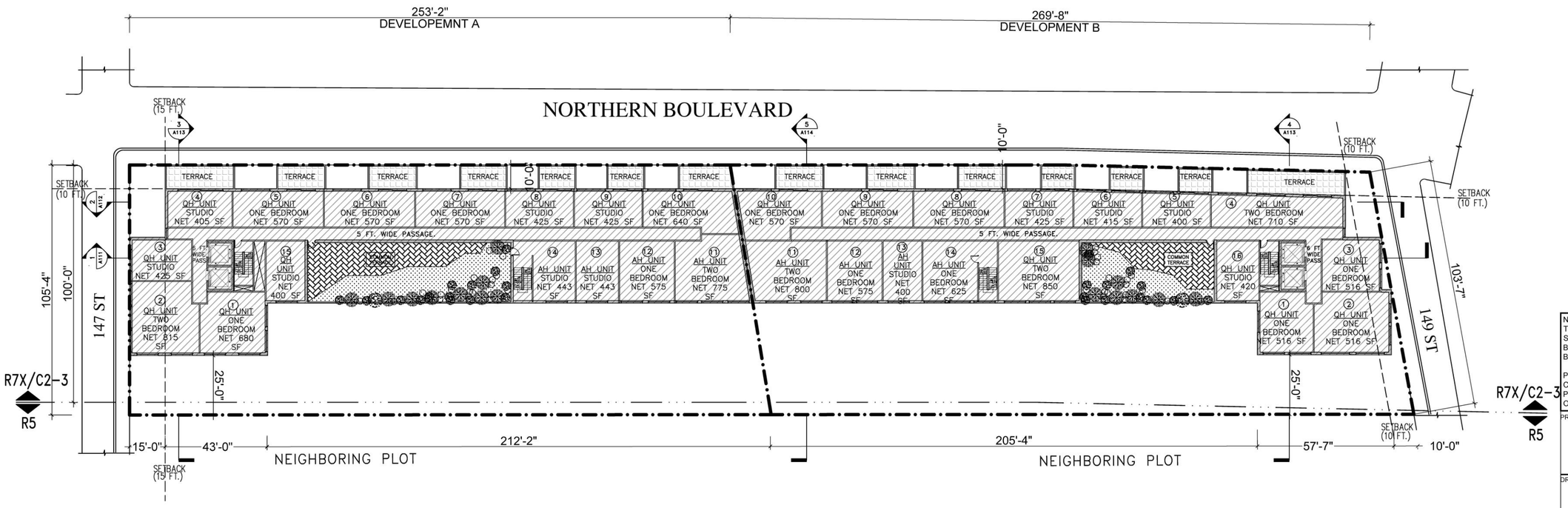
R A Y M O N D
C H A N
ARCHITECT
ARCHITECTS PLAN PC
136-40 **39TH AVENUE** FLUSHING NEW YORK 11354
Tel: (718) 445-2345 Fax (718) 359-8809
mail: info@raymondchanarchitect.com
F eb: www.raymondchanarchitect.com

DATE: 07/21/2021 DWG. No..
PROJECT NO.
PROJECT MANAGER: RCT
DRAWN BY
ADD FILE No

A-108

PROPOSED C2-3 / R7X

No.	DATE	DESCRIPTION



1 RESIDENTIAL FLOOR PLAN (10TH FLOOR)

SCALE: 3/64"= 1'-0"

N

OUTDOOR AREA CALCULATION (10TH FLOOR)

TYPE	S.F.	
	BUILDING A	BUILDING B
LANDSCAPE AREA /VEGETATION / VEGETABLE GARDEN	1,228.40	798.65
PAVERS	909.25	594.40
TOTAL	2,137.65	1,393.05

*NOTE: THESE ARE APPROX. VALUES AND ARE SUBJECT TO CHANGE.

LEGEND

- PROPERTY LINE
- ZONING BOUNDARY LINE
- BUILDING A
- BUILDING B
- VEGETATION
- LAWN
- VEGETABLE GARDEN
- JOGGING TRACK

PROPOSED C2-3 / R7X

NOTE:
THIS IS A SCHEMATIC DESIGN & SHALL SUBJECT TO REVIEW & INTERPRETATION BY NYC DEPT. OF BLDGS ON ZONING AND BUILDING CODES.

PLANS SHALL ALSO SUBJECT TO REVIEW & COMMENTS BY DEPT. OF HOUSING PRESERVATION AND DEVELOPMENT AND ALL OF ITS PREDESSOR AGENCIES.

PROJECT:

147-14, NOTHERN BOULEVARD, NY-11354

DRAWING TITLE:

FLOOR PLAN

STRUCTURAL ENGINEER:

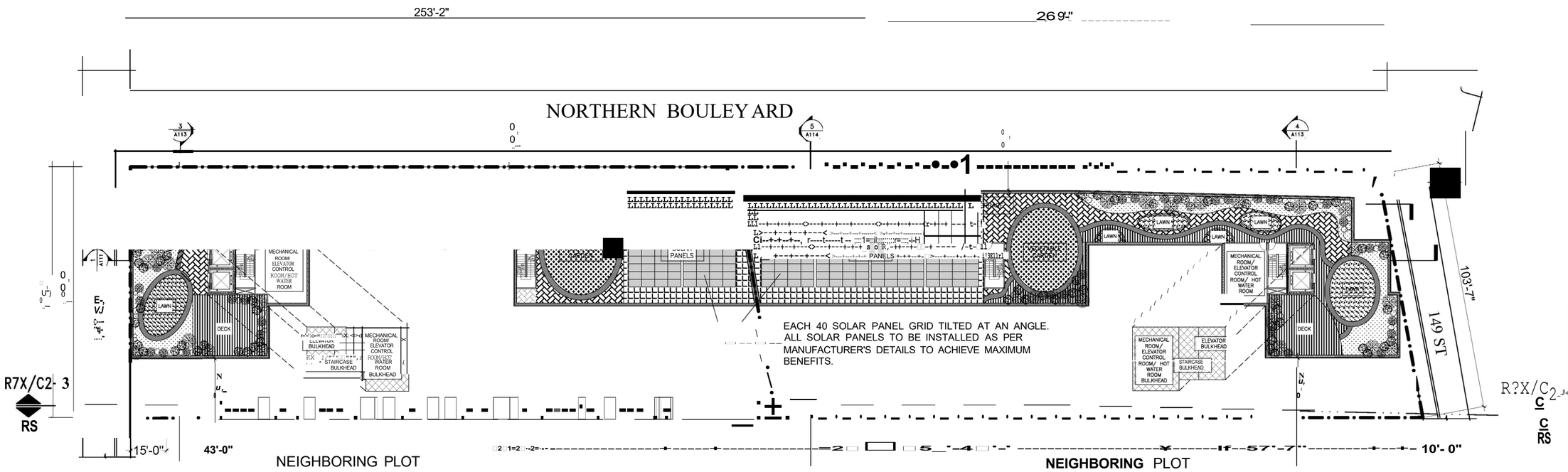
MEP ENGINEER:

SEAL & SIGNATURE:

RAYMOND CHAN ARCHITECT PC
ARCHITECTS • PLANNERS
136-40 39TH AVENUE FLUSHING, NEW YORK 11354
Tel: (718) 445-2345 Fax: (718) 359-8809
Email: info@raymondchanarchitect.com
Web: www.raymondchanarchitect.com

DATE: 07/21/2022
PROJECT No.: 21907 DWG. No.: A-109
PROJECT MANAGER: RCA
DRAWN BY: RM
CADD FILE No.:

No.	DATE	DESCRIPTION



1 RESIDENTIAL ROOF PLAN
SCALE: 3/64"= 1'-0"

N

OUTDOOR AREA CALCULATION (ROOF FLOOR FOR BOTH BUILDING A & B)

TYPE	S.F.
LANDSCAPE AREA /VEGETATION / VEGETABLE GARDEN	4,574.6
SOLAR PANELS	4,420.00
LAWN	1,347.45
JOGGING TRACK	1,188.05
PAVERS	3,627.5
DECK	2,270.95
TOTAL	17,428.55

*NOTE: THESE ARE APPROX. VALUES AND ARE SUBJECT TO CHANGE.

LEGEND

- PROPERTY LINE
- ZONING BOUNDARY LINE
- W/½'l/41 BUILDING A
- W&//□ BUILDING B
- ['':C(x/1 BULKHEAD
- VEGETATION
- LAWN
- VEGETABLE GARDEN
- JOGGING TRACK
- 11111111111 DECK
- SOLAR PANELS
- PAVEMENT

NOTE:
THIS IS A SCHEMATIC DESIGN & SHALL SUBJECT TO REVIEW & INTERPRETATION BY NYC DEPT. OF BLDGS ON ZONING AND BUILDING CODES.

PLANS SHALL ALSO SUBJECT TO REVIEW & COMMENTS BY DEPT. OF HOUSING PRESERVATION AND DEVELOPMENT AND ALL

F_1T_s P_R E_DE_s_s_o_R_AG_E_N_c_1E_s_ ---

ROJECT:

147-14, NOTHERN BOULEVARD, NY-11354

RAWING TITLE:

PLANS

STRUCTURAL ENGINEER

MEP ENGINEER

SEAL & SIGr::AT JRE:

RAYMOND CHAN ARCHITECT PC
ARCHITECTS• PLANNER S
136-40 **39TH AVENUE** FLUSHING NEW YORK 11354
Tel: (718) 445-2345 Fax (718) 359-8809
E-mail: info@raymondchanarchitect.com
Web: www.raymondchanarchitect.com

DATE: 07/21/2022
PROJECT No.: 21907 DWG. No.:
PROJECT MANAGER: RCfa
DRAWN BY: nM **A-110.1**
ADD FILE No

PROPOSED C2-3 / R7X

Attachment D
Disadvantaged Communities Assessment

Disadvantaged Communities Assessment

Methodology

The Disadvantaged Communities Assessment was conducted following the guidance provided by the New York State Department of Environmental Conservation (NYSDEC) and the City of New York's Environmental Justice (EJ) policies. The assessment is conducted pursuant to NYCDEC guidance for Project's requiring a CEQR EAS Short Form, and is structured as follows:

1. Identification of Disadvantaged Community Status

To determine whether the Project Site is within, or within ½ mile of a disadvantaged community, the following tools were used:

• New York State Disadvantaged Communities Assessment Tool (DACAT): This GIS-based tool identifies census tracts designated as disadvantaged communities (DAC) based on data from the Climate Justice Working Group (CJWG).

• Geospatial Analysis: The project location was mapped and measured for proximity to the nearest designated disadvantaged community, ensuring compliance with the ½-mile buffer analysis specified in the assessment requirements.

2. Assessment of Potential Impacts

If the Project Site is found to be within, or within ½ mile of a disadvantaged community, or if the Proposed Action(s) could affect a disadvantaged community, further assessment is required. If either of these conditions are met, potential direct and indirect impacts to nearby disadvantaged communities are evaluated to determine if the proposed project would create any new sources of pollution or increase pollution from existing sources in the following categories:

• Air Quality Impacts
• Noise Pollution
• Light Pollution
• Wastewater Treatment or Wastewater Discharges
• Stormwater and Flooding Considerations

• Solid and Hazardous Waste Management
• Odor Impacts

3. *Assessment of Magnitude of Impacts*

If a potential impact is identified, the magnitude of these impacts must be evaluated. Considerations for magnitude of impact (Small vs. Moderate to Large) are described below:

Small Impact:

• Air emissions will occur at a level that does not require a state air pollution control permit.

• Solid or hazardous waste will be generated in an amount easily transported to and handled at a permitted disposal facility.

• Wastewater discharges will not occur or expand.

• There will be no traffic associated with the project or the traffic generated is limited to non-truck traffic and will not increase to a level causing level of service impacts.

• The disadvantaged community is identified by the Disadvantaged Community Assessment Tool as having comparatively lower burdens or vulnerabilities.

Moderate to Large Impact:

• Air emissions will occur at a level that requires a state air pollution control permit.

• Solid or hazardous waste will be generated in an amount requiring substantial increase in truck traffic to transport to a permitted disposal facility.

• Solid or hazardous waste will be managed or disposed on site, requiring a state solid or hazardous waste management facility permit.

• Wastewater discharges will occur or expand, requiring a State Pollutant Discharge or safety impacts.

• The disadvantaged community is identified by the DACAT as having comparatively higher burdens or vulnerabilities.

• Proposed operations would potentially result in off-site pollution impacts.

• Traffic associated with the project will increase to a level or type causing level of service or safety impacts.

• The action involves a DEC permit application that requires preparation of an 'Existing Burden Report' analyzing potential pollutant impacts to a disadvantaged community.

4. *Evaluation of Moderate to Large Impacts*

Where moderate to large impacts are predicted, these impacts should be identified and assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope, and magnitude. The evaluation should consider the potential for cumulative impacts and whether impacts are expected to be short-term or long-term. Where potential impacts are identified, measures or design elements that have been included by the project sponsor to avoid or reduce impacts should be described.

Preliminary Assessment

With the approval of the Proposed Actions, the Applicant intends to develop two eleven-story buildings. On Projected Development Site 1, Building A would contain a 253,363 gsf (165,215 zsf) mixed-use building. This building would contain 179,401 gsf (142,210 zsf) of residential area (190 dwelling units), 26,872 gsf (17,615 zsf) of commercial area and 5,390 gsf (5,390 zsf) of community facility area

(total FAR 6.0). Of these units, between 38 and 57 would be reserved as moderate to low-income units pursuant to the requirements of Mandatory Inclusionary Housing (MIH). MIH Options 1, 2, and 3 would be mapped on the Project Area as part of the Proposed Actions. The final compliance with MIH would be determined through the ULURP process. In addition to residential, community facility and commercial uses, 139 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels.

On Projected Development Site 2, Building B would contain a 258, 176 gsf (169,068 zsf) mix-used building. This building would contain 182,448 gsf (145,830 zsf) of residential area (199 dwelling units), 27,848 gsf (18,160 zsf) of ground-floor commercial area, and 5,078 gsf (5,078 zsf) of community facility area (total 6.0 FAR). Of these units, between 40 and 60 units would be reserved as moderate to low-income units pursuant to the requirements of Mandatory Inclusionary Housing (MIH). MIH Options 1, 2, and 3 would be mapped on the Project Area as part of the Proposed Actions. The final compliance with MIH would be determined through the ULURP process. In addition to residential, community facility and commercial uses, 141 accessory parking spaces would be provided in an attended garage on cellar and subcellar levels.

The Project Site is located at 147-14 Northern Boulevard within the Flushing neighborhood of Queens Community District 7. As shown in Figure 1 below, the Project Site is located within a disadvantaged community identified as having comparatively lower burdens and vulnerabilities (Census Tract ID 36081116300), within the area of 35th Avenue to the north, 149th Street to the east, Parsons Boulevard to the west and Sanford Avenue to the south. Accordingly, an assessment of potential impacts is provided below.

Figure 1



Based on the Phase I Environmental Site Assessment completed by Environmental Studies Corp in April 2021, a Phase II Environmental Site Assessment was required in multiple locations on the property to further evaluate the potential presence of hazardous materials on the Projected Development Site.

To avoid the potential for significant adverse impacts an (E) Designation for hazardous materials has been placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution. This (E) Designation would ensure that appropriate testing and mitigation are conducted prior to any future development and/or soil disturbance.

If hazardous materials are identified, a Construction Health and Safety Plan (CHASP) would be required and implemented during excavation and construction activities. The CHASP would protect both workers and the surrounding community from potential exposure to contaminated soil, groundwater, and/or soil vapor. Given the expected volume of soil disturbance, if any solid or hazardous waste is encountered during remediation, it is anticipated to be minimal in quantity and would be handled in compliance with all applicable regulatory requirements. Therefore, the Proposed Action(s) would

not result in significant hazardous waste impacts to surrounding disadvantaged communities.

The proposed project would not involve activities that would result in air quality impacts, noise pollution, light pollution, odor impacts or wastewater discharges. In addition, the proposed project incorporates stormwater collection features and therefore would result in decreased stormwater runoff or potential flooding impacts. Lastly, any solid waste would be placed in appropriate containers and picked up. Therefore, the proposed mixed-use development would not disproportionately affect disadvantaged communities and no further analysis is warranted.

Conclusion

The Project Site is located within and proximate to disadvantaged communities. However, as discussed above, the Proposed Actions would not contribute to environmental burdens that disproportionately affect such communities. Further, the residential, commercial and community facility uses will serve the local population, while maintaining compliance with environmental regulations and best practices. Accordingly, no further assessment is warranted.