Queens Boulevard MIH Text Amendment

Revised Environmental Assessment Statement

CEQR Number: 19DCP206Q

Prepared by:

Environmental Studies Corp.

Prepared for:

70-50 QB Owner LLC

January 2020

This Revised EAS supersedes the EAS issued in October 2019. The revised EAS incorporates a Technical Memorandum containing a revised schools analysis in response to new data released by the released by the NYC School Construction Authority shortly after the release of the original EAS. The Technical Memorandum confirms that the conclusions reflected in the negative declaration issued October 2019 are not affected by the updated data issued in December 2019.

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* Queens Blvd MIH Text Amendment

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency) 19DCP206Q	BSA REFERENCE NUMBER (if applicable)
ULURP REFERENCE NUMBER (if applicable) N190352ZRQ	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of City Planning			NAME OF APPLICANT 70-50 QB Owner LLC		
NAME OF LEAD AGENCY CONTACT PERSON Olga Abinader, Director, EARD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Hiram A. Rothkrug, Environmental Studies Corp.		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 55 Water Mill Road		
CITY New York	STATE NY	ZIP 10271	CITY Great Neck	STATE NY	ZIP 10021
TELEPHONE 212-720-3423	EMAIL oabinad@planning.nyc.gov		TELEPHONE 718-343-0026	EMAIL hrothkrug@environmentalstudiescorp.com	

5. *Project Description*

The Applicant proposes a Zoning Text Amendment to Z.R. Appendix F to designate the Project Areas as Mandatory Inclusionary Housing areas.The Applicant requests the proposed action the facilitate the development of three mixed-used buildings pursuant to MIH Option 2, containing residential units and commercial retail space.

The Applicant controlls Projected Development Sites 1, 2, and 3. Together, the Applicant's Projected Development Sites are anticipated to be redeveloped with 349,367 gsf of floor area, of which 322,363 gsf would be residental and 27,004 gsf would be commercial. The residential component would consist of 335 residential units, of which 101 would be permanently affordable under MIH Option 2.

The proposed actions apply to an area of 121,585 square feet and would facilitate the development of up to 649,580 gsf of residential and commercial floor area. The residential component would consist of 643 residential units, of which 193 would be permanently affordable under MIH Option 2. A total of 311 accessory parking spaces are anticipated.

The Project Areas are anticipated for redevelopment with or without the proposed actions.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 2	STREET ADDRESS 70-50 Queens Boulevard
TAX BLOCK(S) AND LOT(S) Block 1341, Lot 77; Block 1342, Lots 1, 5, 36, 38, and 40; Block 2446, Lots 1, 4, 30, 31, 36, and 41; Block 2444, Lots 1, 2, 4, 6, 8, 10, 12, 18, 40, 51 and 57.		ZIP CODE 11377

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS North side of Queens Boulevard between 64th Street and 65th Place; and south side of Queens Boulevard between 70th Street and 73rd Street.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R7X/C2-3	ZONING SECTIONAL MAP NUMBER 9d

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

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

☐ CITY MAP AMENDMENT	☐ ZONING CERTIFICATION	☐ CONCESSION
☐ ZONING MAP AMENDMENT	☐ ZONING AUTHORIZATION	☐ UDAAP
☒ ZONING TEXT AMENDMENT	☐ ACQUISITION—REAL PROPERTY	☐ REVOCABLE CONSENT
☐ SITE SELECTION—PUBLIC FACILITY	☐ DISPOSITION—REAL PROPERTY	☐ FRANCHISE

☐ HOUSING PLAN & PROJECT ☐ OTHER, explain:
☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION Appendix F

***Board of Standards and Appeals*:** ☐ YES ☒ NO
☐ VARIANCE (use)
☐ VARIANCE (bulk)
☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

Other City Approvals Subject to CEQR (check all that apply)
☐ LEGISLATION
☐ RULEMAKING
☐ CONSTRUCTION OF PUBLIC FACILITIES
☐ 384(b)(4) APPROVAL
☐ OTHER, explain:
☐ FUNDING OF CONSTRUCTION, specify:
☐ POLICY OR PLAN, specify:
☐ FUNDING OF PROGRAMS, specify:
☐ PERMITS, specify:

Other City Approvals Not Subject to CEQR (check all that apply)
☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)
☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
☐ OTHER, explain:

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

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

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

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

Physical Setting (both developed and undeveloped areas)
Total directly affected area (sq. ft.): 101,000
Waterbody area (sq. ft) and type:
Roads, buildings, and other paved surfaces (sq. ft.): 101,000
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): 82,256 gsf (increment)
NUMBER OF BUILDINGS: Parts of 7
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): See Table 1 of Project Description
HEIGHT OF EACH BUILDING (ft.): 145' (or a 20' increment over no-action conditions)
NUMBER OF STORIES OF EACH BUILDING: 14

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: 53,120
The total square feet not owned or controlled by the applicant: 68,465

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: sq. ft. (width x length) VOLUME OF DISTURBANCE: cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 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.)	109,650 (increment)			
Type (*e.g.,* retail, office, school)	115 units			

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO
If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 305 NUMBER OF ADDITIONAL WORKERS: 0

Provide a brief explanation of how these numbers were determined: 2.65 (avg HH size for Queens CD) x 115 DUs	
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: Buildout of development sites under existing zoning (see attached project description)	
9. *Analysis Year* CEQR Technical Manual Chapter 2	
ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2022	
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 24	
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO	IF MULTIPLE PHASES, HOW MANY?
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:	
10. *Predominant Land Use in the Vicinity of the Project* (check all that apply) ☒ RESIDENTIAL ☒ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: Institutional, transportation	

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.		
(e) Is the project a large, publicly sponsored project?	☐	☒
o If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
o If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of 200 or more residential units?	☐	☒
o Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
o Directly displace more than 500 residents?	☐	☒
o Directly displace more than 100 employees?	☐	☒
o Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
o Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
o **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
o **Libraries:** Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
o **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
o **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
o If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☐	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
o If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐

	YES	NO
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☐	☒
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☐	☒
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources.		
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 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) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☒	☐
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☐	☒
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☐	☒
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☐	☒
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify:	☐	☒
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?	☐	☒

	YES	NO
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 3,362		
○ 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): 10,421,835		
(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 or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☒
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ 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 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☒	☐
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;	☐	☒

	YES	NO
Hazardous Materials; Noise?		
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
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.		
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.

Access to I-278 would not be impeded and any disruptons to traffic on Queens Boulevard would be kept to a minimum. Construction activities would be short term in duration and undertaken in accordance with all applicable NYC regulations.

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
Dana Feingold, Environmental Studies Corp.	October 22, 2019

SIGNATURE

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

Project Name: 3 St Marks Place
CEQR #: 19DCP094M
SEQRA Classification: Unlisted

NEGATIVE DECLARATION (Use of this form is optional)

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 project. 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 project 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 have no significant effect on the quality of the environment. Reasons supporting this determination are noted below.

Air Quality and Noise

An (E) designation (E-552) related to air quality and noise has been assigned to the site affected by the proposed actions. Refer to "Determination of Significance Appendix: (E) Designation" for a list of these sites and all applicable (E) designation requirements. With the (E) designation measures in place, the proposed actions would not result in significant adverse impacts related to air quality and noise.

Urban Design

A detailed analysis related to urban design is included in this EAS. The 2014 CEQR Technical Manual considers a significant adverse impact for urban design to be one that has the potential to diminish the arrangement, appearance, and functionality of the built and natural environment. The special permit pursuant to Zoning Resolution (ZR) Section 74-79 proposed by the Applicant would: (a) transfer approximately 8,386 gross square feet (gsf) of floor area from the Landmark Site at 4 St. Marks Place to the Development Site at 3 St Marks Place; and (b) modify ZR Section 33-432 to allow the proposed building on the Development Site to encroach within the required setback distance above a maximum front wall height of 85 feet on St. Marks Place. The analysis considered the proposed development as the reasonable worst case development scenario. The proposed building that would be facilitated by the Proposed Action on the Development Site would not be incompatible with the existing character of the surrounding area. Additional height and density would be in keeping with the existing built environment of the study area. Therefore, the analysis concludes that the proposed action would not result in impacts to urban design or visual resources.

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 Katherine Glass at (212) 720-3425.

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | (212) 720-3493
NAME Olga Abinader	DATE October 25, 2019
SIGNATURE	

TITLE	
Chair, City Planning Commission	
NAME Marisa Lago	DATE October 28, 2019
SIGNATURE	

Determination of Significance Appendix: (E) Designation

To ensure that there would be no significant adverse air quality and noise impacts associated with the proposed project, an (E) designation (E-551) will be assigned to projected sites as explained below.

Air Quality

Block 1341, Lot 77 (Projected Development Site 1): Any new residential or commercial 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 and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.
Block 2444, Lot 40 (Projected Development Site 2): Any new residential or commercial 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 and at a minimum of 148 feet above the grade, and that the stack is located at least 20 feet from the eastern lot line facing 72nd Street to avoid any potential significant adverse air quality impacts.
Block 2446, Lots 1, 4, 30, 31, 36, 41 (Projected Development Site 3): Any new residential or commercial 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 and at a minimum of 138 feet above the grade, and that the stack is located at least 25 feet from the western lot line facing 72nd Street to avoid any potential significant adverse air quality impacts.
Block 1342, Lot 1 (Projected Development Site 4): Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.
Block 1342, Lot 36 (Projected Development Site 5): Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.
Block 2444, Lot 57 (Projected Development Site 6): Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.
Block 2444, Lots 1, 2, 4, 6, 8, 10, 12, 18 (Projected Development Site 7): Any new residential or commercial 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) and must be fitted with low NOx (30 ppm) burners, ensure that the stack is located at the building's highest level at a minimum of 148 feet above the grade, and that the stack is located at least 25 feet from the western lot line

facing 70th Street to avoid any potential significant adverse air quality impacts.
Block 1342, Lot 5 (Potential Development Site): Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.

Noise

Block 1342, Lot 77 (Projected Development Site 1): In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 33 dBA window/wall attenuation on facades facing Queens Boulevard or 65th Street or 64th Street and 28 dBA of attenuation on façade facing 43rd Avenue to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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 2446, Lots 1, 4, 30, 31, 36, and 41 (Projected Development Site 2): In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on all facades to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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 2444, Lot 40 (Projected Development Site 3): In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing Queens Boulevard or 72nd Street or 70th Street and 28 dBA of attenuation on façade facing 47th Avenue to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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 1342, Lot 1 (Projected Development Site 4): In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 33 dBA window/wall attenuation on facades facing Queens Boulevard or 65th Street or 65th Place and 28 dBA of attenuation on façade facing Woodside Avenue to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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.

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? ☐ ☒

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).

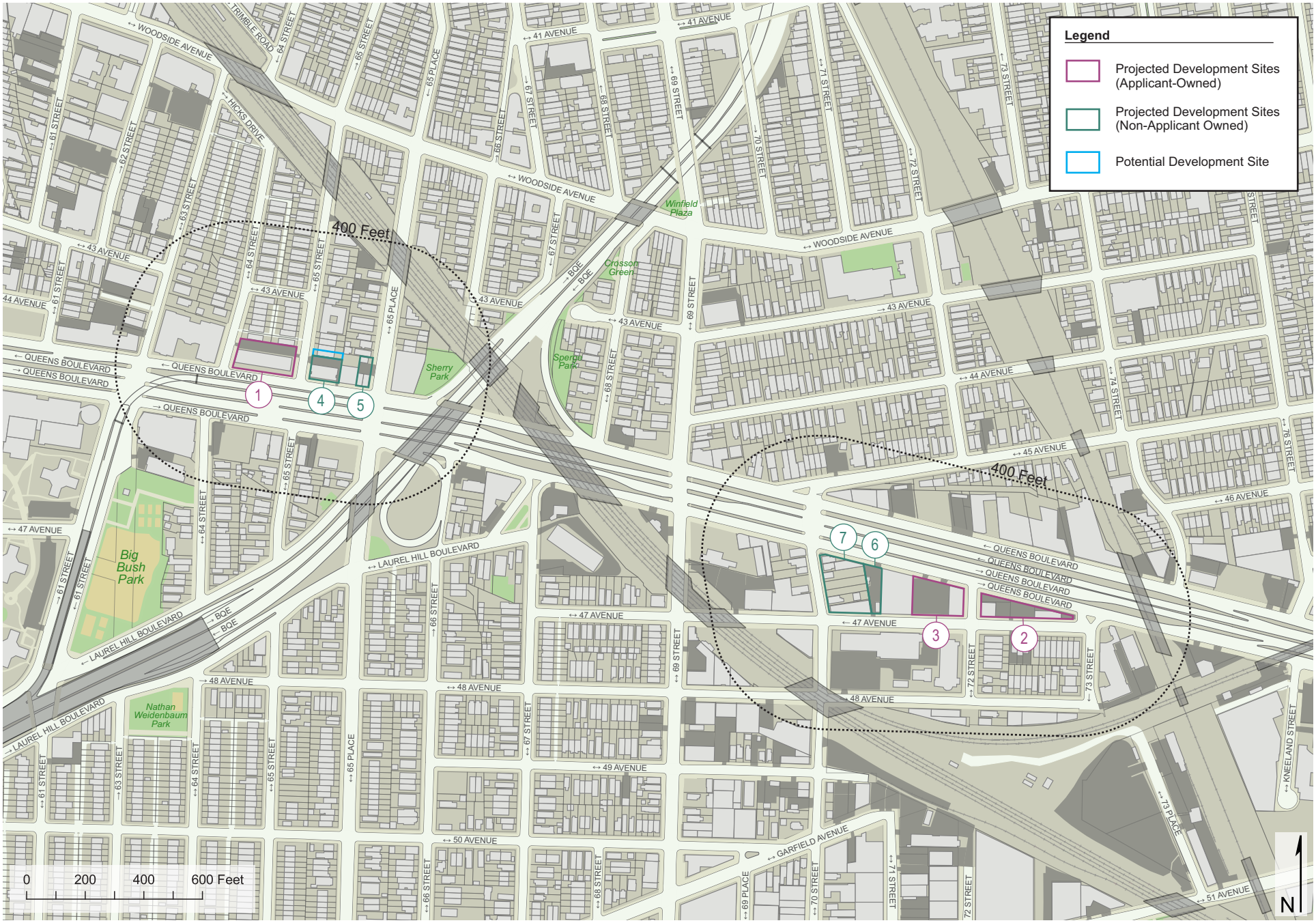
☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. 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***

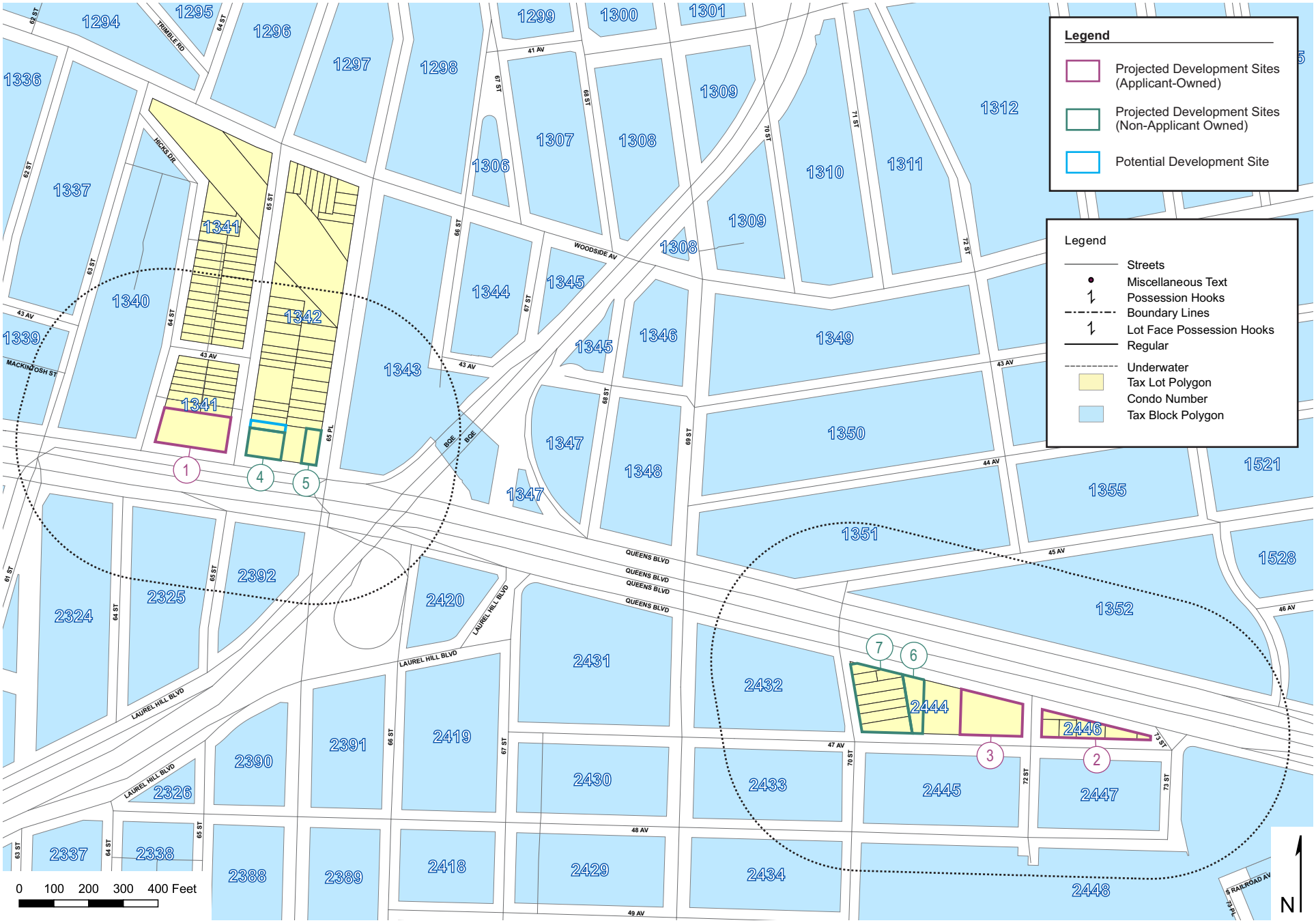
TITLE Director, Environmental Assessment and Review Division	LEAD AGENCY Department of City Planning, acting on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | (212) 720-3493
NAME Olga Abinader	DATE October 25, 2019
SIGNATURE	

Figure 1 - Site Location



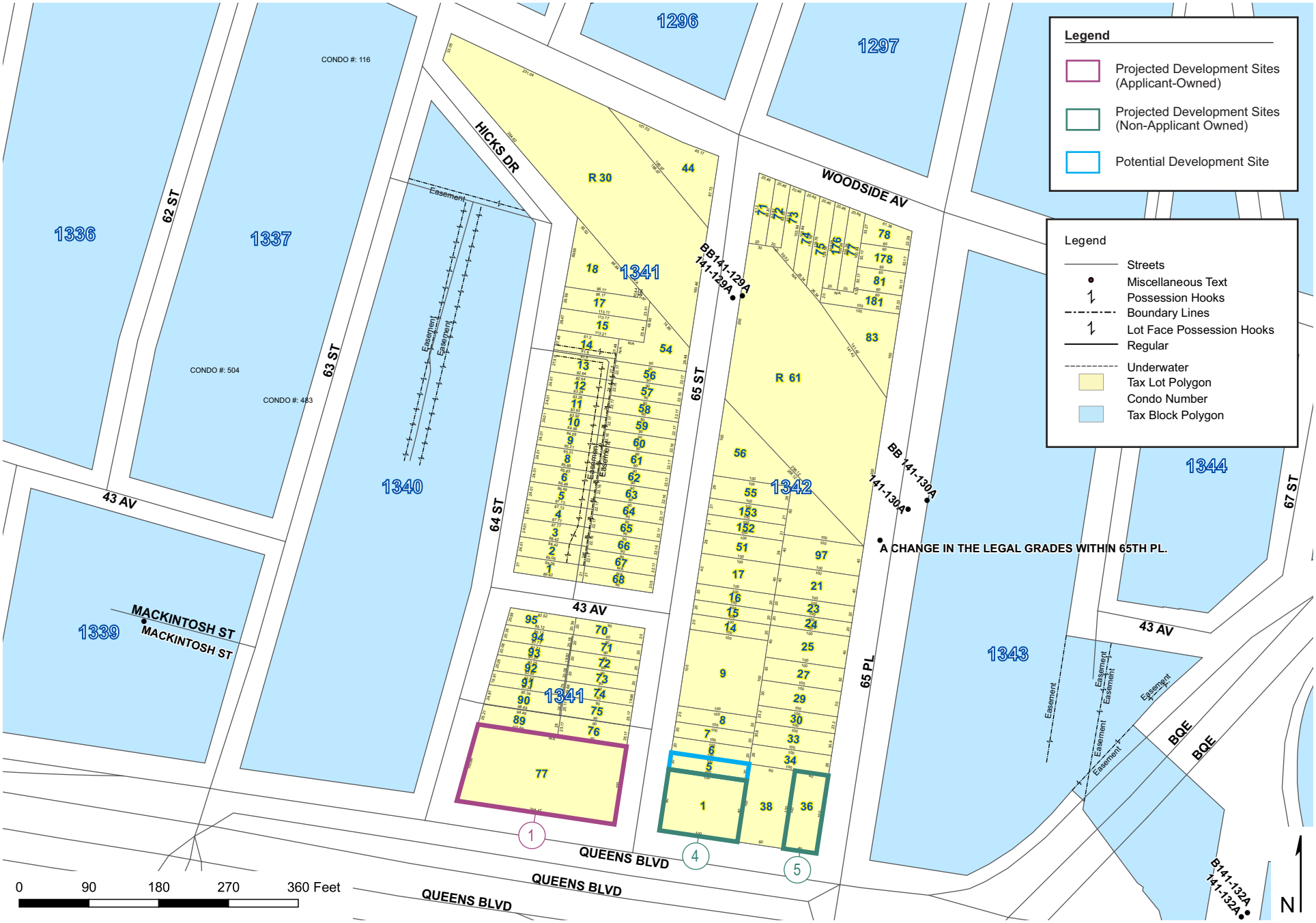
Primary Data Source: MapPLUTO 2018v1

Figure 2-1 - Tax Maps - Overview



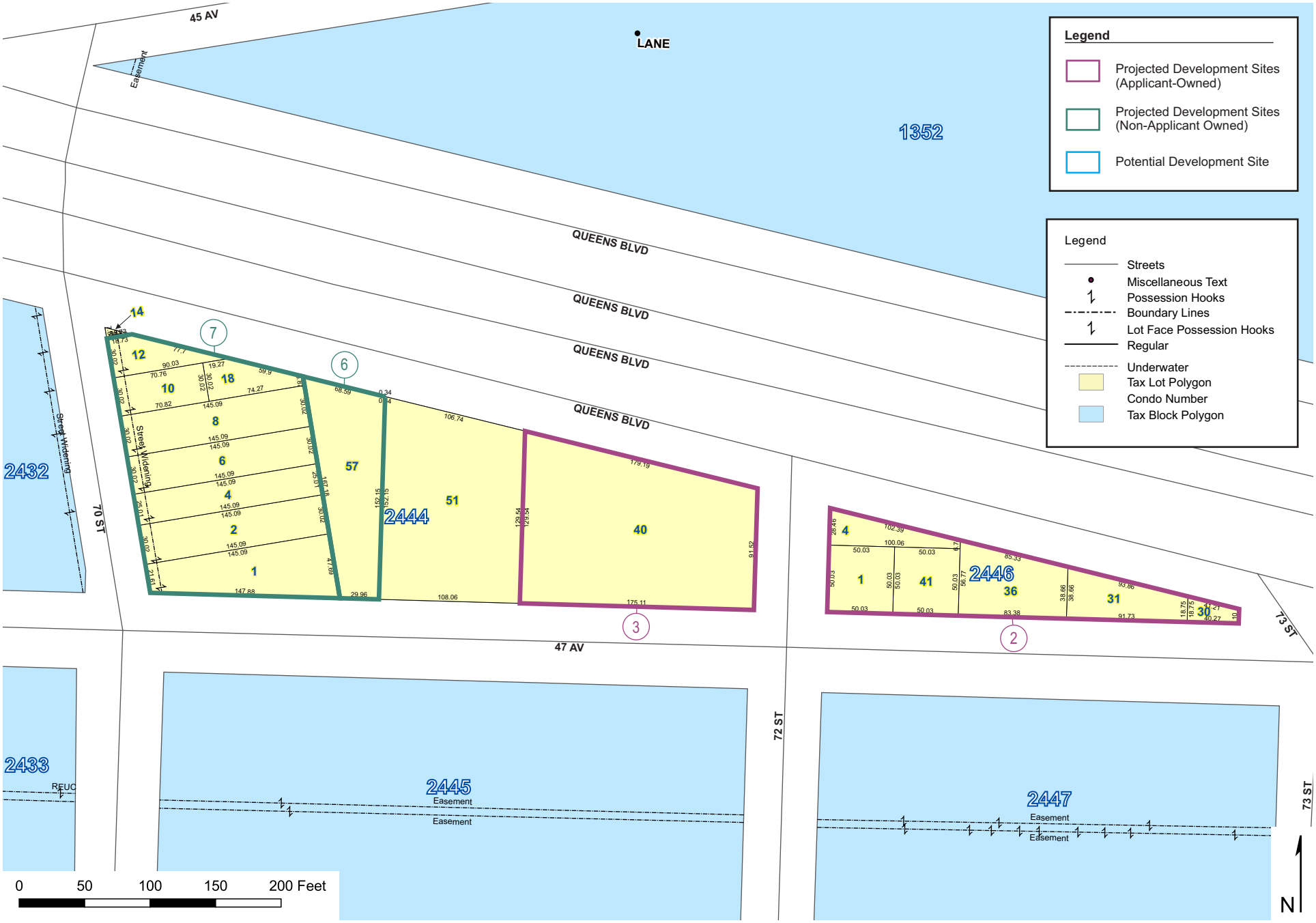
Data Source: MapPLUTO 2018v1, NYC DOF Digital Tax Map 08-18

Figure 2-2 - Tax Map - Project Area 1

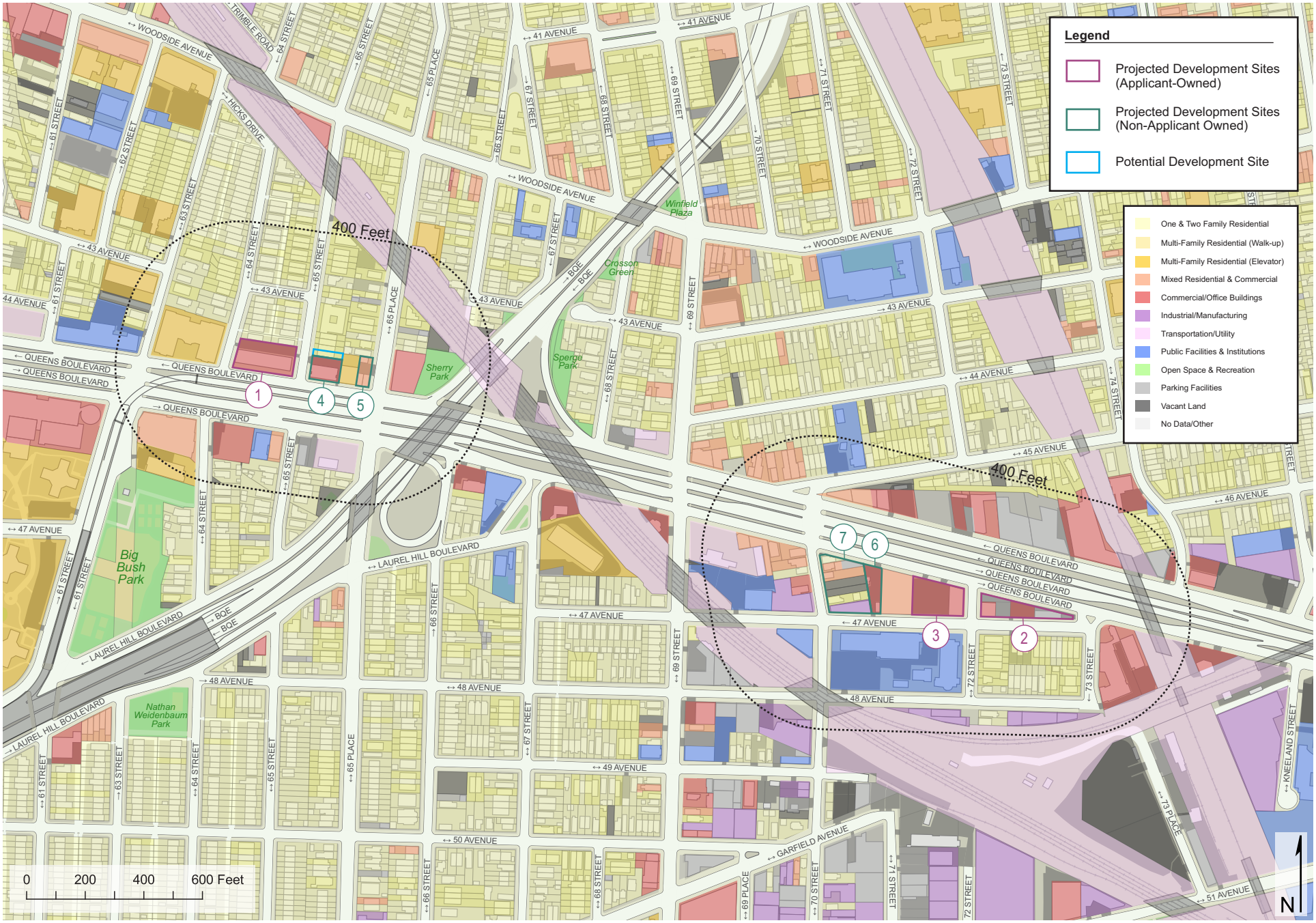


Data Source: MapPLUTO 2018v1, NYC DOF Digital Tax Map 08-18

Figure 2-3 - Tax Map - Project Area 2



Data Source: MapPLUTO 2018v1, NYC DOF Digital Tax Map 08-18


Legend
Projected Development Sites (Applicant-Owned)
Projected Development Sites (Non-Applicant Owned)
Potential Development Site
One & Two Family Residential
Multi-Family Residential (Walk-up)
Multi-Family Residential (Elevator)
Mixed Residential & Commercial
Commercial/Office Buildings
Industrial/Manufacturing
Transportation/Utility
Public Facilities & Institutions
Open Space & Recreation
Parking Facilities
Vacant Land
No Data/Other
400 Feet
400 Feet
1
2
3
4
5
6
7
Big Bush Park
Nathan Weidenbaum Park
Sherry Park
Sperge Park
Crosson Green
Winfield Plaza
QUEENS BOULEVARD
LAUREL HILL BOULEVARD
WOODSIDE AVENUE
HICKS DRIVE
TRIMBLE ROAD
41 AVENUE
43 AVENUE
44 AVENUE
45 AVENUE
46 AVENUE
47 AVENUE
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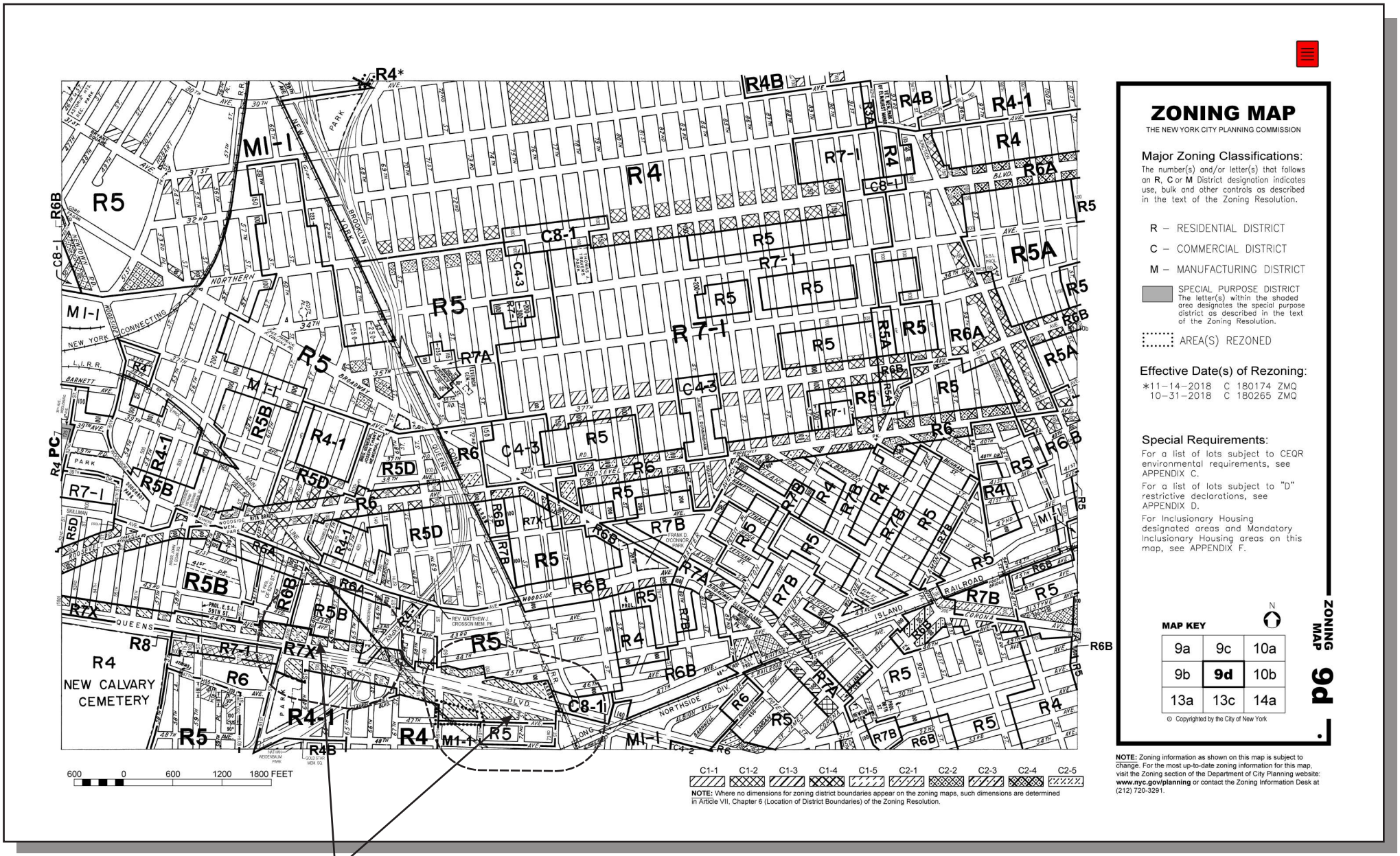
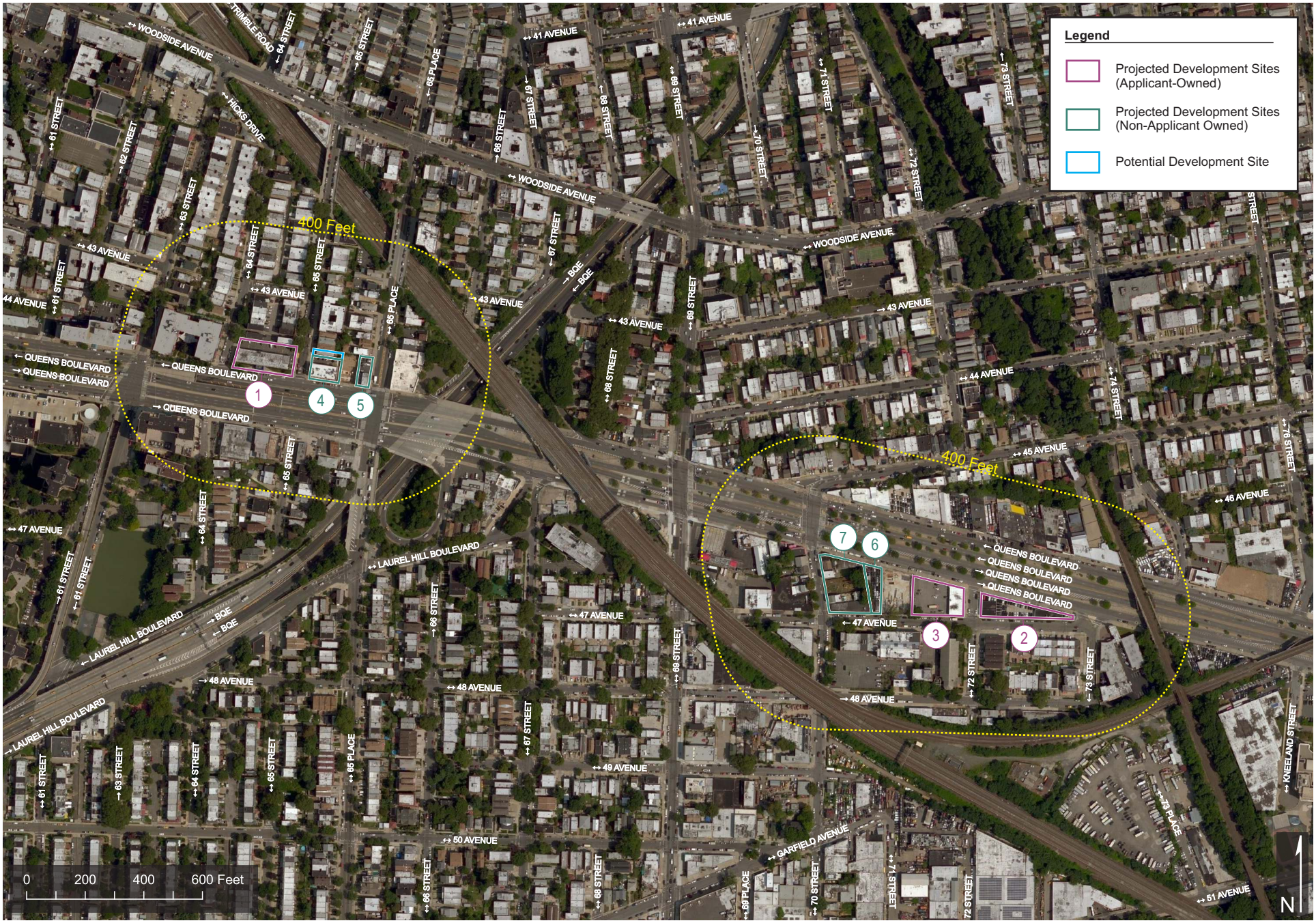
GARFIELD AVENUE
KNEELAND STREET
BQE
0 200 400 600 Feet
N


ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
AREA(S) REZONED
Effective Date(s) of Rezoning:
*11-14-2018 C 180174 ZMQ
10-31-2018 C 180265 ZMQ
Special Requirements:
For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
For Inclusionary Housing designated areas and Mandatory Inclusionary Housing areas on this map, see APPENDIX F.
MAP KEY
9a 9c 10a
9b 9d 10b
13a 13c 14a
© Copyrighted by the City of New York
ZONING MAP 9d
NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3291.
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.
C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5
600 0 600 1200 1800 FEET
NEW CALVARY CEMETERY
Project Areas


Legend
Projected Development Sites (Applicant-Owned)
Projected Development Sites (Non-Applicant Owned)
Potential Development Site
400 Feet
400 Feet
1
2
3
4
5
6
7
QUEENS BOULEVARD
WOODSIDE AVENUE
LAUREL HILL BOULEVARD
43 AVENUE
44 AVENUE
45 AVENUE
46 AVENUE
47 AVENUE
48 AVENUE
49 AVENUE
50 AVENUE
51 AVENUE
41 AVENUE
GARFIELD AVENUE
BQE
HICKS DRIVE
TRIMBLE ROAD
KNEELAND STREET
0
200
400
600 Feet
N

QUEENS BOULEVARD REZONING
PROJECT DESCRIPTION

Proposed Actions

The Applicant, 70-50 QB Owner LLC, seeks a zoning text amendment to Appendix F of the Zoning Resolution to designate the Project Areas (defined below) as Mandatory Inclusionary Housing (MIH) Designated Areas.

There will be two Project Areas consisting of Project Area 1 and Project Area 2, encompassing a total area of approximately 121,585 square feet (sf). Project Area 1 encompasses the blockfronts on the northern side of Queens Boulevard between 64th Street and 65th Place. Project Area 1 has an area of approximately 39,000 sf and consists of the following Tax Lots:

- Block 1341, Lot 77;
- Block 1342, Lots 1, 5, 36, 38, and 40.

Project Area 2 encompasses the blockfronts between 70th Street and 72nd Street on the southern side of Queens Boulevard. Project Area 2 has an area of approximately 81,777 sf and consists of the following Tax Lots:

- Block 2446, Lots 1, 4, 30, 31, 36, and 41.
- Block 2444, Lots 1, 2, 4, 6, 8, 10, 12, 18, 40, 51 and 57.

Table 1: Development Sites

Site ID	Block	Lot	Address
Project Area 1			
Projected Development Site 1	*1342*	*77*	*64-11 Queens Blvd.*
Projected Development Site 4	1342	1	65-09 Queens Blvd.
Projected Development Site 5	1342	36	65-25 Queens Blvd.
Potential Development Site	1342	5	43-15 65th St.
Project Area 2			
Projected Development Site 2	*2446*	*1, 4, 30, 31, 36, 41*	*72-12 Queens Blvd.*
Projected Development Site 3	*2444*	*40*	*70-50 Queens Blvd.*
Projected Development Site 6	2444	57	70-20 Queens Blvd.
Projected Development Site 7	2444	1, 2, 4, 6, 8, 10, 12, 18	70-08 Queens Blvd.

Italic text indicates Applicant-controlled sites

The Applicant controls three Projected Development Sites within the Project Areas, and four additional Projected Development Sites and one Potential Development Site were identified for the Reasonable Worst Case Development Scenario (RWCDS). The Applicant controls Projected Development Sites 1, 2, and 3, but only intends to redevelop Projected Development Sites 1 and 2 under the proposed rezoning; thus, Projected Development Site 3 is treated as a soft site for analysis purposes.

The Applicant requests the proposed action the facilitate the development of two mixed-used buildings to contain affordable residential units pursuant to MIH Option 2, market-rate residential units, and commercial retail space.

Description of Surrounding Area

The Project Areas are located in the borough of Queens, in Community District 2 at two sites approximately ½ mile from each other along Queens Boulevard in the Maspeth and Woodside neighborhoods of Queens.

The Project Areas are located along Queens Boulevard, a major commercial thoroughfare and wide street that has four lanes in each direction. The area surrounding Project Area 1 is characterized as mixed in nature and is predominately improved with mixed and commercial uses including mixed residential & commercial buildings, hotels and motels. The area surrounding Project Area 2 is characterized as very commercial in nature and is predominately improved with commercial uses including hotels, motels and automotive-related uses such as gas stations, automotive sales, automotive repair shops, etc. The interior blocks within the surrounding areas north and south of both Project Areas are zoned R4, R5, R5B and are predominately improved with 2-3 story one and two-family residences or multifamily walk ups.

Description of Affected Area

The Project Area consists of two distinct Project Areas, Project Area 1 and Project Area 2, located approximately ½ mile from each other along Queens Boulevard in the Maspeth and Woodside section of Queens. Tax lots in the Project Areas have a total area of approximately 121,585 square feet.

Project Area 1

Project Area 1 encompasses the block fronts on the northern side of Queens Boulevard between 64th Street and 65th Place. Project Area 1 includes Block 1341, Lot 77 and Block 1342, Lots 1, 5, 36, 38, and 40. The total area of Project Area 1 is approximately 46,000 square feet.

Block 1341, Lot 77 (64-11 Queens Boulevard, **Projected Development Site 1**) contains 19,808 sf of lot area. The lot is improved with a two-story hotel, Queens Motor Inn, with

19,808 sf of floor area (0.9 FAR), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 1342, Lot 1 (65-09 Queens Boulevard, **Projected Development Site 4**) contains 8,000 sf of lot area. The lot is improved with a two-story motel containing 12,000 sf of floor area (FAR 1.5), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 1342, Lot 5 (43-15 65th Street, **Potential Development Site**) contains 2,000 sf of lot area. The lot is improved with a three-story residential building containing 3,480 sf of floor area (FAR 1.74), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 1342, Lot 36 (65-25 Queens Boulevard, **Projected Development Site 5**) contains 4,000 sf of lot area. The lot is improved with a three-story commercial building, a one-story commercial building, and a one-story garage, which together contain 3,210 sf of floor area (0.8 FAR), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 1342, Lot 38 and 40 (65-15 Queens Boulevard) contain a combined 6,000 sf of lot area. The two tax lots are improved with a seven-story hotel containing 12,464 sf of floor area (4.49 FAR), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Project Area 2

Project Area 2 encompasses the block fronts between 70th Street and 73rd Street on the southern side of Queens Boulevard. Project Area 2 includes Block 2444, Lots 1, 2, 4, 6, 8, 10, 12, 18, 40, 51, and 57 and Block 2446, Lots 1, 4, 30, 31, 36, and 41. The total area of Project Area 2 is approximately 55,000 square feet.

Block 2444, Lot 1 (46-21 70th Street, **p/o Projected Development Site 7**) contains a lot area of 4,919 sf. The lot is improved with a commercial/industrial building occupied by a floral company and containing 4,830 sf of floor area (FAR 0.98), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2444, Lot 2 (46-19 70th street, **p/o Projected Development Site 7**) contains a lot area of 4,350 sf. The lot is improved with a two-story residential building and a garage, together containing 1,792 sf of lot area (FAR 0.41), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2444, Lot 4 (46-17 70th Street, **p/o Projected Development Site 7**) contains a lot area of 3,625 sf. The lot is currently vacant and unimproved.

Block 2444, Lot 6 (46-09 70th Street, **p/o Projected Development Site 7**) contains a lot area of 4,350 sf. The lot is currently vacant and unimproved.

Block 2444, Lot 8 (46-07 70th Street, **p/o Projected Development Site 7**) contains a lot area of 4,350 sf. The lot is improved with a two-story mixed commercial/residential building with a floor area of 1,440 sf (FAR 0.33), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2444, Lot 10 (46-03 70th Street, **p/o Projected Development Site 7**) contains a lot area of 2,100 sf. The lot is improved with a two-story mixed residential/commercial building with a floor area of 2,164 sf (FAR 1.05), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2444, Lot 12 (46-01 70th Street, **p/o Projected Development Site 7**) contains a lot area of 2,700 sf. The lot is improved with a two-story residential building with a floor area of 1,232 sf (FAR 0.45), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2444, Lot 18 (70-08 Queens Boulevard, **p/o Projected Development Site 7**) contains a lot area of 1,593 sf. The lot is improved with a one-story parking structure with a floor area of 1,703 sf (FAR 1.07), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2444, Lot 40 (70-50 Queens Boulevard**, Projected Development Site 3**) contains a lot area of 19,355 sf. The lot is improved with a one-story bakery and surface parking lot with 26 parking spaces. The building has a floor area of 4,780 sf (FAR 0.25), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2444, Lot 51 (70-32 Queens Boulevard) contains a lot area of 15,183 sf. The lot is improved with an 11-story residential building with ground-floor commercial space. The building has an area of 86,274 sf (FAR 5.68), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2444, Lot 57 (70-20 Queens Boulevard, **Projected Development Site 6**) contains a lot area of 7,600 sf. The lot is improved with a one-story commercial building with a floor area of 1,480 sf (FAR 0.19), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2446, Lot 1 (46-23 72nd Street, **p/o Projected Development Site 2**) contains a lot area of 2,500 sf. The lot is improved with a one-story commercial (automotive) building with a floor area of 2,500 sf (FAR 1.0), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2446, Lot 4 (no known address, **p/o Projected Development Site 2**) contains a lot area of 1,761 sf. The lot is vacant and used for private parking/vehicle storage.

Block 2446, Lot 30 (no known address, **p/o Projected Development Site 2**) contains a lot area of 579 sf. The lot is vacant and used for private parking/vehicle storage.

Block 2446, Lot 31 (75-22 Queens Boulevard, **p/o Projected Development Site 2**) contains a lot area of 2,633 sf. The lot is improved with a one-story commercial (used automotive sales) building with a floor area of 2,630 sf (FAR 1.0), where 5.0 FAR is permitted as-of-right within the underlying R7X/C2-3 zoning district.

Block 2446, Lot 36 (72-12 Queens Boulevard, **p/o Projected Development Site 2**) contains a lot area of 3,984 sf. The lot is paved and used for parking/vehicle storage associated with the adjacent automotive sales business.

Block 244, Lot 41 (no known address, **p/o Projected Development Site 2**) contains a lot area of 2,500 sf. The lot is vacant and used for parking/vehicle storage associated with the automotive business on Lot 31.

Background

DCP rezoned the Project Area to an R7X/C2-3 zoning district and an Inclusionary Housing designated area in 2006 as part of the City's Maspeth-Woodside Rezoning (C 060294 ZMQ). The primary purpose of the proposed zoning map amendments is to preserve and reinforce the established neighborhood fabric and prevent out-of-character development. Additionally, DCP's rezoning intended to address the need for new housing opportunities primarily along Queens Boulevard; however, nearly 12 years later little new residential development has occurred in this section of Queens Boulevard.

Description of Proposed Development

The Applicant proposes to develop mixed use developments on three separate sites on Queens Boulevard that conform to the Quality Housing Program requirements. As described later under Reasonable Worst Case Development Scenario, additional Projected Development Sites are also analyzed in this EAS.

The Applicant's proposed development consists of two buildings on Projected Development Sites 1 and 2 (identified in Table 1) containing residential and retail uses. Together, the Applicant's Projected Development Sites will have approximately 221,905 gsf of residential and commercial floor area. The proposed project would have a residential FAR of 5.71 and a commercial/retail FAR of 0.26 and would provide approximately 83 parking spaces accessory to residential and commercial uses. The proposed developments would include approximately 322,363 gsf of residential floor area (comprised of approximately 226 dwelling units of which approximately 68 units would be permanently affordable pursuant to MIH Option 2) and approximately 8,811 gross square feet of retail space.

Projected Development Site 1 (Block 1341, Lot 77)

Development Site 1 is a proposed 14-story, 129,861 gsf, mixed use building with frontage on the north side of Queens Boulevard between 64th and 65th Streets consisting of 126,494

gsf of residential space, 3,367 gsf of commercial retail space, and 49 accessory parking spaces. The building on Development Site 1 has a proposed height of 145 feet.

Projected Development Site 2

Development Site 2 is a proposed 13-story, 92,044 gsf, mixed-use building with frontage on the south side of Queens Boulevard between 72nd and 73rd Streets consisting of 86,600 gsf of residential space, 5,443 gsf of commercial space, and 34 accessory parking spaces. Development Site 2 has a proposed height of 135 feet. (A RWCDS height of 145 feet will be considered for the EAS analyses.)

Purpose and Need

A zoning text amendment to Appendix F is requested to designate the Project Area an MIH Area. Through this zoning text amendment, the Project Area will allow an additional 1.0 FAR and will require that developers provide permanently-affordable dwelling units. The City is in need of dwelling units at all income levels but particularly short of affordable housing units. By making the Project Area applicable to the MIH program, all future residential development in the Project Area will be required to provide a percentage of permanently affordable housing units. The increased density is necessary to support the Applicant's proposal to develop 30% of the project's floor area as affordable in perpetuity.

The proposed zoning text amendment would reinforce the goals of the 2006 Maspeth-Woodside Rezoning (C 060294 ZMQ). The DCP's rezoning intended to address the need for new housing opportunities primarily along Queens Boulevard; however, nearly 12 years later little new residential development has occurred in this section of Queens Boulevard.

Required Approvals

The granting of the proposed zoning text amendment is a discretionary action that is subject to both the Uniform Land Use Review Procedure (ULURP) as well as the City Environmental Quality Review (CEQR). ULURP is a process that allows public review of the proposed action at four levels: the Community Board; the Borough President; the City Planning Commission; and, if applicable, the City Council. CEQR is a process by which agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment.

Reasonable Worst Case Development Scenario

The proposed action is the designation of the Project Areas as Mandatory Inclusionary Housing (MIH) areas. Under existing conditions, the Project Areas are zoned R7X/C2-3 and designated as Inclusionary Housing Designated Areas. Under the proposed actions, the maximum the maximum FAR of for residential use in the Project Areas is increased from a based FAR of 3.75 and maximum FAR of 5.0 under voluntary inclusionary housing

to a 6.0 FAR with Mandatory Inclusionary Housing. The maximum community facility FAR of 4.0 and the maximum commercial FAR of 2.0 in the C2-3 overlay will remain the same based on the proposed text amendment. The MIH designation permits the increased FAR to 6.0 to facilitate the affordable housing that will be required to develop and remain permanently affordable at the Development Sites and within the project area.

Thus, the increased density proposed pursuant to the MIH text amendment is an additional 1.0 FAR.

Seven Projected Development Sites and one Potential Development Site were identified (see Table 1 and Existing Conditions description, above).

Future No-Action Scenario

Absent the proposed actions, it is anticipated that the Projected Development Sites will be redeveloped to their maximum potential under the existing zoning, as described below. The maximum height of development on the Projected Development Sites would be 125 feet, the maximum permitted by the underlying zoning.

Absent the proposed actions, **Projected Development Site 1** would be redeveloped with a mixed-use building, with 108,072 gsf of floor area (98,248 zsf, FAR 4.96), of which 104,705 gsf would be residential and 3,367 would be commercial.

Projected Development Site 2 would be redeveloped with a mixed-use building containing 75,228 gsf of floor area (68,339 zsf, FAR 4.9), of which 69,785 gsf would be residential and 5,443 gsf would be commercial.

Projected Development Site 3 would be redeveloped with a mixed-used building with 106,453 gsf of floor area (96,775 zsf, FAR 5.0), of which 88,259 gsf would be residential and 18,194 gsf would be commercial.

Projected Development Site 4 would be redeveloped with a mixed-use building containing 44,000 gsf of floor area (40,000 zsf, FAR 5.0), of which 40,000 gsf would be residential and 4,000 gsf would be commercial.

Projected Development Site 5 would be redeveloped with a mixed-use building containing 22,000 gsf of floor area (20,000 zsf, FAR 5.0), of which 20,000 gsf would be residential and 2,000 gsf would be commercial.

Projected Development Site 6 would be redeveloped with a mixed-use building containing 41,800 gsf of floor area (38,000 zsf, FAR 5.0), of which 38,000 gsf would be residential and 3,800 gsf would be commercial.

Projected Development Site 7 would be redeveloped with a mixed-used building containing 142,379 gsf of floor area (129,435 zsf, FAR 5.0), of which 129,435 gsf would be residential and 12,944 gsf would be commercial.

The **Potential Development Site** could be redeveloped with a mixed-use building containing 11,000 gsf of floor area (10,000 gsf, FAR 5.0), of which 10,000 gsf would be residential and 1,000 gsf would be commercial.

Subsequently, the No-Action scenario of the Build Year of 2022 would consist of seven mixed-use buildings containing a total of 599,834 gsf of residential use (643 market-rate dwelling units) and 49,748 gsf of commercial space.

Future With-Action Scenario

In the future with the proposed action, the above-listed projected developments would occur with a maximum FAR of 6.0 rather than the 5.0 permitted under existing/no-action conditions. The maximum height of each building would be 145 feet, the maximum permitted under the proposed zoning.

Table 2: No-Action and With-Action Development Summary

Site ID	NO ACTION		WITH ACTION		INCREMENT	
	Commercial (GSF)	Residential (GSF)	Commercial (GSF)	Residential (GSF)	Commercial (GSF)	Residential (GSF)
Projected Development Site 1	3,367	104,705	3,367	126,494	0	21,789
Projected Development Site 2	5,443	69,785	5,443	86,600	0	16,815
Projected Development Site 3	18,194	88,259	18,194	109,269	0	21,010
Projected Development Site 4	4,000	40,000	4,000	48,800	0	8,800
Projected Development Site 5	2,000	20,000	2,000	24,400	0	4,400
Projected Development Site 6	3,800	38,000	3,800	46,360	0	8,360
Projected Development Site 7	12,944	129,435	12,944	157,911	0	28,476
Potential Development Site	*1,000*	*10,000*	*1,000*	*12,200*	*0*	*2,200*
Total Projected Development	**49,748**	**490,184**	**49,748**	**599,834**	**0**	**109,650**

The Potential Development Site is not included in density calculations and therefore is not included in the final line of the table.

As shown in Table 2, the total projected development increment would be an increase of 109,650 gsf of residential space (115 dwelling units), with no change to commercial space.

Analysis Framework and Increment

For the purposes of the analysis framework, the future with-action scenario would not result in any new buildings as compared to the no-action scenario. The increment between the future no-action and future with-action includes a net increase of 109,650 gsf of residential floor area (115 new dwelling units).

Based on an 18-month approval process and a 24-month construction/buildout period, the analysis year is assumed to be 2022.

QUEENS BOULEVARD REZONING

ENVIRONMENTAL ASSESSMENT STATEMENT (EAS)

INTRODUCTION

Based on the analysis and the screens contained in the Environmental Assessment Statement Short Form, the analysis areas that require further explanation include land use, zoning, and public policy; historic resources; and urban design, as further detailed below. Subject headers correspond with the relevant chapter of the 2014 *CEQR Technical Manual.*

4. LAND USE, ZONING AND PUBLIC POLICY

I. Introduction

The analysis of land use, zoning and public policy characterizes the existing conditions of the Development Site 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.

The proposed action is the designation of Project Areas 1 and 2 as Mandatory Inclusionary Housing areas. The proposed action is intended to facilitate the proposed construction by the Applicant of two mixed-use (residential/commercial) buildings on Development Sites 1 and 2. Four additional Projected Development Sites and one Potential Development Site were identified for the Reasonable Worst Case Development Scenario (RWCDS).

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 600-foot radius of the two Project Areas, which is the area within which the proposed action has the potential to affect land use or land use trends. The Project Area 1 study area is bounded by 61st Street to the west, 67th Street to the east, and Laurel Hill Boulevard to the south. The Project Area 2 study area is

bounded by 44th Avenue to the north, 76th Street to the east, 69th Street to the west, and Garfield Avenue to the south.

II. Existing Conditions

Land Use

The Project Areas are located in the borough of Queens, in Community District 2 at two sites approximately ½ mile from each other along Queens Boulevard in the Maspeth and Woodside neighborhoods of Queens.

The Project Areas are located along Queens Boulevard, a major commercial thoroughfare and wide street that has four lanes in each direction. The area within a 600-foot radius of Project Area is characterized as mixed in nature and is predominately improved with mixed and commercial uses including mixed residential & commercial buildings, hotels and motels. The area within a 600-foot radius of Project Area 2 is characterized as very commercial in nature and is predominately improved with commercial uses including hotels, motels and automotive-related uses such as gas stations, automotive sales, automotive repair shops, etc. The interior blocks within the surrounding areas north and south of both Project Areas are predominately improved with 2-3 story one- and two-family residences or multifamily walk ups.

North of Project Area 1 between 62nd and 65th Streets consists primarily of 2-3 story one and two-family residences or multifamily walk ups; immediately west of Project Area #1 located at 63-11 Queens Boulevard is a 7- story higher density multi-family elevator building, south of the Project Area #1, located at 63-14 Queens Boulevard is an 8-story mixed residential and commercial building.

Existing commercial uses in the surrounding area of Project Area 1 consist of local retail uses, such as a gas station, automotive repair, convenience stores, hotels and motels and food establishments which are located on the ground floor of mixed-use residential/commercial buildings to the south of Project Area1. Other land uses within the vicinity include institutional uses located along Queens Boulevard south and west of Project Area 1.

The area immediately surrounding Project Area 2 is very commercial in nature and consists primarily of 1 to 2 story commercial buildings improved with automotive-related uses, such as auto repair shops and automotive sales lots. Other existing commercial uses include 2-3 story motels.

There are several public facilities and institutions within the surrounding areas including IS5-Walter Crowley Intermediate School, 51st Avenue Academy, FDNY Engine 292/Rescue 4, Kids Time Preschool, Tiegerman Middle School, Queens Boulevard Extended Care Facility, and St. Mary's Winfield Catholic Church. Sherry Park is a public

open space located east of Project Area 1 that borders the exit from the Brooklyn Queens Expressway.

Major thoroughfares near the Project Areas include the Brooklyn Queens Expressway located east of Project Area 1 and west of Project Area 2, Queens Boulevard that both Project Areas have frontage on, Roosevelt Avenue located north of the Project Areas, and Maurice Avenue located south of the Project Areas.

With regards to public transit, Project Area 1 is approximately a quarter of a mile south from the 61st Street-Woodside station of the 7 line and the Woodside Station of the Long Island Rail Road. Project Area 2 is approximately a half of a mile south of the Roosevelt Avenue-Jackson Heights subway station that services the E, F, M, R and 7 lines. The Project Areas are also in close proximity to the following bus routes: the Q60 (East Midtown 2 AV - S. Jamaica 109 AV), the Q 47 (Glendale Atlas Park Mall - Laguardia Main Terminal), and the Q 18 (30 Ave - 58 St - 65 Pl).

Zoning

The Project Areas are zoned R7X with a C2-3 commercial overlay and is the predominant zoning found along the lots with frontage on Queens Boulevard within the surrounding areas. The project areas are also designated as an Inclusionary Housing Designated Area. The interior blocks within the surrounding areas north and south of both project areas are primarily zoned R4, R5, and R5B and characterized by one- and two- family lower density residences. East of the Project Area along Queens Boulevard, the areas are zoned C8-1 and M1-1 zoning districts which allow one- and two- story light industrial, automotive-related and commercial buildings.

R7X is a contextual residential district that is governed by the Quality Housing bulk regulations. R7X allows for an FAR of 5.0 and a maximum height of 125 feet (with a qualifying ground floor). Off-street parking is generally required for 50 percent of residential units, but requirements can be reduced or waived under certain conditions.

C2-3 is a commercial overlay district. C2 districts allow for a variety of commercial uses (Use Groups 5-9, 14) such as local retail, funeral homes and repair services. Within lower density residential zoning districts (R1 through R5) the maximum FAR of 1.0, whereas in denser residential districts (R6 through R10) the maximum FAR is 2.0. Parking requirements vary by use.

R4 residential districts allow all types of housing at a maximum FAR of 0.75, plus an attic allowance. The maximum building height is 35 feet and front yards must be at least 10 feet deep.

R5 residential districts allow an FAR of 1.25 and a height of 40 feet. Above a maximum streetwall height of 30 feet, a 15-foot setback is required. Off-street parking is required for 85% of dwelling units, but requirements can be waived for income-restricted housing units or developments within the Transit Zone. The R5B district is a contextual district that allows a maximum FAR of 1.35 for residential use; the maximum allowable lot

coverage is 55 percent. The maximum height is 33 feet and parking is required for approximately 66% of dwelling units.

C8-1 zoning districts permit general service commercial uses and Use Group 4 community facility uses. The maximum permitted floor area ratio (FAR) is 1.0 for commercial use and 2.4 for community facility use. Height is regulated by a sky exposure plane beginning 30 feet above the street line.

M1 zoning districts are light industrial districts, often mapped as buffer zones between M2 and M3 districts and residential areas. M1 zoning districts permit Use Groups 4-14 and 16-17 and uses typically include woodworking shops, auto repair shops, and wholesale/storage facilities. These uses are usually located in one and two-story warehouse buildings. The M1-2 zoning district allows a maximum FAR of 1.0 for light manufacturing and industrial uses and allows an FAR of 2.4 for community facility uses. The maximum building height is based on a sky-exposure plane, which begins 30 feet above the street line.

Public Policy

Other than the Zoning Resolution discussed above, no other public policies apply to the Project Areas or the study area. The Project Area is not covered by any 197-a Community Development Plans, is not within any designated New York State Empire Zone or New York City Industrial Business Zone (IBZ), is not within the NYC Coastal Zone Boundary, 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. The proposed action does not involve the siting or displacement of any public facilities.

III. Future No-Action Scenario

Land Use

Absent the proposed actions, it is anticipated that the Projected Development Sites will be redeveloped to their maximum potential under the existing zoning, as shown in Table 4-1.

The surrounding land uses within the immediate study area are expected to remain largely unchanged by the projected build year of 2022.

Table 4-1: Future No-Action Development Scenario

Site ID	NO ACTION	
	Commercial (GSF)	Residential (GSF)
Projected Development Site 1	3,367	104,705
Projected Development Site 2	5,443	69,785
Projected Development Site 3	18,194	88,259
Projected Development Site 4	4,000	40,000
Projected Development Site 5	2,000	20,000
Projected Development Site 6	3,800	38,000
Projected Development Site 7	12,944	129,435
Potential Development Site	*1,000*	*10,000*
Total Projected Development	**49,748**	**490,184**

Zoning

In the future without the proposed action, the provisions of the existing R7X/C2-3 zoning districts would continue to apply to the Project Areas. The surrounding zoning districts within the immediate study area are expected to remain largely unchanged by the projected build year of 2022.

Public Policy

In the future without the proposed action, any new development within the Project Areas would continue to be governed by the provisions of the underlying R7X/C2-3 zoning district. No other public policy initiatives would pertain to the Project Areas or to the study area by the project build year of 2022. In addition, no changes are anticipated to the zoning districts and zoning regulations or to any public policy documents related to the Project Areas or the surrounding study area by the project build year.

IV. Future With-Action Scenario

Land Use

In the future with the proposed actions, it is assumed that the Development Sites would be developed to an FAR of 6.0 rather than the 5.0 projected under the no-action scenario.

Projected Development Site 1 (applicant-controlled, Project Area 1) would be redeveloped with a 14-story mixed use building consisting of 126,454 gsf of residential space, 3,388 gsf of commercial retail space, and 49 accessory parking spaces. Development Site 1 would have a maximum height of 145 feet and an FAR of 5.96.

Projected Development Site 2 (applicant-controlled, Project Area 2) would be redeveloped with a 14-story mixed-use building consisting of 86,600 gsf of residential space, 5,443 gsf of commercial retail space, and 34 accessory parking spaces. Development Site 3 would have a maximum height of 145 feet and an FAR of 5.90.

Projected Development Site 3 (applicant-controlled soft site, Project Area 2) would be redeveloped with a 14-story mixed-use building consisting of 109,269 gsf of residential space, 18,184 gsf of commercial retail space, and 120 accessory parking spaces. Development Site 2 would have a maximum height of 145 feet and an FAR of 6.00.

Projected Development Site 4 (Project Area 1) is anticipated to be developed with a mixed-use building consisting of 48,800 gsf of residential space, 4,000 gsf of commercial retails space, and 19 accessory parking spaces. Development Site 4 would have a maximum height of 145 feet and an FAR of 6.00.

Projected Development Site 5 (Project Area 1) is anticipated to be developed with a mixed-use building consisting of 24,400 gsf of residential space, 2,000 gsf of commercial retail space, and 9 accessory parking spaces. Development Site 5 would have a maximum height of 145 feet and an FAR of 6.00.

Projected Development Site 6 (Project Area 2) is anticipated to be developed with a mixed-use building containing 56,077 gsf of residential space, 1,350 gsf of commercial retail space, and 22 accessory parking spaces. Development Site 6 would have a maximum height of 145 feet and an FAR of 6.00.

Projected Development Site 7 is anticipated to be developed with a mixed-use building containing 157,911 gsf of residential space, 12,944 gsf of commercial spac,e and 61 parking spaces, with a maximum height of 145 feet and an FAR of 6.00.

Zoning

In the future with the proposed action, a zoning text amendment would make Project Areas 1 and 2 applicable to the Mandatory Inclusionary Housing (MIH) Program. The underlying R7X/C2-3 zoning district would remain in place.

In an R7X/C2-3 zoning district in a MIH area, the maximum FAR of for residential use is increased from a based FAR of 3.75 and maximum FAR of 5.0 under voluntary inclusionary housing to a 6.0 FAR with Mandatory Inclusionary Housing. The maximum community facility FAR of 4.0 and the maximum commercial FAR of 2.0 in the C2-3 overlay will not be changed by the proposed text amendment. The MIH Area permits the increased FAR to 6.0 to facilitate the affordable housing that the Applicant proposes. Thus, the only bulk change under the proposed action would be the increase of the maximum residential FAR from 5.0 to 6.0.

V. Conclusion

Land Use

The study area contains a diverse mix of land uses, including residential and commercial use. The proposed action would not permit any new land uses that are not permitted under existing or no-action conditions.

No potentially significant adverse impacts related to land use are expected to occur as a result of the proposed action. Therefore, further analysis of land use is not warranted.

Zoning

The increased density proposed pursuant to the MIH text amendment is an additional 1.0 FAR. The applicant feels that the Project Areas can accommodate the increased density since the Project Areas are located along Queens Boulevard, a wide street with four travel lanes in each direction, and is in line with Department's policy to have higher density developments along wide streets that can support such development. Further, the Development Sites are located near public transportation options. The increased density is necessary to support the Applicant's proposal to develop 30% of the project's floor area as affordable in perpetuity.

Without the proposed action, the amount of affordable housing units that could be developed at the Development Sites would be significantly reduced. Some new developments may be developed along Queens Boulevard; however, the provision of affordable housing would be optional. The Applicant's projected development will provide needed affordable housing and replace obsolete commercial buildings with new and improved quality residential developments that will serve the needs of this Queens community.

No potentially significant adverse effects related to zoning are expected to occur as a result of the proposed action. Therefore, no further zoning analysis is required.

Public Policy

In accordance with the stated public policies within the study area, the proposed action would be suitable for the Affected Area and the study area as a whole. No potential significant adverse impacts related to public policy are anticipated to occur as a result of the proposed action and further assessment of public policy is not warranted.

7. OPEN SPACE

Introduction

For the purposes of CEQR, open space is defined as publicly- or privately-owned land that is publicly accessible and has been designated for leisure, play, or sport; or land that is set aside for the protection and/or enhancement of the natural environment. Under CEQR, an open space analysis is conducted to determine whether or not a Proposed Action would have either a direct impact resulting from the elimination or alteration of open space or an indirect impact resulting from overtaxing the use of open space. The analyses focus only on officially designated existing or planned public open space. Open space may be public or private and may include active and/or passive areas. Active open space is the part of a facility used for active play such as sports or exercise and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses, lawns and paved areas for active recreation. Passive open space is used for sitting, strolling, and relaxation with benches, walkways, and picnicking areas. Certain spaces such as lawns can be used for both active and passive recreation.

An open space analysis may be necessary when an action would potentially have a direct or indirect effect on open space. A direct impact would physically change, diminish or eliminate an open space or reduce its utilization or aesthetic value. An indirect impact could result from an action introducing a substantial new user population that would create or exacerbate an overutilization of open space resources. An open space analysis considers both direct and indirect open space impacts. There are no open space resources on or directly adjacent to the Project Area. There would be no direct open space impacts resulting from the proposed actions. Therefore, this section discussed potential indirect open space impacts of the proposed actions.

According to the *CEQR Technical Manual*, and indirect open space impact could occur if a Proposed Action would generate more than 200 residents or 500 workers. However, in an under-served area, even 50 additional residents or 125 additional employees could result in indirect open space impacts. The Project Areas are located an area of Queens Community District 2 that is neither under- nor well-served by public open spaces and the proposed action is anticipated to introduce approximately 305 new residents to the study area. Therefore, a preliminary analysis has been conducted to determine whether significant indirect open space impacts could occur as a result of the increased residential population.

Study Area

Open space study areas are defined to allow analysis of both the nearby open spaces and the population using the 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. The 0.5 mile radius is then adjusted by identifying all census tracts with at least 50 percent of their area within the generalized 0.5-mile study area. The boundary drawn around these census tracts becomes the open space study area. See Figure 7-1 for a map of the open space study area.

Existing Conditions

Study Area Population

The study area population was estimated using data from the 2017 U. S. Census American Community Survey Data for the census tracts located fully or at least 50 percent within the one-half mile study area. As shown in Table 7-1, in 2017 the study area contained a total of 69,669 residents within the 15 study area census tracts.

Table 7-1: Open Space Study Area Population

Census Tract	Total Population (2017)
243	5,963
245	5,608
247	1,577
249	4,981
259	3,504
261	7,364
263	6,884
265	3,807
267	5,768
479	5,340
481	6,384
483	4,290
485	4,369
489	1,788
493.01	2,042
Total	**69,669**

Source: US Census ACS Demographic and Housing Estimates. 2013-2017 American Community Survey 5-Year Estimates

Open Space Resources

Open spaces within the study area are indicated in Figure 4-1, Open Space Facilities and Census Tracts and Table 7-2, Inventory of Open Space Resources. The publicly owned and accessible facilities provide a total of 8.71 acres of open space.

The open spaces in the study area are of varying size, from small public plazas to the 2.5-acre Big Bush Playground and generally in good condition. Two of the larger parks in the study area are scheduled for renovations by the Department of Parks and Recreation within the future with-action timeline: Nathan Weiderbaum Park and Hart Playground. This will not generate any new open space but will improve the quality of the open spaces in the study area.

Table 7-2: Inventory of Open Space Resources

Map No.	Park Name	Location	Area (acres)	Amenities	Hours	Condition
1	Sherry Park Dog Run	Queens Blvd. bet. 65 Pl. and the BQE	0.35	Dog park with benches, landscaping	6am-9pm	OK
2	Big Bush Playground	Laurel Hill Blvd. bet. 61 St. and 64 St.	2.5	Ballfield, fitness equip., spray showers, comfort station, seating areas, playgrounds, handball courts	6am-9pm	Good
3	Nathan Weidenbaum Park	Laurel Hill Blvd., 48 Ave. bet. 63 St. and 64 St.	0.73	Playgrounds, seating, landscaping, basketball court	6am-9pm	Good
4	Hart Playground	Broadway, 37 Ave. bet. 65 St. and 69 St.	0.9	Playgrounds, seating, landscaping, spray showers	6am-9pm	Good
5	Sohncke Square	Woodside Ave., 58 St., Roosevelt Ave.	0.04	Seating, landscaping	24 hrs	Good
6	Woodside Memorial Plaza	Woodside Ave., Roosevelt Ave.	0.2	Seating, landscaping	24 hrs	OK
8	Crosson Green	68 St., the BQE bet. Woodside Ave. and 43 Ave.	0.06	Seating, landscaping	24 hrs	Good
9	Winfield Plaza	Woodside Ave., 69 St., the BQE	0.09	Seating, landscaping	24 hrs	OK
10	Long Island Mews	51 Ave., 51 Rd., 72 Pl.	0.32	Playgrounds, seating, landscaping	6am-9pm	Good
12	Moore Homestead Playground	Broadway., 82 St., 45 Ave.	1.98	Basketball and handball courts, spray showers, comfort station, fitness equip., playgrounds	6am-9pm	OK
13	Frank D O'Connor Playground	Broadway and Woodside Ave. bet. 77 St. and 79 St.	1.54	Basketball and handball courts, spray showers, comfort station, fitness equip., playgrounds	6am-9pm	Good
	Total Area		**8.71**			
	Condition noted as Good, OK, or Unacceptable					

Open Space Ratio

Based on the ratio of publicly accessible open space acreage to the study area population, a determination of the adequacy of open space resources in the study area was quantified. The resultant computation for the study area was then compared with the median ratio for New York City, which is 1.5 acres per 1,000 residents, and with the City's planning goal as expressed in the *CEQR Technical Manual* of 2.5 acres per 1,000 population.

The *CEQR Technical Manual* considers an action to result in significant impacts to open space resources if it would decrease the open space ratio substantially, thereby reducing the availability of open spaces for an area's population. A decrease in the open space ratio of 5 percent or more is generally considered to be a significant adverse impact on open space resources. The open space study area exhibits an open space ratio of 0.1250 acres per 1,000 residents, (based on 8.71 acres of existing open space divided by the 2017 American Community Survey study area population estimate of 69,669 persons).

Table 17-3: Open Space Ratios

	Existing/No-Action Conditions	**Future With-Action**
Publicly Accessible Open Space (Acres)	8.71	8.71
Study Area Population	69,669	69,974
Open Space Ratio (Acres/1,000 Residents)	0.1250	0.1245 (-0.44%)

<u>No-Action Condition</u>

In the future without the proposed action, no changes are anticipated to the study area open space ratio. No significant residential developments are anticipated, nor are any changes to study area open spaces.

<u>With-Action Condition</u>

Study Area Population

The net increase of 214 dwelling units resulting from the proposed actions is expected to generate approximately 305 residents, based on the average household size of 2.65 residents in Queens Community District 2. Adding these residents to the Future No-Action population of 69,669 results in a future with-action population of 69,974.

Open Space Resources

No new open spaces are planned to be added to the study area by the project's build year of 2022. As noted above, Nathan Weiderbaum Park and Hart Playground are anticipated to be renovated by the project build year, but the size of the parks and the available public open space will not change. Therefore, in the future with-action condition, the project study area would contain approximately 8.71 acres of open space, the same as under existing conditions.

Open Space Ratio

The projected open space ratio in the future with the proposed action would be 0.1245 acres per 1,000 residents (based on 8.71 acres of open space and a study area population of 69,974), compared with the ratio of 0.1250 acres per 1,000 residents under existing and no-action conditions. This represents a decrease of approximately 0.0005 acres per 1,000 persons or a 0.44 percent reduction in the open space ratio. The community would continue to not meet DCP's open space planning goals. Table 7-3 shows the calculation of open space ratios for the Existing/No-Action and Future With-Action conditions.

The proposed development would result in a decrease of 0.44 percent in the open space ratio in the project study area. According to the *CEQR Technical Manual,* in under-served areas, a detailed analysis is generally not necessary if the open space ratio decreases by less than one percent. Therefore, based on *CEQR Technical Manual* criteria and this preliminary analysis, the proposed project would not result in a significant adverse impact on open space resources.

A detailed open space assessment is not required as it has been determined that the project would not decrease the open space ratio by more than 5 percent.

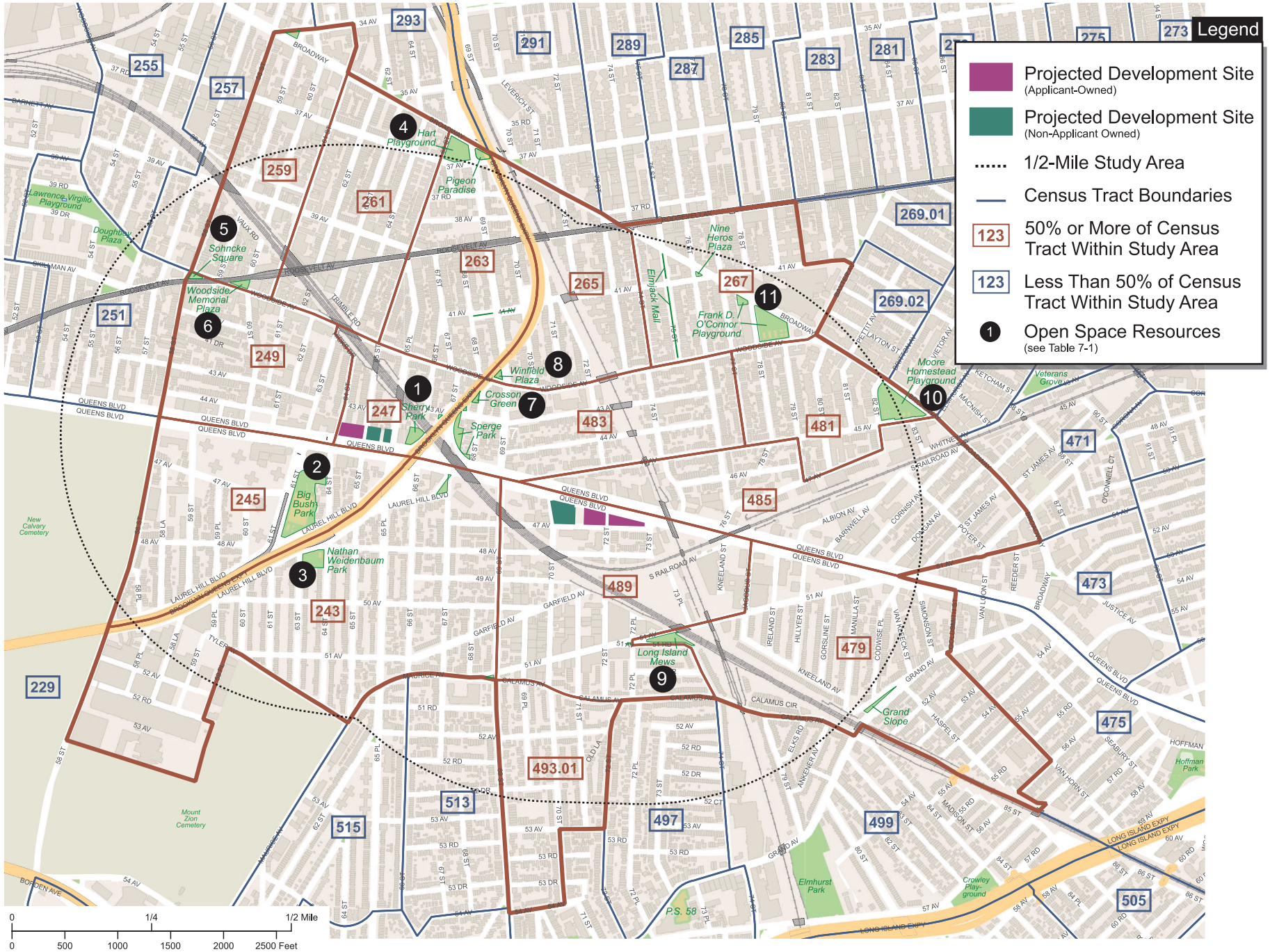
Due to the absence of significant direct impacts on any open space resource and the small decrease in the future with the action open space ratio, it is anticipated that the project would not have any potentially significant adverse open space impacts and further assessment is not warranted. No significant adverse impacts associated with open space would occur as a result of the proposed action.

Conclusion

A detailed open space assessment is not required as it has been determined that the project would not decrease the open space ratio by more than 5 percent.

Due to the absence of significant direct impacts on any open space resource and the minute decrease in the future with-action open space ratio, it is anticipated that the project would not have any potentially significant adverse open space impacts and further assessment is not warranted. No significant adverse impacts associated with open space would occur as a result of the proposed action.

Figure 7-1: Open Space Facilities and Census Tracts



9. HISTORIC AND CULTURAL RESOURCES

I. Introduction

The 2014 *City Environmental Quality Review (CEQR) Technical Manual* identifies historic 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 (LPC); 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.

II. Archaeological Resources

The proposed project would involve construction potentially resulting in ground disturbance of a site that may not have previously experienced extensive excavation. In a letter dated April 23, 2018, and appended to this document, the New York City Landmarks Preservation Commission (LPC) stated that the Project Areas have no archaeological significance. No further analysis is necessary and there will be no significant adverse impacts to archaeological resources.

III. Architectural Resources

The structures that would be demolished as a result of the proposed action do not have historic or cultural significance. In a letter dated April 23, 2018, and appended to this document, the LPC stated that the Project Areas have no architectural significance. No further analysis is necessary and there will be no significant adverse impacts to architectural resources.

IV. Conclusion

No significant adverse impacts relating to historic and cultural resources are anticipated.

10. URBAN DESIGN AND VISUAL RESOURCES

I. Introduction

An assessment of urban design is needed when a project may have effects on any of the elements that contribute to the pedestrian experience of public space. 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. An assessment would be appropriate for the following:

1. Projects that permit the modification of yard, height, and setback requirements; and
2. Projects that result in an increase in built floor area beyond what would be allowed 'as- of-right'.

The Proposed Action would allow an additional 1.0 FAR of residential space and an increase in maximum building height from 125 feet to 145 feet.

II. Existing Conditions

The Project Areas are located in the borough of Queens, in Community District 2 at two sites approximately ½ mile from each other along Queens Boulevard in the Maspeth and Woodside neighborhoods of Queens. Project Area 1 encompasses the blockfronts on the northern side of Queens Boulevard between 64th Street and 65th Place. Project Area 1 has an area of approximately 39,000 sf and consists of the following Tax Lots:

- Block 1341, Lot 77;
- Block 1342, Lots 1, 5, 36, 38, and 40.

Project Area 2 encompasses the blockfronts between 70th Street and 72nd Street on the southern side of Queens Boulevard. Project Area 2 has an area of approximately 81,777 sf and consists of the following Tax Lots:

- Block 2446, Lots 1, 4, 30, 31, 36, and 41.
- Block 2444, Lots 1, 2, 4, 6, 8, 10, 12, 18, 40, 51 and 57.

The Project Areas and surrounding neighborhood contain a range of land uses and building typologies, including apartment buildings, two- and three- story attached residential buildings, industrial/warehouse buildings, commercial buildings, and automotive service buildings. Bulkier, commercial and industrial buildings are generally located along Queens Boulevard in the study area, while the blocks north and south of the thoroughfare are developed largely with 2- and 3-story attached or semi-detached residential buildings. (See attached photos.)

Transportation uses occupy significant swaths of the study area, including the eight-lane Queens Boulevard, the elevated Long Island Railroad tracks, and I-278 (at or below-grade, 8 lanes), which has an interchange where it crosses Queens Boulevard.

III. Future No-Action Conditions

In the future without the proposed actions, Development Sites 1 through 6 and the Potential Development Site are anticipated to be redeveloped to their full potential under the underlying R7-X/C2-3 zoning. These buildings, up to 125 feet high and ranging from 14,850 gsf to 108,944 gsf, are significantly different from the existing low-rise and parking uses currently in place. The location of these high-density buildings along Queens Boulevard is in line with the Department of City Planning's policy to encourage higher density developments along wide streets that can support such development.

IV. Future With-Action Conditions

In the future with the proposed actions, Development Sites 1 through 7 and the Potential Development Site are anticipated to be redeveloped in much the same way as under the future no-action condition, but at the slightly higher density (6.0 FAR rather than 5.0) permitted by the proposed zoning text amendment.

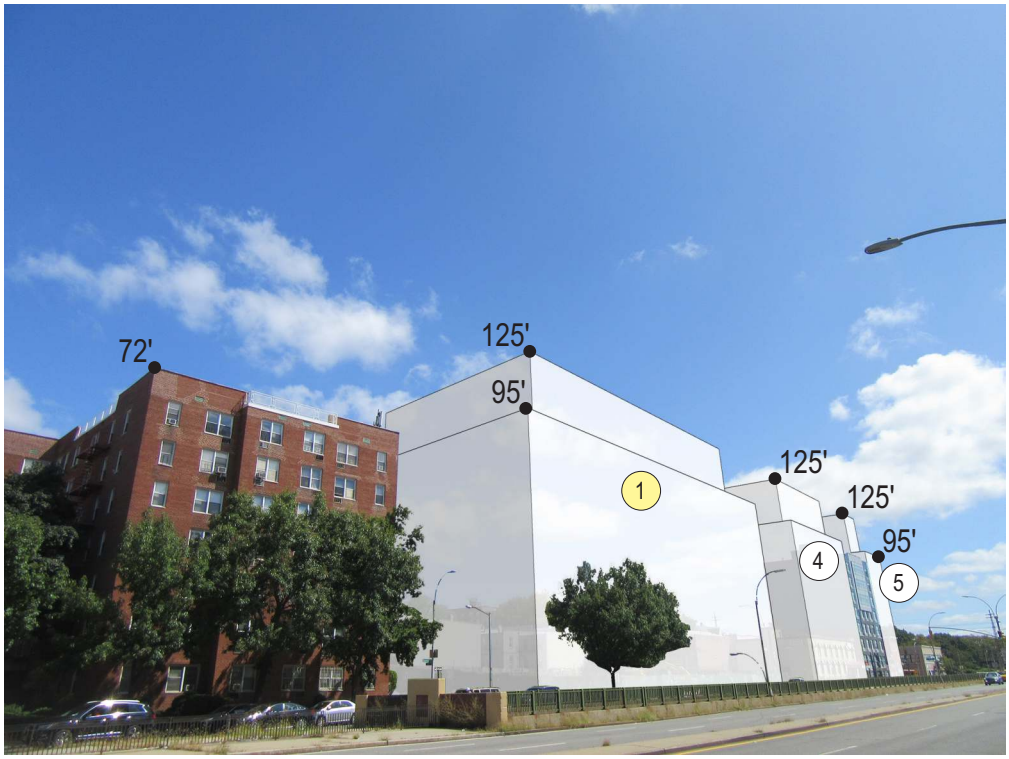
The Proposed Action would allow an additional 1.0 FAR of residential space and an increase in maximum building height from 125 feet to 145 feet (and from 12 stories to 14 stories) as compared to the no-action conditions. The Project Areas are already zoned for moderate density residential development, and such development is appropriate given the context of the Project Areas. The Projected Development Sites are underdeveloped, located alone a wide commercial thoroughfare (Queens Boulevard), and in proximity to public transit. The proposed zoning text amendment would not result in buildings that would be substantially different in height, bulk, or scale than what currently exists or is allowed in the Project Areas. The proposed actions would also reinforce goals of the Maspeth/Woodside rezoning, which included the enhancement of the Queens Boulevard streetscape while both visually and physically connecting the residential neighborhoods north and south of the boulevard.

V. Conclusion

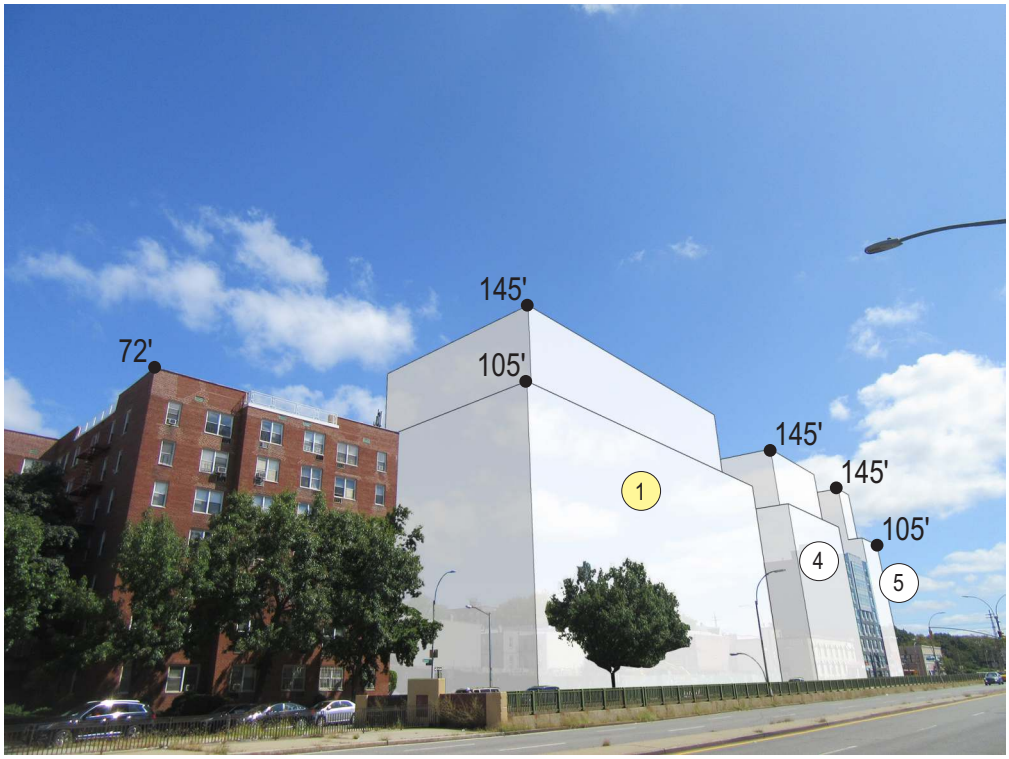
There are no visual resources, open spaces, or natural features in the project area that could be affected by the proposed actions. The projected development resulting from the proposed zoning text change is appropriate in scale and use with the surrounding area, and there will be no significant adverse effects relating to urban design or visual character.

Queens Boulevard, Queens
Urban Design Diagram

Without MIH
Queens Boulevard facing northeast (Site at left)



With MIH
Queens Boulevard facing northeast (Site at left)



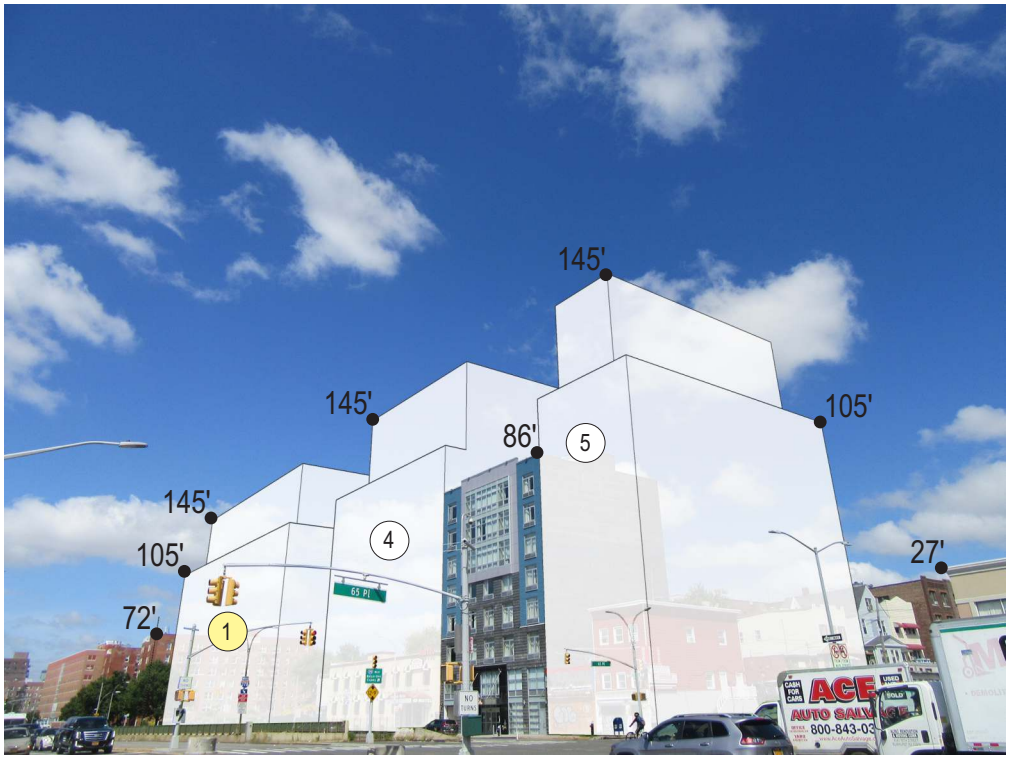
(#) Applicant-Controlled Projected Development Site (#) All Other Projected Development Sites

Urban Cartographics

Queens Boulevard, Queens
Urban Design Diagram

Without MIH
Queens Boulevard facing northwest (Site at right)

With MIH
Queens Boulevard facing northwest (Site at right)



(#) Applicant-Controlled Projected Development Site (#) All Other Projected Development Sites

Urban Cartographics

Queens Boulevard, Queens
Urban Design Diagram

Without MIH
47th Avenue facing east (Site at left)

2
3

With MIH
47th Avenue facing east (Site at left)

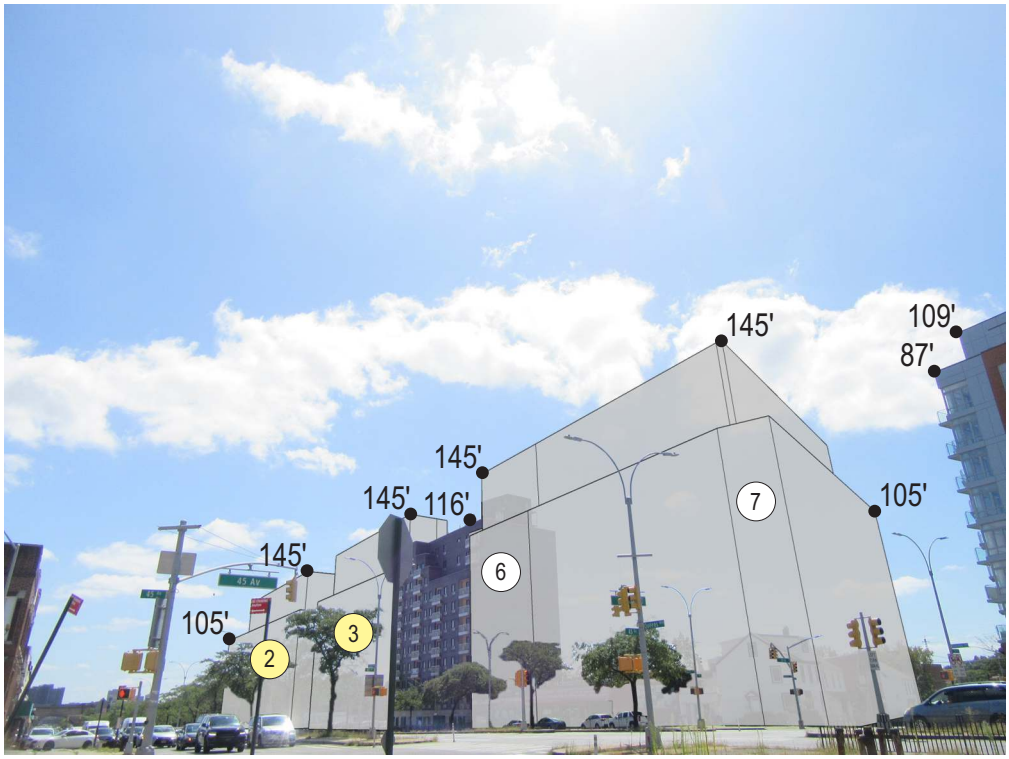
Applicant-Controlled Projected Development Site # All Other Projected Development Sites

Urban Cartographics

Queens Boulevard, Queens
Urban Design Diagram

Without MIH
Queens Boulevard facing southeast (Site at right)

With MIH
Queens Boulevard facing southeast (Site at right)



(#) Applicant-Controlled Projected Development Site (#) All Other Projected Development Sites

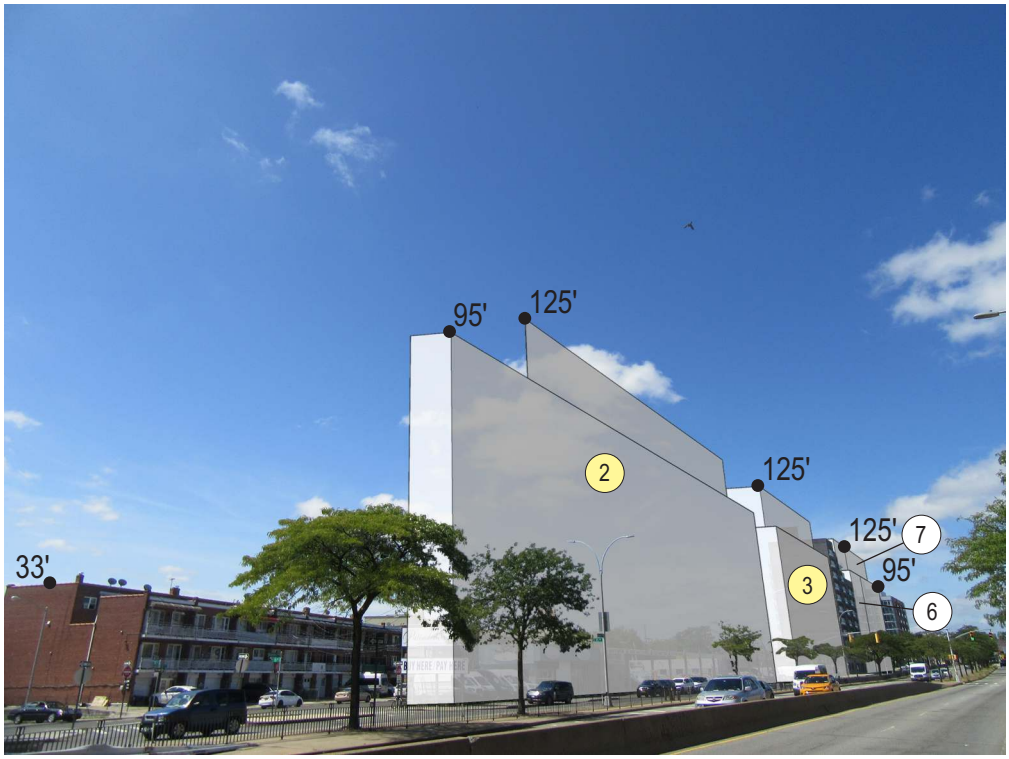
Urban Cartographics

Queens Boulevard, Queens

Urban Design Diagram

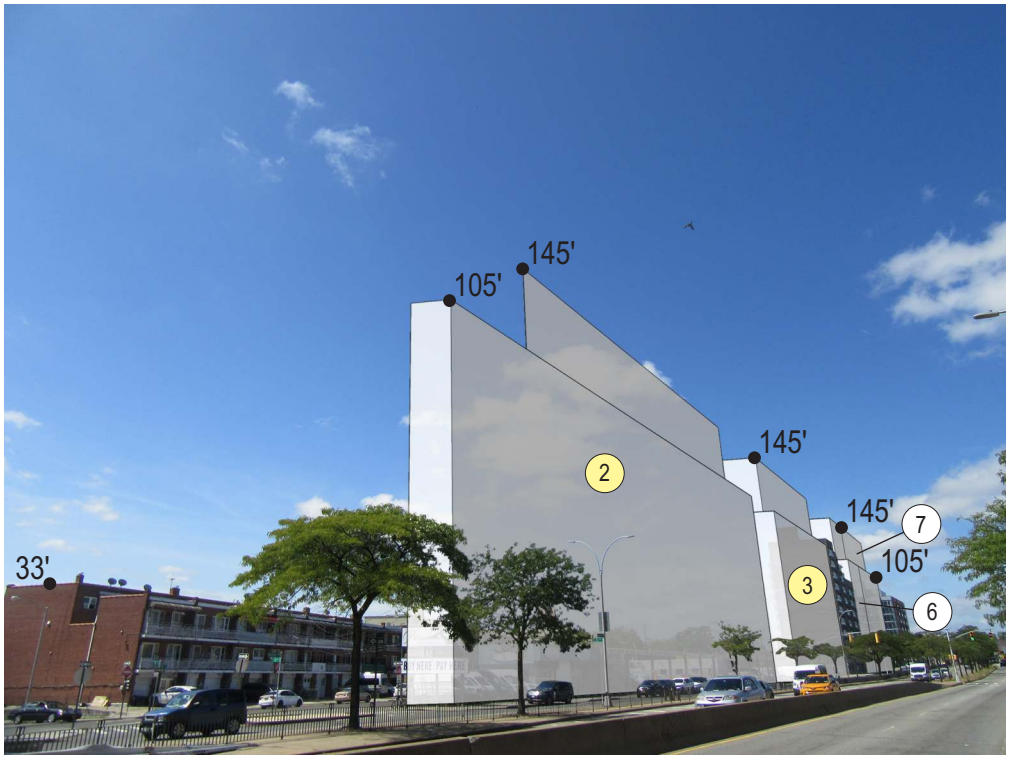
Without MIH

Queens Boulevard facing west (Site at left)



With MIH

Queens Boulevard facing west (Site at left)



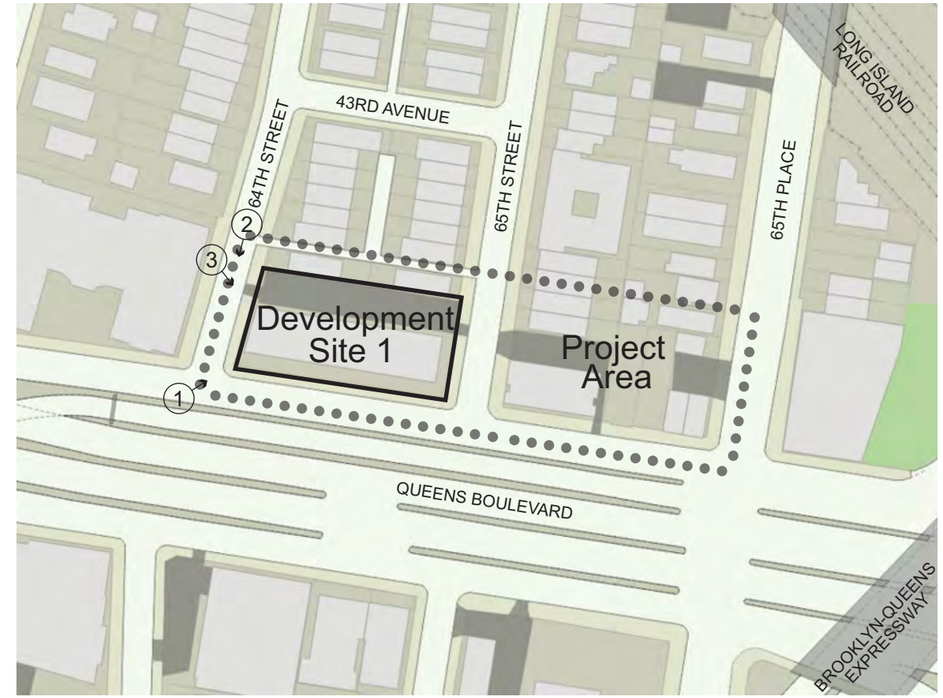
(#) Applicant-Controlled Projected Development Site (#) All Other Projected Development Sites

Urban Cartographics

1. View of Development Site 1 facing northeast from the intersection of Queens Boulevard and 64th Street.

2. View of 64th Street facing south (Development Site 1 at left).

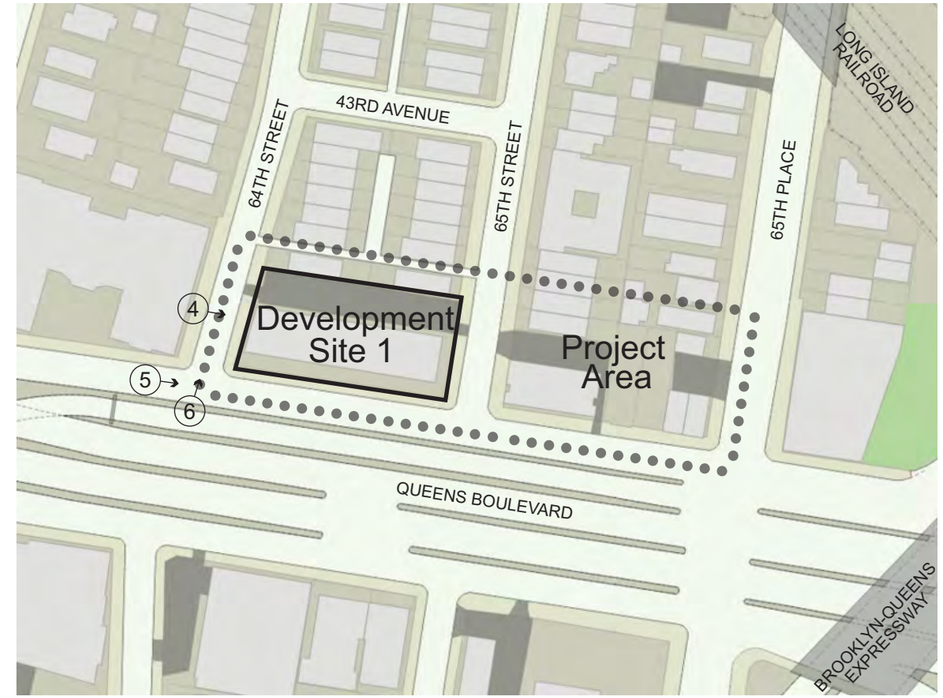
3. View of Development Site 1 facing southeast from 64th Street.



4. View of Development Site 1 facing east from 64th Street.

5. View of Queens Boulevard facing east from 64th Street (Development Site 1 at left).

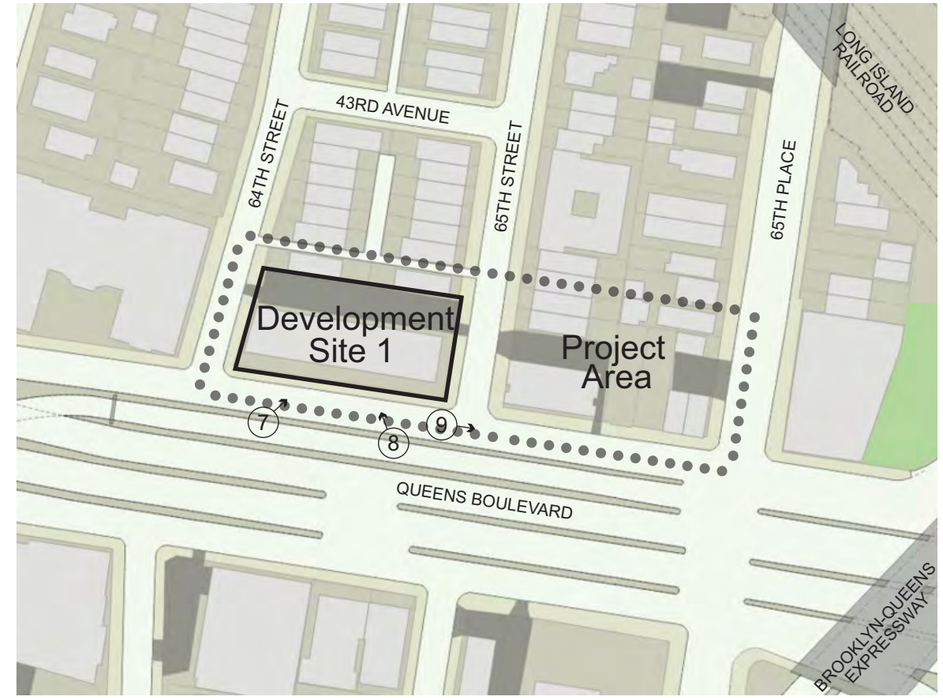
6. View of 64th Street facing north from Queens Boulevard (Development Site 1 at right).



7. View of Development Site 1 facing northeast from Queens Boulevard.

8. View of Development Site 1 facing northwest from Queens Boulevard.

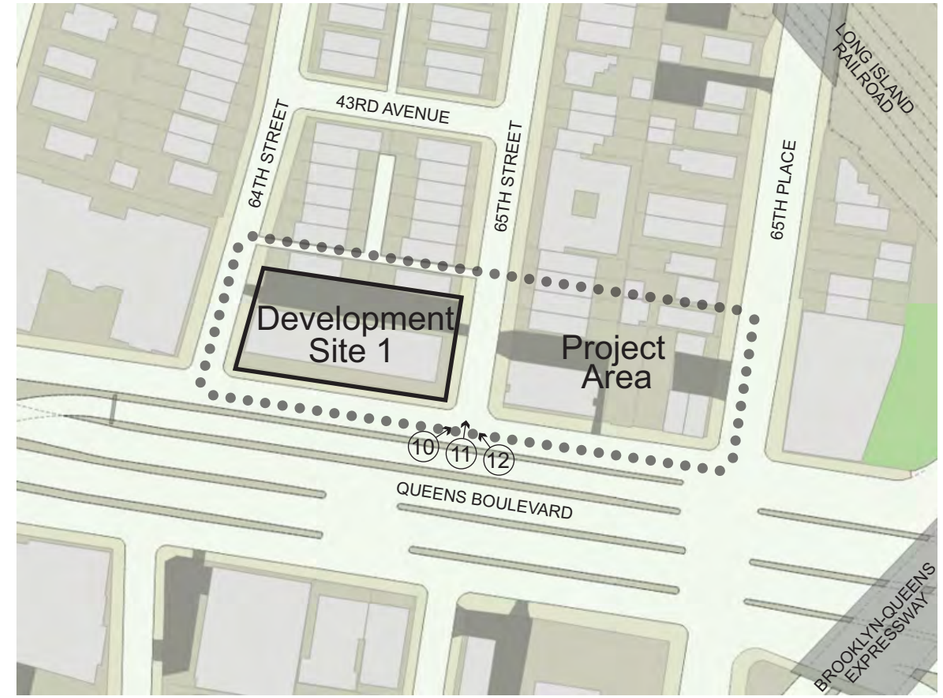
9. View of Queens Boulevard facing east from 65th Street (Project Area at left).



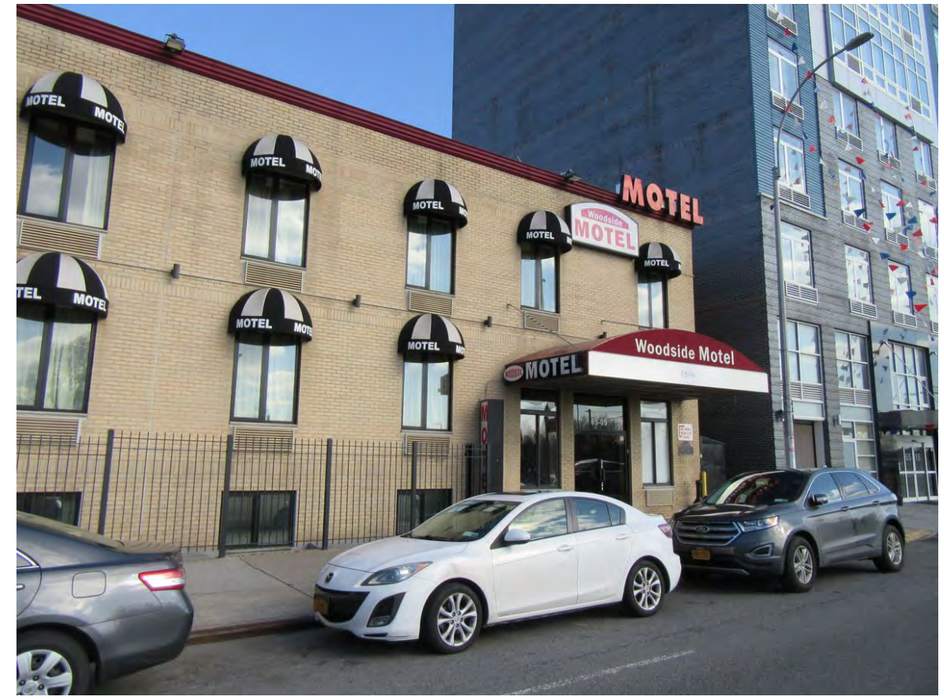
10. View of the Project Area facing northeast from the intersection of Queens Boulevard and 65th Street.

11. View of 65th Street facing north from Queens Boulevard (Development Site 1 at left).

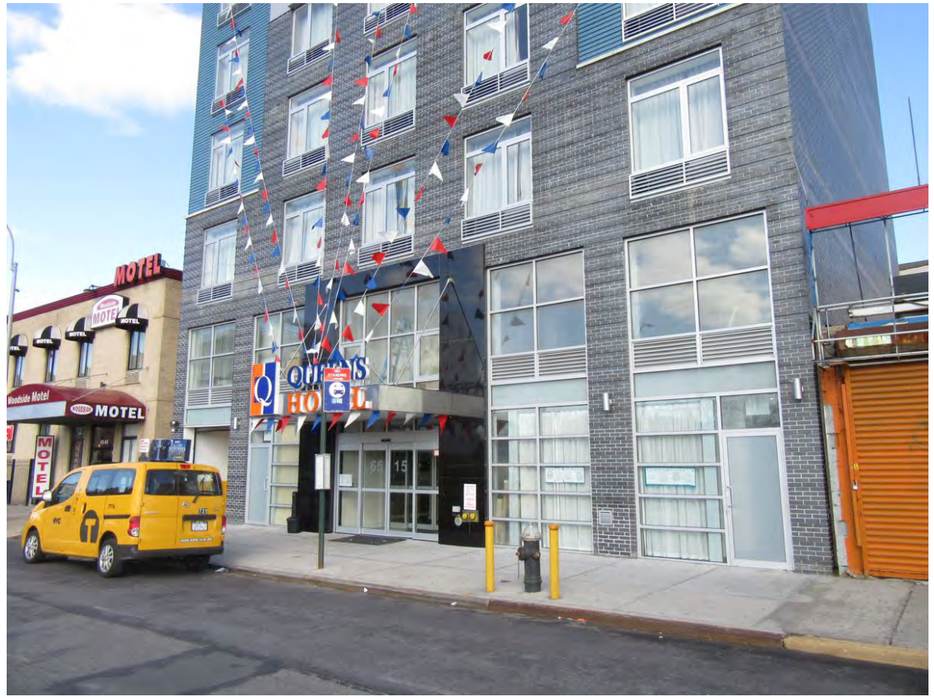
12. View of Development Site 1 facing northwest from the intersection of Queens Boulevard and 65th Street.



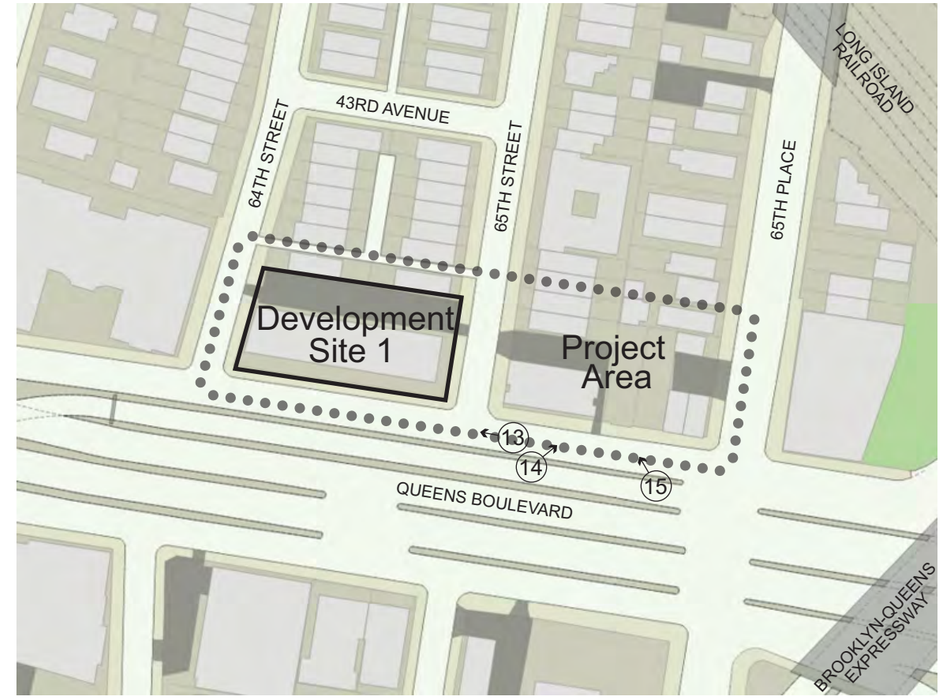
13. View of Queens Boulevard facing west from 65th Street (Development Site 1 at right).



14. View of the Project Area facing northeast from Queens Boulevard.



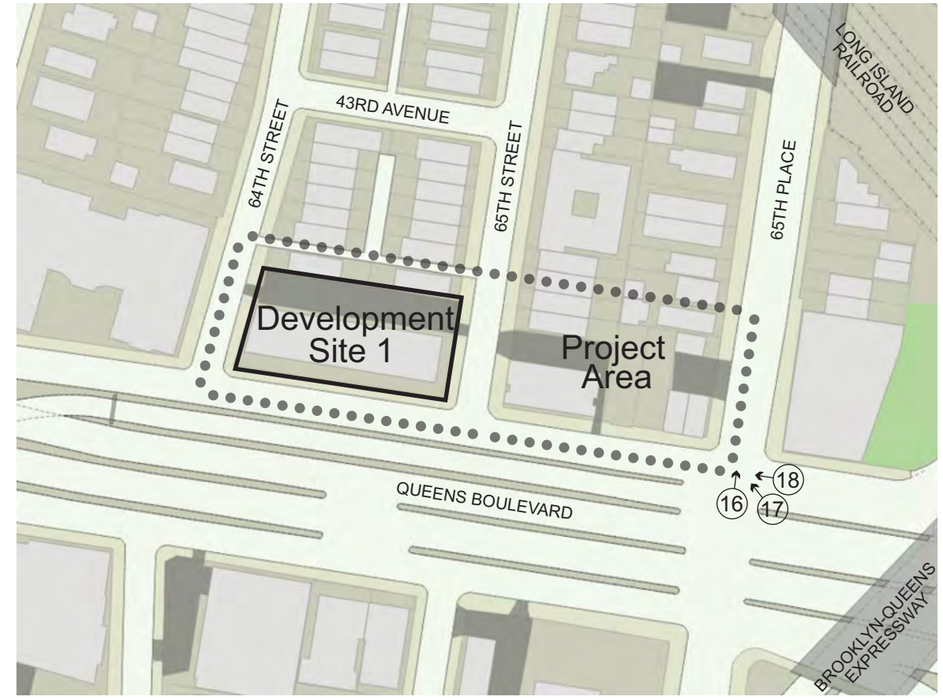
15. View of the Project Area facing northwest from Queens Boulevard.



16. View of 65th Place facing north from Queens Boulevard (Project Area at left).

17. View of the Project Area facing northwest from the intersection of Queens Boulevard and 65th Place.

18. View of Queens Boulevard facing west from 65th Place (Project Area at right).



19. View of the Project Area facing west from 65th Place.

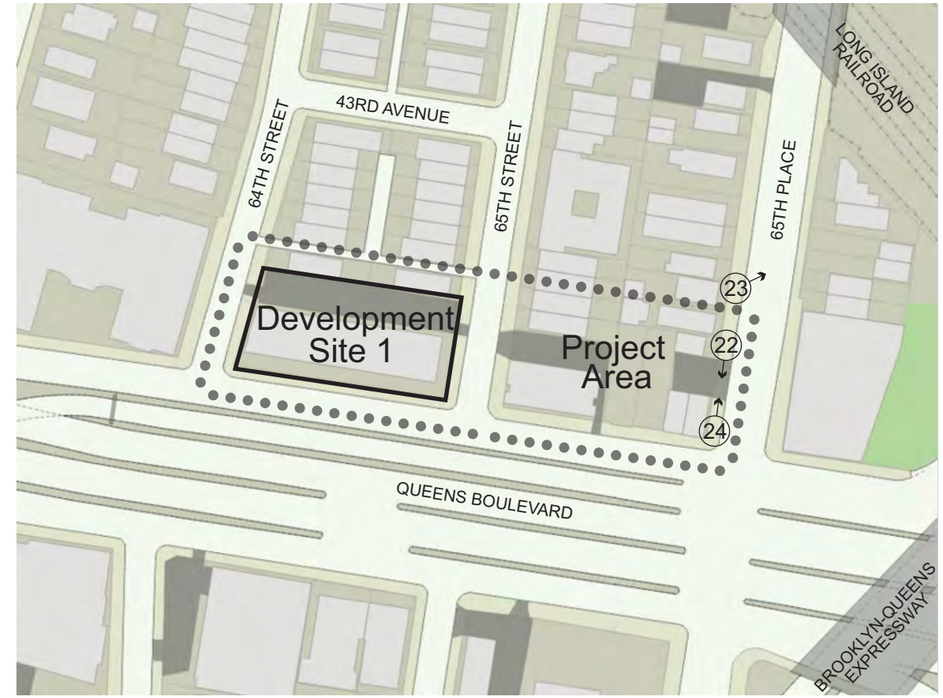
20. View of the Project Area facing southwest from 65th Place.

21. View of 65th Place facing south (Project Area at right).

22. View of the sidewalk along the west side of 65th Place facing south (Project Area at right).

23. View of the east side of 65th Place facing northeast from the Project Area.

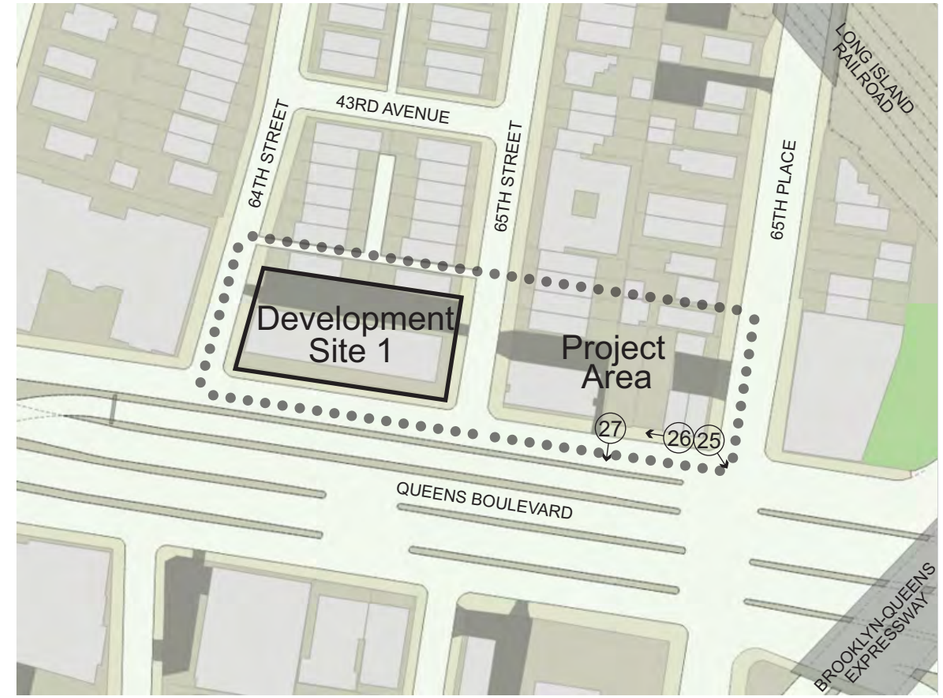
24. View of the sidewalk along the west side of 65th Place facing north from Queens Boulevard (Project Area at left).



25. View of the intersection of Queens Boulevard and 65th Place facing southeast from the Project Area.

26. View of the sidewalk along the north side of Queens Boulevard facing west from 65th Place (Project Area at right).

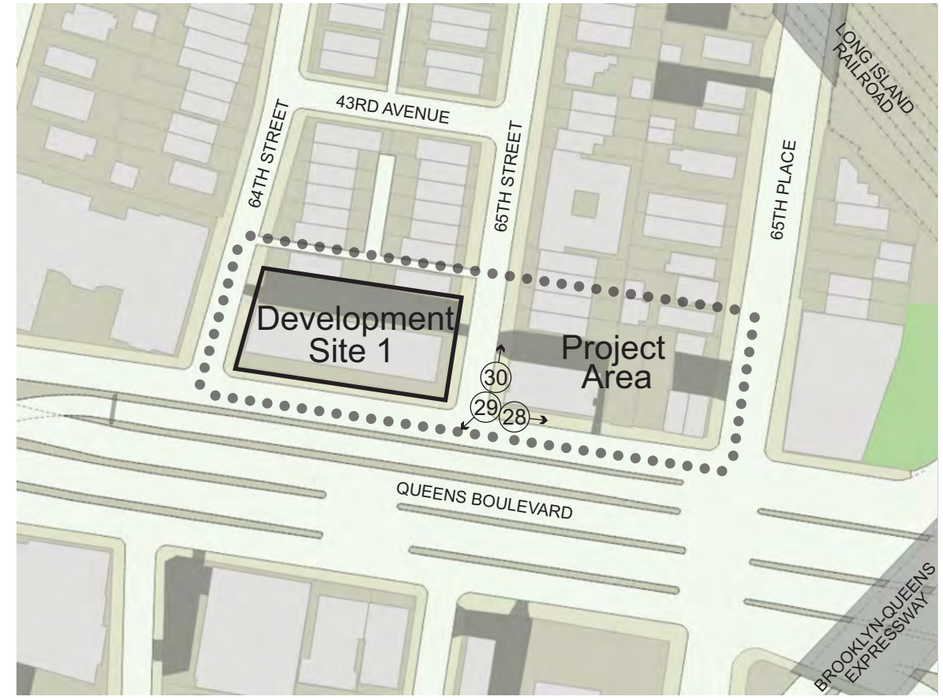
27. View of the south side of Queens Boulevard facing south from the Project Area.



28. View of the sidewalk along the north side of Queens Boulevard facing east from 65th Street (Project Area at left).

29. View of the intersection of Queens Boulevard and 65th Street facing southwest from the Project Area.

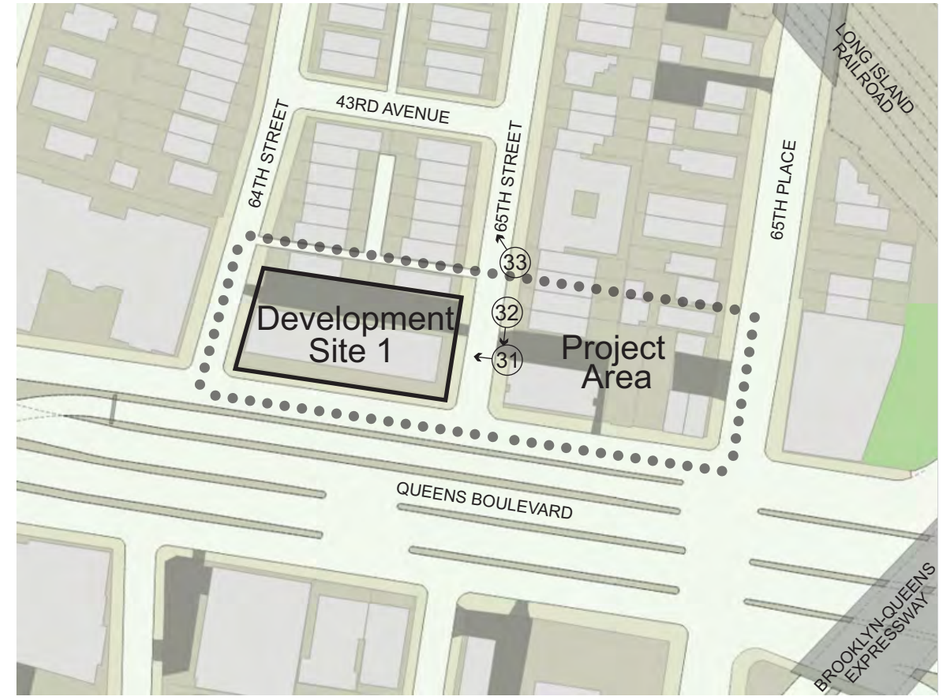
30. View of the sidewalk along the east side of 65th Street facing north from Queens Boulevard (Project Area at right).



31. View of Development Site 1 facing west from 65th Street.

32. View of the sidewalk along the east side of 65th Street facing south (Project Area at left).

33. View of the west side of 65th Street facing northwest from the Project Area.



34. View of Development Site 1 facing southwest from 65th Street.

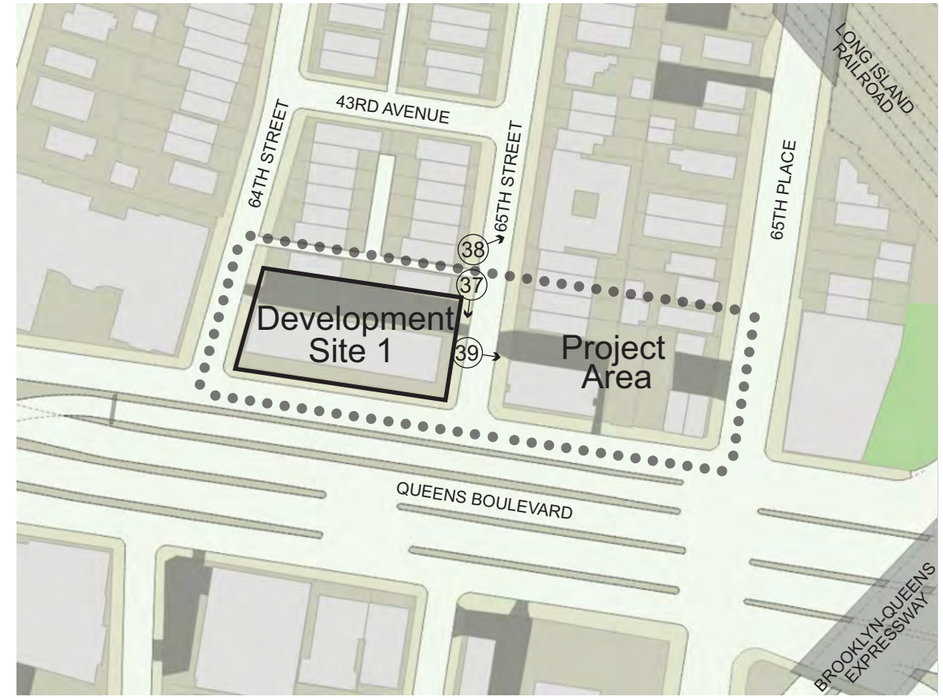
35. View of 65th Street facing south (Development Site 1 at right).

36. View of the Project Area facing southeast from 65th Street.

37. View of the sidewalk along the west side of 65th Street facing south (Development Site 1 at right).

38. View of the east side of 65th Street facing northwest from Development Site 1.

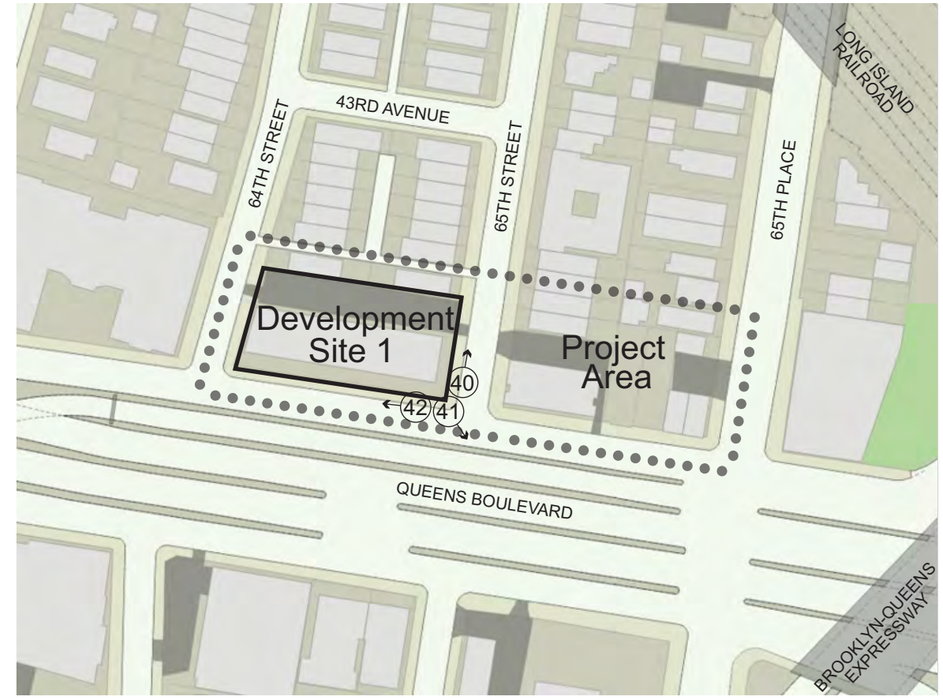
39. View of the Project Area facing east from Development Site 1.



40. View of the sidewalk along the west side of 65th Street facing north from Queens Boulevard (Development Site 1 at left).

41. View of the intersection of Queens Boulevard and 65th Street facing southeast from Development Site 1.

42. View of the sidewalk along the north side of Queens Boulevard facing west from 65th Street (Development Site 1 at right).



43. View of the south side of Queens Boulevard facing south from Development Site 1.

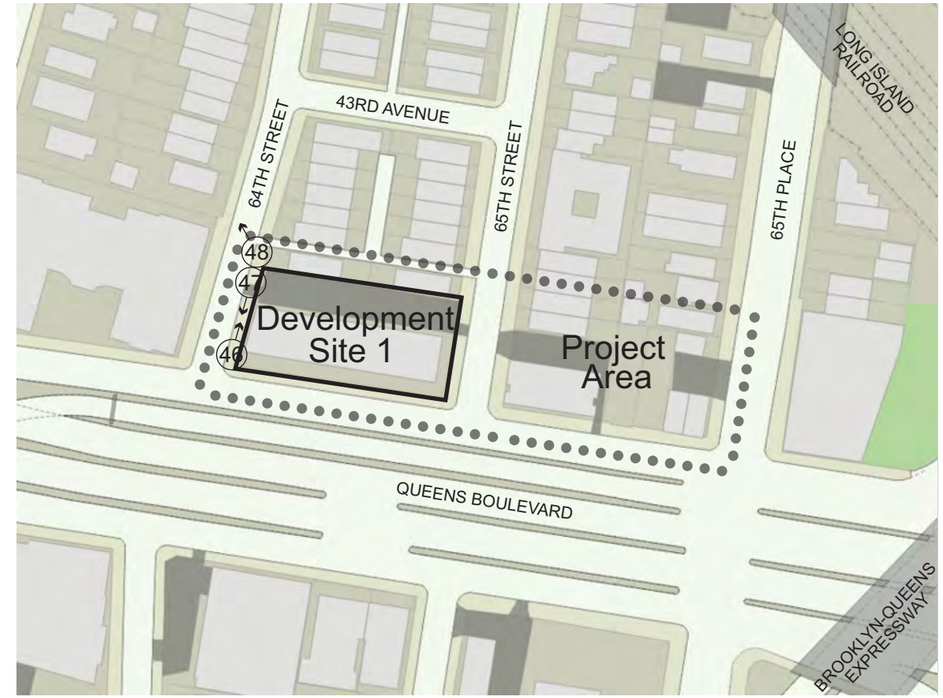
44. View of the sidewalk along the north side of Queens Boulevard facing east from 64th Street (Development Site 1 at left).

45. View of the intersection of Queens Boulevard and 64th Street facing southwest from Development Site 1.

46. View of the sidewalk along the east side of 64th Street facing north from Queens Boulevard (Development Site 1 at right).

47. View of the sidewalk along the east side of 64th Street facing south (Development Site 1 at left).

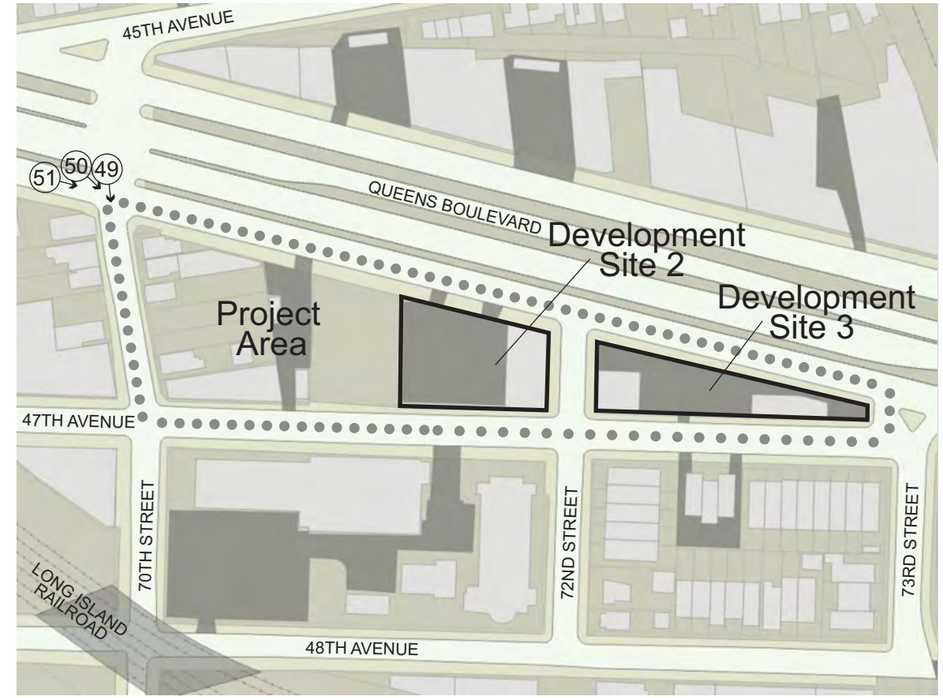
48. View of the west side of 64th Street facing northwest from Development Site 1.



49. View of 70th Street facing south from Queens Boulevard (Project Area at left).

50. View of the Project Area facing southeast from the intersection of Queens Boulevard and 70th Street.

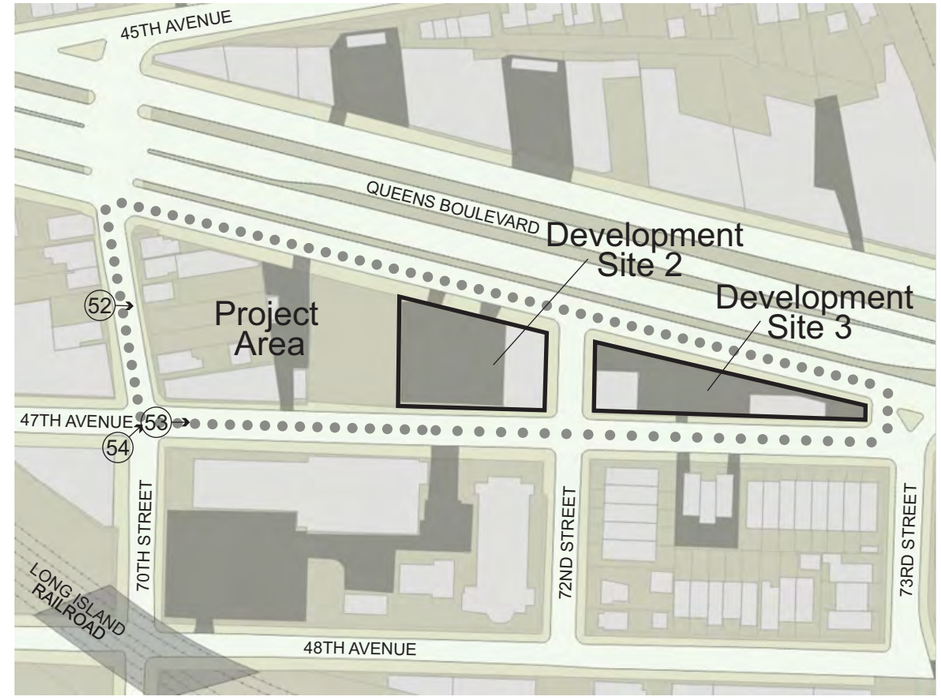
51. View of Queens Boulevard facing southeast from 70th Street (Project Area at right).



52. View of the Project Area facing east from 70th Street.

53. View of 47th Avenue facing east from 70th Street (Project Area at left).

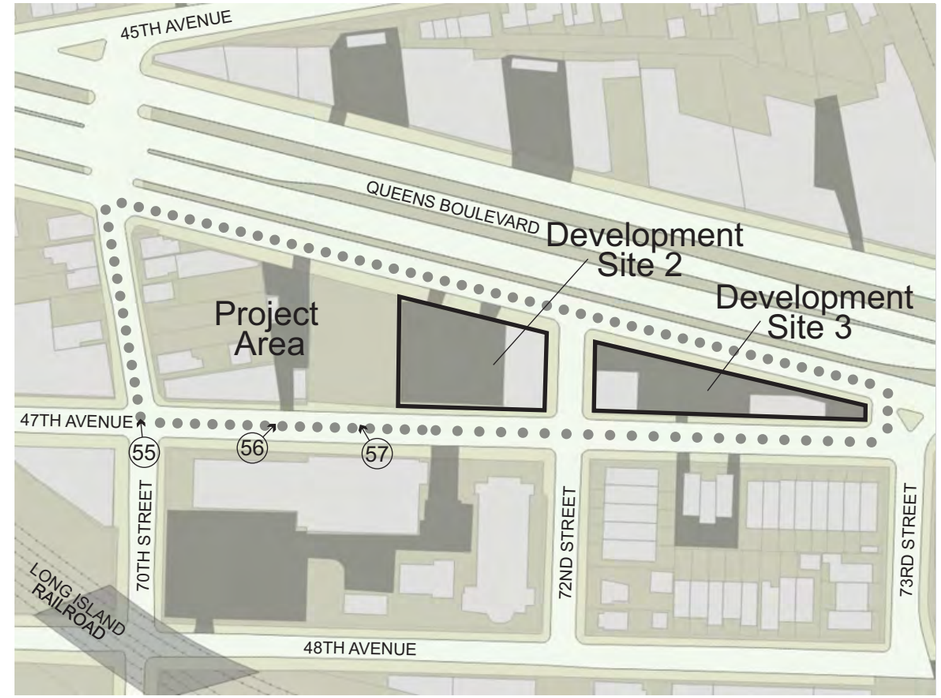
54. View of the Project Area facing northeast from the intersection of 47th Avenue and 70th Street.



55. View of 70th Street facing north from 47th Avenue (Project Area at right).

56. View of the Project Area facing northeast from 47th Avenue.

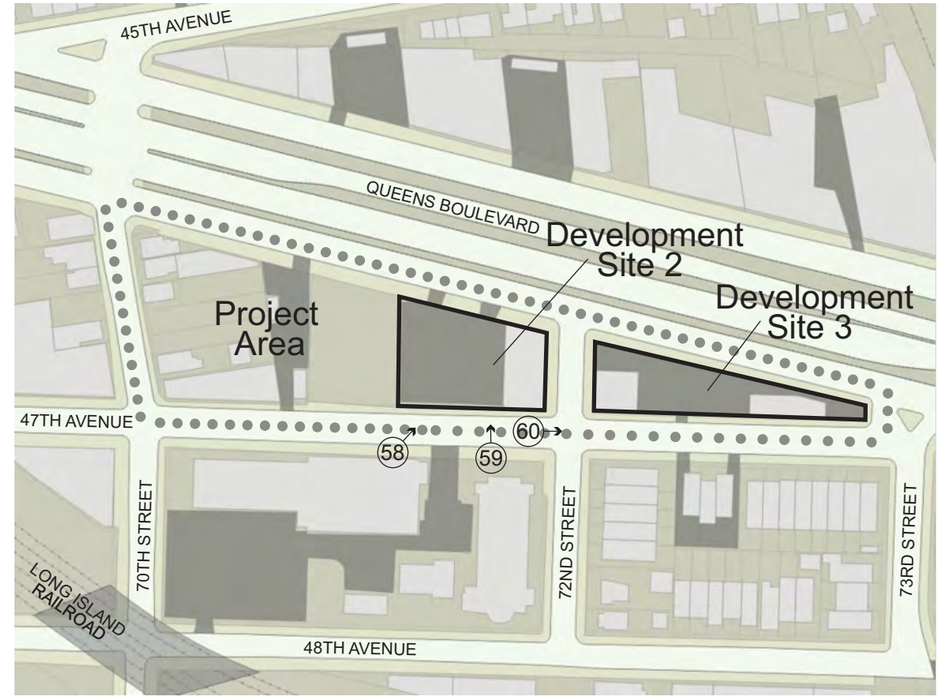
57. View of the Project Area facing northwest from 47th Avenue.



58. View of Development Site 2 facing northeast from 47th Avenue.

59. View of Development Site 2 facing north from 47th Avenue.

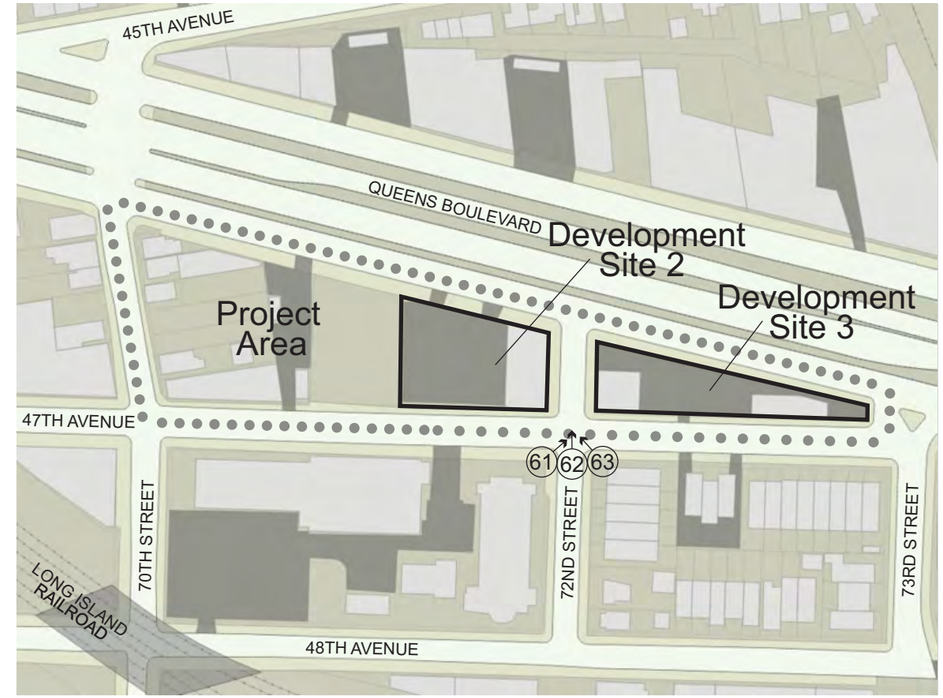
60. View of 47th Avenue facing east from
72nd Street (Development Site 3 at left).



61. View of Development Site 3 facing northeast from the intersection of 47th Avenue and 72nd Street.

62. View of 72nd Street facing north from 47th Avenue (Development Site 2 at left, Development Site 3 at right).

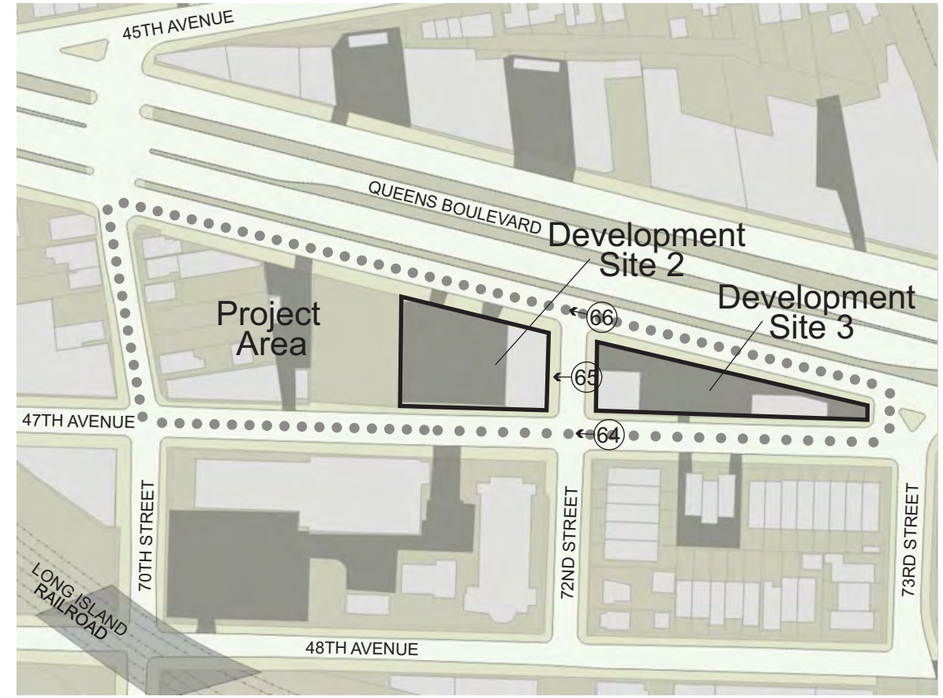
63. View of Development Site 2 facing northwest from the intersection of 47th Avenue and 72nd Street.



64. View of 47th Avenue facing west from 72nd Street (Development Site 2 at right).

65. View of Development Site 2 facing west from 72nd Street.

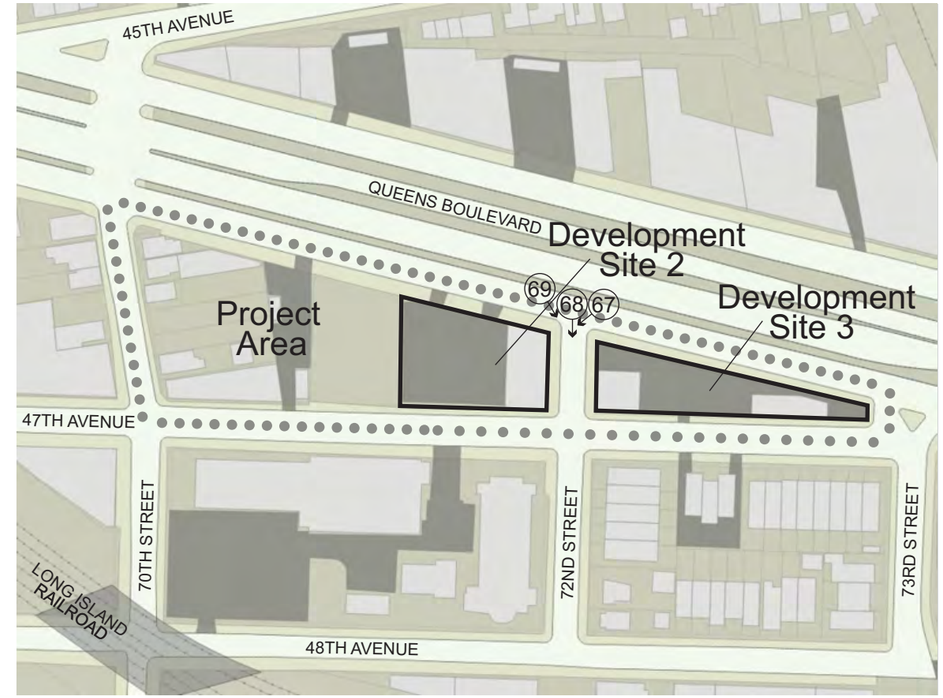
66. View of Queens Boulevard facing northwest from 72nd Street (Development Site 2 at left).



67. View of Development Site 2 facing southwest from Queens Boulevard.

68. View of 72nd Street facing south from Queens Boulevard (Development Site 2 at right, Development Site 3 at left).

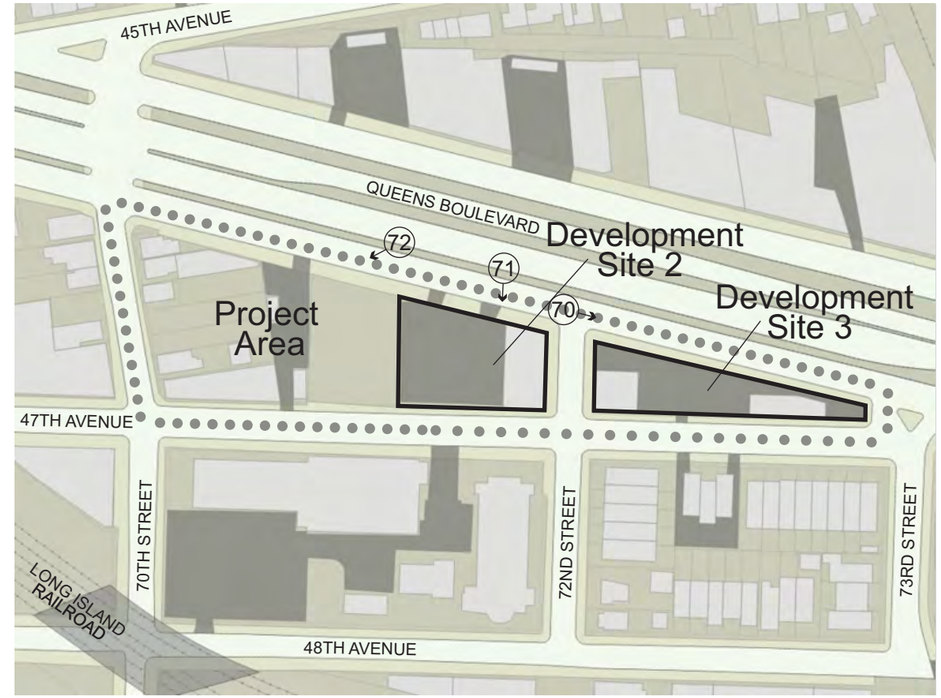
69. View of Development Site 3 facing southeast from the intersection of Queens Boulevard and 72nd Street.



70. View of Queens Boulevard facing southeast from 72nd Street (Development Site 3 at right).

71. View of Development Site 2 facing south from Queens Boulevard.

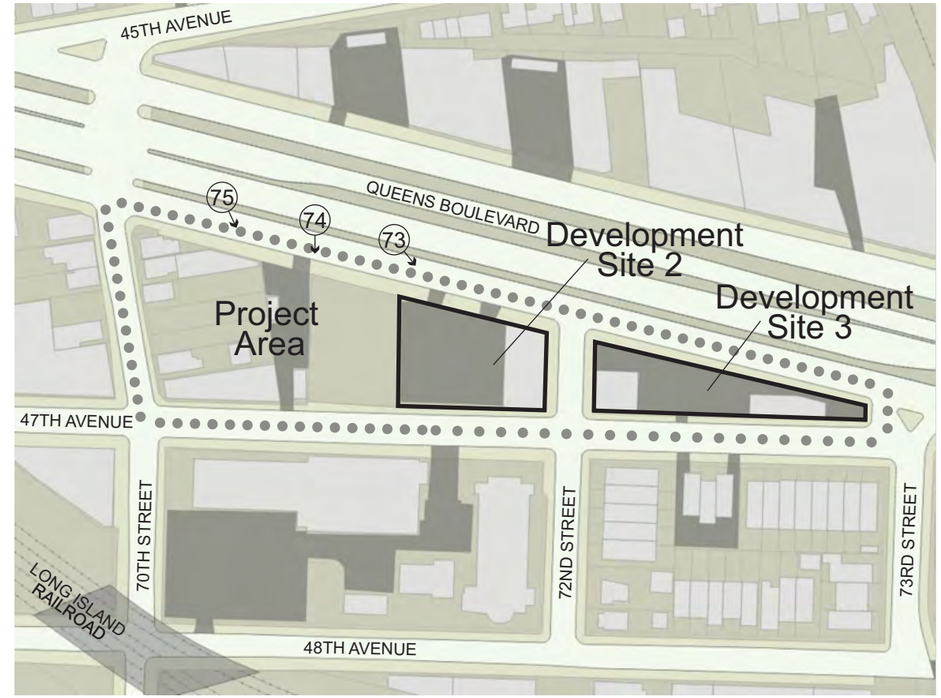
72. View of the Project Area facing southwest from Queens Boulevard.



73. View of Development Site 2 facing southeast from Queens Boulevard.

74. View of the Project Area facing south from Queens Boulevard.

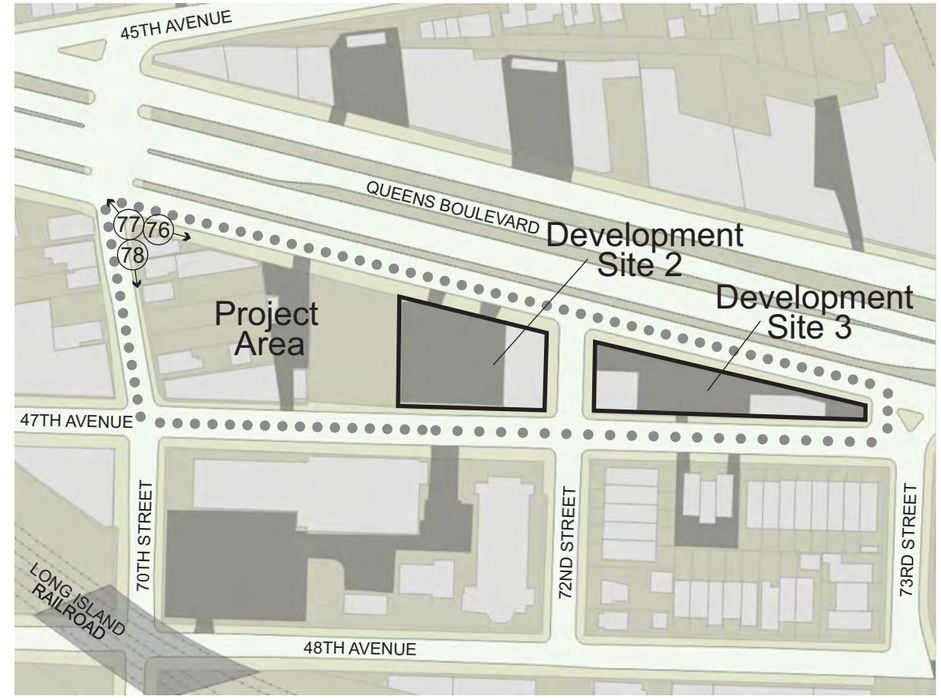
75. View of the Project Area facing southeast from Queens Boulevard.



76. View of the sidewalk along the south side of Queens Boulevard facing southeast from 70th Street (Project Area at right).

77. View of the intersection of Queens Boulevard and 70th Street facing northwest from the Project Area.

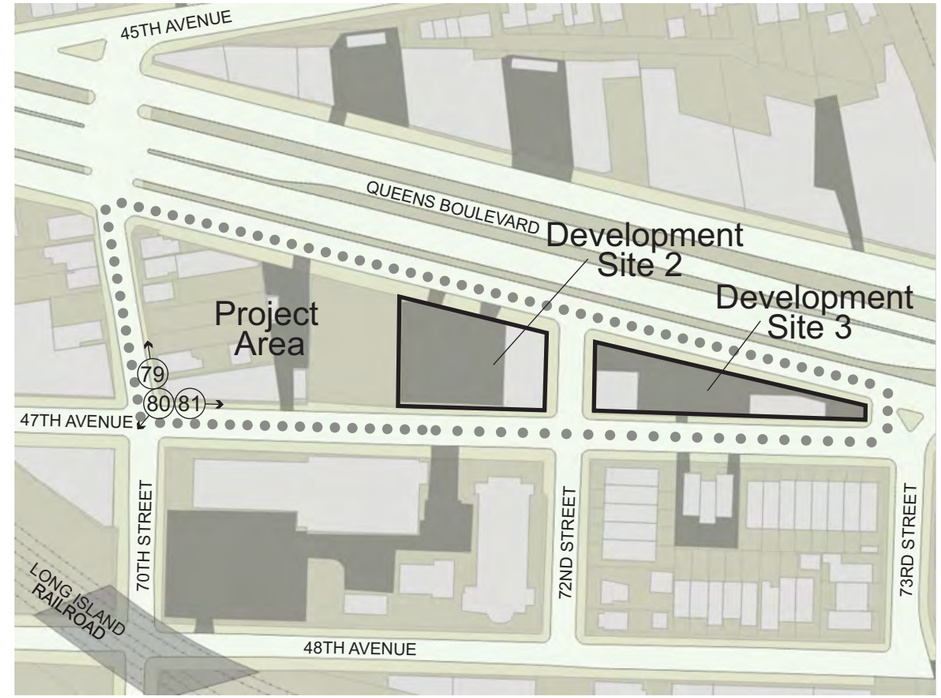
78. View of the sidewalk along the east side of 70th Street facing south from Queens Boulevard (Project Area at left).



79. View of the sidewalk along the east side of 70th Street facing north from 47th Avenue (Project Area at right).

80. View of the intersection of 47th Avenue and 70th Street facing southwest from the Project Area.

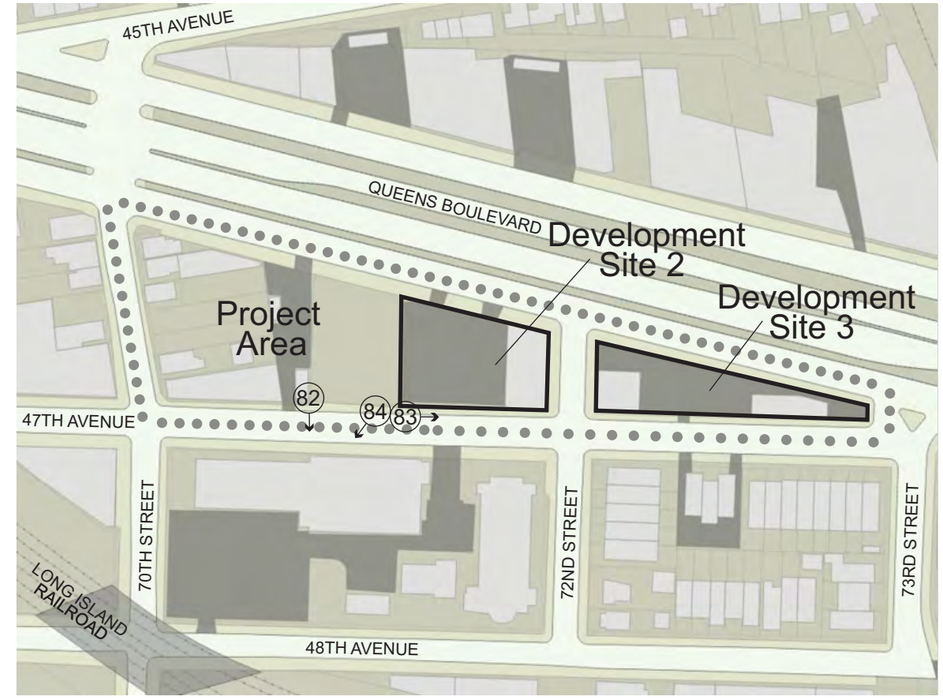
81. View of the sidewalk along the north side of 47th Avenue facing east from 70th Street (Project Area at left).



82. View of the south side of 47th Avenue
facing south from the Project Area.

83. View of the sidewalk along the north side of 47th Avenue
facing west (Development Site 2 at left).

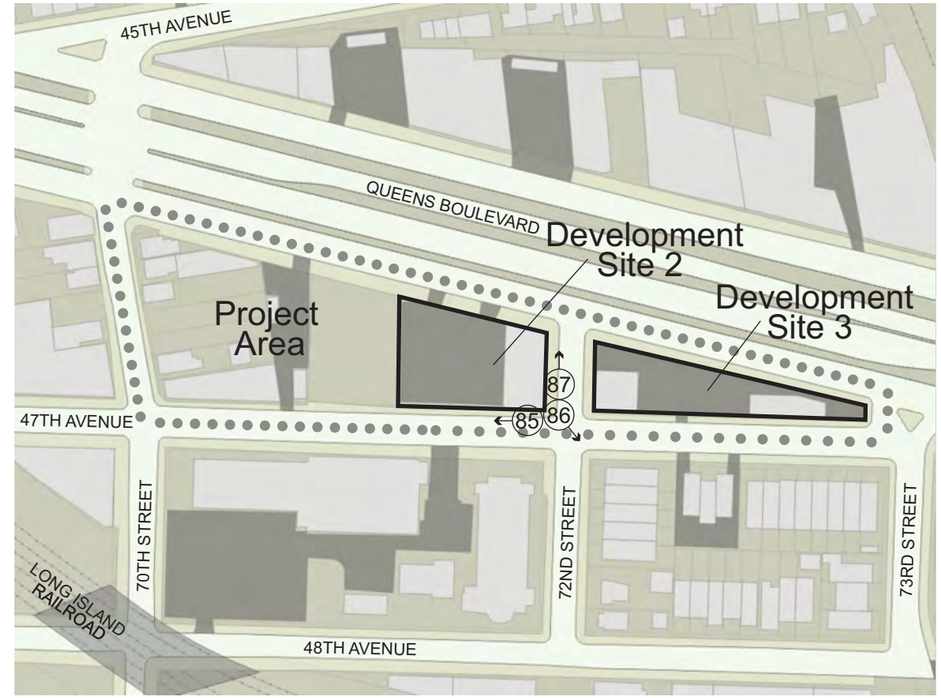
84. View of the south side of 47th Avenue
facing southwest from Development Site 2.



85. View of the sidewalk along the north side of 47th Avenue facing west from 72nd Street (Development Site 2 at right).

86. View of the intersection of 47th Avenue and 72nd Street facing southeast from Development Site 2.

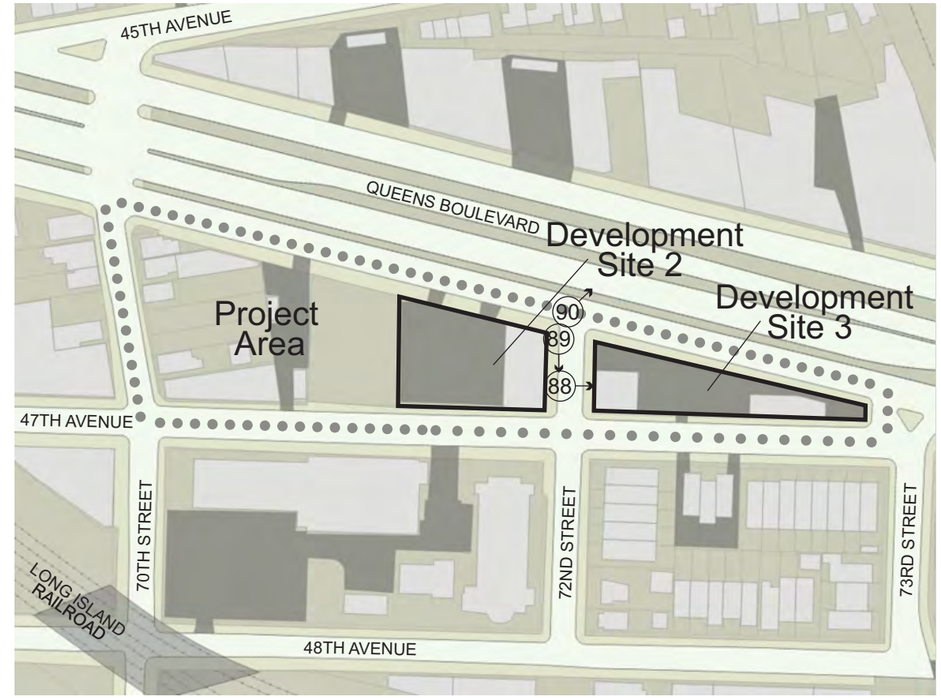
87. View of the sidewalk along the west side of 72nd Street facing north from 47th Avenue (Development Site 2 at left).



88. View of Development Site 3 facing east from 72nd Street.

89. View of the sidewalk along the west side of 72nd Street facing south from Queens Boulevard (Development Site 2 at right).

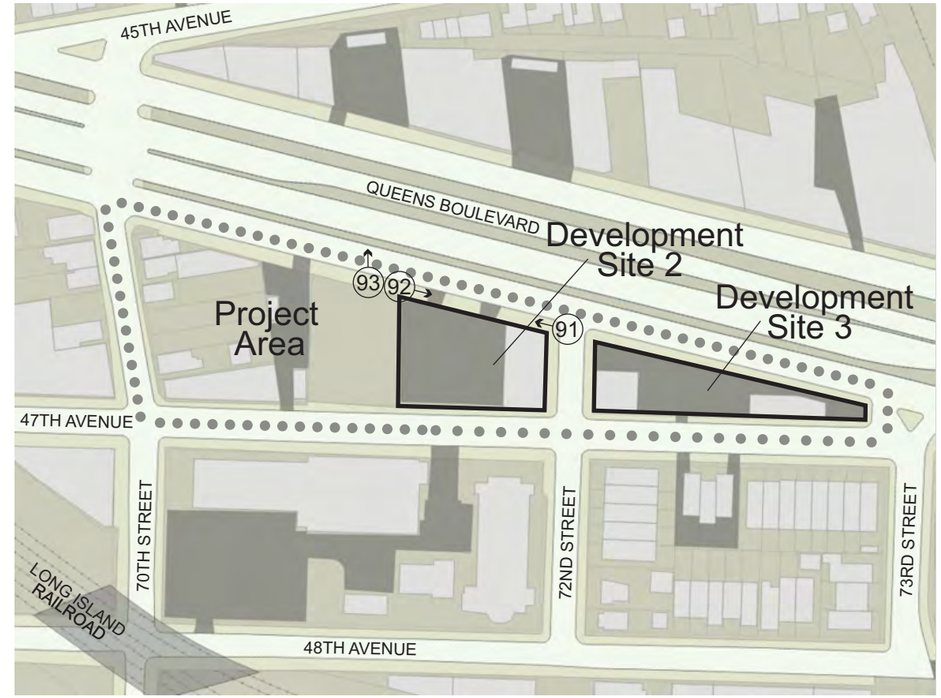
90. View of the intersection of Queens Boulevard and 72nd Street facing northeast from Development Site 2.



91. View of the sidewalk along the south side of Queens Boulevard facing northwest from 72nd Street (Development Site at left).

92. View of the sidewalk along the south side of Queens Boulevard facing southeast (Development Site 2 at right).

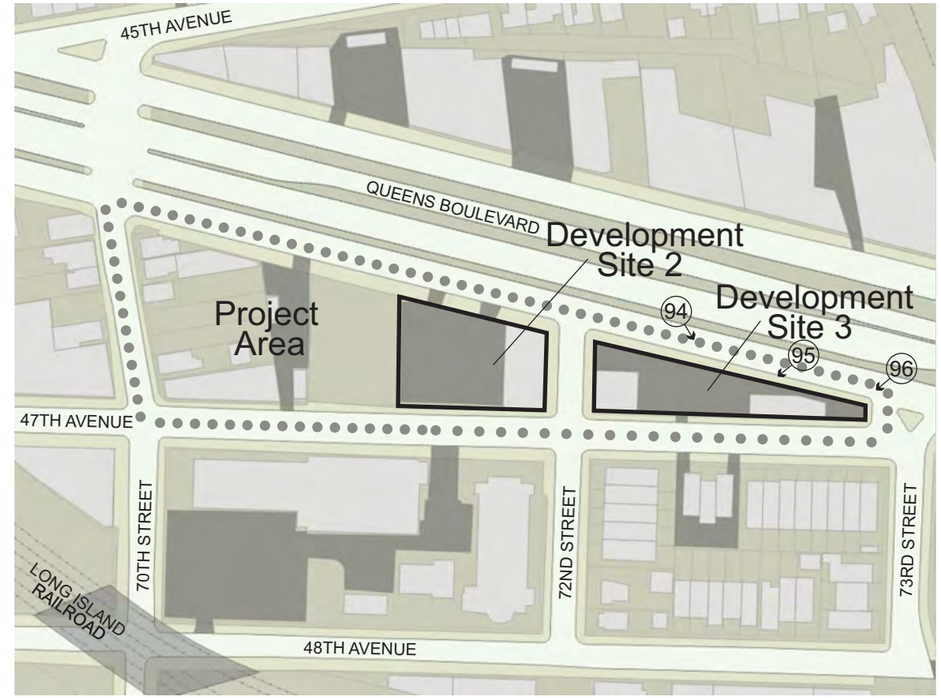
93. View of the north side of Queens Boulevard facing north from the Project Area.



94. View of Development Site 3 facing southeast from Queens Boulevard.

95. View of Development Site 3 facing southwest from Queens Boulevard.

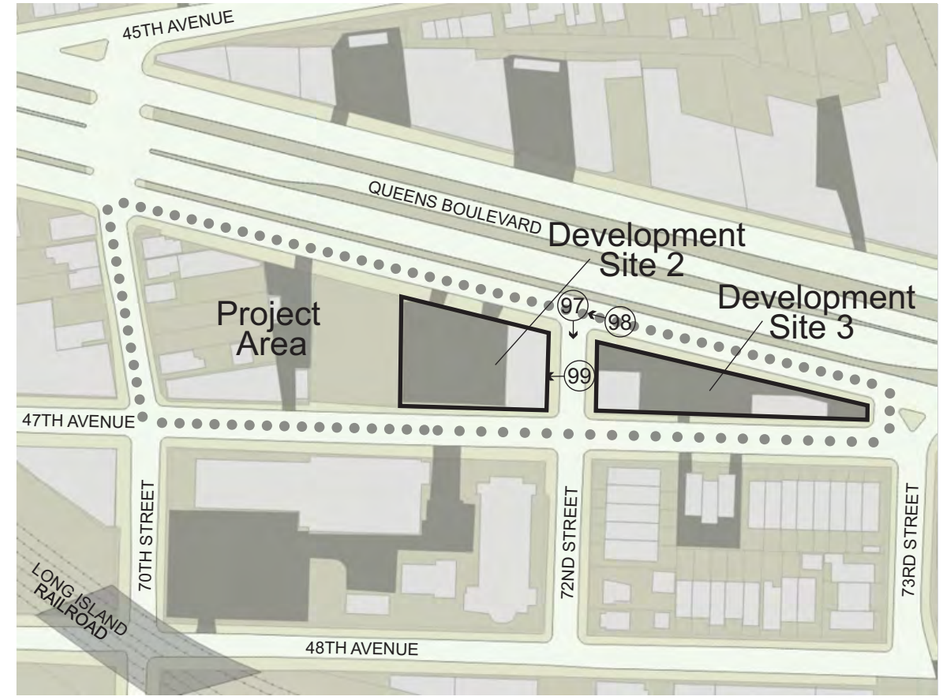
96. View of Development Site 3 facing southwest from the intersection of Queens Boulevard and 73rd Street.



97. View of 73rd Street facing south from
Queens Boulevard (Development Site 3 at right).

98. View of Queens Boulevard facing northwest
from 73rd Street (Development Site 3 at left).

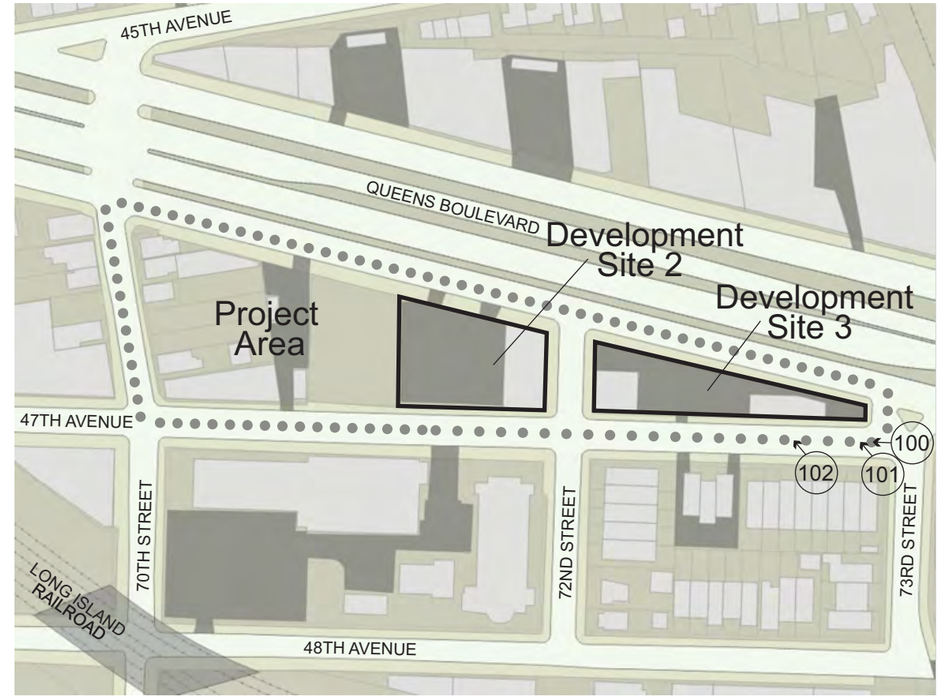
99. View of Development Site 3 facing west from 73rd Street.



100. View of 47th Avenue facing west from 73rd Street (Development Site 3 at right).

101. View of Development Site 3 facing northwest from the intersection of 47th Avenue and 73rd Street.

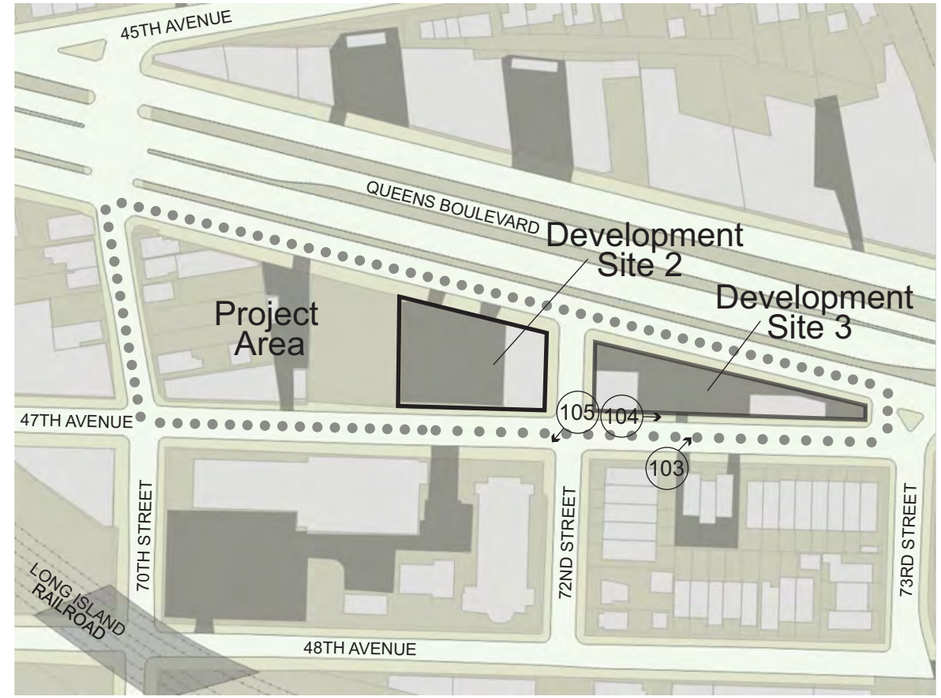
102. View of Development Site 3 facing northwest from 47th Avenue.



103. View of Development Site 3 facing northeast from 47th Avenue.

104. View of the sidewalk along the north side of 47th Avenue facing east from 72nd Street (Development Site 3 at left).

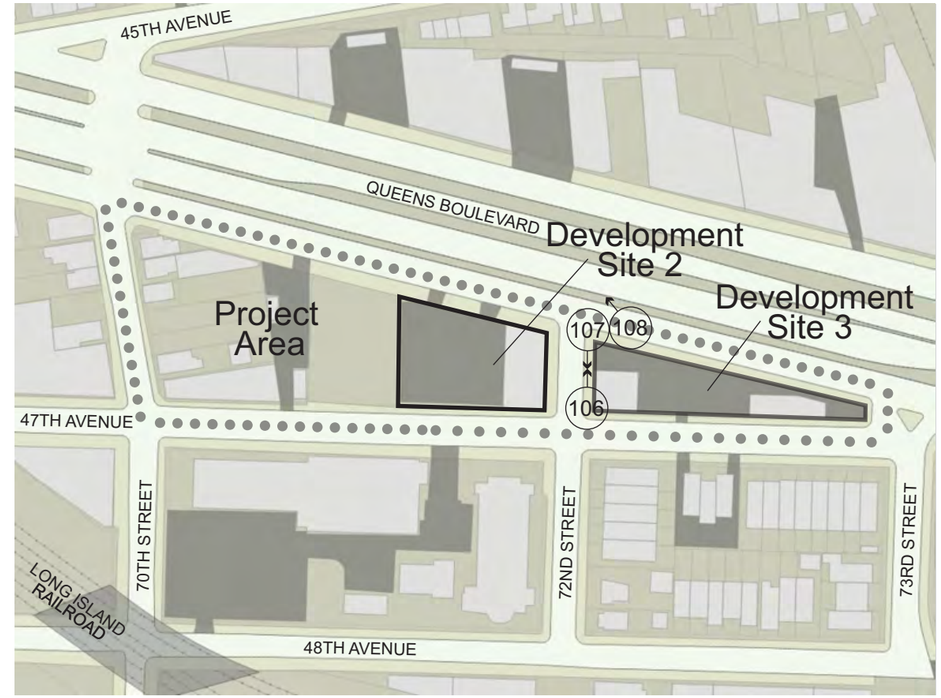
105. View of the intersection of 47th Avenue and 72nd Street facing southwest from Development Site 3.



37. View of the sidewalk along the east side of 72nd Street facing north from 47th Avenue (Development Site 3 at right).

38. View of the sidewalk along the east side of 72nd Street facing south from Queens Boulevard (Development Site 3 at left).

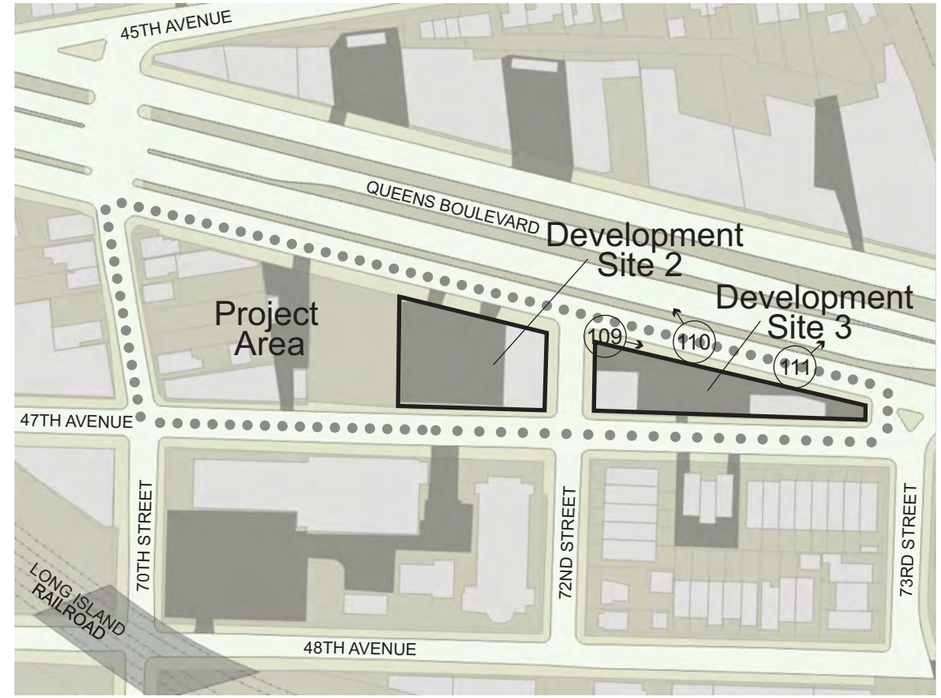
36. View of the intersection of Queens Boulevard and 72nd Street facing northwest from Development Site 3.



109. View of the sidewalk along the south side of Queens Boulevard facing southeast from 72nd Street (Development Site 3 at right).

110. View of the north side of Queens Boulevard facing northwest from Development Site 3.

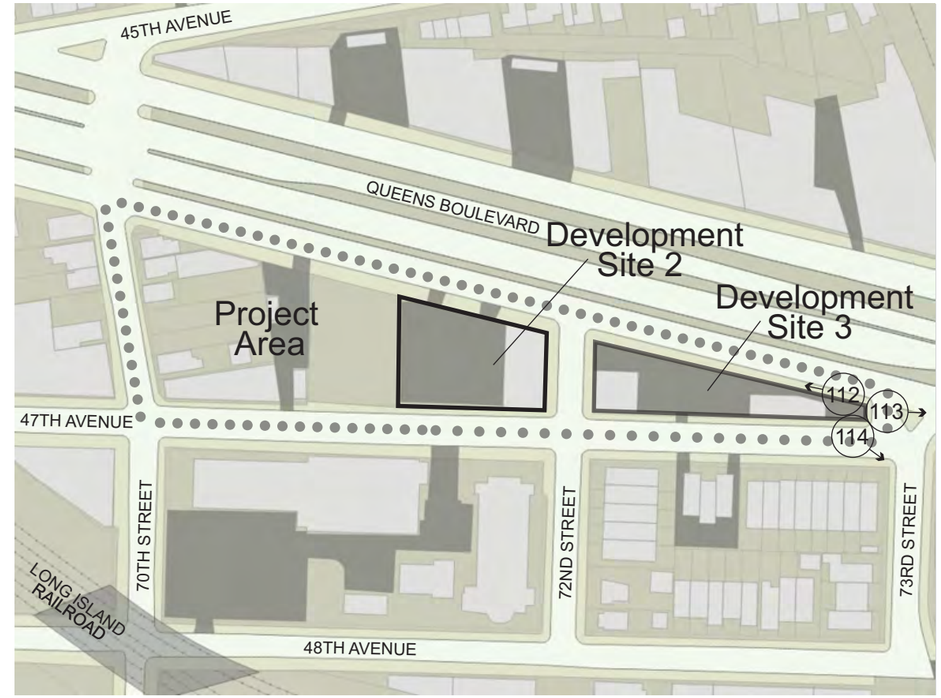
111. View of the north side of Queens Boulevard facing northeast from Development Site 3.



112. View of the sidewalk along the south side of Queens Boulevard facing northwest from 73rd Street (Development Site 3 at left).

113. View of the intersection of Queens Boulevard and 73rd Street facing east from Development Site 3.

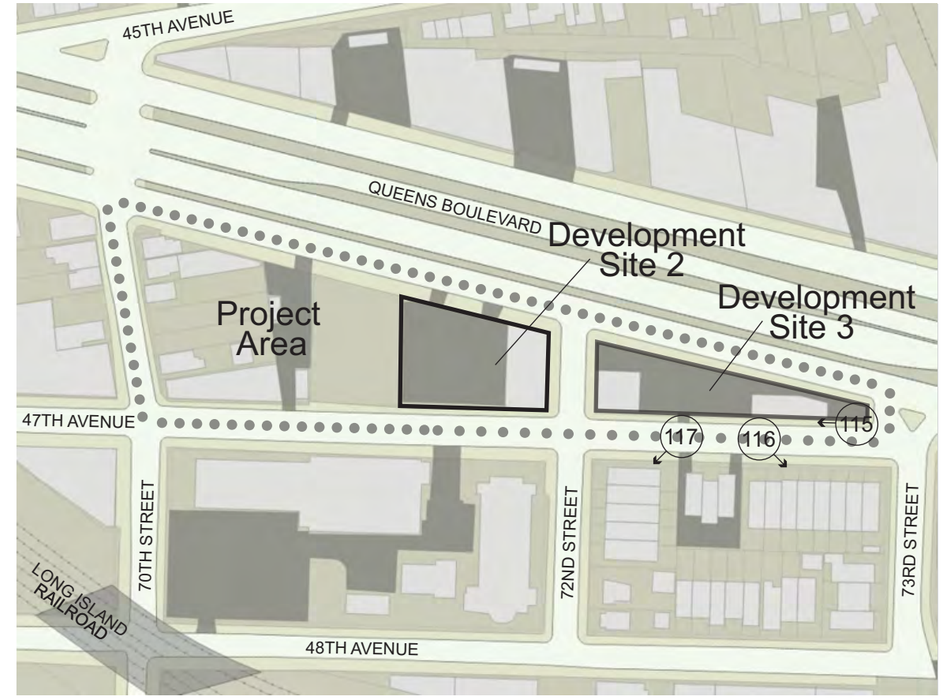
114. View of the intersection of 47th Avenue and 73rd Street facing southeast from Development Site 3.



115. View of the sidewalk along the north side of 47th Avenue facing west from 73rd Street (Development Site 3 at right).

116. View of the south side of 47th Avenue facing southeast from Development Site 3.

117. View of the south side of 47th Avenue facing southwest from Development Site 3.



12. HAZARDOUS MATERIALS

Introduction

A hazardous materials assessment is conducted to determine whether the proposed project may increase the exposure of people or the environment to hazardous materials and, if so, whether this increased exposure would result in potential significant public health or environmental impacts.

This section examines the proposed action's potential to cause a significant adverse hazardous materials impact by leading to redevelopment or other activities that could expose people to hazardous materials, either by introducing land uses that would involve the use or storage of such materials or by increasing pathways to exposure to existing hazardous materials that contaminate portions of the proposed rezoning area as a result of current or past activities. A hazardous material is any substance that poses a threat to human health or the environment; such substances typically include heavy metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, dioxins, and other toxic, corrosive, or flammable waste products of industrial or other processes. Manufacturing operations, automotive repair shops, gasoline service stations, dry cleaners, exterminators, chemical laboratories, junk yards, solid waste transfer stations, welding shops, and printers are among those land uses that may be associated with subsequent hazardous materials contamination of soil or groundwater, as well as any land use with underground fuel storage tanks.

Existing Environmental Controls

As part of the Maspeth/Woodside Rezoning, E-designations for hazardous materials were places on three properties within the Project Area. Projected Development Site 1 (Block 1341, Lot 77), Projected Development Site 3 (Block 2444, Lot 40) and Projected Development Site 6 (Block 2555, Lot 57) received E-designation E-163 under the Maspeth/Woodside rezoning. The E-designation provides an underground gasoline storage tank testing protocol that requires sampling and remediation prior to any development. With this control in place, no significant adverse impacts would occur on Projected Development Sites 1, 3, and 6.

Phase I ESA for Projected Development Site 1

A Phase I Environmental Site Assessment (ESA) was prepared for Projected Development Site 1 (Block 1341, Lot 77) in January 2017. The site reconnaissance, interviews and review of records did not find the presence or possible presence of hazardous substances or petroleum related products in, on, or at Projected Development Site 1 due to any release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The Phase I ESA concluded that no further testing (subsurface or

otherwise) is warranted on the property. Even so, any development on the property would occur only after the requirements of the E-designation are met.

Conclusion

There will be no new excavation included in the increment for analysis in the future with-action scenario; the full extent of the projected excavation is allowed (and anticipated) as-of-right in the no-action condition.

The existing "E" designations on Projected Development Sites 1, 3, and 6 will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance on the properties. E-designations, testing or remedial measures for the remaining development sites will be discussed with EARD and DEP.

17. AIR QUALITY

Introduction

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 2014 Technical Manual*. The potential air quality impacts of the following emission sources were evaluated:

- Vehicular emission resulting from increased vehicular traffic and/or changes to traffic pattern.
- Vehicular emission associated with off-street parking facilities.
- Vehicular emission generated at an atypical (*e.g.*, not at-grade) roadway.
- Emission from the burning of fossil fuels in the heating, ventilation and air conditioning (HVAC) equipment of the proposed developments.
- Air toxics emission released from industrial or manufacturing facilities.
- Stationary source emissions of facilities that require Prevention of Significant Deterioration permits (Title V facilities), and facilities which require a state facility permit.
- Facilities' malodorous emissions to unreasonably interfere with the proposed project's occupant's comfortable enjoyment of life or their property.

Project Description

<u>The Project Area</u>

There will be two Project Areas consisting of Project Area 1 and Project Area 2. The Project Areas are located in the borough of Queens, in Community District 2 at two sites approximately ½ mile from each other along Queens Boulevard in the Maspeth and Woodside neighborhoods of Queens. The Applicant controls three distinct Development Sites within the Project Areas, and four additional Projected Development Sites and one Potential Site were also identified for the Reasonable Worst Case Development Scenario (RWCDS). The Development Sites, including their gross floor areas, are identified in Table 17-1.

Table 17-1: Development Sites

Site ID	Block	Lot	Floor Area (gsf)
Project Area 1			
Projected Development Site 1	1342	77	129,861
Projected Development Site 4	1342	1	52,800
Projected Development Site 5	1342	36	26,400
Potential Development Site	1342	5	13,200
Project Area 2			
Projected Development Site 2	2444	40	127,463
Projected Development Site 3	2446	1, 4, 30, 31, 36, 41	92,044
Projected Development Site 6	2444	57	50,160
Projected Development Site 7	2444	1, 2, 4, 6, 8, 10, 12, 18	170,854

For the purpose of the air quality analysis, the development RWCDS and the proposed buildings dimensions, provided by the building architect for this project, were considered. The RWCDS would facilitate 145 feet high buildings. The proposed buildings dimensions of the Projected Development Sites 1, 2 and 3 consist of 145 feet buildings for Sites 1 and 2, and 135 feet for Site 3.

For the purposes of the analysis framework, the future with-action scenario would not result in any new buildings as compared to the no-action scenario. The increment between the future no-action and future with-action includes a net increase of 109,650 gsf of residential floor area (115 new dwelling units), no commercial space, and an additional 47 new accessory parking spaces. The project Build year is 2022.

Air Pollutants and Applicable Standards and Guidelines

National Air Quality Standards

The U.S. Environmental Protection Agency (EPA) has identified six pollutants, known as criteria pollutants which are being of concern nationwide, and established threshold concentrations based upon adverse effect on human health.

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for the criteria pollutants by EPA, and New York State has adopted the NAAQS as the State ambient air quality standards. The pollutants for which a detailed analysis was conducted, together with their health-related averaging periods, are presented in Table 17-2.

New York State Standards

As mentioned, New York State has adopted the national standard, NAAQS. In addition, the New York State Department of Environmental Conservation (NYSDEC) has established guidelines for maximum allowable concentration of "noncriteria pollutants," which are potentially toxic or carcinogenic pollutants. The maximum allowable guidelines set a maximum 1-hour and annual averaging time concentrations and are

published in the DAR-1 AGC/SGC Table, where AGC/SGC refers to Annual and Short-term Guideline Concentrations. The most recent DAR-1 guidelines were created on August 10, 2016.

NYSDEC also regulates pollutants that produce discomfort due to odors, where significant discomfort is evaluated on quantity, characteristic or duration.

NYC Guidelines

In addition to the NAAQS, the *CEQR Technical Manual* requires that projects subject to CEQR apply a $PM_{2.5}$ and CO 8-hour averaging time significant impact criteria (based on concentration increments). These criteria are called *de minimis* and they are more stringent than the NAAQS and the state standards, as the criteria set a maximum increase of pollutant concentration that is below the national standard. If the estimated impacts of a proposed project are less than the *de minimis* criteria, the impacts are not considered to be significant. $PM_{2.5}$ significant impact concentrations are evaluated as follows:

- 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 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or 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 $\mu g/m^3$ at any receptor location for stationary sources.

Per the *CEQR Technical Manual*, CO significant impact concentration is:

- 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.

Background Concentrations

Determination of significant impact criteria is evaluated by adding the background concentrations at the nearest NYSDEC monitoring station to the concentrations of criteria pollutants in the ambient air of the existing and planned land uses.

Background concentrations of the criteria pollutants for which a detailed analysis was conducted were obtained from the NYSDEC's annual report for 2017 at the nearest monitoring stations. Table 17-2 shows the background concentrations and the NAAQS.

Table 17-2. The NAAQS and Background Concentrations at the Nearest NYSDEC Monitoring Stations

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
NO_2	1-Hour Concentration	188 μg/m³	112.2 μg/m³	Queens College 2
	Annual Arithmetic Average	100 μg/m³	32.4 μg/m³	
$PM_{2.5}$	24-Hour concentration	35 μg/m³	19.6 μg/m³	JHS 126
	Average of 3 consecutive annual means	12 μg/m³	8.2 μg/m³	
PM_{10}	24-hour concentration	150 μg/m³	35 μg/m³	Queens College 2
CO	1-hour	35 ppm	1.78 ppm	
	8-hour	9 ppm	0.90 ppm	
SO2	1-hour	196 μg/m³	18.1 μg/m³	
	Annual	80 μg/m³	2.0 μg/m³	

The *de minimis* criteria for CO and $PM_{2.5}$ were evaluated per the NYC Guidelines. The concentrations increments are: 24-hour $PM_{2.5}$ 7.70 μg/m³; annual $PM_{2.5}$ for stationary source 0.3 μg/m³; and, CO 8-hour 4.05 ppm.

<u>NO_2 NAAQS</u>

Nitrogen oxide (NOx) emissions from gas combustion consist predominantly of nitric oxide (NO) at the source. The NOx in these emissions are then gradually converted to NO_2, which is the pollutant of concern, in the atmosphere (in the presence of ozone and sunlight as these emissions travel downwind of a source). For determining compliance with the 1-hour standard, the EPA has developed a three-tiered modeling approach: Tier 1, the most conservative approach, assumes a full (100%) conversion of NOx to NO_2; Tier 2 applies a conservative ambient NOx/NO_2 ratio of 80% to the NOx estimated concentrations; and Tier 3, which is the most precise approach, employs AERMOD's PVMRM module. The PVMRM accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations. AERMOD generates 8th highest daily maximum 1-hour NO_2 concentrations or total 1-hour NO_2 concentrations if hourly NO2 background concentrations are added within the model. Per the CEQR Technical Manual, a Tier 1 approach is initially applied, followed by a Tier 2 application. A less conservative Tier 3 approach is then applied if exceedances of the 1-hour NO_2 NAAQS were estimated.

For the Tier 3 approach, 2013-2017 Ozone hourly background concentrations were obtained from the NYSDEC Queens College monitoring station[1]. The maximum ozone hourly concentration was filled for missing values. 2015-2017 NO_2 hourly background concentrations were obtained from the NYSDEC for Queens College monitoring station. The 3-year of data was compiled, and a 5-year hourly background concentrations file was created following the EPA March 2011 Memorandum (Page 17)[2].

Mobile Source Analysis

Introduction

Projects may result in significant mobile source impacts when they create mobile sources of pollutants, change traffic pattern, or add new uses near mobile sources of pollutants. Per CEQR guidelines, a detailed analysis is conducted to predict whether the Proposed Actions could potentially have a significant adverse air quality impact if certain threshold criteria are met or exceeded, while proposed projects that do not meet or exceed the threshold criteria (screen out) are not expected to have a mobile source impact. Projects that require a detailed analysis, model the ambient air CO and PM concentrations—the mobile source pollutants of concern—and compare the modeled concentrations with the applicable air quality standard.

Mobile Source Screen

Project-Generated Traffic

Per the *CEQR Technical Manual*, localized increases in CO and $PM_{2.5}$ levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of the proposed project. For this area of the City, the threshold volume for a detailed analysis of CO concentration, using MOVES2014 and CAL3QHC/R or AERMOD, is an increment of 170 vehicles. $PM_{2.5}$ threshold criterion is an increment of applied heavy-duty diesel vehicles (HDDVs) screen.

A transportation screening analysis was not warranted. As such, the project-generated peak hour HDDVs traffic or its equivalent in vehicular emissions are not expected to meet or exceed the CEQR threshold criterions.

Therefore, no intersection detailed air quality analysis was required, and no significant adverse mobile source air quality impacts are expected at intersections affected by the proposed project.

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[1] http://www.nyaqinow.net/

[2] https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf

Parking Garage

Based on CEQR guidelines, the maximum capacity of a parking garage is evaluated against a threshold criterion to predict whether the potential impacts associated with mobile source emissions are significant. The threshold criteria level, per CEQR guidelines, is 85 new off-street parking spaces. If the threshold is met or exceeded, a detailed analysis is warranted.

The proposed project would result in a net increase of 47 new off-street parking spaces. Therefore, no detailed air quality analysis is required, and no significant mobile source air quality impacts are expected from vehicular emission generated at the proposed project's off-street parking spaces.

Atypical Roadway

According to *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadways may result in significant adverse mobile source air quality impacts. These impacts are estimated at sensitive receptors located at air intakes, operable windows, and terraces of the receiving building.

The Project Area 1 is located approximately 215 feet west of the Brooklyn Queens Expressway, and Project Area 2 is located approximately 1,200 feet east of the Brooklyn Queens Expressway. Therefore, no analysis was required, and no impact was predicted from an atypical roadway source of pollutant.

Project HVAC Systems Analysis

Introduction

Per the *CEQR Technical Manual*, the HVAC analysis considers the potential for emissions from the HVAC system of the proposed project to significantly impact existing land uses (project-on-existing), and the potential of the proposed project to significantly impact each other (project-on-project).

Buildings' HVAC systems are defined as stationary sources (for this type of application). Accordingly, and based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the heat and hot water system boiler emissions would result in 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 Analysis

As outlined in the *CEQR Technical Manual,* the potential for stationary source emissions from heat and hot water systems to have a significant adverse impact on nearby receptors depends on the type of fuel that would be used, the building's residential or non-residential use, the square footage of the development that would be served by the system, the height of the building served by the HVAC system, and the distance to the nearest building whose height is at least as great as the building served by the HVAC

system. The *CEQR Technical Manual* provides a screening analysis based on these factors, which was utilized to determine the potential for significant impacts from the projected building's HVAC system(s).

If the actual distance between a stack and the affected building is greater than the threshold distance for a building size, then that building passes the screening analysis (and no adverse significant impact is predicted). However, if the actual distance is less than the threshold distance for a building, then there is a potential for an adverse significant impact and a detailed analysis would be required. In addition, screening analysis is only applicable to a single smokestack. However, for purpose of a cumulative analysis, emissions from multiple stacks could be combined in a single stack situated as close as possible to a receiving building. In addition, according to 15 RCNY 2-15, no new boiler or burner installations may use No. 6 or No. 4 fuel oils. Therefore, the highest-emitting fuel that could be used in is No. 2 fuel oil. The following screening analyses were performed (or considered):

1. Project Area 1: project-on-project screening analysis. Natural gas would be the type of fuel used in the HVAC system(s) of Projected Development Site 1. Fuel oil #2 would be the type of fuel used in the other buildings' HVAC systems.

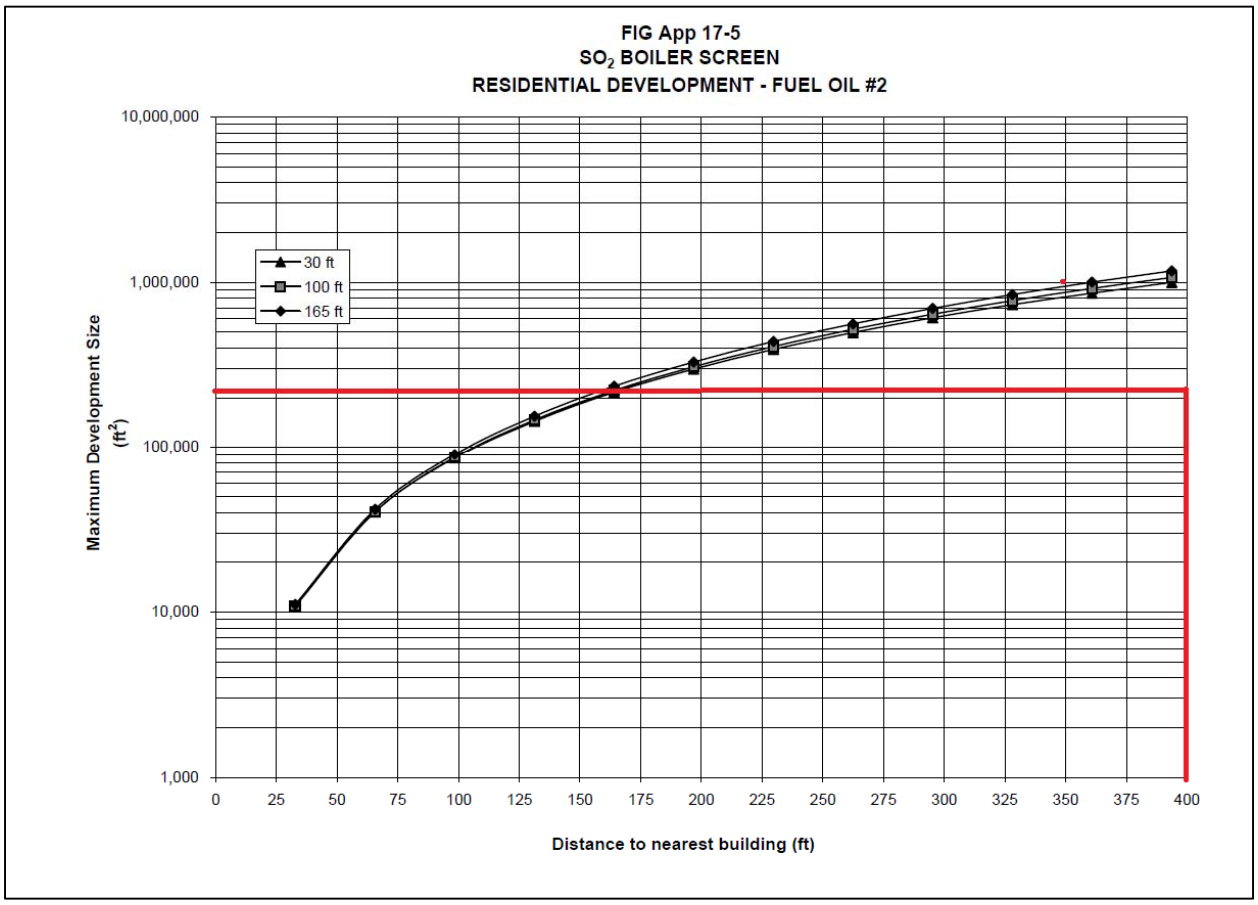
2. Project Area 2: project-on-project screening analysis, where both the RWCDS and proposed building heights of Projected Development Site 3 were considered. Natural gas would be the type of fuel used in the HVAC system(s) of Projected Development Sites 2 and 3. Fuel oil #2 would be the type of fuel used in the other buildings' HVAC systems.

3. Project Area 1 screening analysis on Project Area 2 and on existing land uses: Project Area 1 as a single residential building, 145 feet high, containing 222,261 gsf of floor area. Fuel oil #2 would be the type of fuel used in the buildings' HVAC systems.

4. Project Area 2 screening analysis on Project Area 1 and on existing land uses: Project Area 2 as a single residential building, 135 feet high, containing 440,521 gsf of floor area. Fuel oil #2 would be the type of fuel used in the buildings' HVAC systems.

The CEQR nomographs depicted on Figure 17-5 of the *CEQR Technical Manual Appendices* were used for the screening analyses. These stationary source screens are generic screens that consider the type of fuel used and the residential or nonresidential use of the buildings. These nomographs depict the size of the development versus distance below which the potential impact can occur and provides a conservative estimate of the threshold distance. In addition, and per the *CEQR Technical Manual*, the distance to the nearest building of similar or greater height was assumed to be 400 feet if the actual distance is greater. Figures 17-1 shows the screening analyses scenarios 3.

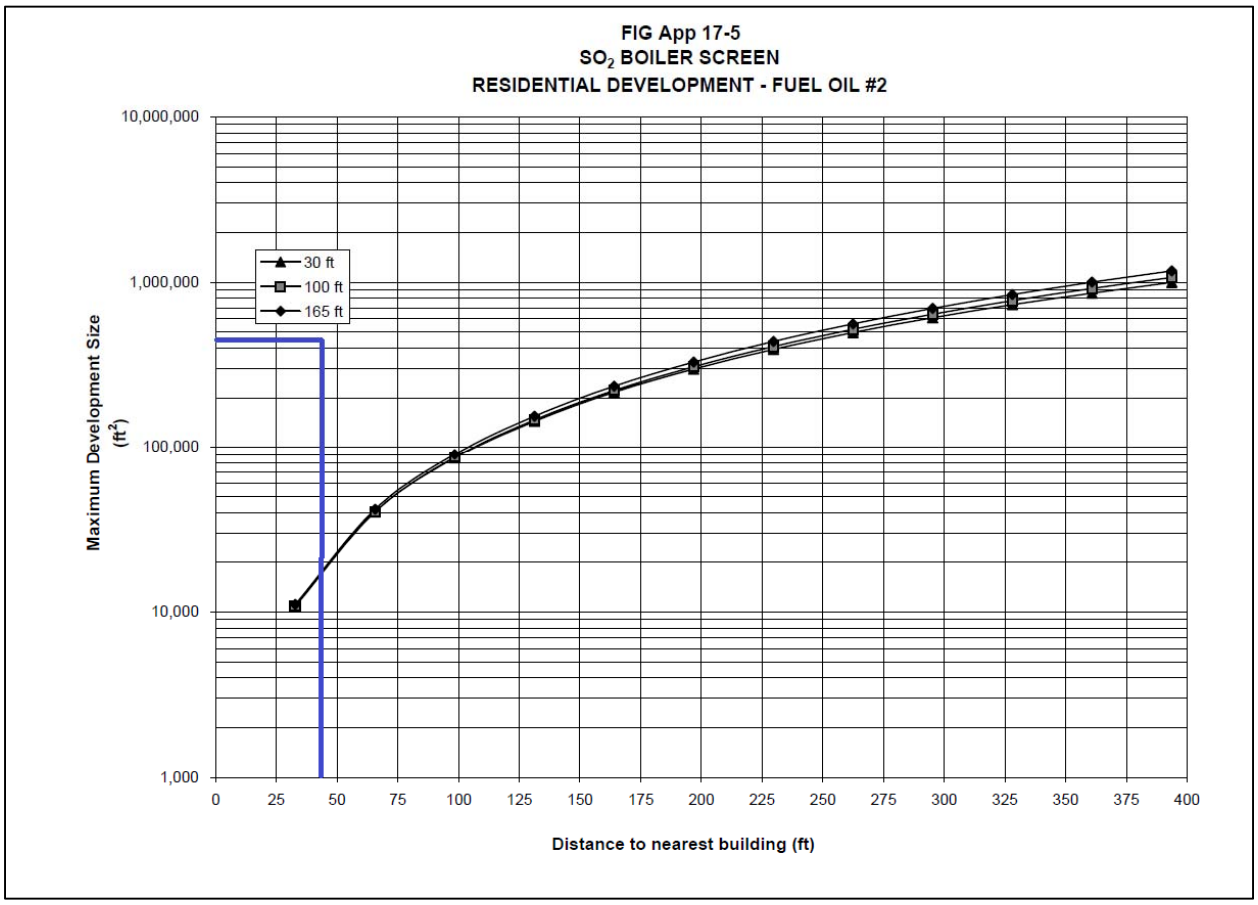
Figure 17-1. Screening Analyses ID 2 (Area 1) - HVAC Screen Nomograph



The screening analyses Figure 17-1 (using Figure 17-6 of the *CEQR Technical Manual*) nomograph show that no impact would be predicted to existing land uses at a distance equal or greater than 400 feet from the Development Sites of Project Area 1 (there are no existing land uses within 400 feet of Project Area 1 that are equal or greater in height than the lowest Development Site and Projected Area 2 is more than 400 feet from the Project Area 1).

Figures 17-2 shows the screening analyses scenarios 4, Project Area 2 on existing land uses. The development located at 69-02 Queens Boulevard (Block 2432, Lots 9, 21, 41, 44, 50), CEQR Action *18DCP132Q*, consists of a 14-story, 151.5 feet tall, building and a 17-story, 185.5 feet tall, building. The 14-story tower is facing 70th Street, directly across the street from Projected Development Site 7, and at a distance of 45 feet.

Figure 17-2. Screening Analyses ID 2 (Area 2) - HVAC Screen Nomograph



The screening analyses Figure 17-2 (using Figure 17-6 of the *CEQR Technical Manual*) nomograph show that impact would be predicted to the existing land use located at 69-02 Queens Boulevard. Therefore, a detailed analysis was required.

Screening analysis were also considered for the project-on-project scenarios within each Project Area (screening analyses scenarios 1 and 2). However, as cumulative analyses would be required for each Development Site, all the screening analyses failed, and cumulative detailed analyses were carried out.

<u>Detailed Analysis</u>

Methodology

Detailed analyses were conducted using the latest version of EPA's AERMOD dispersion model 18081. In accordance with CEQR guidance, these analyses were conducted assuming stack tip downwash, urban roughness coefficient, elimination of calms, and with and without downwash effect on plume dispersion. All analyses specified flat terrain and population of 2,000,000.

All analyses were conducted using the latest five consecutive years of meteorological data (2013-2017). Surface data was obtained from LaGuardia Airport and upper air data was obtained from Brookhaven station, New York. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. Meteorological data were combined to develop a 5-year set of meteorological conditions, which was used for the AERMOD modeling runs and Anemometer height of 9.4 meters was specified per Lakes Environmental Software Inc.

For the Development Sites of Project Area 1, all buildings were analyzed at 145 feet high. This building height is both Projected Development Site 1 RWCDS and proposed height and the other Development Sites RWCDS. For the Development Sites of Project Area 2, all buildings were analyzed at 145 feet high for the RWCDS. A height of 135 feet was specified for Projected Development Site 3, which is its proposed building height, and all other Development Sites specified a height of 145 feet. The Applicant controlled three Development Sites (projected Development Sites 1, 2, and 3) specified natural gas to be used as the type of fuel in their HVAC systems and E-Designations to this affect was stipulated. The Projected Development Site 7 specified Low NOx (30 ppm) natural gas fueled boiler and an E-Designations to this affect was stipulated. All the other Development Sites were assumed to use oil #2 as the type of fuel used in their HVAC systems.

Per the *CEQR Technical Manual*, the pollutants of concern for natural gas fueled boilers are NO_2 and $PM_{2.5}$ and the pollutants of concern for oil #2 fueled boilers are NO_2, SO_2 and $PM_{2.5}$. The boilers' energy intensities were calculated from the annual fuel usage, the developments' gross floor areas, and the assumption that the developments' fuel usage would resemble that of residential buildings. Pertinent values were obtained from the *CEQR Technical Manual Appendices* for residential buildings, and the assumption that all fuel would be consumed during the 100-day (or 2,400 hour) heating season. The NOx emission of the Projected Development Site 7 was calculated based on Low NOx boiler emission of 30 ppm. Emission factors obtained from the EPA AP-42 manual were used to calculate the other boilers' emissions and the Projected Development Site 7 $PM_{2.5}$ emission. Table 17-3 shows the calculated emission rates, both short-term and annual.

Table 17-3. The Development Sites Estimated Short-term and Annual Emission Rates

Site ID	Fuel	Pollutant	Averaging Time	Emission Rate (g/s)
Project Area 1				
Projected Development Site 1	Natural Gas	NO_2	1-hour	4.03E-02
			Annual	1.10E-02
		$PM_{2.5}$	24-hour	3.06E-03
			Annual	8.39E-04
Projected Development Site 4	Oil #2	NO_2	1-hour	2.41E-02
			Annual	6.60E-03
		$PM_{2.5}$	24-hour	2.57E-03
			Annual	7.03E-04
		SO_2	1-hour	2.57E-04
			Annual	7.03E-05
Projected Development Site 5	Oil #2	NO_2	1-hour	1.21E-02
			Annual	3.30E-03
		$PM_{2.5}$	24-hour	1.28E-03
			Annual	3.52E-04
		SO_2	1-hour	1.28E-04
			Annual	3.52E-05
Potential Development Site	Oil #2	NO_2	1-hour	6.03E-03
			Annual	1.65E-03
		$PM_{2.5}$	24-hour	6.42E-04
			Annual	1.76E-04
		SO_2	1-hour	6.42E-05
			Annual	1.76E-05
Project Area 2				
Projected Development Site 2	Natural Gas	NO_2	1-hour	3.95E-02
			Annual	1.08E-02
		$PM_{2.5}$	24-hour	3.01E-03
			Annual	8.23E-04
Projected Development Site 3	Natural Gas	NO_2	1-hour	2.86E-02
			Annual	7.82E-03
		$PM_{2.5}$	24-hour	2.17E-03
			Annual	5.95E-04
Projected Development Site 6	Oil #2	NO_2	1-hour	2.29E-02
			Annual	6.27E-03
		$PM_{2.5}$	24-hour	2.44E-03
			Annual	6.68E-04
		SO_2	1-hour	2.44E-04
			Annual	6.68E-05
Projected Development Site 7	Low NOx, Natural Gas	NO_2	1-hour	1.97E-02
			Annual	1.45E-02
		$PM_{2.5}$	24-hour	4.03E-03
			Annual	1.10E-03

The diameters of the stacks and the exhausts' exit velocities of both the Projected Development Site 5 and the Potential Development Site were assumed to be 0.0 feet and 0.001 meter per second respectively, based on values obtained from the *CEQR Technical Manual*. The diameters of the stacks and exhaust exit velocities of all other Development Sites 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). All the stacks exit temperatures were assumed to be 300°F (423°K), which is appropriate for boilers. The New York City Building Code (Building Code) requires that a rooftop stack should be at least 10 feet away from the edge of the roof and at least 3 feet higher than the roofline[3]. These parameters were specified in the AERMOD models. In addition, the stack of the source building was situated as close as possible to the receiving building, initially, and a stack set back distance from the receiving building was applied if an impact was predicted. This stack set back distance was applied in all the other cumulative analyses.

All Development Site RWCDS were modeled as buildings that cover all their lot areas and rise to their maximum height. The Projected Development Site 3 proposed building dimension was modeled as a 135 feet tall building that covers the entirety of Lots 1, 4, 36, and 41 per the site plans provided by the building's architect for this project.

Receptors on the receiving building were placed all around the receiving building envelope, at 10 feet horizontal increments and at all floor levels. Ground floor receptors were placed at a height of 6 feet above grade. Second floor receptors were placed at a height of 21 feet, assuming a 15 feet high ground floor level. Receptors on the third to the top floors of the receiving building were place 6 feet above each floor level, assuming 10 feet high floor levels. Receptors for the planned development (CEQR Action *18DCP132Q, 69-02 Queens Boulevard*) were placed around the 14-story east tower, which is much closer to the Project Area 2.

Most AERMOD models specified generic emissions of 1 gram per second and maximum predicted concentrations. The impact concentration from each source building was added cumulatively. Other models were run with the calculated emission rates and the required output concentration, such as the 1-hour NO_2 with 8th highest concentration. In addition, some 1-hour NO_2 utilized a Tier 3 approach. Models that specified the calculated emission rates were cumulatively assessed within the model.

Stack set back distances were required for a few developments on Project Area 2. The Projected Development Site 2 stack required a stack set back distance of 20 feet from the lot line facing the Projected Development Site 3, the Projected Development Site 3 stack

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[3] https://www1.nyc.gov/assets/buildings/apps/pdf_viewer/viewer.html?file=2014CC_FGC_Chapter5_Chimneys_and_Vents.pdf&section=conscode_2014

required a stack set back distance of 25 feet from the lot line facing the Projected Development Site 2, and the Projected Development Site 7 required 50 feet set back distance from the Projected Development Site 6 and 25 feet from the western lot line facing the existing building (planned development) on 69-02 Queens Boulevard. These stacks set back distances were specified in all the AERMOD models.

Results of Dispersion Analyses

As stated in the AERMOD Setting section, each pollutant averaging time was modeled twice—with building wake effect enabled/disabled. The predicted concentration is the highest concentration of these. The Tier 1 and 2 NO_2 1-hour and the NO_2 annual averaging times modeled concentrations were added to the background concentrations. The Tier 3 NO_2 1-hour concentration includes the background concentration. The SO_2 modeled concentrations were added to the background concentrations. The $PM_{2.5}$ 24-hour and annual averaging times modeled concentrations were compared with the NYC Guidelines threshold criterions. Result of the HVAC dispersions analyses are shown in Table 17-4, 17-5, 17-6, and 17-7.

Table 17-4. Project Area 1 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
Projected Development Site 1					
1-hour NO_2	72.3	112.2	**185**	**188**	NAAQS
Annual NO_2	0.63	32.4	**33.0**	**100**	NAAQS
24-hour $PM_{2.5}$	1.98	N.A.	**1.98**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.07	N.A.	**0.07**	**0.3**	*de minimis*
1-hour SO_2	0.96	18.1	**19.1**	**196**	NAAQS
Annual SO_2	0.01	2.0	**2.0**	**80**	NAAQS
Projected Development Site 4					
1-hour NO_2	57.8	112.2	**170**	**188**	NAAQS
Annual NO_2	1.13	32.4	**33.5**	**100**	NAAQS
24-hour $PM_{2.5}$	3.62	N.A.	**3.62**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.11	N.A.	**0.1**	**0.3**	*de minimis*
1-hour SO_2	1.97	18.1	**20.1**	**196**	NAAQS
Annual SO_2	0.01	2.0	**2.0**	**80**	NAAQS
Projected Development Site 5					
1-hour NO_2	55.2	112.2	**168**	**188**	NAAQS
Annual NO_2	1.11	32.4	**33.5**	**100**	NAAQS
24-hour $PM_{2.5}$	3.17	N.A.	**3.17**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.11	N.A.	**0.1**	**0.3**	*de minimis*
1-hour SO_2	1.11	18.1	**19.2**	**196**	NAAQS
Annual SO_2	0.01	2.0	**2.0**	**80**	NAAQS

Pollutant and Averaging Time	Modeled Concentration (μg/m³)	Background Concentration (μg/m³)	Evaluated Concentration (μg/m³)	Threshold Concentration (μg/m³)	Threshold Standard
Potential Development Site					
1-hour NO_2	45.04	112.2	**157**	**188**	NAAQS
Annual NO_2	1.17	32.4	**33.5**	**100**	NAAQS
24-hour $PM_{2.5}$	4.48	N.A.	**4.48**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.12	N.A.	**0.1**	**0.3**	*de minimis*
1-hour SO_2	1.08	18.1	**19.2**	**196**	NAAQS
Annual SO_2	0.01	2.0	**2.0**	**80**	NAAQS

Table 17-5. Project Area 2 Proposed HVAC Dispersion Analysis Results

Pollutant and Averaging Time	Modeled Concentration (μg/m³)	Background Concentration (μg/m³)	Evaluated Concentration (μg/m³)	Threshold Concentration (μg/m³)	Threshold Standard
Projected Development Site 2					
1-hour NO_2	173.7		**174**	**188**	NAAQS
Annual NO_2	1.50	32.4	**33.9**	**100**	NAAQS
24-hour $PM_{2.5}$	5.57	N.A.	**5.57**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.13	N.A.	**0.13**	**0.3**	*de minimis*
1-hour SO_2	0.70	18.1	**18.7**	**196**	NAAQS
Annual SO_2	0.003	2.0	**2.0**	**80**	NAAQS
Projected Development Site 6					
1-hour NO_2	67.86	112.2	**180**	**188**	NAAQS
Annual NO_2	1.08	32.4	**33.5**	**100**	NAAQS
24-hour $PM_{2.5}$	7.22	N.A.	**7.22**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.20	N.A.	**0.20**	**0.3**	*de minimis*
Projected Development Site 7					
1-hour NO_2	71.76	112.2	**184**	**188**	NAAQS
Annual NO_2	0.53	32.4	**32.9**	**100**	NAAQS
24-hour $PM_{2.5}$	1.84	N.A.	**1.84**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.05	N.A.	**0.05**	**0.3**	*de minimis*
1-hour SO_2	0.37	18.1	**18.5**	**196**	NAAQS
Annual SO_2	0.003	2.0	**2.0**	**80**	NAAQS

Table 17-6. Project Area 2 RWCDS HVAC Dispersion Analysis Results

Pollutant and Averaging Time	Modeled Concentration (μg/m³)	Background Concentration (μg/m³)	Evaluated Concentration (μg/m³)	Threshold Concentration (μg/m³)	Threshold Standard
Projected Development Site 2					
1-hour NO_2	40.0	112.2	**144**	**188**	NAAQS
Annual NO_2	0.52	32.4	**32.9**	**100**	NAAQS
24-hour $PM_{2.5}$	2.49	N.A.	**2.49**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.06	N.A.	**0.06**	**0.3**	*de minimis*
1-hour SO_2	0.79	18.1	**18.8**	**196**	NAAQS
Annual SO_2	0.003	2.0	**2.0**	**80**	NAAQS
Projected Development Site 3					
1-hour NO_2	69.5	112.2	**182**	**188**	NAAQS
Annual NO_2	0.97	32.4	**33.4**	**100**	NAAQS
24-hour $PM_{2.5}$	3.61	N.A.	**3.61**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.08	N.A.	**0.08**	**0.3**	*de minimis*
1-hour SO_2	0.22	18.1	**18.3**	**196**	NAAQS
Annual SO_2	0.001	2.0	**2.0**	**80**	NAAQS
Projected Development Site 6					
1-hour NO_2	67.68	112.2	**180**	**188**	NAAQS
Annual NO_2	1.09	32.4	**33.5**	**100**	NAAQS
24-hour $PM_{2.5}$	7.26	N.A.	**7.26**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.20	N.A.	**0.20**	**0.3**	*de minimis*
Projected Development Site 7					
1-hour NO_2	57.45	112.2	**170**	**188**	NAAQS
Annual NO_2	0.51	32.4	**32.9**	**100**	NAAQS
24-hour $PM_{2.5}$	1.86	N.A.	**1.86**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.05	N.A.	**0.05**	**0.3**	*de minimis*
1-hour SO_2	0.37	18.1	**18.5**	**196**	NAAQS
Annual SO_2	0.03	2.0	**2.0**	**80**	NAAQS

Table 17-7. Project Area 2 Impact Concentrations on the Planned Development 69-02 Queens Boulevard - HVAC Dispersion Analysis Results

Pollutant and Averaging Time	Modeled Concentration (μg/m³)	Background Concentration (μg/m³)	Evaluated Concentration (μg/m³)	Threshold Concentration (μg/m³)	Threshold Standard
1-hour NO_2	61.19	112.2	**173**	**188**	NAAQS
Annual NO_2	2.63	32.4	**35.0**	**100**	NAAQS
24-hour $PM_{2.5}$	6.68	N.A.	**6.68**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.20	N.A.	**0.20**	**0.3**	*de minimis*
1-hour SO_2	0.20	18.1	**18.3**	**196**	NAAQS
Annual SO_2	0.002	2.0	**2.0**	**80**	NAAQS

As seen in Table 17-4, 17-5, 17-6, and 17-7 the NO_2 and SO_2 predicted concentrations are less than the NAAQS and the $PM_{2.5}$ concentrations are less than the *de minimis*. Therefore, with (E) Designations in place, the emissions of the Development Sites HVAC systems would not pose a significant adverse impact to other buildings in the area.

As previously mentioned, the Projected Development Sites 2, 3, and 7 required stack set back distances. These stacks set back distances are specified in the E-Designation below.

Text for (E) Designation E-551:

<u>Block 1341, Lot 77 (Projected Development Site 1)</u>: Any new residential or commercial 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 and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.

<u>Block 2444, Lot 40 (Projected Development Site 2)</u>: Any new residential or commercial 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 and at a minimum of 148 feet above the grade, and that the stack is located at least 20 feet from the eastern lot line facing 72nd Street to avoid any potential significant adverse air quality impacts.

<u>Block 2446, Lots 1, 4, 30, 31, 36, 41 (Projected Development Site 3)</u>: Any new residential or commercial 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 and at a minimum of 138 feet above the grade, and that the stack is located at least 25 feet from the western lot line facing 72nd Street to avoid any potential significant adverse air quality impacts.

<u>Block 1342, Lot 1 (Projected Development Site 4)</u>: Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.

<u>Block 1342, Lot 36 (Projected Development Site 5)</u>: Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.

<u>Block 2444, Lot 57 (Projected Development Site 6)</u>: Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the

building's highest level and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.

<u>Block 2444, Lots 1, 2, 4, 6, 8, 10, 12, 18 (Projected Development Site 7)</u>: Any new residential or commercial 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) and must be fitted with low NOx (30 ppm) burners, ensure that the stack is located at the building's highest level at a minimum of 148 feet above the grade, and that the stack is located at least 25 feet from the western lot line facing 70th Street to avoid any potential significant adverse air quality impacts.

<u>Block 1342, Lot 5 (Potential Development Site)</u>: Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level and at a minimum of 148 feet above the grade to avoid any potential significant adverse air quality impacts.

Industrial Source

As outlined in the *CEQR Technical Manual*, projects that would introduce new uses near industrial sources may result in potentially significant adverse air quality impacts. The study area considers industrial sources within 400 feet of the Project Area. Industrial sources are categorized as the operation of manufacturing or processing facilities, or medical, chemical, or research labs. These facilities are likely to have New York City Department of Environmental Protection (DEP) processing permits. The analysis first determines if there are any existing industrial sources located in the study area. An air dispersion analysis is then performed for any existing industrial source that is in the study area. Otherwise no analysis is required.

No industrial source facility that is likely to emit toxic air was identified within 400 feet of Project Area 1.

Four facilities were identified in the DEP online Clean Air Tracking System (CATS) as possible air toxic emitters in the study area surrounding Project Area2. The facility located at 48-16 70 Street (Block 2434, Lot 20), which has an expired DEP permit PA034599 for the grinding of architectural stone, seems to be currently active. However, the DEP permit situates the emission source at a distance greater than 400 feet from the Project Area. As such this facility was screened out. The other three facilities are two auto body facilities and one auto mechanic. In addition, the Woodside Auto, an auto body facility, located at 72-01 Queens Boulevard (Block 1352, Lot 125), was identified as a possible toxic air emitter. Phone call to the facility went unanswered and it seems like the number was

disconnected. An online search of the property showed that the property is planned for redevelopment[4]. Therefore, the facility was screened out.

The three facilities that were determined to be currently active are:

- The Tri Auto Service, an auto body facility, located at 69-15 48 Avenue (Block 2433, Lot 45).
- Rayco, an auto body facility, located at 70-55 Queens Boulevard (Block 1352, Lot 51).
- A & K Auto, an auto mechanic, located at 69-11 48 Avenue (Block 2433, Lot 46).

A formal request to review these permit applications was submitted to the DEP. The DEP permit for the A & K Auto did not list the contaminants and their emission rates. Therefore, the information in the DEP permit for the Bay Ridge Volvo American facility, a similar type of facility but much larger, was used for the A & K Auto. The DEP permits for the two auto body facilities specified the types of operations, pollutants' emission rates, and stacks' parameters. The active facilities and their emission rates are shown in Table 17-8.

Table 17-8. DEP Permits of Active Facilities in the Study Area – Contaminants and Emission Rates

Permit ID	Pollutant	CAS No.	Emission	
			Hourly	Annual
			lb/hr	lb/year
A & K Auto 69-11 48 Avenue (Block 2433, Lot 46)(1)				
PA023113	Oxides of Nitrogen	NY210-00-0	0.01	16
	Carbon Monoxide	630-08-0	0.1	160
Rayco 70-55 Queens Boulevard (Block 1352, Lot 51)				
PB0489403	Solids	NY079-00-0	0.065	97.6
	Solvents	NY998-00-0	3.1	4650
Tri Auto Service 69-15 48 Avenue (Block 2433, Lot 45)				
PB013107	Solids	NY079-00-0	0.008	6.5
	Solvents	NY998-00-0	0.775	620

1. Pollutants and pollutants emission rates from the DEP permit PA079389 of the Bay Ridge Volvo American

[4] https://therealdeal.com/2018/09/28/hakimian-org-buys-queens-dev-site-with-plans-for-400-unit-rental/

The two auto body facilities and the auto mechanic facility are discussed here:

A & K Auto (PA023113)

The A & K Auto DEP processing permit applications is for 2 tailpipe exhaust systems in auto service areas. The facility operates 8 hours per day, 200 day per year. The facility is located 390 feet south-west of the Projected Development Site 7 (the nearest development). The oxides of nitrogen (New York identification number NY210-00-0) identification number refers to nitrogen oxide (NO) and nitrogen dioxide (NO_2) combined. For analysis purpose and as a conservative measure, each oxide of nitrogen was analyzed as 100% NO or 100% NO_2.

Table 17-9. A & K Auto Pollutants Emitted – Contaminants and Emission Rates

Permit ID	Pollutant	CAS No.	Hourly	Annual
			lb/hr	lb/year
PA023113	Nitrogen Oxide (NO)	10102-43-9	0.02	32
	Nitrogen Dioxide	10102-44-0	0.02	32
	Carbon Monoxide (CO)	630-08-0	0.20	320

Tri Auto Service (PB013107)

Tri Auto Service is an auto body facility. The activity associated with PB013107 is for a spray booth operation. The distance between the facility and the Projected Development Site 7 (the nearest development) is 365 feet. The distance between the spray booth stack and the Project Area is 390 feet. The facility operates 4 hour per day, 250 day per year.

In accordance with NYCDEP, emissions of solids are analyzed as PM_{10} and $PM_{2.5}$, and the particle size distribution was obtained from the EPA AP-42, *Appendix B1, Page B.1-12, Particle Size Distribution Data and Sized Emission Factors for Selected Sources, Table 4.2.2.8 Automobile and Light-Duty Track Surface Coating Operations, Automobile Spray Booths*. The particulates short-term emissions were adjusted to 24-hour by using the number of hours per day the spray booth is active. Table 17-10 shows the PM_{10} and $PM_{2.5}$ emission rates.

Table 17-10. PM_{10}/$PM_{2.5}$ Emission Rates from the Tri Auto Service Spray Booth/Area Activity

Contaminant	Permitted Emission Rate		Fraction of Particle Size	Emission rate			
				Short-term		Annual	
	lb/hr	lb/yr	Percent	lb/hr	g/s	lb/yr	g/s
$PM_{2.5}$	0.008	6.5	28.6	3.81E-04	0.00005	1.86E+00	2.67E-05
PM_{10}			46.7	6.23E-04	0.00008	3.04E+00	4.37E-05

The mixture of different compounds, identified collectively as VOCs, have no guideline values in the NYSDEC DAR-1 database. The mixture comprises of compounds of varying toxicities. The chemicals that make up the volatile organic (VOC) group or solvents were

not included in the DEP certificate. As the composition of the coating substance was not known, a representative composition by percent weight was obtained from the approved CEQR action *139-01, 135-05, and 135-09 Northern Boulevard 07DCP029Q, Table 3, Typical Composition of VOC Emissions from Auto Spray Paint Booths* (hereinafter "Solow Report Table 3"). The Solow Report VOC by percentage weight and the Tri Auto Service 1-hour and annual VOC emissions were used to calculate the chemical's emission rates. The ingredients that make up the representative paint, along with their Chemical Abstract Service (CAS) number, by percent weight, and the hourly and annual emission rates are presented in Table 17-11.

Table 17-11. The Tri Auto Service Facility VOC Short-term and Annual Emission Rates (Chemicals and their Percentage Weight from the Solow Report, Table 3)

Contaminant name	CAS No.	Percent Weight	1-Hour		Annual	
			lb/hr	g/s	lb/yr	g/s
Acetone	67-64-1	43%	0.3333	4.20E-02	266.6	3.83E-03
Aromatic Petroleum Distillate	64742-94-5	10%	0.0775	9.77E-03	62.0	8.92E-04
Butane	106-97-8	11%	0.0853	1.07E-02	68.2	9.81E-04
Ethanol	64-17-5	2%	0.0155	1.95E-03	12.4	1.78E-04
Ethyl 3-Ethoxypropionate	763-69-9	9%	0.0698	8.79E-03	55.8	8.03E-04
Ethylbenzene	100-41-4	5%	0.0388	4.88E-03	31.0	4.46E-04
Methyl Ethyl Ketone	78-93-3	8%	0.0620	7.81E-03	49.6	7.13E-04
N-Butyl Acetate	123-86-4	5%	0.0388	4.88E-03	31.0	4.46E-04
Propane	74-98-6	11%	0.0853	1.07E-02	68.2	9.81E-04
Stoddard Solvent	8052-41-3	10%	0.0775	9.77E-03	62.0	8.92E-04
Toluene	108-88-3	10%	0.0775	9.77E-03	62.0	8.92E-04
Xylene	1330-20-7	10%	0.0775	9.77E-03	62.0	8.92E-04

Rayco (PB0489403)

Rayco is an auto body facility. The activity associated with PB0489403 is for a spray booth operation. The distance between the facility and the Projected Development Site 2 (the nearest development) is 200 feet. The distance between the spray booth stack and the Project Area is 320 feet. The facility operates 8 hour per day, 250 day per year. In accordance with NYCDEP, emissions of solids were analyzed as PM_{10} and $PM_{2.5}$. Table 17-12 shows the PM_{10} and $PM_{2.5}$ emission rates.

Table 17-12. PM_{10}/$PM_{2.5}$ Emission Rates from the Rayco Spray Booth/Area Activity

Contaminant	Permitted Emission Rate		Fraction of Particle Size	Emission rate			
				Short-term		Annual	
	lb/hr	lb/yr	Percent	lb/hr	g/s	lb/yr	g/s
$PM_{2.5}$	0.065	97.6	28.6	6.20E-03	0.00078	2.79E+01	4.01E-04
PM_{10}			46.7	1.01E-02	0.00127	4.56E+01	6.56E-04

Information contained in the permit showed that BASF coating compounds D121, D403, and D902 are used. The material safety data sheets (MSDS) for these compounds were obtained and the chemicals listed in them analyzed. In addition, the chemicals listed in the Solow Report Table 3 were also analyzed as a conservative measure. The ingredients that make up the representative paint, along with their Chemical Abstract Service (CAS) number, by percent weight, and the hourly and annual emission rates are presented in Table 17-13.

Table 17-13. The Rayco Facility VOC Short-term and Annual Emission Rates (Chemicals and their Percentage Weight from the Solow Report, Table 3)

Contaminant name	CAS No.	Percent Weight	1-Hour		Annual		Compound
			lb/hr	g/s	lb/yr	g/s	
1,2,4-trimethylbenzen	95-63-6	5	0.1550	1.95E-02	232.5000	3.34E-03	D121
Ethylbenzene	100-41-4	3	0.0930	1.17E-02	139.5000	2.01E-03	
4-methylpentan-2-one	108-10-1	10	0.3100	3.91E-02	465.0000	6.69E-03	
Xylene	1330-20-7	10	0.3100	3.91E-02	465.0000	6.69E-03	
N-Butyl Acetate	123-86-4	75	2.3250	2.93E-01	3487.5000	5.02E-02	
Ethyl 3-ethoxypropionate	763-69-9	5	0.1550	1.95E-02	232.5000	3.34E-03	
Solent naphtha, light aromatic	64742-95-6	5	0.1550	1.95E-02	232.5000	3.34E-03	
1-methoxy-2-propylacetate	108-65-6	5	0.1550	1.95E-02	232.5000	3.34E-03	
Ethylbenzene	100-41-4	3	0.0930	1.17E-02	139.5000	2.01E-03	D403
4-methylpentan-2-one	108-10-1	10	0.3100	3.91E-02	465.0000	6.69E-03	
2-butoxyethanol	111-76-2	3	0.0930	1.17E-02	139.5000	2.01E-03	
N-Butyl Acetate	123-86-4	50	1.5500	1.95E-01	2325.0000	3.34E-02	
Xylene	1330-20-7	15	0.4650	5.86E-02	697.5000	1.00E-02	
Carbon black	1333-86-4	3	0.0930	1.17E-02	139.5000	2.01E-03	
N-butanol	71-36-3	1	0.0310	3.91E-03	46.5000	6.69E-04	
Solent naphtha, light aromatic	64742-95-6	3	0.0930	1.17E-02	139.5000	2.01E-03	
Ethylbenzene	100-41-4	3	0.0930	1.17E-02	139.5000	2.01E-03	D902
4-methylpentan-2-one	108-10-1	10	0.3100	3.91E-02	465.0000	6.69E-03	
Toluene	108-88-3	0.2	0.0062	7.81E-04	9.3000	1.34E-04	
N-Butyl Acetate	123-86-4	50	1.5500	1.95E-01	2325.0000	3.34E-02	
Xylene	1330-20-7	15	0.4650	5.86E-02	697.5000	1.00E-02	
Titanium dioxide	13463-67-7	50	1.5500	1.95E-01	2325.0000	3.34E-02	
Aluminum hydroxide	21645-51-2	3	0.0930	1.17E-02	139.5000	2.01E-03	
Acetone	67-64-1	43	1.3330	1.68E-01	1999.5	2.88E-02	Solow Report Table 3
Aromatic Petroleum Distillate	64742-94-5	10	0.3100	3.91E-02	465.0	6.69E-03	
Butane	106-97-8	11	0.3410	4.30E-02	511.5	7.36E-03	
Ethanol	64-17-5	2	0.0620	7.81E-03	93.0	1.34E-03	
Ethyl 3-Ethoxypropionate	763-69-9	9	0.2790	3.52E-02	418.5	6.02E-03	
Ethylbenzene	100-41-4	5	0.1550	1.95E-02	232.5	3.34E-03	
Methyl Ethyl Ketone	78-93-3	8	0.2480	3.12E-02	372.0	5.35E-03	
N-Butyl Acetate	123-86-4	5	0.1550	1.95E-02	232.5	3.34E-03	
Propane	74-98-6	11	0.3410	4.30E-02	511.5	7.36E-03	
Stoddard Solvent	8052-41-3	10	0.3100	3.91E-02	465.0	6.69E-03	
Toluene	108-88-3	10	0.3100	3.91E-02	465.0	6.69E-03	
Xylene	1330-20-7	10	0.3100	3.91E-02	465.0	6.69E-03	

CEQR Screening Analysis

For estimating potential impacts from industrial emission sources of toxic air pollutants, *CEQR Technical Manual* recommends using a screening procedure as a first step in an analysis. The procedure is the "Industrial Source Screen" in the *CEQR Technical Manual*. This procedure is based on a generic emission rate of 1 gram per second of a pollutant from a point source. This approach, which can be used to estimate maximum short-term and annual average concentration values at various distances (from 30 to 400 feet) from an emission source, was utilized to assess the potential impacts. The analysis assumed distances of less than or equal to the tabulated *CEQR Technical Manual* Table 17-3 distances from a source. The pre-tabulated concentrations are displayed in Table 17-14.

Table 17-14. *CEQR Technical Manual* Table 17-3 Industrial Source Screen Pre-Tabulated Concentrations

Facility Name	Distance from Source (ft) Actual (CEQR)	1-Hour ($\mu g/m^3$)	8-Hour ($\mu g/m^3$)	24-Hour ($\mu g/m^3$)	Annual ($\mu g/m^3$)
A & K Auto	390/ 365	1528	857	434	62
Tri Auto Service	390/ 365	1528	857	434	62
Rayco	320 / 300	1891		594	84

All values obtained from Table 17-3 of the *CEQR Technical Manual* for an emission rate of 1 gram per second were multiplied by the pollutants' actual emission rates to estimate the impact concentrations. Pollutants emitted from multiple facilities were cumulatively added.

To evaluate if there are any potential impacts, NO_2, 1-hour CO, and PM_{10} predicted concentrations were compared with the NAAQS; 8-hour CO and $PM_{2.5}$ with the *de minimis*; and, all other pollutants with the SGC/AGC guidelines. Background concentrations were added to the modeled concentrations of pollutants evaluated with the NAAQS.

Screening Analysis Results

As previously mentioned, impact concentrations of the criteria pollutants were evaluated with the NAAQS and NYC Guidelines (NYC Guidelines where applicable) threshold standards. Table 17-15 shows the results of the criteria pollutants.

Table 17-15. Criteria Pollutants – CEQR Dispersion Analysis Results

Criteria Pollutant	Threshold Standard	Predicted Concentration (μg/m³)	Background Concentration (μg/m³)	Total Concentration (μg/m³)	Threshold Criteria (μg/m³)
PM_{10} 24-Hour	NAAQS	0.8	35	**36**	**150**
$PM_{2.5}$ 24-Hour	*de minimis*	0.48	*de minimis*	**0.48**	**7.70**
$PM_{2.5}$ Annual	*de minimis*	0.1	*de minimis*	**0.1**	**0.3**
NO_2 1-hour	NAAQS	1.93	112.2	**114**	**188**
NO_2 Annual	NAAQS	0.01	32.4	**32.4**	**100**
CO 1-hour	NAAQS	19	2034	**2054**	**40000**
CO 8-hour	*de minimis*	11	*de minimis*	**11**	**4500**

As displayed in Table 17-15, the $PM_{2.5}$ and 8-hour CO predicted concentrations do not exceed the *de minimis* threshold criterions, and all other pollutants' predicted concentrations with the background concentrations added are less than the NAAQS.

The other pollutants predicted concentrations were compared with the NYSDEC SGC/AGC guidelines. The air dispersion results of the non-criteria pollutants are displayed in Table 17-16.

Table 17-16. Non- Criteria Pollutants – CEQR Dispersion Analysis Results

Contaminant Name	CAS No.	1-Hour	SGC	Annual	AGC
		μg/m³	μg/m³	μg/m³	μg/m³
Nitrogen Oxide (NO)	10102-43-9	1.9	___	0.01	74.0
Ethylbenzene	100-41-4	37.3	___	0.2	1000.0
Butane	106-97-8	82.1	238000.0	0.5	___
4-methylpentan-2-one	108-10-1	73.9	31000.0	0.6	3000.0
1-methoxy-2-propylacetate	108-65-6	36.9	55000.0	0.3	2000.0
Toluene	108-88-3	74.6	37000.0	0.5	5000.0
2-butoxyethanol	111-76-2	22.2	140000.0	0.2	1600.0
N-Butyl Acetate	123-86-4	561.4	95000.0	4.2	17000.0
Xylene	1330-20-7	125.7	22000.0	0.9	100.0
Carbon black	1333-86-4	22.2	___	0.2	7.0
Titanium dioxide	13463-67-7	369.3	___	2.8	24.0
Aluminum hydroxide	21645-51-2	22.2	___	0.2	___
Ethanol	64-17-5	14.9	___	0.1	45000.0
Aromatic Petroleum Distillate	64742-94-5	74.60	___	0.47	100.0
Solvent naphtha, light aromatic	64742-95-6	36.93	___	0.28	100.0
Acetone	67-64-1	320.80	180000.0	2.02	30000.0
N-butanol	71-36-3	7.39	___	0.06	1500.0
Propane	74-98-6	82.07	N.A.	0.52	43000.0
Ethyl 3-Ethoxypropionate	763-69-9	67.14	140.0	0.42	64.0
Methyl Ethyl Ketone	78-93-3	59.68	13000.0	0.38	5000.0
Stoddard Solvent	8052-41-3	74.60	___	0.47	900.0
1,2,4-trimethylbenzen	95-63-6	36.93	___	0.28	6.0

As seen in Table 17-16 the predicted 1-hour and annual concentrations do not exceed the SGA/AGC guideline criterions. Therefore, no significant adverse air quality impacts are predicted from industrial sources.

Major/Large Source

Introduction

Per 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 proposed project. 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.

The Big Six Towers Title V facility (Permit ID #2-6304-00404/00004), located at 59-55 47th Avenue (Block 2314, Lot 1), is approximately 900 feet south-west of Project Area 1. Per the certificate, the facility has a power plant which contains a total of six (6) internal combustion engines and three (3) small boilers. The new Easco Boiler Corp. boilers consist of two (2) at 400-horsepower (HP) (16.74 mmBtu/hr) and one (1) at 250-HP (10.46 mmBtu/hr). These boilers are primarily operated on natural gas. The internal combustion engines consist of three (3) Natural Gas-fired engines, which are Caterpillar Model G399, rated at 650 KW each. The other three No. 2 fuel oil fired engines are Caterpillar engines; two of which are Model D399, rated at 850 KW each; and the third one is a Caterpillar Model D3516, rated at 1600 KW.

All the equipment exhaust through a common stack. The 48-in by 78-in stack is 212 feet high. Per satellite image, the stack is located at the north edge of the building located at 59-55 47th Avenue (no stack was identified near the NYTMN coordinate).

Per the *CEQR Technical Manual*, analyses were conducted with the equipment operating at 100%, 75%, and 50% capacities.

Emissions from the Big Six Towers (Permit ID #2-6304-00404/00004)

Emission Statements 2013-2017 were received from the NYSDEC through a Freedom of Information Law (FOIL) request. The Emission Statements specified the annual emission rates from each source and the emission factors used to calculate the total emission rates. The records indicated that the NOx emissions of the internal combustion engines were

calculated from stacks test. All other pollutants were calculated from published emission factors in the EPA AP-42 manual. The record also included the amount of fuels consumed. Per the certificate 2-6304-00404/00004, the external combustion boilers burn No. 2 Oil only as a backup during periods of interruptible natural gas supply. The Emission Statements shows that significant amount of Oil No. 2 is used by the boilers; therefore, the short-term analysis assumed emissions corresponding to maximum emission rates of either natural gas or fuel oil No. 2 throughputs. Per the certificate 2-6304-00404/00004, the sulfur content of oil No. 1 and 2 are 0.0015 percent by weight.

All pollutants' annual emission rates were obtained from the Emission Statements. The maximum annual emission rates were used in the analysis. Table 17-17 shows the Big Six Towers maximum annual emission rates between 2013-2017.

Table 17-17. Big Six Towers - Criteria Pollutants' Annual Emission Rates at 100% Operating Capacity

Pollutant Name	Annual Emission Rate	
	(lb/yr)	(g/s)
NOx	79,060	1.1372
$PM_{2.5}$	6,962	0.1001
PM_{10}	29,700	0.4272
CO	80	0.0012
SO_2	86,100	1.2384

The short-term emissions from the new Easco Boiler Corp. boilers were calculated based on emission factors published in the EPA AP-42 manual for external combustion sources. SO_2 short-term emission rates corresponding to fuel oil No. 2 were calculated based on sulfur content of 0.0015 percent by weight. The stack exit temperature was assumed to be 300°F (423°K), which is appropriate for boilers. The exhaust gas flow rate was calculated at 32,620 cubic foot per minute (CFM) according to the EPA Method 19, adjusted to 15 percent oxygen and exit temperature of 300-deg Fahrenheit[5]. The exhaust gas flow rates were also calculated for the boilers operating at 75% and 50% operating capacities. The analysis assumed that either natural gas or fuel oil No. 2 are used, and the pollutants' maximum hourly emission rates used in the analysis. Table 17-18 shows the short-term emission rates of the criteria pollutants of concern with the boilers operating at 100 percent capacity.

[5] Equipment specs. requested in the FOIL request with the NYSDEC were not available at the time of analysis.

Table 17-18. External Combustion Boilers - Criteria Pollutants' Short-term Emission Rates at 100% Operating Capacity Specific to Each Type of Equipment

Emission Source	Pollutant Name	Natural Gas Short-Term Emission Rate		Fuel oil No. 2 Short-Term Emission Rate		Analyzed Short-term Emission Rate	
		(lb/hr)	(g/s)	(lb/yr)	(g/s)	(lb/yr)	(g/s)
10.46 MMBtu Boiler	NOx	1.03	1.29E-01	2.40	3.02E-01	2.40	3.02E-01
	$PM_{2.5}$	0.078	9.82E-03	0.255	3.22E-02	0.255	3.22E-02
	PM_{10}	0.08	9.82E-03	0.29	3.60E-02	0.29	3.60E-02
	CO	0.86	1.09E-01	0.60	7.55E-02	0.86	1.09E-01
	SO_2	0.006	7.75E-04	0.026	3.22E-03	0.026	3.22E-03
16.74 MMBtu Boiler	NOx	1.64	2.07E-01	2.40	3.02E-01	2.40	3.02E-01
	$PM_{2.5}$	0.12	1.57E-02	0.255	3.22E-02	0.255	3.22E-02
	PM_{10}	0.12	1.57E-02	0.29	3.60E-02	0.29	3.60E-02
	CO	1.38	1.74E-01	0.60	7.55E-02	1.38	1.74E-01
	SO_2	0.010	1.24E-03	0.026	3.22E-03	0.026	3.22E-03

As seen in Table 17-18, CO emission rate is greater for natural gas fired boilers than for fuel oil No. fired boilers, while the other pollutants have greater emission with the boiler fueled by oil No. 2. As such, the analysis assumed maximum emission rate regardless of the fuel used.

The NOx emission factors of the internal combustion engines were obtained from the Emission Statements provided by the NYSDEC. The internal combustion engines other pollutants' emission factors were calculated based on the EPA AP-42 manual corresponding to the sources classification codes of the engines (and as specified in the Emission Statements). The analysis of the 100% operating capacity scenario assumed load factor of one, meaning that the equipment operates at maximum load. Fuel use of the natural gas fired engines were calculated based on energy content of 1020 Btu/ft^3 and 35 percent heat input efficiency. Fuel use of the oil #2 fired engines were calculated based on Approximate Diesel Fuel Consumption Chart[6] and engines' output ratings (linearly approximated) specified in the 2-6304-00404/00004 certificate. The same methodology was used to calculate the diesel fueled engines fuel consumptions while operating at 75 and 50 percent loads.

The stacks' exhaust volumetric flow rates of the internal combustion engines can be calculated based on equations obtained from the Bureau of Ocean Energy Management[7]. However, as a conservative measure all the internal combustion engines were assumed

[6] https://www.wpowerproducts.com/power-generation-resources/diesel-fuel-consumption-chart/
[7] https://www.boem.gov/

to have 0 exhaust gas flow rates. This assumption is the *CEQR Technical Manual* default value.

Table 17-19 shows the internal combustion engines short-term emission rates of the criteria pollutants of concern with the equipment operating at 100 percent capacity.

Table 17-19. Internal Combustion Engines - Criteria Pollutants' Short-term Emission Rates at 100% Operating Capacity Specific to Each Type of Equipment

Emission Source	Pollutant Name	Short-Term Emission Rate	
		(lb/hr)	(g/s)
650 kW Natural Gas Fired Engine	NOx	0.8056	0.1015
	$PM_{2.5}$	0.30612	0.0386
	PM_{10}	0.30612	0.0386
	CO	2.237	0.2818
	SO_2	0.0037	0.0005
850 kW Oil #2 Fueled Engine	NOx	7.4	0.9357
	$PM_{2.5}$	0.4694	0.0591
	PM_{10}	0.484	0.0610
	CO	7.2	0.9042
	SO_2	0.013	0.0016
1600 kW Oil #2 Fueled Engine	NOx	13.9	1.7572
	$PM_{2.5}$	0.8816	0.1111
	PM_{10}	0.909	0.1145
	CO	13.5	1.6982
	SO_2	0.024	0.0030

Per the Title V certificate, the facility has a single stack. As such, the equipment emission rates were cumulatively added to predict the pollutants short-term emission rates. Table 17-20 shows the facility's combined short-term emission rates at 100, 75, and 50 percent operating loads.

Table 17-20. Big Six Tower - Criteria Pollutants' Short-term Emission Rates at 100%, 75%, and 50% Operating Capacities

Pollutant Name	Short-term Emission Rate (g/s)		
	100%	75%	50%
NOx	4.72624	3.54468	2.36312
$PM_{2.5}$	0.42956	0.32217	0.21478
PM_{10}	0.44649	0.33487	0.22325
CO	4.80810	3.60608	2.40405
SO_2	0.01613	0.01210	0.00807

Air Dispersion Analysis

Dispersion modeling analyses were conducted using the latest version of EPA's AERMOD dispersion model version 18081. In accordance with CEQR guidance, these analyses were conducted assuming stack tip downwash, urban dispersion surface roughness, elimination of calms, and models were run with and without downwash effect on plume dispersion. The AERMOD models specified flat terrain and population of 2,000,000.

All analyses were conducted using the latest five consecutive years of meteorological data (2013-2017). Surface data from La Guardia Airport and upper air data from Brookhaven station, New York were utilized. Data was processed by Lakes Environmental Software, Inc. using the EPA AERMET version (14134). These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. Meteorological data were combined to develop a 5-year set of meteorological conditions, which was used for the AERMOD modeling runs and Anemometer height of 9.4 meters was specified per Lakes Environmental Software Inc.

The receiving buildings of Project Area 1 were modeled at height of 145 feet. Receptors around the receiving building were placed around the building envelope in 20-foot increments and at heights of 6 feet above ground level, in 25 feet increment above the ground floor, and at heights of 131 and 141 feet above grade. Numerous other buildings in the area where specified in the models to account for the downwash effect on plum dispersion.

All pollutants averaging times were modeled with a generic pollutant with a 1 gram per second emission rate. A Tier 2 approach was used to calculate the 1-hour NO_2 impact concentration. The AERMOD 1 gram per second output (for each operating capacity) was multiplied by the combined emission rate.

As previously mentioned, stack height was obtained from the Title V permit. The stack exit velocity was calculated at 20.9, 15.7, and 10.5 feet per second which corresponds to the external combustion boilers operating at 100, 75, and 50 percent capacities, respectively.

Results of Dispersion Analyses

The potential impacts of criteria pollutants' emissions from the Big Six Towers on the Project Area 1 Development Site are presented here. As previously mentioned, each pollutant averaging time was modeled twice—with building wake effect enabled/disabled. The predicted concentration is the highest concentration of these. The CO and $PM_{2.5}$ predicted concentrations were compared the NYC significant impact criteria; the PM_{10}, NO_2, and SO_2 predicted concentrations with background added were compared with the NAAQS. Result of the dispersion analyses with the equipment operating at 100% capacity are shown in Table 17-21.

Table 17-21. Criteria Pollutants Dispersion Analysis Results – 100% Operating Capacity

Pollutant	Averaging Time	Modeled Concentration	Background Concentration	Evaluated Concentration	Threshold Criterion	Unit
NO_2	1-hour	64.2	112.2	**177**	**188**	(μg/m³)
	Annual	0.93	32.4	**33.3**	**100**	(μg/m³)
$PM_{2.5}$	24-hour	3.79	N.A.	**3.79**	**7.70**	(μg/m³)
	Annual	0.08		**0.08**	**0.3**	(μg/m³)
PM_{10}	24-hour	3.94	35	**39**	**150**	(μg/m³)
CO	1-hour	0.07	1.78	**1.85**	**35**	ppm
	8-hour	0.05	N.A.	**0.05**	**4.05**	ppm
SO_2	1-hour	0.27	18.1	**18.4**	**196**	(μg/m³)
	Annual	0.0009	2.0	**2.0**	**80**	(μg/m³)

Result of the dispersion analyses with the equipment operating at 75% capacity are shown in Table 17-22.

Table 17-22. Criteria Pollutants Dispersion Analysis Results – 75% Operating Capacity

Pollutant	Averaging Time	Modeled Concentration	Background Concentration	Evaluated Concentration	Threshold Criterion	Unit
NO_2	1-hour	72.6	112.2	**185**	**188**	(μg/m³)
	Annual	0.74	32.4	**33.1**	**100**	(μg/m³)
$PM_{2.5}$	24-hour	2.97	N.A.	**2.97**	**7.70**	(μg/m³)
	Annual	0.06		**0.06**	**0.3**	(μg/m³)
PM_{10}	24-hour	3.09	35	**38**	**150**	(μg/m³)
CO	1-hour	0.06	1.78	**1.84**	**35**	ppm
	8-hour	0.04	N.A.	**0.04**	**9**	ppm
SO_2	1-hour	0.25	18.1	**18.4**	**196**	(μg/m³)
	Annual	0.0007	2.0	**2.0**	**80**	(μg/m³)

Result of the dispersion analyses with the equipment operating at 50% capacity are shown in Table 17-23.

Table 17-23. Criteria Pollutants Dispersion Analysis Results – 50% Operating Capacity

Pollutant	Averaging Time	Modeled Concentration	Background Concentration	Evaluated Concentration	Threshold Criterion	Unit
NO_2	1-hour	57.8	112.2	**170**	**188**	(μg/m³)
	Annual	0.52	32.4	**32.9**	**100**	(μg/m³)
$PM_{2.5}$	24-hour	2.07	N.A.	**2.07**	**7.70**	(μg/m³)
	Annual	0.05		**0.05**	**0.3**	(μg/m³)
PM_{10}	24-hour	2.15	35	**37**	**150**	(μg/m³)
CO	1-hour	0.05	1.78	**1.83**	**35**	ppm
	8-hour	0.03	N.A.	**0.03**	**9**	ppm
SO_2	1-hour	0.20	18.1	**18.3**	**196**	(μg/m³)
	Annual	0.001	2.0	**2.0**	**80**	(μg/m³)

As seen in Tables 17-21, 17,22, and 17-23, the predicted concentrations do not exceed the NAAQS or the *de minimis* threshold criterions. Therefore, the emissions from the Big Six Towers Title V facility would not significantly impact any of the Development Sites.

Conclusion

The air quality analysis addressed mobile sources, stationary HVAC system(s), and existing industrial and major/large sources. The results of the analyses are summarized below.

- No significant adverse air quality impacts are predicted from an atypical roadway source of pollutant.
- Emissions from project-related vehicle trips would not cause significant adverse air quality impacts to receptors at the local or neighborhood scale.
- Emissions from project-related heating, ventilation, and air conditioning systems (HVACs) would not cause significant adverse air quality impacts to receptors at the local scale with (E) - Designations in place.
- No significant adverse air quality impacts are anticipated from industrial sources to the proposed project.
- No significant adverse air quality impacts are anticipated from existing large or major sources to the proposed project.

19. NOISE

Introduction

The following noise monitoring was conducted on June 14th, June 19th, and June 20th 2018, in support of the City Environmental Quality Review (CEQR) analysis of a proposed Zoning Text Amendment (The Proposed Action). The Proposed Action would amend Appendix F of the Zoning Resolution to designate the affected area a Mandatory Inclusionary Housing Area (MIHA) where the provisions of Mandatory Inclusionary Housing (MIH) and Zoning for Quality and Affordability (ZQA) would apply. The text change would effectuate the development of multiple buildings containing residential and retail uses.

The Project Areas are located near heavily traveled vehicular routes as well as elevated rail lines. Accordingly, an assessment of the potential for adverse effects on project occupants from ambient noise is warranted. The proposed 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.

Existing Environmental Controls

The 2006 Maspeth/Woodside Rezoning (06DCP065Q) placed E-designations for noise on the properties that are identified in this EAS as Projected Development Site 1 (Block 1341, Lot 77), Projected Development Site 3 (Block 2444, Lot 40), and Projected Development Site 6 (Block 2444, Lot 57). The E-designation state that future residential/commercial uses on these properties must provide a closed window condition with a minimum of 35 dBA window/wall attenuation in order to maintain an acceptable interior noise level. In order to maintain a closed-window condition, alternate means of ventilation must be provided.

Framework of Noise Analysis

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 a sound pressure 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 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: 2014 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.
- $L_{eq(24)}$ 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.

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Protection Order-City Environmental Quality Review (CEPO-CEQR) noise standards at the exterior façade to achieve interior noise levels of 45 dB(A) or below. CEPOCEQR Noise Standards classify noise exposure into four categories: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable. As noted in the *CEQR Technical Manual*, these standards are the basis for classifying noise exposure into the following categories based on the L10 measured directly outside the projected development site:

Table 19-2: Attenuation Values to Achieve Acceptable Interior Noise Levels (19-2 CEQR TM)

	Marginally Unacceptable				Clearly Unacceptable
Noise Level with Proposed Project	70 < L10 ≤ 73	73 < L10 ≤ 76	76 < L10 ≤ 78	78 < L10 ≤ 80	80 < L10
Attenuation[1]	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	36 + (L10 – 80) dB(A)

Notes:
1 The above composite window-wall attenuation values are for residential dwellings. Commercial and office spaces/meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
2 Required attenuation values increase by 1 dB(A) increments for L10 values greater than 80 dBA.

Measurement Location and Equipment

One-hour noise monitoring was conducted at six locations. Location One (1) is located on the 65th Place frontage of Development Site 5 (Block 1342, Lot 36); Location Two (2) is located on the Queens Boulevard frontage of Development Site 5 (Block 1242, Lot 36); Monitoring Location Three (3) is located on the Queens Boulevard frontage of Development Site 3 (Block 2444, Lot 40), Monitoring Location Four (4) is located on the 47th Avenue frontage of Development Site 3 (Block 2444, Lot 40), Monitoring Location Five (5) is located on the Queens Boulevard Frontage of Development Site 2 (Block 2444, Lots 1, 4, 41, 30, 31, and 36); and Monitoring Location Six (6) is located on the 47th Avenue frontage of Development Site 2 (Block 2444, Lots 1, 4, 41, 30, and 31) Monitoring Locations are shown in Figure 1 followed by photographs of each location.

For the 1-hour noise monitoring, measurements ran continuously for an hour and were recorded cumulatively for the entire session. Statistics were recorded in 1/3 octave bands from 6.35 Hz to 20k Hz. Noise monitoring was conducted using a Type 1 Casella CEL-633C sound meter with wind screen. The monitors were placed on a tripod at a height of approximately three feet above the ground, away from any other noise-reflective surfaces. The meter was calibrated prior to and following our measurement using a CEL120/1 sound calibrator conforming to ANSI S1.4. The time response of the sound level was set to "slow." We recorded the L_{10} noise level, as well as the L_{max}, L_{eq}, L_{50}, L_{90} and L_{min} noise levels, for each monitoring location in the tables below.

Periods of peak public transit and vehicular traffic around the subject site constitute a worst-case condition for noise at the project site. Vehicular traffic counts are shown in the tables below. Noise meter calibration certification and back up data are provided in the Noise Appendix.

Figure 19-1: Noise Monitoring Locations

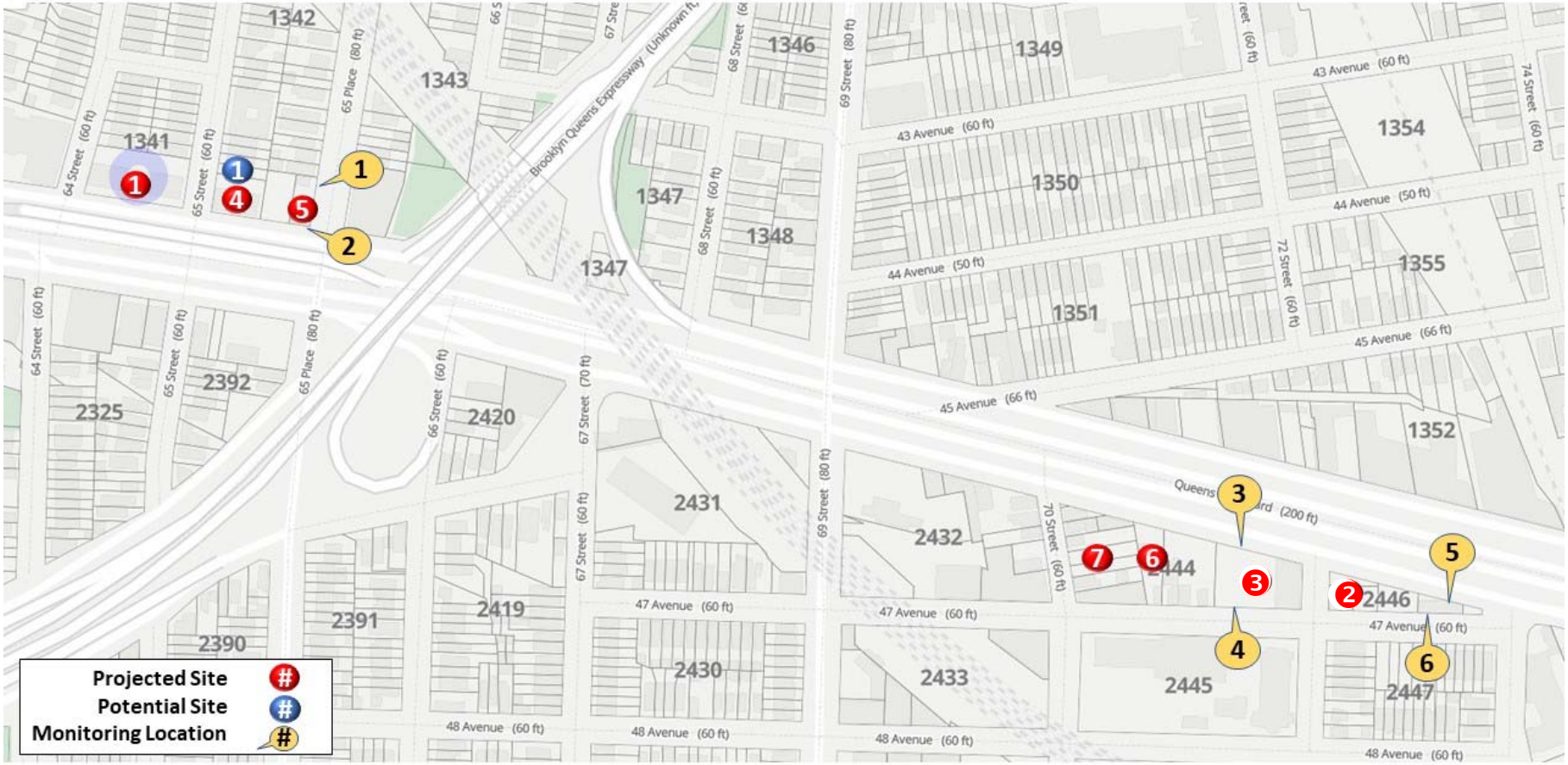


Photo 19-1: *Noise Monitoring Location One (1) at the 65th Place frontage of Development Site 5*

Photo 19-2: *Noise Monitoring Location Two (2) at the Queens Boulevard frontage of Development Site 5*

Photo 19-3: ***Noise Monitoring Location Three (3) at the Queens Boulevard frontage of Development Site 3***

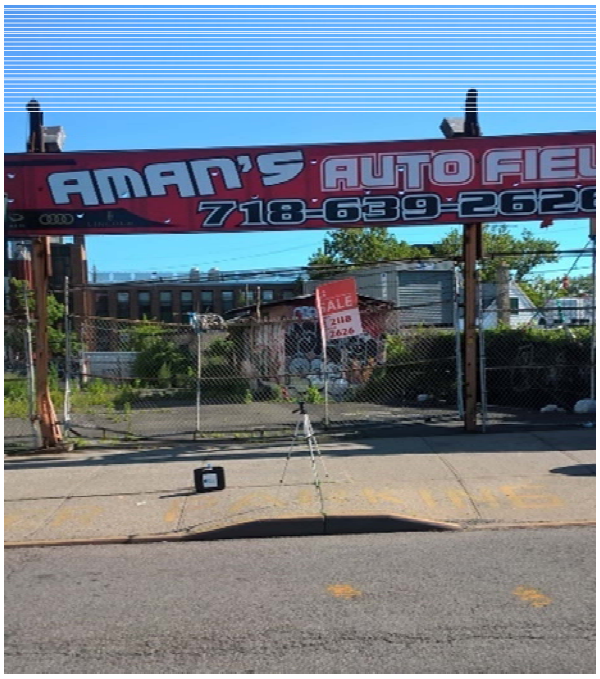


Photo 19-4: ***Noise Monitoring Location Four (4) at the 47th Avenue frontage of Development Site 3***

Photo 19-5: ***Noise Monitoring Location Five (5) at the Queens Boulevard frontage of Development Site 2***

Photo 19-6: ***Noise Monitoring Location Six (6) on the Queens 47th Ave Frontage of Development Site 2***

Measurement Conditions
Noise monitoring was conducted on Thursday June 14th, Tuesday June 19th, and Wednesday June 20th, 2018. The weather conditions during the monitoring sessions were dry with moderate winds. The temperature ranged from approximately 70-85°F.

Existing Conditions
Based on the noise measurements taken at the Project Sites, the predominant source of noise is vehicular traffic, as well as train movements at Locations 4 and 6.

Tables 3a-3f *below contains the 1-hour results for the measurements taken at the Project Site:*

Note: **Bold** denotes L_{10} noise level exceedances, according to Table 19-2 of the *CEQR Technical Manual*

Table 19-3a (1 of 6): Noise Levels (dB)

Location 1:*1-hour Noise Monitoring at the 65th Place frontage of Development Site 5*

Wednesday, June 20th, 2018			
Time	7:31 am – 8:31 am	12:00 pm – 1:00 pm	4:30 pm – 5:30 pm
L_{max}	95.7	93.6	92
L_{10}	69.5	**70.5**	68
L_{eq}	68.3	68.1	65.9
L_{50}	62.5	63.5	62.5
L_{90}	57.5	57.5	58.5
L_{min}	53.2	54	53.9

Table 19-3b (2 of 6): Noise Levels (dB)

Location 2: *1-hour Noise Monitoring at Queens Boulevard frontage of Development Site 5*

Tuesday, June 19th, 2018			
Time	7:35 am – 8:35 am	12:00 pm – 1:00 pm	4:30 pm – 5:30 pm
L_{max}	102.9	100.6	102.4
L_{10}	**76.5**	**72.5**	**73.5**
L_{eq}	75.1	72.5	72.8
L_{50}	71	66	67
L_{90}	65.5	62	62.5
L_{min}	60.5	58.3	58.4

Table 19-3c (3 of 6): Noise Levels (dB)

Location 3: *1-hour Noise Monitoring at the Queens Boulevard frontage of Development Site 3*

Tuesday, June 19th, 2018			
Time	7:31 am – 8:31 am	12:02 pm – 1:02 pm	4:32 pm – 5:32 pm
L_{max}	98.2	90.7	92.3
L_{10}	**72.5**	**71.5**	**73.5**
L_{eq}	72.5	68.7	71.2
L_{50}	66.5	64	66
L_{90}	61	57	59.5
L_{min}	56.3	52.7	54.8

Table 19-4d (4 of 6): Noise Levels (dB)

Location 4: *1-hour Noise Monitoring at the 47th Avenue frontage of Development Site 3*

Thursday, June 14th, 2018			
Time	7:30 am – 8:30 am	12:00 pm – 1:00 pm	4:30 pm – 5:30 pm
L_{max}	82	89.1	93.6
L_{10}	65	63	62.5
L_{eq}	61.6	67.9	61.1
L_{50}	57.5	55	57
L_{90}	53	52	53
L_{min}	49.5	47.8	49.3

Table 19-4e (5 of 6): Noise Levels (dB)

Location 5: *1-hour Noise Monitoring at the Queens Boulevard frontage of Development Site 2*

Thursday, June 14th, 2018			
Time	7:30 am – 8:30 am	12:00 pm – 1:00 pm	4:30 pm – 5:30 pm
L_{max}	93.7	98.5	90.1
L_{10}	**72.5**	**71**	**72.5**
L_{eq}	69.8	70.5	69.6
L_{50}	66.5	64	66
L_{90}	59.5	57	60.5
L_{min}	54.9	51.6	54.7

Table 19-4f (6 of 6): Noise Levels (dB)

Location 6: *1-hour Noise Monitoring at the 47th Avenue frontage of Development Site 2*

Tuesday, June 19th, 2018			
Time	7:30 am – 8:30 am	12:00 pm – 1:00 pm	4:30 pm – 5:30 pm
L_{max}	84	90.1	87.8
L_{10}	61.5	59.5	62
L_{eq}	59.9	64.5	59.6
L_{50}	57.5	55	57.5
L_{90}	53.5	51	54
L_{min}	48.9	45.1	49.8

Tables 19-5a-5f below contains the traffic counts taken at the Project Site:

Table 19-5a (1 of 6): Traffic Counts and Vehicle Classifications

Location 1: *Traffic Counts at the 65th Place frontage of Development Site 5*

	Morning	**Midday**	**Evening**
Cars	99	67	134
Van/SUV	128	101	168
Heavy Trucks	5	15	6
Bus	14	4	12
Train	0	0	0

Table 19-5b (2 of 6): Traffic Counts and Vehicle Classifications

Location 2: *Traffic Counts at the Queens Boulevard frontage of Development Site 5*

	Morning	**Midday**	**Evening**
Cars	300	273	261
Van/SUV	498	419	409
Heavy Trucks	36	21	18
Bus	12	8	9
Train	0	0	0

Table 19-5c (3 of 6): Traffic Counts and Vehicle Classifications

Location 3: *Traffic Counts at the Queens Boulevard frontage of Development Site 3*

	Morning	Midday	Evening
Cars	298	268	188
Van/SUV	372	275	240
Heavy Trucks	36	31	9
Bus	47	6	14
Train	0	0	0

Table 19-5d (4 of 6): Traffic Counts and Vehicle Classifications

Location 4: *Traffic Counts at the 47th Avenue frontage of Development Site 3*

	Morning	Midday	Evening
Cars	7	6	5
Van/SUV	9	6	10
Heavy Trucks	0	0	0
Bus	13	0	1
Train	6	2	2

Table 19-5e (5 of 6): Traffic Counts and Vehicle Classifications

Location 5: *Traffic Counts at the Queens Boulevard frontage of Development Site 2*

	Morning	Midday	Evening
Cars	62	191	292
Van/SUV	45	230	453
Heavy Trucks	11	22	20
Bus	22	4	17
Train	0	0	0

Table 19-5f (6 of 6): Traffic Counts and Vehicle Classifications

Location 6: *Traffic Counts at the 47th Avenue frontage of Development Site 2*

	Morning	Midday	Evening
Cars	6	2	2
Van/SUV	8	2	1
Heavy Trucks	0	1	0
Bus	3	0	0
Train	6	2	2

Conclusions

The monitoring at locations on 47th Ave frontages (locations 4 and 6), placed in front of Projected Development Sites 2 and 3 identified light vehicular traffic conditions and relatively low noise levels – a maximum L_{eq} of 67.9 dBA at location 4 and 64.5 dBA at location 6. It should be noted that both of these sites contain auto sales parking lots and the monitoring locations had direct exposure to heavy vehicular traffic associated with Queens Blvd. Further, as both of these monitoring locations indicated, six (6) Long Island Railroad trains passed by these sites during the monitoring periods. Given the combination of Queens Boulevard ambient traffic noise and the exposure to train traffic, the addition of a net increment of 11 units at Projected Development Site 2 and 10 at projected Development Site 6 would not perceptibly increase the PCE noise levels at either of these sites compared to the no-build. Chapter 19, Section 421.1 of CEQR TM 2014, states "If the proposed project would introduce a sensitive receptor, With-Action noise level in dBA would be compared to the values contained in the Noise Exposure Guidelines. If these noise levels would exceed the marginally acceptable levels, a significant impact would occur unless the building design as proposed provides a composite building attenuation that would be sufficient to reduce these levels to an acceptable interior noise level." Based on the low traffic counts at Monitoring Locations 4 and 6 as depicted in "Table Vehicular -5d" and "Table Vehicular-5f" and higher train noise at upper floors, it is possible that L_{eq} or L_{10} noise levels at Monitoring Locations 4 and 6 could be increased to exceed the exterior noise level threshold of 70 dBA and require new window/wall facade attenuation for the newly introduced projected development sites under the total With-Action development condition. Therefore, as per recent noise study conducted for 69-02 Queens Boulevard Rezoning (18DCP132Q) project, at least 28 dBA of attenuation requirement will be provided for facades facing 47th Avenue.

The 2014 *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 One (1) was 70.5 dB(A) during the afternoon monitoring session. The highest recorded L_{10} at Location Two (2) was 76.5 dB(A) during the morning monitoring session. The highest recorded L_{10} at Location Three (3) was 73.5 dB(A) during the evening monitoring session. The highest recorded L_{10} at Location Four (4) was 65 dB(A) during the morning monitoring session. The highest recorded L_{10} at Location Five (5) was 72.5 dB(A) during the morning and evening monitoring sessions. The highest recorded L_{10} at Location Six (6) was 62 dB(A) during the evening monitoring session.

E-Designation E-551

Based on these results, the following E-Designations are warranted:

Block 1342, Lot 77 (Projected Development Site 1): In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 33 dBA window/wall attenuation on facades facing Queens Boulevard or 65th Street or 64th Street and 28 dBA of attenuation on façade facing 43rd Avenue to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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 2446, Lots 1, 4, 30, 31, 36, and 41 (Projected Development Site 2): In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on all facades to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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 2444, Lot 40 (Projected Development Site 3): In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing Queens Boulevard or 72nd Street or 70th Street and 28 dBA of attenuation on façade facing 47th Avenue to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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 1342, Lot 1 (Projected Development Site 4): In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 33 dBA window/wall attenuation on facades facing Queens Boulevard or 65th Street or 65th Place and 28 dBA of attenuation on façade facing Woodside Avenue to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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.

<u>Block 1342, Lot 36 (Projected Development Site 5):</u> In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 33 dBA window/wall attenuation on all facades facing Queens Boulevard or 65th Street or portions of façade facing 65th Place within 50 feet from Queens Boulevard and 28 dBA of attenuation on all façade facing Woodside Avenue or portions of façade facing 65th Place beyond 50 feet from Queens Boulevard to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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.

<u>Block 2444, Lot 57 (Projected Development Site 6):</u> In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing Queens Boulevard or 72nd Street or 70th Street and 28 dBA of attenuation on façade facing 47th Avenue to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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.

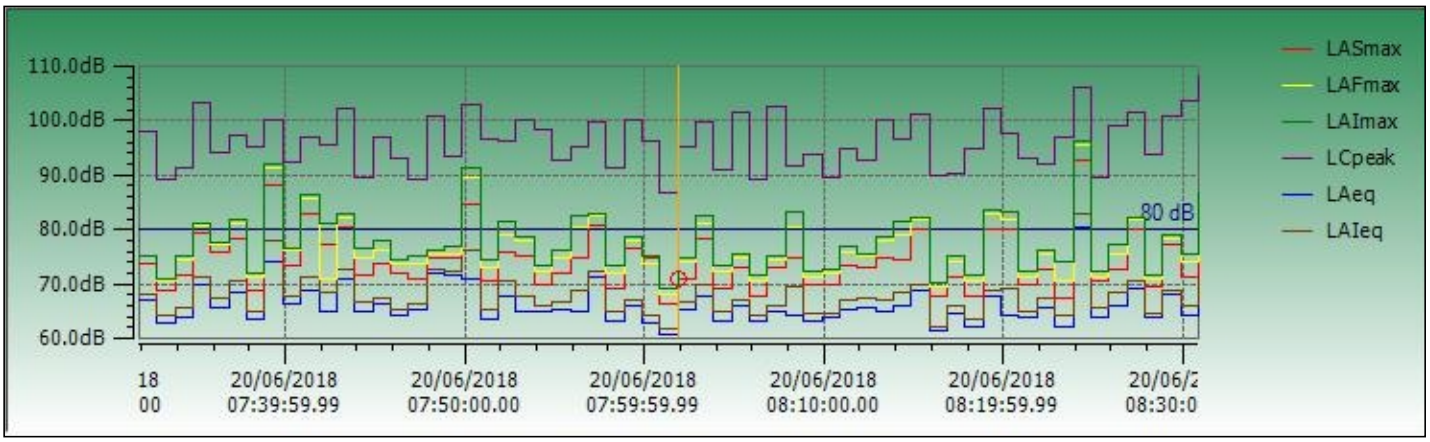
<u>Block 2444, Lots 1, 2, 4, 6, 8, 10, 12, and 18 (Projected Development Site 7): In</u> order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a minimum of 31 dBA window/wall attenuation on all facades facing Queens Boulevard or 70th Street or 72nd Street or portions of façade facing 47th Avenue within 50 feet from 70th Street and 28 dBA of attenuation on portions of façade facing 47th Avenue beyond 50 feet from 70th Street to ensure an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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.

<u>Block 1342, Lot 5 (Potential Development Site):</u> In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a minimum of 28 dBA window/wall attenuation on all facades to ensure an acceptable interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses. 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.

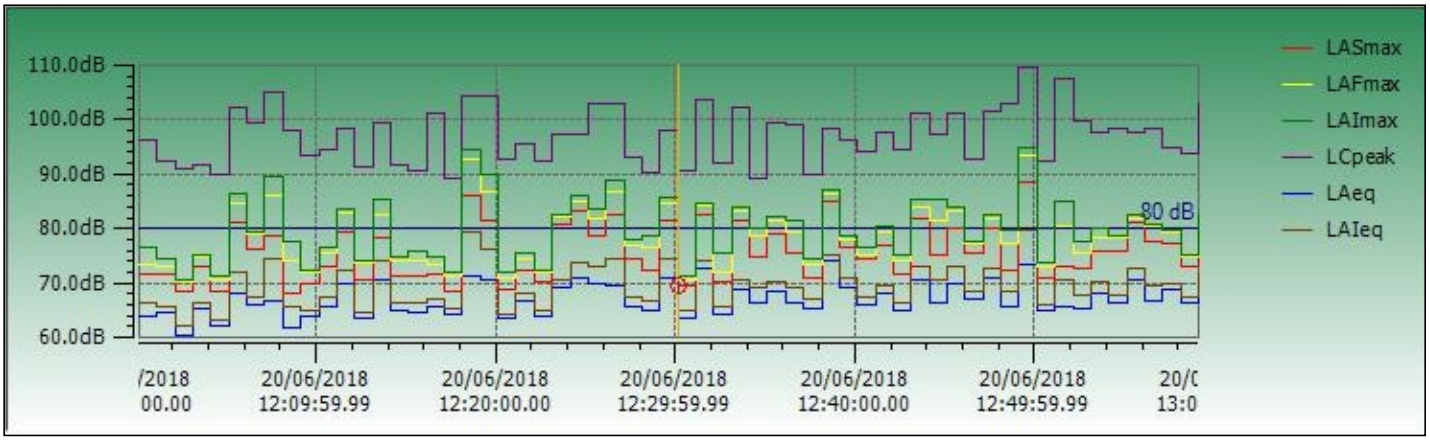
With this level of noise attenuation, there would be no potential for adverse impacts related to noise, and an acceptable interior noise exposure level of 45 dB(A) would be achieved.

NOISE BACKUP

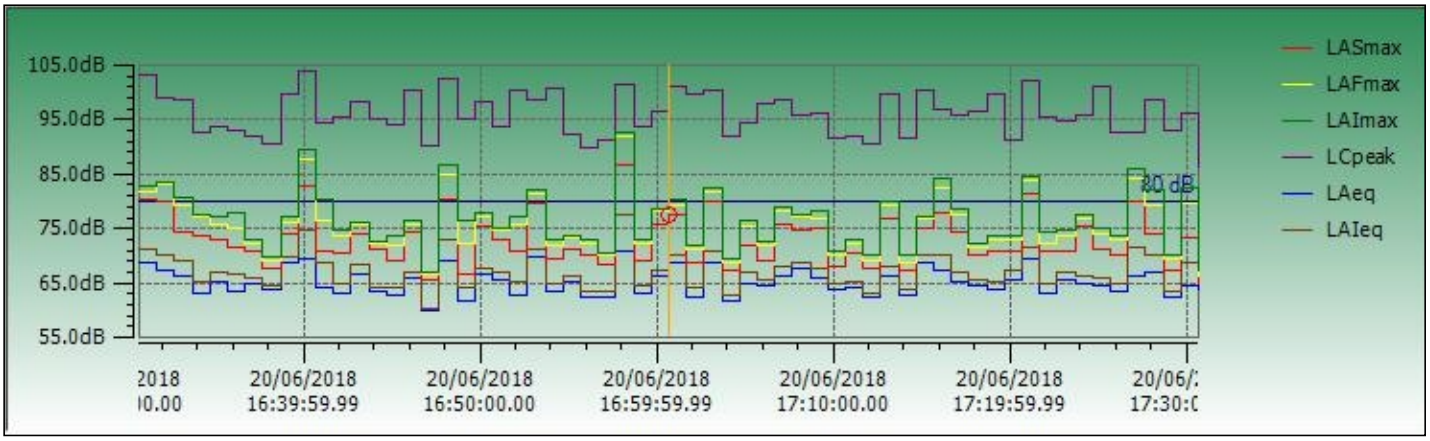
Instrument Model	CEL-633C		
LAImin with Time	53.5 dB (6/20/2018 8:29:12 AM)	LAFmin with Time	53.2 dB (6/20/2018 8:29:14 AM)
LDN	0	LAImin	53.5 dB
LDEN	0	LAImax with Time	96.3 dB (6/20/2018 8:24:10 AM)
CNEL	0	LAImax	96.3 dB
LCF 10%	80.5 dB	Calibration (After) Date	6/20/2018 11:58:48 AM
LCF 50%	75 dB	Calibration (Before) Date	6/20/2018 7:28:51 AM
LCF 90%	71.5 dB	Calibration (Before) Offset	2.8
LCF 95%	70.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	69.5 dB	Calibration Drift	-0.3 dB
LCpeak	108.3 dB	LAeq	68.3 dB
LCpeak with Time	108.3 dB (6/20/2018 8:31:51 AM)	Battery Low	Yes
LAE	103.9 dB	LAF variable%	55 dB
LAIeq	70.5 dB	LAF 95%	56.5 dB
LCeq	78.8 dB	LAF 90%	57.5 dB
LCeq-LAeq	10.5 dB	LAF 50%	62.5 dB
Lepd(Projected)	68.3 dB	LAF 10%	69.5 dB
Lex8h(Projected)	68.3 dB	Duration	01:00:00 HH:MM:SS
LZeq	80.4 dB	End Date & Time	6/20/2018 8:31:52 AM
Lepd	59.3 dB	Run Number	41
Lex8h	59.3 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/20/2018 7:31:52 AM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	95.7 dB	Process	Unallocated
LAFmax with Time	95.7 dB (6/20/2018 8:24:10 AM)		
LAFmin	53.2 dB		
Notes			



Instrument Model	CEL-633C		
LAImin with Time	54.4 dB (6/20/2018 12:54:39 PM)	LAFmin with Time	54.0 dB (6/20/2018 12:54:39 PM)
LDN	0	LAImin	54.4 dB
LDEN	0	LAImax with Time	94.7 dB (6/20/2018 12:49:10 PM)
CNEL	0	LAImax	94.7 dB
LCF 10%	80.5 dB	Calibration (After) Date	6/20/2018 4:30:38 PM
LCF 50%	75 dB	Calibration (Before) Date	6/20/2018 11:58:48 AM
LCF 90%	71.5 dB	Calibration (Before) Offset	2.5
LCF 95%	70.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	69 dB	Calibration Drift	-0.4 dB
LCpeak	109.8 dB	LAeq	68.1 dB
LCpeak with Time	109.8 dB (6/20/2018 12:49:10 PM)	Battery Low	Yes
LAE	103.7 dB	LAF variable%	55.5 dB
LAIeq	71.3 dB	LAF 95%	56.5 dB
LCeq	78.2 dB	LAF 90%	57.5 dB
LCeq-LAeq	10.1 dB	LAF 50%	63.5 dB
Lepd(Projected)	68.1 dB	LAF 10%	70.5 dB
Lex8h(Projected)	68.1 dB	Duration	01:00:00 HH:MM:SS
LZeq	82.6 dB	End Date & Time	6/20/2018 1:00:08 PM
Lepd	59.1 dB	Run Number	43
Lex8h	59.1 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/20/2018 12:00:08 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	93.6 dB	Process	Unallocated
LAFmax with Time	93.6 dB (6/20/2018 12:49:10 PM)		
LAFmin	54 dB		
Notes			



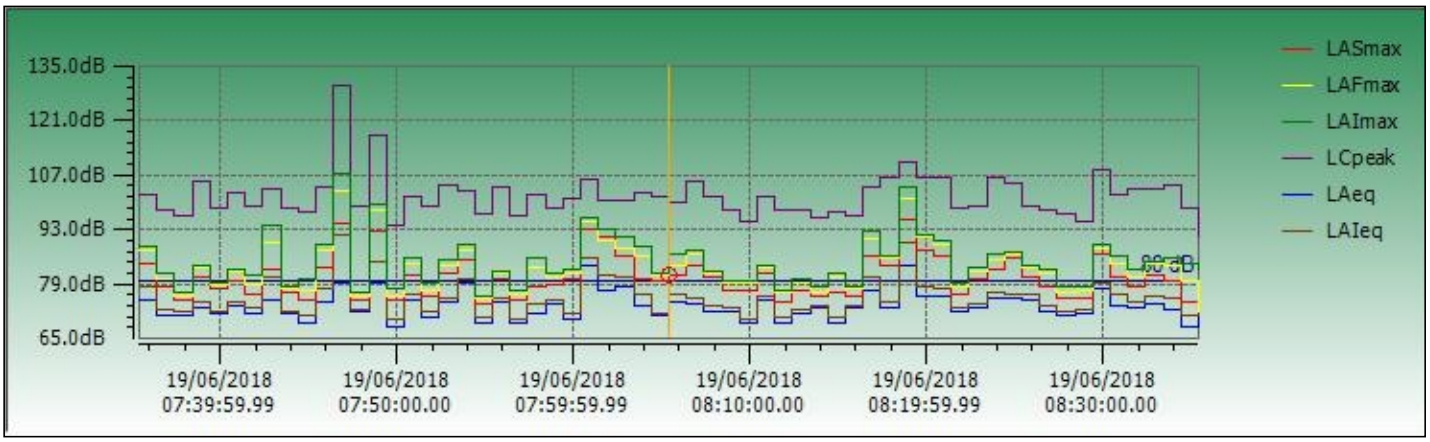
Instrument Model	CEL-633C		
LAImin with Time	54.0 dB (6/20/2018 4:34:52 PM)	LAFmin with Time	53.9 dB (6/20/2018 4:34:52 PM)
LDN	0	LAImin	54 dB
LDEN	0	LAImax with Time	92.6 dB (6/20/2018 4:58:23 PM)
CNEL	0	LAImax	92.6 dB
LCF 10%	81 dB	Calibration (After) Date	6/20/2018 5:31:30 PM
LCF 50%	76.5 dB	Calibration (Before) Date	6/20/2018 4:30:38 PM
LCF 90%	73 dB	Calibration (Before) Offset	2.2
LCF 95%	72.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	71 dB	Calibration Drift	0.6 dB
LCpeak	104 dB	LAeq	65.9 dB
LCpeak with Time	104.0 dB (6/20/2018 4:40:11 PM)	Battery Low	No
LAE	101.5 dB	LAF variable%	56 dB
LAIeq	68.5 dB	LAF 95%	57.5 dB
LCeq	78.9 dB	LAF 90%	58.5 dB
LCeq-LAeq	13 dB	LAF 50%	62.5 dB
Lepd(Projected)	65.9 dB	LAF 10%	68 dB
Lex8h(Projected)	65.9 dB	Duration	01:00:01 HH:MM:SS
LZeq	84.1 dB	End Date & Time	6/20/2018 5:30:42 PM
Lepd	56.9 dB	Run Number	45
Lex8h	56.9 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/20/2018 4:30:41 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	92 dB	Process	Unallocated
LAFmax with Time	92.0 dB (6/20/2018 4:58:23 PM)		
LAFmin	53.9 dB		
Notes			



Casella CEL Ltd.

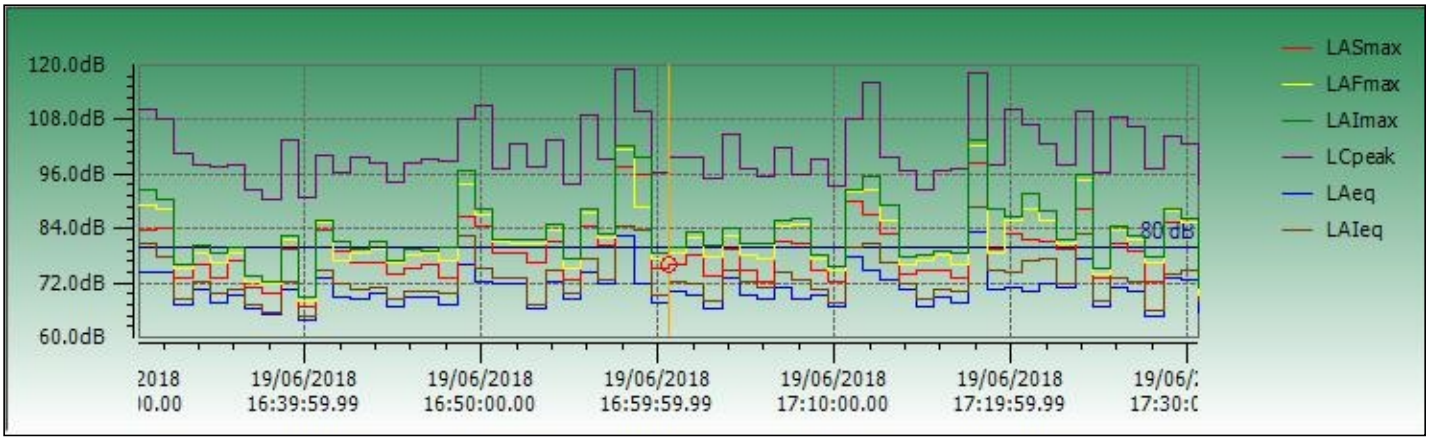
Report On CEL-63X

Instrument Model	**CEL-633C**		
LAImin with Time	60.8 dB (6/19/2018 8:00:08 AM)	LAFmin with Time	60.5 dB (6/19/2018 8:00:14 AM)
LDN	0	LAImin	60.8 dB
LDEN	0	LAImax with Time	107.5 dB (6/19/2018 7:47:06 AM)
CNEL	0	LAImax	107.5 dB
LCF 10%	85.5 dB	Calibration (After) Date	6/19/2018 8:36:03 AM
LCF 50%	79.5 dB	Calibration (Before) Date	6/19/2018 7:34:52 AM
LCF 90%	76 dB	Calibration (Before) Offset	1
LCF 95%	75.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	87.5 dB	Calibration Drift	-0.2 dB
LCpeak	130.1 dB	LAeq	75.1 dB
LCpeak with Time	130.1 dB (6/19/2018 7:47:06 AM)	Battery Low	No
LAE	110.6 dB	LAF variable%	79.5 dB
LAIeq	79.3 dB	LAF 95%	64 dB
LCeq	82.7 dB	LAF 90%	65.5 dB
LCeq-LAeq	7.6 dB	LAF 50%	71 dB
Lepd(Projected)	75.1 dB	LAF 10%	76.5 dB
Lex8h(Projected)	75.1 dB	Duration	01:00:03 HH:MM:SS
LZeq	84.5 dB	End Date & Time	6/19/2018 8:35:27 AM
Lepd	66.1 dB	Run Number	181
Lex8h	66.1 dB	Serial Number	1274486
Overload	No	Start Date & Time	6/19/2018 7:35:24 AM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	102.9 dB	Process	Unallocated
LAFmax with Time	102.9 dB (6/19/2018 7:47:06 AM)		
LAFmin	60.5 dB		
Notes			

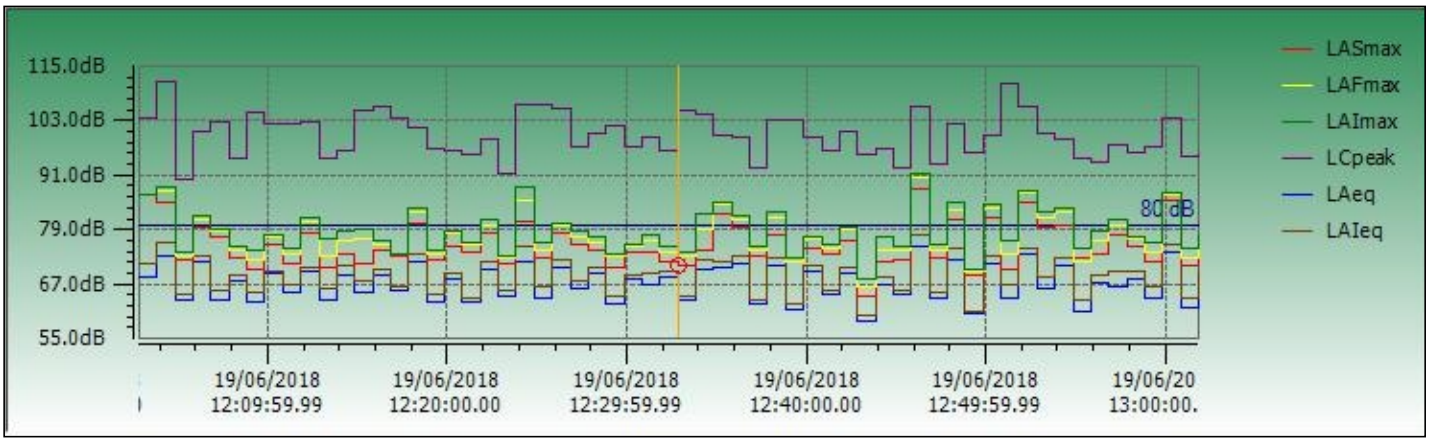


Instrument Model	CEL-633C		
LAImin with Time	58.5 dB (6/19/2018 12:04:36 PM)	LAFmin with Time	58.3 dB (6/19/2018 12:04:36 PM)
LDN	0	LAImin	58.5 dB
LDEN	0	LAImax with Time	101.7 dB (6/19/2018 12:09:19 PM)
CNEL	0	LAImax	101.7 dB
LCF 10%	84 dB	Calibration (After) Date	6/19/2018 1:01:56 PM
LCF 50%	77.5 dB	Calibration (Before) Date	6/19/2018 11:53:05 AM
LCF 90%	74 dB	Calibration (Before) Offset	0.9
LCF 95%	73 dB	Calibration (Before) SPL	114 dB
LCF variable%	86.5 dB	Calibration Drift	-0.2 dB
LCpeak	120.2 dB	LAeq	72.5 dB
LCpeak with Time	120.2 dB (6/19/2018 12:09:19 PM)	Battery Low	No
LAE	108.2 dB	LAF variable%	76 dB
LAIeq	75.4 dB	LAF 95%	61.5 dB
LCeq	81.8 dB	LAF 90%	62 dB
LCeq-LAeq	9.3 dB	LAF 50%	66 dB
Lepd(Projected)	72.5 dB	LAF 10%	72.5 dB
Lex8h(Projected)	72.5 dB	Duration	01:01:08 HH:MM:SS
LZeq	84.6 dB	End Date & Time	6/19/2018 1:01:11 PM
Lepd	63.6 dB	Run Number	182
Lex8h	63.6 dB	Serial Number	1274486
Overload	No	Start Date & Time	6/19/2018 12:00:03 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	100.6 dB	Process	Unallocated
LAFmax with Time	100.6 dB (6/19/2018 12:09:19 PM)		
LAFmin	58.3 dB		
Notes			

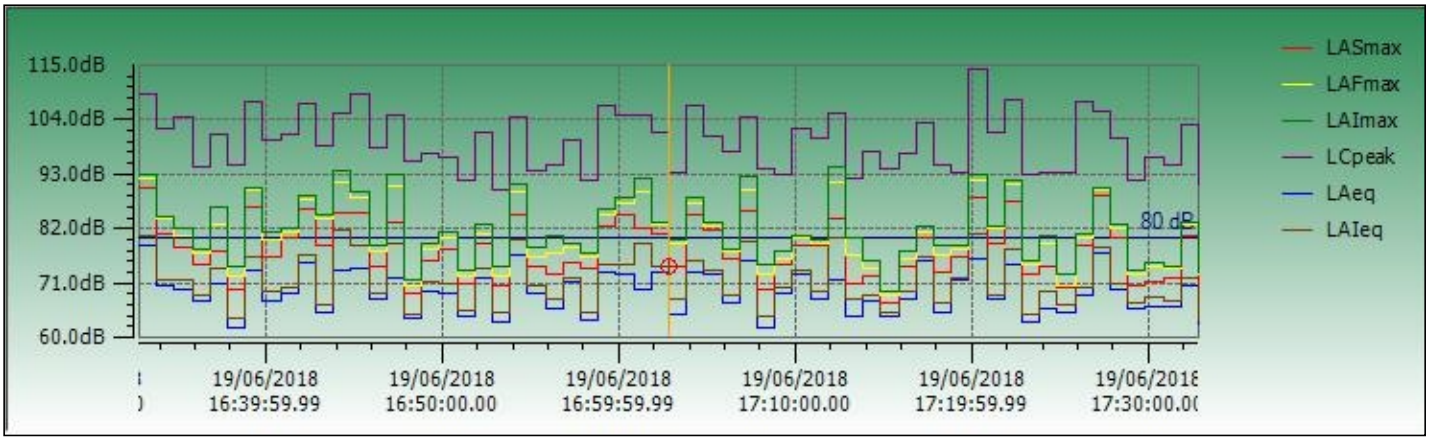
Instrument Model	CEL-633C		
LAImin with Time	58.9 dB (6/19/2018 5:27:37 PM)	LAFmin with Time	58.4 dB (6/19/2018 5:27:38 PM)
LDN	0	LAImin	58.9 dB
LDEN	0	LAImax with Time	103.7 dB (6/19/2018 5:18:31 PM)
CNEL	0	LAImax	103.7 dB
LCF 10%	83.5 dB	Calibration (After) Date	6/19/2018 5:31:13 PM
LCF 50%	78.5 dB	Calibration (Before) Date	6/19/2018 4:30:17 PM
LCF 90%	75.5 dB	Calibration (Before) Offset	0.9
LCF 95%	74.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	86.5 dB	Calibration Drift	-0.5 dB
LCpeak	119.2 dB	LAeq	72.8 dB
LCpeak with Time	119.2 dB (6/19/2018 4:58:36 PM)	Battery Low	No
LAE	108.4 dB	LAF variable%	76 dB
LAIeq	76.9 dB	LAF 95%	62 dB
LCeq	82.9 dB	LAF 90%	62.5 dB
LCeq-LAeq	10.1 dB	LAF 50%	67 dB
Lepd(Projected)	72.8 dB	LAF 10%	73.5 dB
Lex8h(Projected)	72.8 dB	Duration	01:00:03 HH:MM:SS
LZeq	85.1 dB	End Date & Time	6/19/2018 5:30:40 PM
Lepd	63.8 dB	Run Number	183
Lex8h	63.8 dB	Serial Number	1274486
Overload	No	Start Date & Time	6/19/2018 4:30:37 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	102.4 dB	Process	Unallocated
LAFmax with Time	102.4 dB (6/19/2018 5:18:32 PM)		
LAFmin	58.4 dB		
Notes			



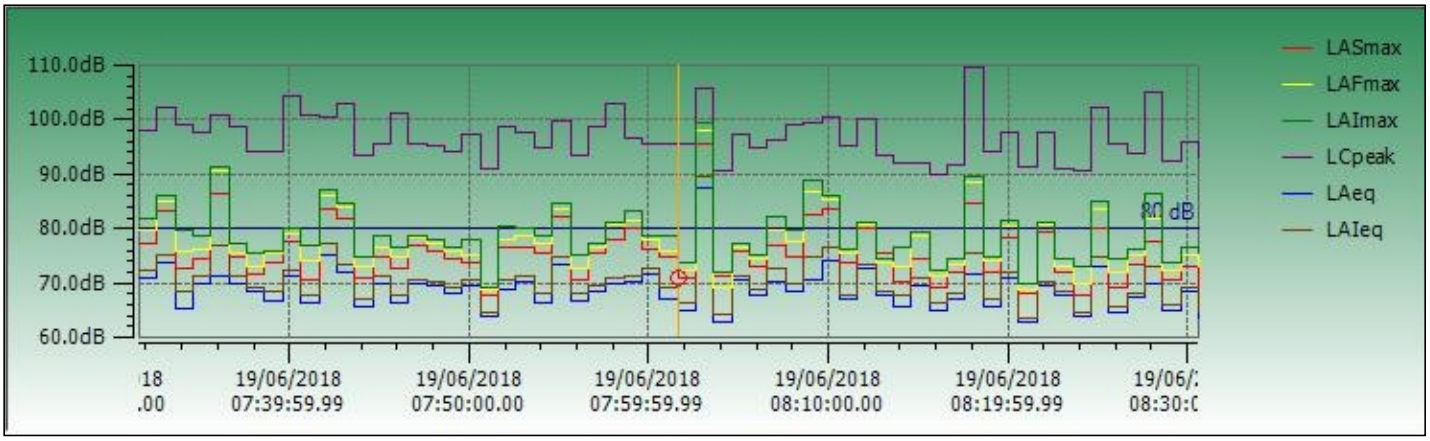
Instrument Model	CEL-633C		
LAImin with Time	52.8 dB (6/19/2018 12:57:55 PM)	LAFmin with Time	52.7 dB (6/19/2018 12:57:55 PM)
LDN	0	LAImin	52.8 dB
LDEN	0	LAImax with Time	91.3 dB (6/19/2018 12:46:45 PM)
CNEL	0	LAImax	91.3 dB
LCF 10%	83.5 dB	Calibration (After) Date	6/19/2018 4:14:58 PM
LCF 50%	77 dB	Calibration (Before) Date	6/19/2018 12:00:47 PM
LCF 90%	71.5 dB	Calibration (Before) Offset	1.6
LCF 95%	70.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	68.5 dB	Calibration Drift	0.1 dB
LCpeak	111.8 dB	LAeq	68.7 dB
LCpeak with Time	111.8 dB (6/19/2018 12:04:19 PM)	Battery Low	Yes
LAE	104.3 dB	LAF variable%	54.5 dB
LAIeq	70.6 dB	LAF 95%	55.5 dB
LCeq	80.3 dB	LAF 90%	57 dB
LCeq-LAeq	11.6 dB	LAF 50%	64 dB
Lepd(Projected)	68.7 dB	LAF 10%	71.5 dB
Lex8h(Projected)	68.7 dB	Duration	01:00:00 HH:MM:SS
LZeq	88.5 dB	End Date & Time	6/19/2018 1:02:51 PM
Lepd	59.7 dB	Run Number	37
Lex8h	59.7 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/19/2018 12:02:51 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	90.7 dB	Process	Unallocated
LAFmax with Time	90.7 dB (6/19/2018 12:46:45 PM)		
LAFmin	52.7 dB		
Notes			



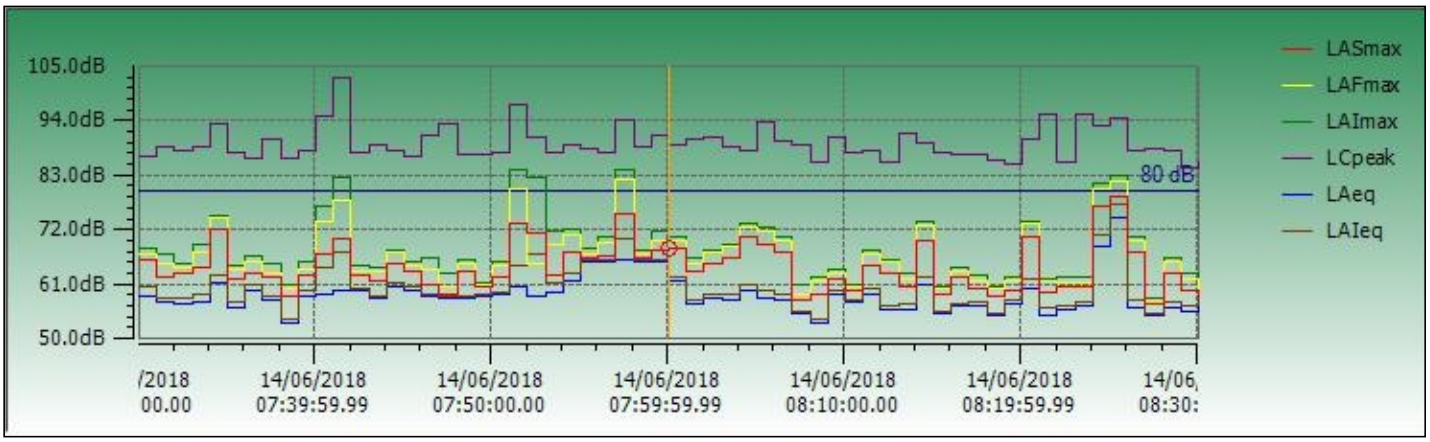
Instrument Model	CEL-633C		
LAImin with Time	55.6 dB (6/19/2018 5:08:34 PM)	LAFmin with Time	54.8 dB (6/19/2018 5:13:47 PM)
LDN	0	LAImin	55.6 dB
LDEN	0	LAImax with Time	94.5 dB (6/19/2018 5:12:36 PM)
CNEL	0	LAImax	94.5 dB
LCF 10%	84.5 dB	Calibration (After) Date	6/19/2018 5:34:59 PM
LCF 50%	78 dB	Calibration (Before) Date	6/19/2018 4:15:19 PM
LCF 90%	73 dB	Calibration (Before) Offset	1.7
LCF 95%	72 dB	Calibration (Before) SPL	114 dB
LCF variable%	71 dB	Calibration Drift	0.1 dB
LCpeak	114.1 dB	LAeq	71.2 dB
LCpeak with Time	114.1 dB (6/19/2018 5:20:26 PM)	Battery Low	Yes
LAE	106.9 dB	LAF variable%	57 dB
LAIeq	74.4 dB	LAF 95%	58.5 dB
LCeq	82 dB	LAF 90%	59.5 dB
LCeq-LAeq	10.8 dB	LAF 50%	66 dB
Lepd(Projected)	71.2 dB	LAF 10%	73.5 dB
Lex8h(Projected)	71.2 dB	Duration	01:01:00 HH:MM:SS
LZeq	85.3 dB	End Date & Time	6/19/2018 5:33:51 PM
Lepd	62.2 dB	Run Number	39
Lex8h	62.2 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/19/2018 4:32:51 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	92.3 dB	Process	Unallocated
LAFmax with Time	92.3 dB (6/19/2018 4:33:04 PM)		
LAFmin	54.8 dB		
Notes			



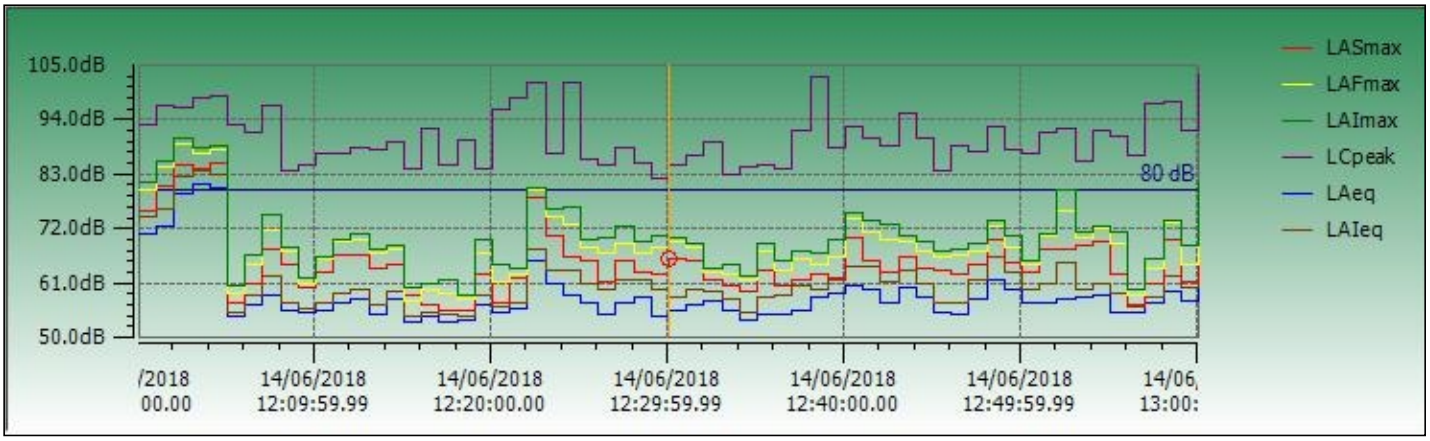
Instrument Model	CEL-633C		
LAImin with Time	56.7 dB (6/19/2018 8:31:33 AM)	LAFmin with Time	56.3 dB (6/19/2018 8:31:33 AM)
LDN	0	LAImin	56.7 dB
LDEN	0	LAImax with Time	99.6 dB (6/19/2018 8:03:22 AM)
CNEL	0	LAImax	99.6 dB
LCF 10%	82 dB	Calibration (After) Date	6/19/2018 12:00:47 PM
LCF 50%	77.5 dB	Calibration (Before) Date	6/19/2018 7:29:04 AM
LCF 90%	74 dB	Calibration (Before) Offset	1.8
LCF 95%	73 dB	Calibration (Before) SPL	114 dB
LCF variable%	71.5 dB	Calibration Drift	-0.2 dB
LCpeak	109.5 dB	LAeq	72.5 dB
LCpeak with Time	109.5 dB (6/19/2018 8:18:05 AM)	Battery Low	Yes
LAE	108.1 dB	LAF variable%	58 dB
LAIeq	74.5 dB	LAF 95%	60 dB
LCeq	79.6 dB	LAF 90%	61 dB
LCeq-LAeq	7.1 dB	LAF 50%	66.5 dB
Lepd(Projected)	72.5 dB	LAF 10%	72.5 dB
Lex8h(Projected)	72.5 dB	Duration	01:00:00 HH:MM:SS
LZeq	82.7 dB	End Date & Time	6/19/2018 8:31:37 AM
Lepd	63.5 dB	Run Number	35
Lex8h	63.5 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/19/2018 7:31:37 AM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	98.2 dB	Process	Unallocated
LAFmax with Time	98.2 dB (6/19/2018 8:03:23 AM)		
LAFmin	56.3 dB		
Notes			



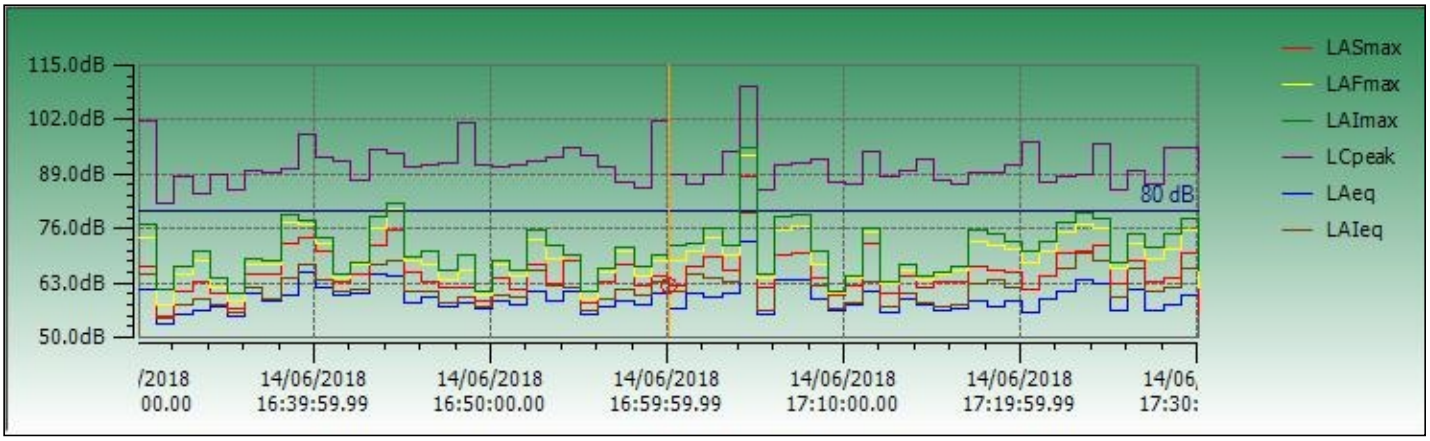
Instrument Model	CEL-633C		
LAImin with Time	49.8 dB (6/14/2018 7:38:44 AM)	LAFmin with Time	49.5 dB (6/14/2018 7:38:44 AM)
LDN	0	LAImin	49.8 dB
LDEN	0	LAImax with Time	84.2 dB (6/14/2018 7:57:14 AM)
CNEL	0	LAImax	84.2 dB
LCF 10%	75 dB	Calibration (After) Date	6/14/2018 8:31:29 AM
LCF 50%	71.5 dB	Calibration (Before) Date	6/14/2018 7:21:52 AM
LCF 90%	68.5 dB	Calibration (Before) Offset	2
LCF 95%	67.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	66.5 dB	Calibration Drift	-0.2 dB
LCpeak	102.7 dB	LAeq	61.6 dB
LCpeak with Time	102.7 dB (6/14/2018 7:41:06 AM)	Battery Low	No
LAE	97.2 dB	LAF variable%	51 dB
LAIeq	63.8 dB	LAF 95%	52 dB
LCeq	72.6 dB	LAF 90%	53 dB
LCeq-LAeq	11 dB	LAF 50%	57.5 dB
Lepd(Projected)	61.6 dB	LAF 10%	65 dB
Lex8h(Projected)	61.6 dB	Duration	01:00:01 HH:MM:SS
LZeq	76.8 dB	End Date & Time	6/14/2018 8:30:05 AM
Lepd	52.6 dB	Run Number	32
Lex8h	52.6 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/14/2018 7:30:04 AM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	82 dB	Process	Unallocated
LAFmax with Time	82.0 dB (6/14/2018 7:57:14 AM)		
LAFmin	49.5 dB		
Notes			



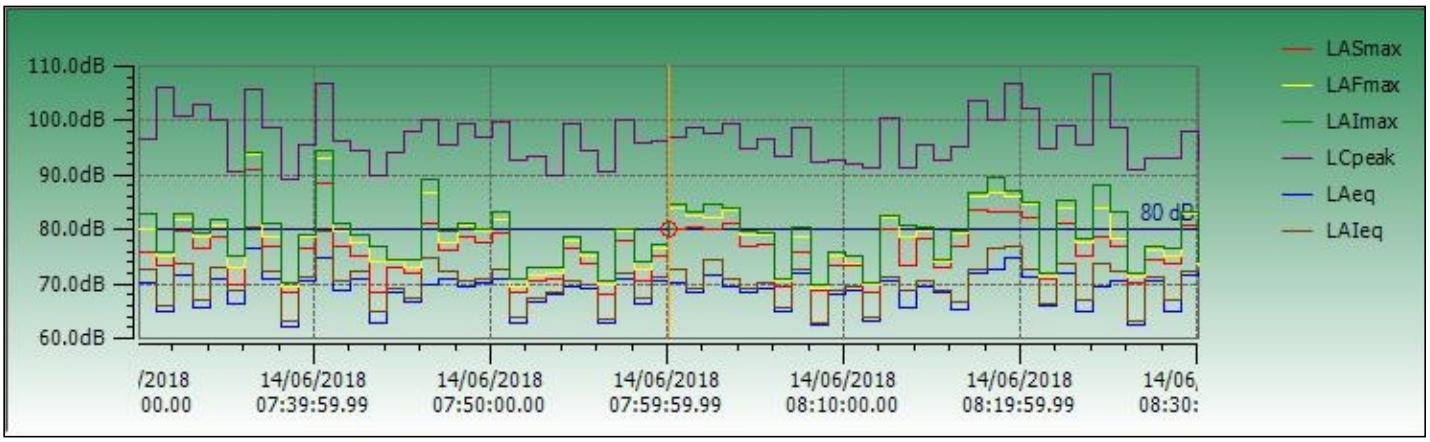
Instrument Model	CEL-633C		
LAImin with Time	48.1 dB (6/14/2018 12:35:24 PM)	LAFmin with Time	47.8 dB (6/14/2018 12:35:24 PM)
LDN	0	LAImin	48.1 dB
LDEN	0	LAImax with Time	90.1 dB (6/14/2018 12:02:27 PM)
CNEL	0	LAImax	90.1 dB
LCF 10%	75.5 dB	Calibration (After) Date	6/14/2018 1:00:32 PM
LCF 50%	69.5 dB	Calibration (Before) Date	6/14/2018 11:58:26 AM
LCF 90%	66 dB	Calibration (Before) Offset	1.7
LCF 95%	65 dB	Calibration (Before) SPL	114 dB
LCF variable%	64 dB	Calibration Drift	0.0 dB
LCpeak	103.1 dB	LAeq	67.9 dB
LCpeak with Time	103.1 dB (6/14/2018 1:00:08 PM)	Battery Low	No
LAE	103.5 dB	LAF variable%	49.5 dB
LAIeq	71 dB	LAF 95%	51 dB
LCeq	73.4 dB	LAF 90%	52 dB
LCeq-LAeq	5.5 dB	LAF 50%	55 dB
Lepd(Projected)	67.9 dB	LAF 10%	63 dB
Lex8h(Projected)	67.9 dB	Duration	01:00:04 HH:MM:SS
LZeq	80.7 dB	End Date & Time	6/14/2018 1:00:10 PM
Lepd	58.9 dB	Run Number	33
Lex8h	58.9 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/14/2018 12:00:06 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	89.1 dB	Process	Unallocated
LAFmax with Time	89.1 dB (6/14/2018 12:02:27 PM)		
LAFmin	47.8 dB		
Notes			



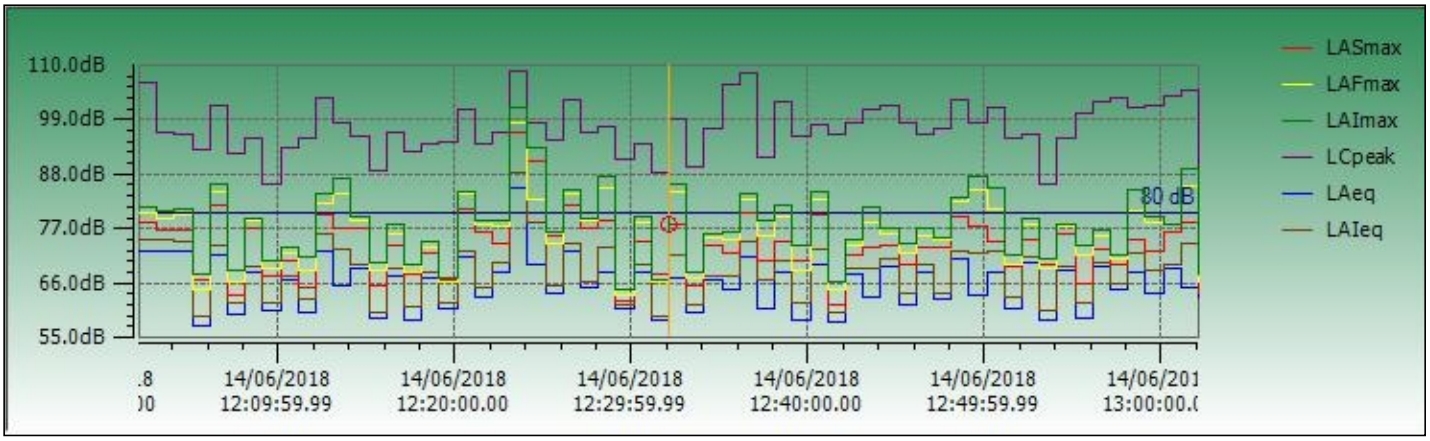
Instrument Model	CEL-633C		
LAImin with Time	49.6 dB (6/14/2018 5:20:57 PM)	LAFmin with Time	49.3 dB (6/14/2018 5:20:57 PM)
LDN	0	LAImin	49.6 dB
LDEN	0	LAImax with Time	95.4 dB (6/14/2018 5:04:38 PM)
CNEL	0	LAImax	95.4 dB
LCF 10%	77.5 dB	Calibration (After) Date	6/14/2018 5:30:36 PM
LCF 50%	71 dB	Calibration (Before) Date	6/14/2018 4:25:43 PM
LCF 90%	67.5 dB	Calibration (Before) Offset	1.7
LCF 95%	66.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	65 dB	Calibration Drift	0.1 dB
LCpeak	110.1 dB	LAeq	61.1 dB
LCpeak with Time	110.1 dB (6/14/2018 5:04:38 PM)	Battery Low	No
LAE	96.6 dB	LAF variable%	51.5 dB
LAIeq	65.9 dB	LAF 95%	52.5 dB
LCeq	74.2 dB	LAF 90%	53 dB
LCeq-LAeq	13.1 dB	LAF 50%	57 dB
Lepd(Projected)	61.1 dB	LAF 10%	62.5 dB
Lex8h(Projected)	61.1 dB	Duration	01:00:01 HH:MM:SS
LZeq	80.3 dB	End Date & Time	6/14/2018 5:30:06 PM
Lepd	52.1 dB	Run Number	34
Lex8h	52.1 dB	Serial Number	4278006
Overload	No	Start Date & Time	6/14/2018 4:30:05 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	93.6 dB	Process	Unallocated
LAFmax with Time	93.6 dB (6/14/2018 5:04:38 PM)		
LAFmin	49.3 dB		
Notes			



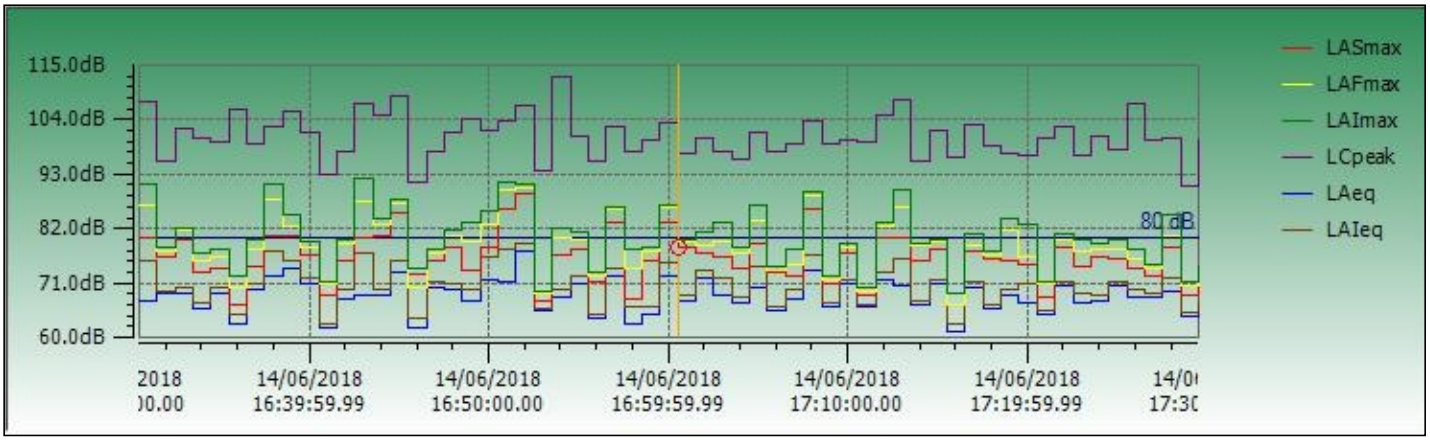
Instrument Model	CEL-633C		
LAImin with Time	55.0 dB (6/14/2018 8:08:53 AM)	LAFmin with Time	54.9 dB (6/14/2018 8:08:53 AM)
LDN	0	LAImin	55 dB
LDEN	0	LAImax with Time	94.5 dB (6/14/2018 7:40:58 AM)
CNEL	0	LAImax	94.5 dB
LCF 10%	81.5 dB	Calibration (After) Date	6/14/2018 8:32:35 AM
LCF 50%	76.5 dB	Calibration (Before) Date	6/14/2018 7:21:53 AM
LCF 90%	73 dB	Calibration (Before) Offset	0.9
LCF 95%	72 dB	Calibration (Before) SPL	114 dB
LCF variable%	83 dB	Calibration Drift	0.7 dB
LCpeak	108.5 dB	LAeq	69.8 dB
LCpeak with Time	108.5 dB (6/14/2018 8:25:02 AM)	Battery Low	No
LAE	105.4 dB	LAF variable%	74 dB
LAIeq	71.9 dB	LAF 95%	58.5 dB
LCeq	78.6 dB	LAF 90%	59.5 dB
LCeq-LAeq	8.8 dB	LAF 50%	66.5 dB
Lepd(Projected)	69.8 dB	LAF 10%	72.5 dB
Lex8h(Projected)	69.8 dB	Duration	01:00:02 HH:MM:SS
LZeq	83.2 dB	End Date & Time	6/14/2018 8:30:08 AM
Lepd	60.8 dB	Run Number	177
Lex8h	60.8 dB	Serial Number	1274486
Overload	No	Start Date & Time	6/14/2018 7:30:06 AM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	93.7 dB	Process	Unallocated
LAFmax with Time	93.7 dB (6/14/2018 7:37:01 AM)		
LAFmin	54.9 dB		
Notes			



Instrument Model	CEL-633C		
LAImin with Time	51.7 dB (6/14/2018 12:35:23 PM)	LAFmin with Time	51.6 dB (6/14/2018 12:35:21 PM)
LDN	0	LAImin	51.7 dB
LDEN	0	LAImax with Time	101.3 dB (6/14/2018 12:24:04 PM)
CNEL	0	LAImax	101.3 dB
LCF 10%	82 dB	Calibration (After) Date	6/14/2018 1:05:22 PM
LCF 50%	76.5 dB	Calibration (Before) Date	6/14/2018 11:57:08 AM
LCF 90%	71 dB	Calibration (Before) Offset	0.9
LCF 95%	70 dB	Calibration (Before) SPL	114 dB
LCF variable%	84.5 dB	Calibration Drift	0.1 dB
LCpeak	109 dB	LAeq	70.5 dB
LCpeak with Time	109.0 dB (6/14/2018 12:24:04 PM)	Battery Low	No
LAE	106 dB	LAF variable%	73 dB
LAIeq	73.6 dB	LAF 95%	56 dB
LCeq	80.1 dB	LAF 90%	57 dB
LCeq-LAeq	9.6 dB	LAF 50%	64 dB
Lepd(Projected)	70.5 dB	LAF 10%	71 dB
Lex8h(Projected)	70.5 dB	Duration	01:00:06 HH:MM:SS
LZeq	86.4 dB	End Date & Time	6/14/2018 1:02:13 PM
Lepd	61.5 dB	Run Number	178
Lex8h	61.5 dB	Serial Number	1274486
Overload	No	Start Date & Time	6/14/2018 12:02:07 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	98.5 dB	Process	Unallocated
LAFmax with Time	98.5 dB (6/14/2018 12:24:02 PM)		
LAFmin	51.6 dB		
Notes			



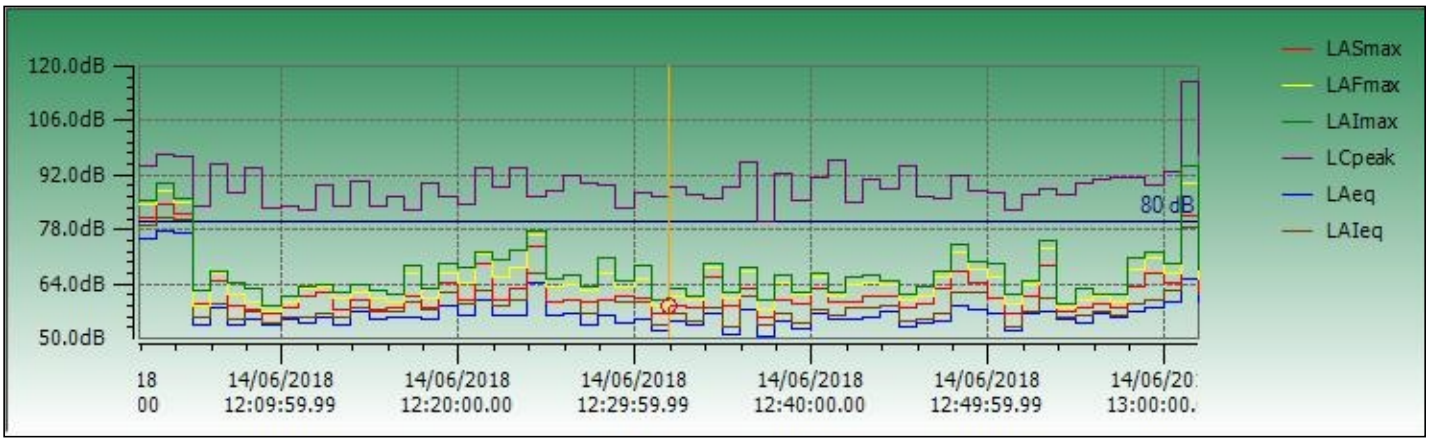
Instrument Model	CEL-633C		
LAImin with Time	55.2 dB (6/14/2018 5:01:01 PM)	LAFmin with Time	54.7 dB (6/14/2018 5:01:01 PM)
LDN	0	LAImin	55.2 dB
LDEN	0	LAImax with Time	92.1 dB (6/14/2018 4:42:45 PM)
CNEL	0	LAImax	92.1 dB
LCF 10%	85 dB	Calibration (After) Date	
LCF 50%	78 dB	Calibration (Before) Date	6/14/2018 4:26:02 PM
LCF 90%	73.5 dB	Calibration (Before) Offset	0.9
LCF 95%	72.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	87 dB	Calibration Drift	-0.9 dB
LCpeak	112.7 dB	LAeq	69.6 dB
LCpeak with Time	112.7 dB (6/14/2018 4:54:08 PM)	Battery Low	Yes
LAE	105.1 dB	LAF variable%	74 dB
LAIeq	72.1 dB	LAF 95%	59 dB
LCeq	81.6 dB	LAF 90%	60.5 dB
LCeq-LAeq	12 dB	LAF 50%	66 dB
Lepd(Projected)	69.6 dB	LAF 10%	72.5 dB
Lex8h(Projected)	69.6 dB	Duration	01:00:00 HH:MM:SS
LZeq	88.1 dB	End Date & Time	6/14/2018 5:30:32 PM
Lepd	60.6 dB	Run Number	179
Lex8h	60.6 dB	Serial Number	1274486
Overload	No	Start Date & Time	6/14/2018 4:30:32 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	90.1 dB	Process	Unallocated
LAFmax with Time	90.1 dB (6/14/2018 4:52:17 PM)		
LAFmin	54.7 dB		
Notes			



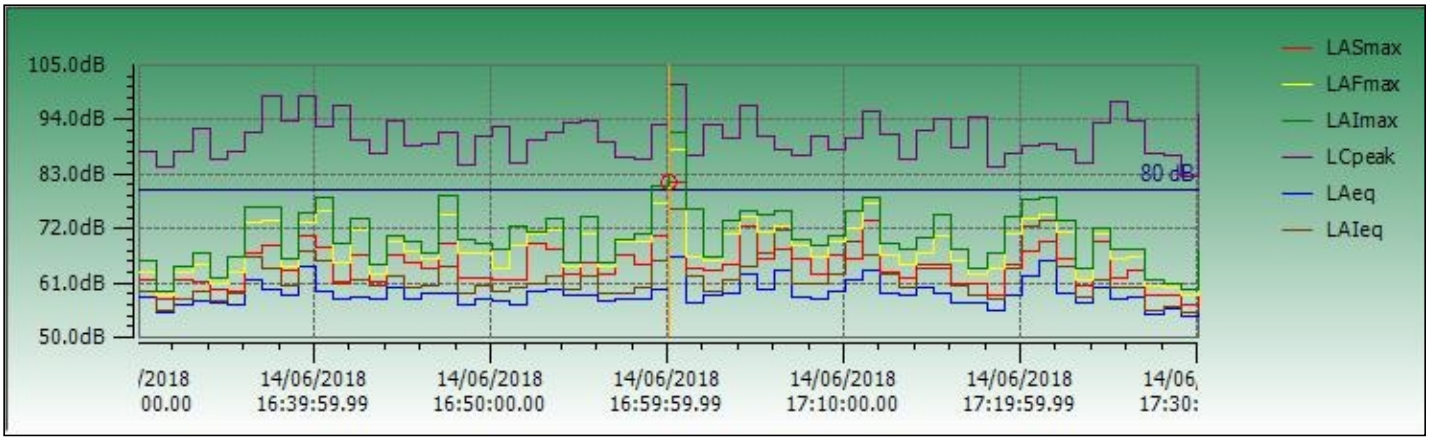
Casella CEL Ltd.

Report On CEL-63X

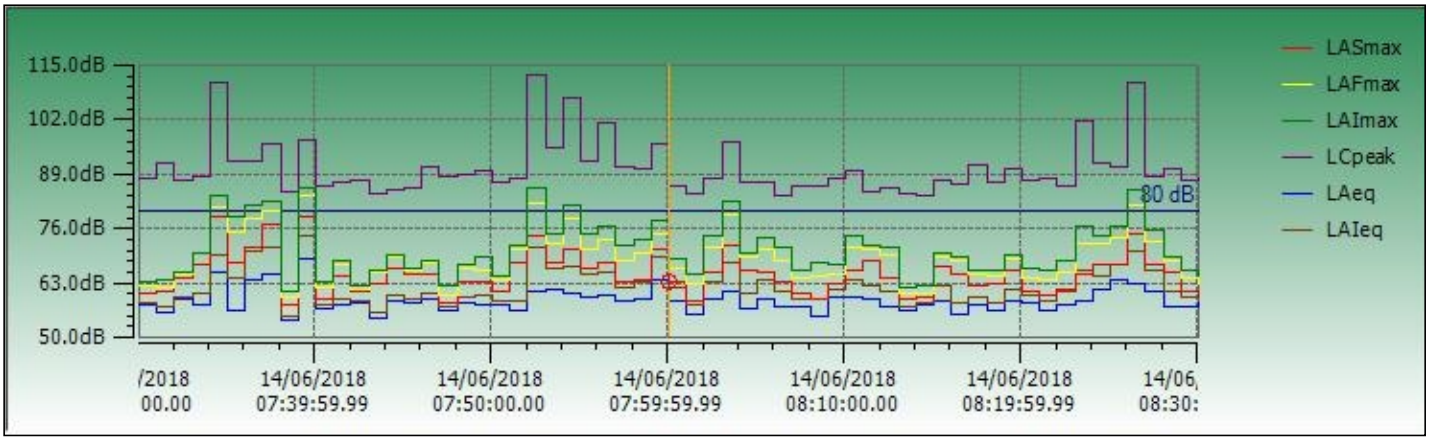
Instrument Model	**CEL-633C**		
LAImin with Time	45.3 dB (6/14/2018 12:35:21 PM)	LAFmin with Time	45.1 dB (6/14/2018 12:35:20 PM)
LDN	0	LAImin	45.3 dB
LDEN	0	LAImax with Time	94.5 dB (6/14/2018 1:01:37 PM)
CNEL	0	LAImax	94.5 dB
LCF 10%	75.5 dB	Calibration (After) Date	6/14/2018 1:03:21 PM
LCF 50%	70 dB	Calibration (Before) Date	6/14/2018 11:59:02 AM
LCF 90%	66.5 dB	Calibration (Before) Offset	0.4
LCF 95%	66 dB	Calibration (Before) SPL	114 dB
LCF variable%	77.5 dB	Calibration Drift	0.0 dB
LCpeak	116 dB	LAeq	64.5 dB
LCpeak with Time	116.0 dB (6/14/2018 1:01:37 PM)	Battery Low	No
LAE	100.1 dB	LAF variable%	68.5 dB
LAIeq	68.5 dB	LAF 95%	50 dB
LCeq	72.6 dB	LAF 90%	51 dB
LCeq-LAeq	8.1 dB	LAF 50%	55 dB
Lepd(Projected)	64.5 dB	LAF 10%	59.5 dB
Lex8h(Projected)	64.5 dB	Duration	01:00:14 HH:MM:SS
LZeq	78 dB	End Date & Time	6/14/2018 1:02:08 PM
Lepd	55.5 dB	Run Number	170
Lex8h	55.5 dB	Serial Number	1367937
Overload	No	Start Date & Time	6/14/2018 12:01:54 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	90.1 dB	Process	Unallocated
LAFmax with Time	90.1 dB (6/14/2018 1:01:37 PM)		
LAFmin	45.1 dB		
Notes			



Instrument Model	CEL-633C		
LAImin with Time	50.3 dB (6/14/2018 5:18:22 PM)	LAFmin with Time	49.8 dB (6/14/2018 5:18:22 PM)
LDN	0	LAImin	50.3 dB
LDEN	0	LAImax with Time	91.3 dB (6/14/2018 5:00:44 PM)
CNEL	0	LAImax	91.3 dB
LCF 10%	77 dB	Calibration (After) Date	6/14/2018 5:32:15 PM
LCF 50%	72.5 dB	Calibration (Before) Date	6/14/2018 4:26:54 PM
LCF 90%	69.5 dB	Calibration (Before) Offset	0.2
LCF 95%	68.5 dB	Calibration (Before) SPL	114 dB
LCF variable%	78.5 dB	Calibration Drift	0.2 dB
LCpeak	101.3 dB	LAeq	59.6 dB
LCpeak with Time	101.3 dB (6/14/2018 5:00:44 PM)	Battery Low	No
LAE	95.2 dB	LAF variable%	64 dB
LAIeq	65 dB	LAF 95%	53.5 dB
LCeq	74.2 dB	LAF 90%	54 dB
LCeq-LAeq	14.6 dB	LAF 50%	57.5 dB
Lepd(Projected)	59.6 dB	LAF 10%	62 dB
Lex8h(Projected)	59.6 dB	Duration	01:00:40 HH:MM:SS
LZeq	78.4 dB	End Date & Time	6/14/2018 5:30:46 PM
Lepd	50.6 dB	Run Number	171
Lex8h	50.6 dB	Serial Number	1367937
Overload	No	Start Date & Time	6/14/2018 4:30:06 PM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	87.8 dB	Process	Unallocated
LAFmax with Time	87.8 dB (6/14/2018 5:00:44 PM)		
LAFmin	49.8 dB		
Notes			



Instrument Model	CEL-633C		
LAImin with Time	49.4 dB (6/14/2018 7:38:39 AM)	LAFmin with Time	48.9 dB (6/14/2018 7:38:39 AM)
LDN	0	LAImin	49.4 dB
LDEN	0	LAImax with Time	85.8 dB (6/14/2018 7:39:46 AM)
CNEL	0	LAImax	85.8 dB
LCF 10%	74 dB	Calibration (After) Date	6/14/2018 8:31:51 AM
LCF 50%	71 dB	Calibration (Before) Date	6/14/2018 7:21:41 AM
LCF 90%	68.5 dB	Calibration (Before) Offset	12.7
LCF 95%	68 dB	Calibration (Before) SPL	114 dB
LCF variable%	75.5 dB	Calibration Drift	-12.6 dB
LCpeak	112.6 dB	LAeq	59.9 dB
LCpeak with Time	112.6 dB (6/14/2018 7:52:07 AM)	Battery Low	No
LAE	95.6 dB	LAF variable%	64 dB
LAIeq	64.9 dB	LAF 95%	53 dB
LCeq	72.4 dB	LAF 90%	53.5 dB
LCeq-LAeq	12.5 dB	LAF 50%	57.5 dB
Lepd(Projected)	59.9 dB	LAF 10%	61.5 dB
Lex8h(Projected)	59.9 dB	Duration	01:00:54 HH:MM:SS
LZeq	76.2 dB	End Date & Time	6/14/2018 8:30:58 AM
Lepd	50.9 dB	Run Number	169
Lex8h	50.9 dB	Serial Number	1367937
Overload	No	Start Date & Time	6/14/2018 7:30:04 AM
Pause Duration	00:00:00 HH:MM:SS	Site	Unallocated
Response	Random	Location	Unallocated
Result	Cumulative	Person	Unallocated
LAFmax	84 dB	Process	Unallocated
LAFmax with Time	84.0 dB (6/14/2018 7:39:46 AM)		
LAFmin	48.9 dB		
Notes			



AGENCY CORRESPONDENCE

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: NO LEAD AGENCY / NL-CEQR-Q
Project: QUEENS BLVD MIH HOUSING
Date received: 4/18/2018

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 64 11 Queens Boulevard, BBL: 4013410077
2) ADDRESS: 65 09 Queens Boulevard, BBL: 4013420001
3) ADDRESS: 43 15 65 Street, BBL: 4013420005
4) ADDRESS: 65 25 Queens Boulevard, BBL: 4013420036
5) ADDRESS: 65 15 Queens Boulevard, BBL: 4013420038
6) ADDRESS: 65 11 Queens Boulevard, BBL: 4013420040
7) ADDRESS: 46 21 70 Street, BBL: 4024440001
8) ADDRESS: 46 19 70 Street, BBL: 4024440002
9) ADDRESS: 46 17 70 Street, BBL: 4024440004
10) ADDRESS: 46 09 70 Street, BBL: 4024440006
11) ADDRESS: 46 07 70 Street, BBL: 4024440008
12) ADDRESS: 46 03 70 Street, BBL: 4024440010
13) ADDRESS: 46 01 70 Street, BBL: 4024440012
14) ADDRESS: 70 08 Queens Boulevard, BBL: 4024440018
15) ADDRESS: 70 50 Queens Boulevard, BBL: 4024440040
16) ADDRESS: 70 32 Queens Boulevard, BBL: 4024440051
17) ADDRESS: 70 20 Queens Boulevard, BBL: 4024440057
18) ADDRESS: 46 23 72 Street, BBL: 4024460001
19) ADDRESS: 72 Street, BBL: 4024460004
20) ADDRESS: 47 Avenue, BBL: 4024460030
21) ADDRESS: 72 22 Queens Boulevard, BBL: 4024460031
22) ADDRESS: 72 21 Queens Boulevard, BBL: 4024460036
23) ADDRESS: 47 Avenue, BBL: 4024460041

Gina Santucci 4/23/2018

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 33273_FSO_DNP_04232018.doc

ILLUSTRATIVE PLANS: APPLICANT SITES

(PROJECTED DEVELOPMENT SITES 1, 2, & 3)

Zoning Analysis

Site Data		List of Required Actions
Block(s)	1341	1. Zoning Text Amendment to designate the
Lot(s)	77	site an MIH area.
Street Address(es)	64-11 Queens Blvd.	
Existing Zoning	C2-3/R7X	
Community District	402	
Zoning Section Map No.	9d	
Zoning Lot Area	19,808 sf	

Item	Zoning Section	Permitted/Required	Proposed	Compliance/Notes
Uses Permitted	22-00 & 33-00	1 thru 9 & 14	1 thru 9 & 14	yes
Max. F.A.R.				
Commercial	33-121	2.00	0.08	yes
Community Facility	33-121	5.00	N.A.	N.A.
Residential (MIH)	23-154(d)(2) & 35-31	6.00	5.92	yes
Total F.A.R.		6.00	6.00	yes
Max. Floor Area				
Commercial		39,616 sf	1,654 sf	yes
Community Facility		99,040 sf	0	N.A.
Residential (MIH)		118,848 sf	*117,194 sf	yes
Total Floor Area		118,848 sf	118,848 sf	yes
Max. Lot Coverage				
Percentage	23-154	100% - corner	63.00%	yes
Square feet		19,808 sf - corner	12,530.5 sf	yes
Yards				
Front	35-52	none	none	yes
Side	35-52	0 or 8'-0" min.	30'-7 1/2"	yes
Rear	23-531 & 33-26	none	N.A.	N.A.
Density	23-22	680	837	yes
Max. No. of D.U's		172	140	yes
Max. Height & Setback				
Min. Base Height	23-664 & 35-654	60'-0"	N.A.	N.A.
Max. Base Height	23-664 & 35-654	105'-0"	85'-0"	yes
Max. Building Height	23-664 & 35-654	145'-0" or 14 stories	135'-0" or 13 stories	yes
Setback Narrow Street	35-654 (a)	15'-0"	15'-0"	yes
Setback Wide Street		10'-0"	10'-0"	yes
Req'd. Parking				
General Retail Uses	36-21	1 per 400 sf = 4**	4	yes
Affordable Units	25-251 & 36-33	Transit Zone - none	6	yes
Market Rate D.U.'s	36-342	50% x 105 = 53 spaces	65	yes
Req'd. Bicycle Parking				
General Retail Uses	36-362	1 per 10,000 = 0	0	N.A.
Residential		1 per 2 D.U's = 70	70	yes
Req'd. Loading	36-62	First 100,000 = 0	0	yes

Notes

*Zoning Floor area after Quality Housing Deductions & mechanical

** Commercial floor area 1,654 sf / 400 sf = 4 spaces < 15 spaces (36-231 ZR - waiver) - none req'd.

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Gerald J. Caliendo, R.A., A.I.A.
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Code Consultant
Building Dept. Expediting
138-72 Queens Boulevard
Briarwood N.Y. 11435
Tel. (718) 268-9098
Fax (718) 268-9097
www.caliendoarchitects.com

DRAWING TITLE: ZONING ANALYSIS FOR ILLUSTRATIVE PURPOSES ONLY

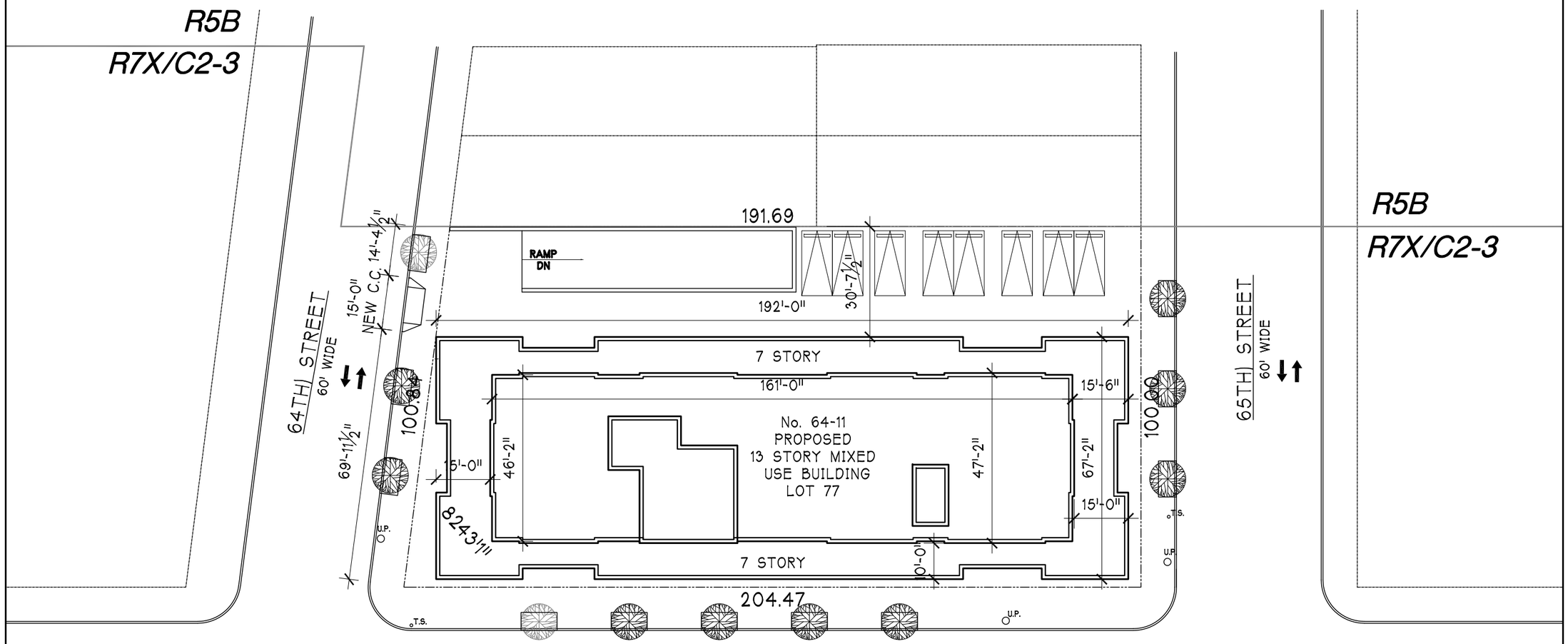
PREMISES: 64-11 QUEENS BLVD. WOODSIDE, NY

DRAWN BY: N.M.M.
CHECKED BY: GJC
JOB No: 16073
SCALE: AS NOTED
DATE: 5-22-17

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 1 OF 1

Z-001.00



SITE PLAN
SCALE: 1" = 30'-0"

0 10 20 40

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DRAWING TITLE: SITE PLAN FOR ILLUSTRATIVE PURPOSES ONLY

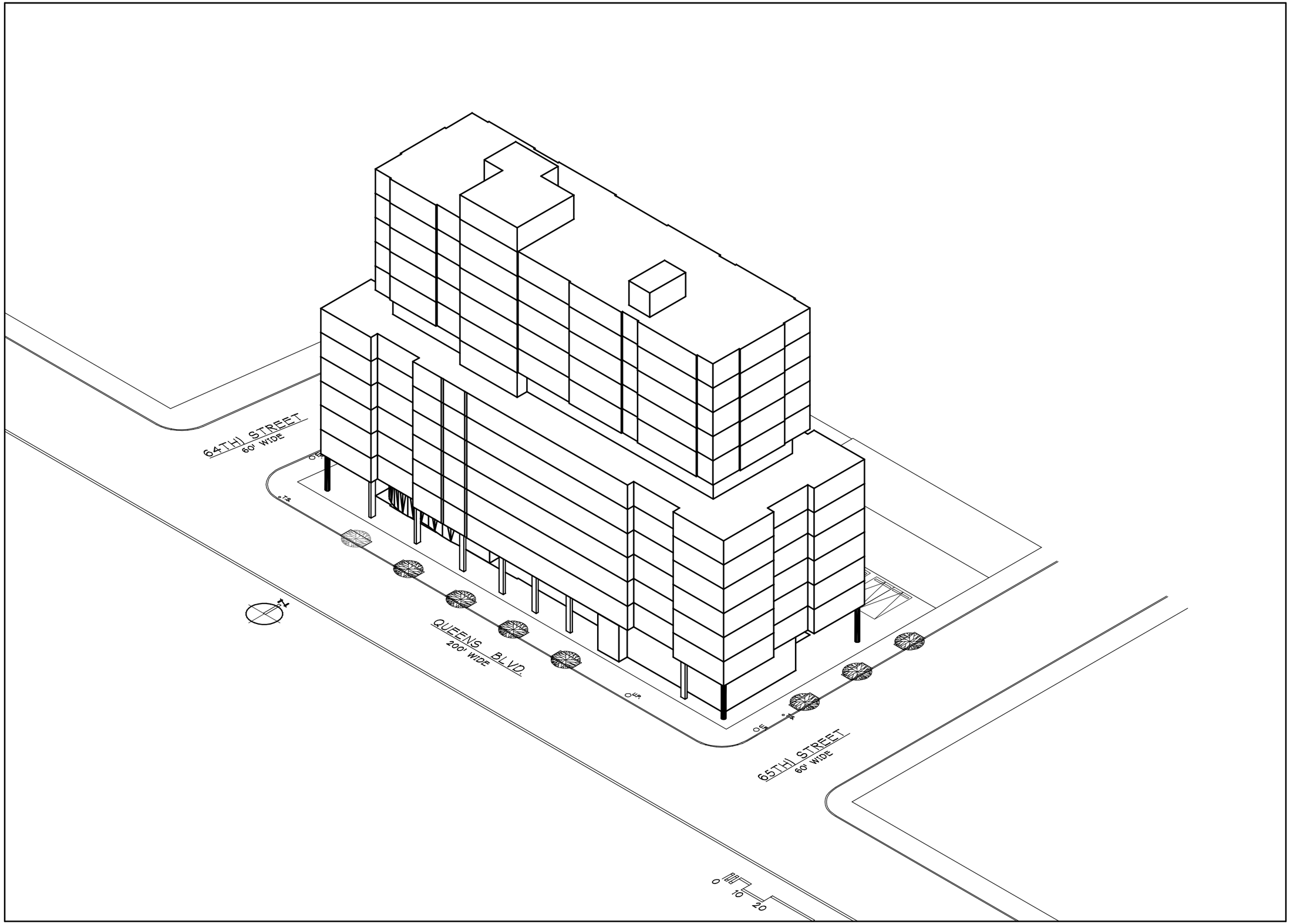
PREMISES: 64-11 QUEENS BLVD. WOODSIDE, NY

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	16073
SCALE:	AS NOTED
DATE:	5-2-17

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 1 OF 11

A-001.00



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DRAWING TITLE: MASSING DIAGRAM FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: 64-11 QUEENS BLVD. WOODSIDE, NY

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	16035
SCALE:	AS NOTED
DATE:	5-2-17

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 2 OF 11

A-002.00

Zoning Analysis

Site Data		List of Required Actions
Block(s)	2444	1. Zoning Text Amendment to designate the
Lot(s)	40	site an MIH area.
Street Address(es)	70-50 Queens Blvd.	
Existing Zoning	C2-3/R7X	
Community District	402	
Zoning Section Map No.	9d	
Zoning Lot Area	19,355 sf	

Item	Zoning Section	Permitted/Required	Proposed	Compliance/Notes
Uses Permitted	22-00 & 33-00	1 thru 9 & 14	1 thru 9 & 14	yes
Max. F.A.R.				
Commercial	33-121	2.00	0.94	yes
Community Facility	33-121	5.00	N.A.	N.A.
Residential (MIH)	23-154(d)(2) & 35-31	6.00	5.06	yes
Total F.A.R.		6.00	6.00	yes
Max. Floor Area				
Commercial		38,710 sf	18,302 sf	yes
Community Facility		96,775 sf	0	N.A.
Residential (MIH)		116,130 sf	*98,028 sf	yes
Total Floor Area		116,130 sf	116,330 sf	yes
Max. Lot Coverage				
Percentage	23-154	100% - corner	45.90%	yes
		70% - interior	16.80%	yes
Square feet		10,237.62 sf - corner	8,881.66 sf	yes
		9,117.29 sf interior	3,254.34 sf	yes
Yards				
Front	35-52	none	none	yes
Side	35-52	0 or 8'-0" min.	21'-7"	yes
Rear	23-531 & 33-26	none	0	yes
Density	23-22	680	922.3	yes
Max. No. of D.U's		142	105	yes
Max. Height & Setback				
Min. Base Height	23-664 & 35-654	60'-0"	60'-0"	yes
Max. Base Height	23-664 & 35-654	105'-0"	81'-3"	yes
Max. Building Height	23-664& 35-654	145'-0" or 14 stories	145'-0" or 13 stories	yes
Setback Narrow Street	35-654 (a)	15'-0"	15'-0"	yes
Setback Wide Street		10'-0"	10'-0"	yes
Req'd. Parking				
General Retail Uses	36-21	1 per 400 sf = **15 spaces	0	yes
Affordable Units	25-251 & 36-33	15% x 26 = 4 spaces	4	yes
Market Rate D.U.'s	36-342	50% x 79 = 40 spaces	46	yes
Req'd. Bicycle Parking				
General Retail Uses	36-362	1 per 10,000 = 2	2	yes
Residential		1 per 2 D.U's = 53	53	yes
Req'd. Loading	36-62	First 100,000 = 0	0	yes

Notes

*Zoning Floor area after Quality Housing Deductions

**Retail commercial area = 6,166 sf / 400 = 15 < 25 waiver, thus none required.

2nd floor PCE (12,136 sf) by BSA Special Permit - no parking regulations for this use under current C2-3 zone.

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DRAWING TITLE: ZONING ANALYSIS FOR ILLUSTRATIVE PURPOSES ONLY

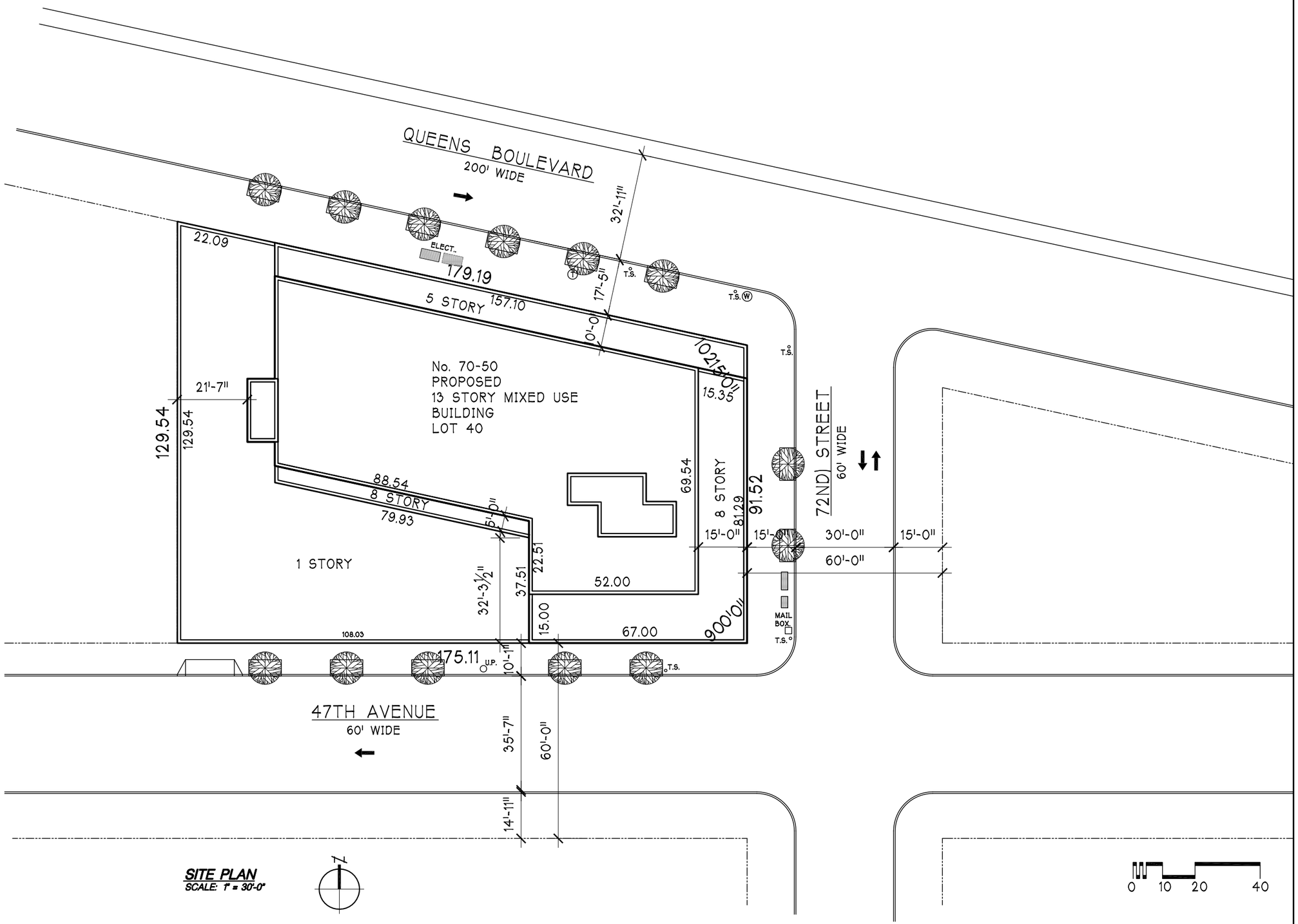
PREMISES: 70-50 QUEENS BLVD. WOODSIDE, NY

DRAWN BY: N.M.M.
CHECKED BY: GJC
JOB No: 17017
SCALE: AS NOTED
DATE: 5-22-17

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 1 OF 1

Z-001.00



SITE PLAN
SCALE: 1" = 30'-0"

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DRAWING TITLE: SITE PLAN FOR ILLUSTRATIVE PURPOSES ONLY

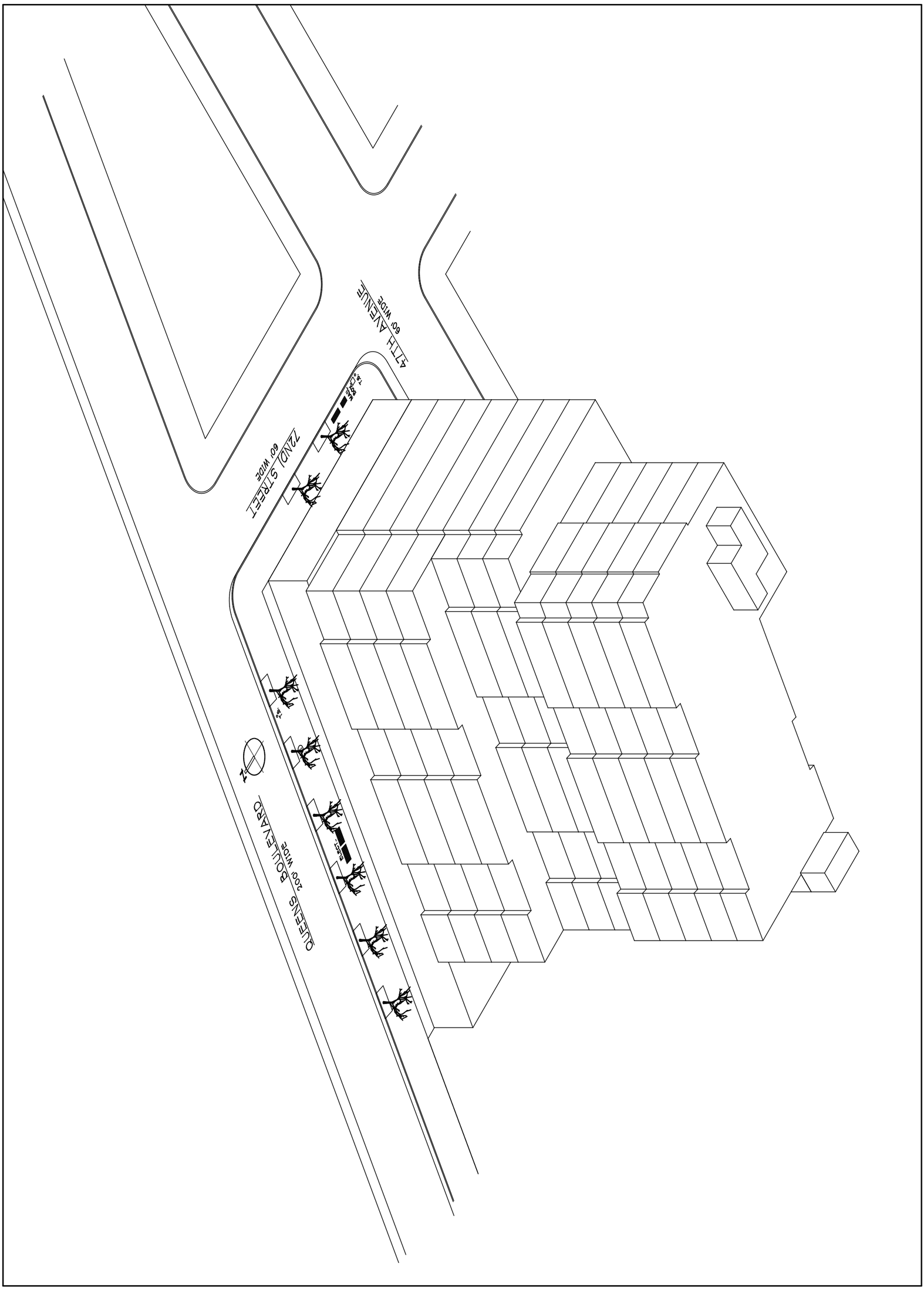
PREMISES: 70-50 QUEENS BLVD. WOODSIDE, NY

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	17017
SCALE:	AS NOTED
DATE:	5-4-17

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 1 OF 11

A-001.00



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A-002.00

DRAWING No: 2 OF 11

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	16035
SCALE:	AS NOTED
DATE:	5-4-17

DRAWING TITLE: MASSING DIAGRAM FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: 70-50 QUEENS BLVD. WOODSIDE, NY

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Expediting

Zoning Analysis

Site Data		List of Required Actions
Block(s)	2446	1. Zoning Text Amendment to designate the
Lot(s)	1, 4, 41, 36, 31 & 30	site an MIH area.
Street Address(es)	72-12 Queens Blvd.	
Existing Zoning	C2-3/R7X	
Community District	402	
Zoning Section Map No.	9d	
Zoning Lot Area	13,956.64 sf	

Item	Zoning Section	Permitted/Required	Proposed	Compliance/Notes
Uses Permitted	22-00 & 33-00	1 thru 9 & 14	1 thru 9 & 14	yes
Max. F.A.R.				
Commercial	33-121	2.00	0.39	yes
Community Facility	33-121	5.00	N.A.	N.A.
Residential (MIH)	23-154(d)(2) & 35-31	6.00	5.51	yes
Total F.A.R.		6.00	5.90	yes
Max. Floor Area				
Commercial		27,913.28 sf	5,481.19 sf	yes
Community Facility		69,783.2 sf	0	N.A.
Residential (MIH)		83,739.84 sf	76,851 sf	yes
Total Floor Area		83,739.84 sf	82,332.19 sf	yes
Max. Lot Coverage				
Percentage	23-154	100% - corner	57.00%	yes
Square feet		13,956.64 sf - corner	7,934.79 sf	yes
Yards				
Front	35-52	none	none	yes
Side	35-52	0 or 8'-0" min.	0	yes
Rear	23-531 & 33-26	none	N.A.	N.A.
Density	23-22	680	985	yes
Max. No. of D.U's		172	78	yes
Max. Height & Setback				
Min. Base Height	23-664 & 35-654	60'-0"	N.A.	N.A.
Max. Base Height	23-664 & 35-654	105'-0"	105'-0"	yes
Max. Building Height	23-664 & 35-654	145'-0" or 14 stories	125'-0" or 12 stories	yes
Setback Narrow Street	35-654 (a)	15'-0"	15'-0"	yes
Setback Wide Street		10'-0"	10'-0"	yes
Req'd. Parking				
General Retail Uses	36-21	1 per 400 sf**	0	yes
Affordable Units	25-251 & 36-33	15% x 20 = 3	3	yes
Market Rate D.U.'s	36-342	50% x 58 = 29 spaces	29	yes
Req'd. Bicycle Parking				
General Retail Uses	36-362	1 per 10,000 = 0	0	N.A.
Residential		1 per 2 D.U's = 39	39	yes
Req'd. Loading	36-62	First 100,000 = 0	0	yes

Notes

*Zoning Floor area after Quality Housing Deductions & mechanical

** Commercial floor area 5,481.19 sf / 400 sf = 14 spaces < 25 spaces (36-231 ZR - waiver) - none req'd.

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

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DRAWING TITLE: ZONING ANALYSIS FOR ILLUSTRATIVE PURPOSES ONLY

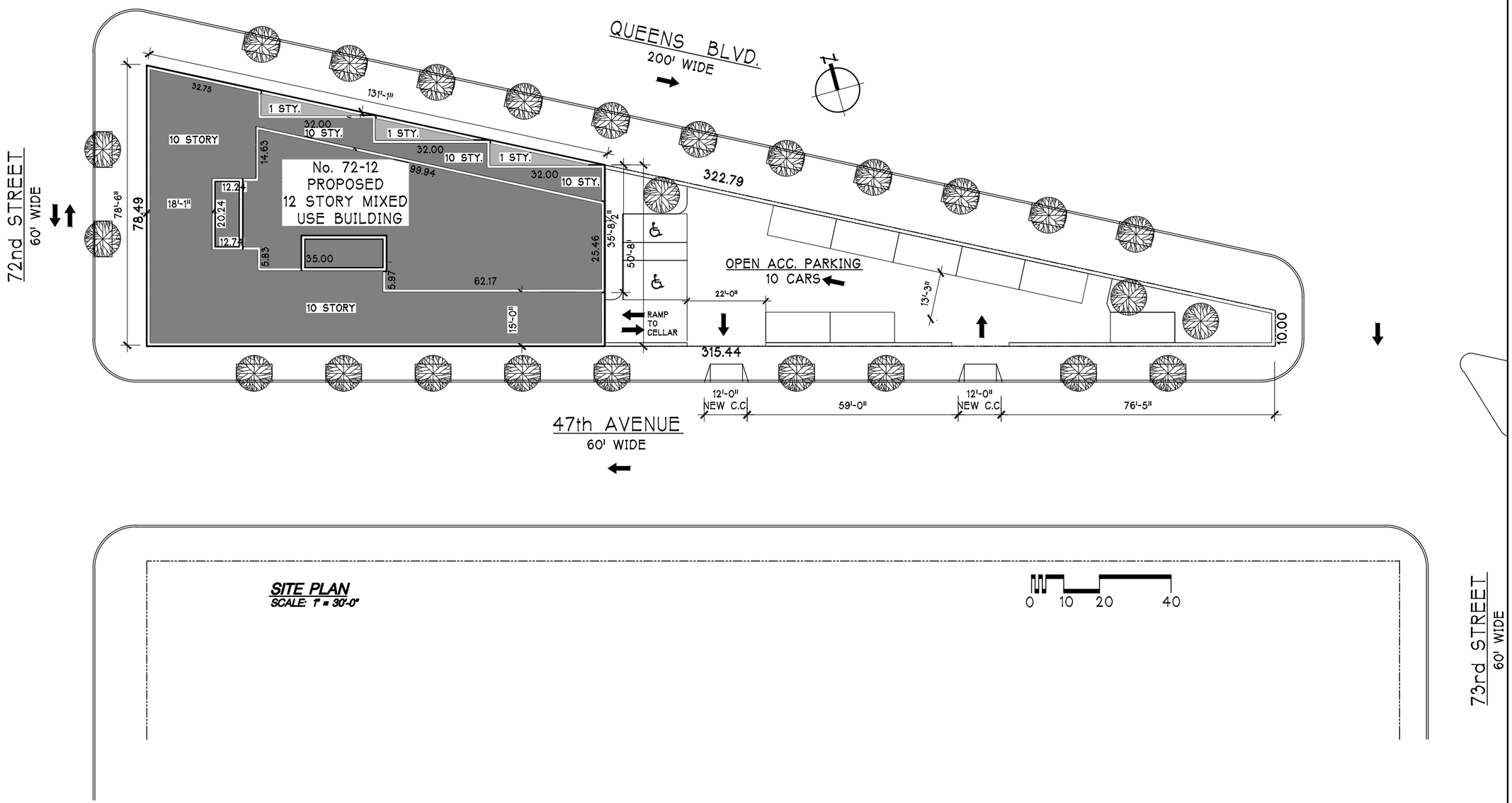
PREMISES: 72-12 QUEENS BLVD. WOODSIDE, NY

DRAWN BY: N.M.M.
CHECKED BY: GJC
JOB No: 17xxx
SCALE: AS NOTED
DATE: 5-22-17

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 1 OF 1

Z-001.00



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DRAWING TITLE: SITE PLAN FOR ILLUSTRATIVE PURPOSES ONLY

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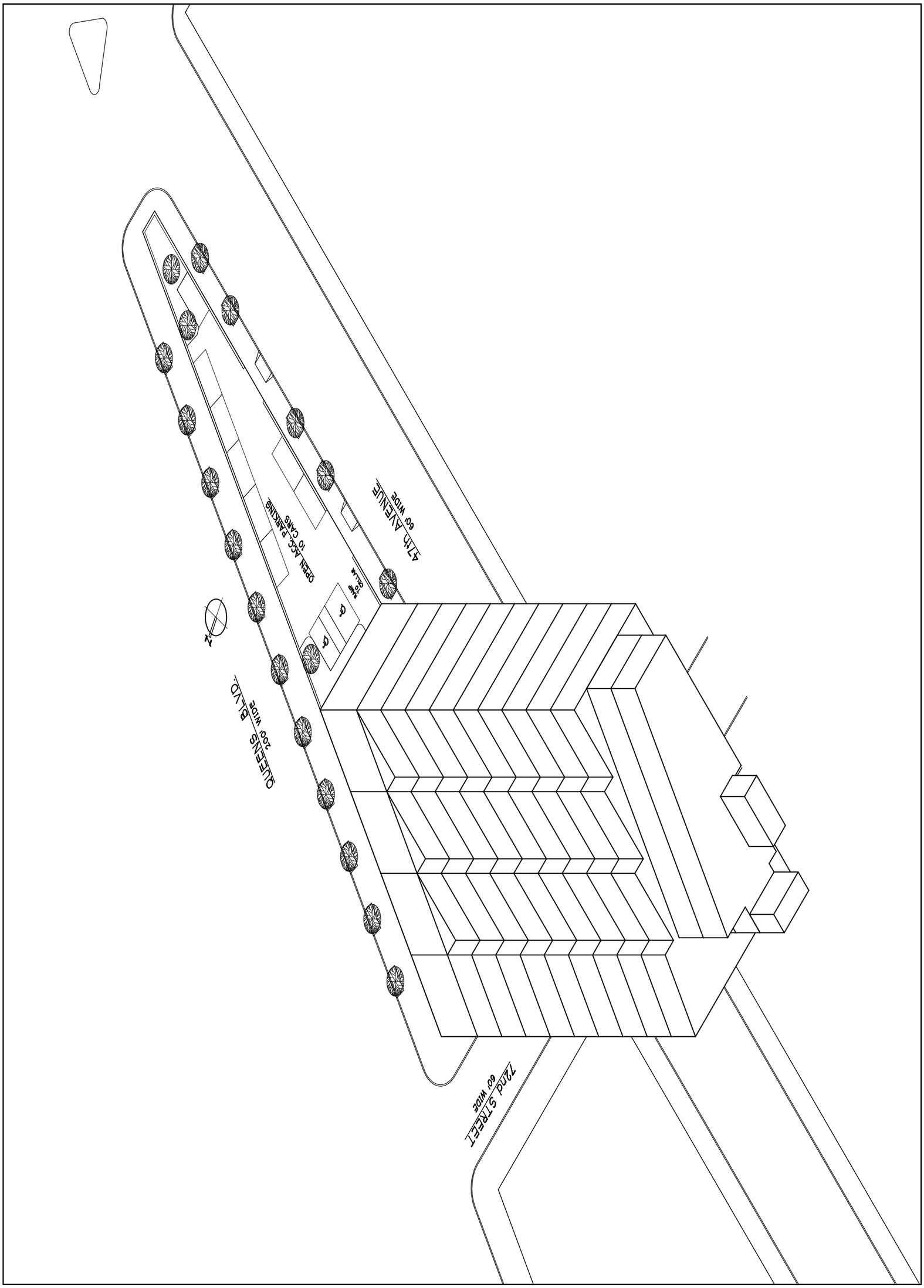
DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	17xxx
SCALE:	AS NOTED
DATE:	5-12-17

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 1 OF 11

A-001.00



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A-002.00

DRAWING No: 2 OF 11

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	17xxx
SCALE:	AS NOTED
DATE:	5-12-17

DRAWING TITLE: MASSING DIAGRAM FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: 72-12 QUEENS BLVD. WOODSIDE, NY

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PROPOSED ZONING TEXT

Queens Boulevard, Queens
Community District 2, Queens
2/10/18
Zoning Map 9d

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

* * *

APPENDIX F
Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

* * *

Queens

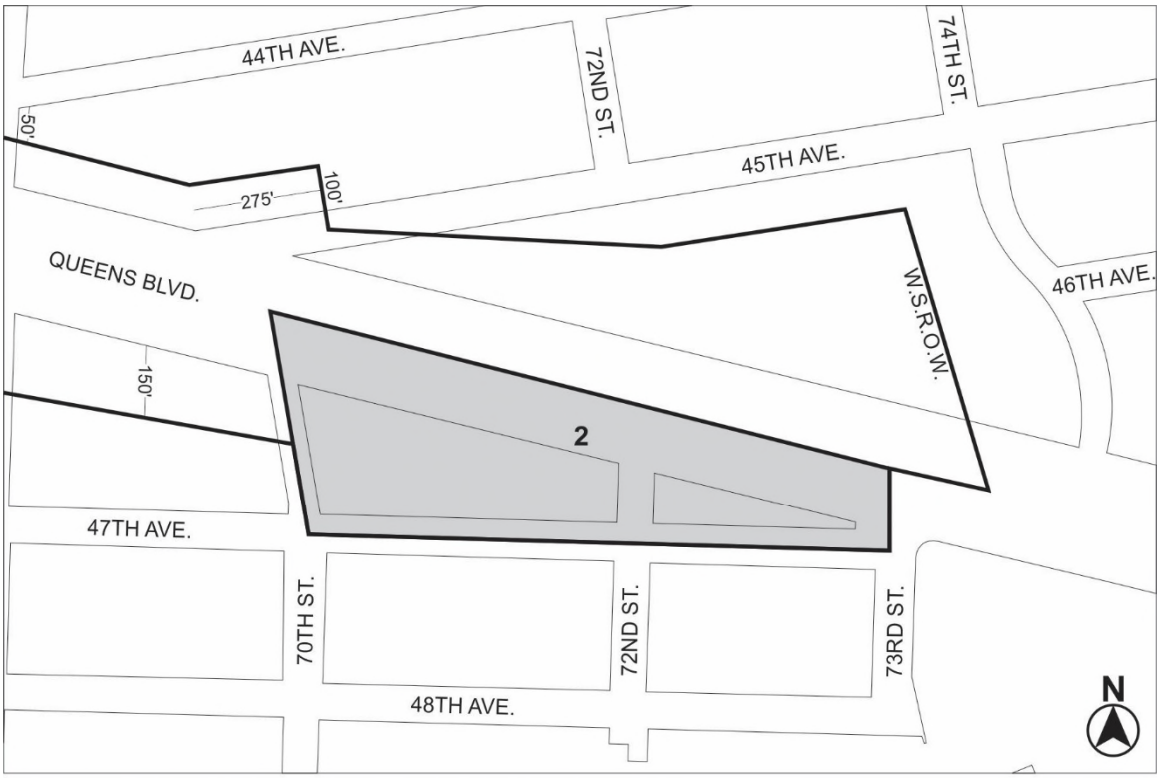
* * *

Queens Community District 2

* * *

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

Area **1** — [date of adoption] — MIH Program Option 1 and Option 2



Inclusionary Housing Designated Area

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

Area **1** — [date of adoption] — MIH Program Option 1 and Option 2

Portion of Community District 2, Queens

* * *

APPENDIX

Queens Boulevard MIH Text Amendment

CEQR Number 19DCP206Q

(ULURP Number N190352ZRQ)

Technical Memorandum

January 2020

Purpose of the Technical Memorandum

Shortly after the publication of this Environmental Assessment Statement (EAS) in December of 2019, new data was released by the NYC School Construction Authority (SCA) including updated Projected Public School Ratios (housing multipliers used for calculating the anticipated number of public school students per housing unit). The data is available on SCA's website *(Capital Plan Reports & Data)*. Projected Public School Ratios are revised annually. Those for grades PreK-5 (elementary schools) and 6-8 (middle schools) are calculated at the community school district (CSD) level; those for grades 9-12 (high schools) are calculated at the borough level. The newly released Projected Public School Ratios for CSD 24 (the community school district in which the Project Areas are situated) and for Queens are higher than the ones released a year earlier.

Because the new multipliers are higher than the ones used in the analysis performed for the EAS and thus yield an increase in the number of pupils generated for all grade levels by new housing in the vicinity of the project area, this Technical Memorandum presents an updated analysis using the new housing multiplier data in order to more conservatively and accurately estimate the number of public school pupils anticipated to be generated by the proposed project and assess the potential effect that the resulting enrollment increases might have on school utilization. This analysis continues to include enrollment data from AY 2017-2018 and housing starts data from 2018, as neither updated data would affect the conclusions and updated housing starts are not yet available. The analysis conclusions presented in this Technical Memorandum, indicating that no significant adverse impacts related to public schools would result from the proposed project, remain unchanged.

Overview of the Schools Analysis

For CEQR purposes, a schools assessment addresses public schools at the elementary, middle, and high school levels. The purpose of a schools assessment is to determine whether a proposed action would have a direct significant adverse impact by reducing available school seats or an indirect significant adverse impact by adding a sufficient number of students to overburden the available facilities at any of the three school levels.

The proposed actions would not have a direct impact on public schools.

For analysis of the potential for an indirect impact, the *CEQR Technical Manual* provides thresholds for determining whether an assessment is appropriate: the addition of at least 50 public elementary and middle school students or 150 high school students. As is discussed above, each year the SCA calculates and releases multipliers known as Projected Public School Ratios for use in determining whether the additional residential development resulting from a proposed action would be likely to generate numbers of public school students that would equal or exceed the thresholds. The 2019 Projected Public School Ratios for public elementary and middle school students per housing unit in CSD 24 are 0.38 and 0.13 respectively, and the ratio for public high school students in Queens is 0.10.

It is anticipated that the proposed actions would result in the development of 115 more housing units than would occur in the future under the no-action scenario. As is shown in Table 1, the additional housing units would add a total of 59 elementary and middle school students to local schools (exceeding the 50-student threshold) and would add 12 high school students (a number below the 150-student threshold). Further analysis is therefore needed at the elementary and midddle school levels, but no further analysis is required to determine that the proposed actions would not have a significant adverse impact on high school capacity and utilization.

Table 1
Students Added by the Proposed Actions

Grade Level	Housing Multiplier	Housing Units	Additional Students
Elementary	0.38	115	44
Middle	0.13	115	15
High school	0.10	115	12

The study area for an elementary and middle schools assessment is the community school district sub-district in which the proposed project would be located, since that is the area for which the SCA does its planning. CSD 24 contains four sub-districts, and in most of the district Queens Boulevard is the boundary between Sub-districts 1 and 2. The Project Areas for the proposed action straddle Queens Boulevard. Project Area 1, located on the north side of Queens Boulevard between 64th Street and 65th Place, is within Sub-district 1 (North Corona / South Corona / Lefrak City / Elmhurst). It contains Projected Development Sites 1, 4, and 5, where development under the with-action scenario would yield a total of 55 more housing units than development under the no-action scenario. Project Area 2 is located to the south of Queens Boulevard, on the two blocks bounded by the boulevard, 70th Street, 47th Avenue, and 73rd Street, within Sub-district 2 (Maspeth / South of Woodside). Project Area 2 contains the other four projected development sites (Sites 2, 3, 6, and 7), where with-action development would collectively have an increment of 60 housing units over no-action development. Table 2 shows the numbers of elementary and middle school students who would be added to the two sub-districts as a result of the proposed actions.

Table 2
Additional Students per Sub-district

Grade Level	Housing Multiplier	Housing Units	Additional Students
Sub-district 1			
Elementary	0.38	55	21
Middle	0.13	55	7
Sub-district 2			
Elementary	0.38	60	23
Middle	0.13	60	8

This Technical Memorandum provides an assessment of the potential for the proposed actions to have a significant adverse impact on the public elementary and middle school enrollment, capacity, and utilization figures for any of three study areas: Sub-district 1 of CSD 24; Sub-district 2 of CSD 24, or the two sub-districts combined.

Existing Conditions

Elementary Schools

Sub-district 1

Table 3 lists all elementary schools within Sub-district 1 of CSD 24, and Figure 1 shows their locations. Per guidance in the *CEQR Technical Manual*, charter schools are excluded from the analysis even if they occupy space within a public school building. For each school the table shows the enrollment during the 2017-2018 school year, the school's target capacity, the excess capacity or shortfall in number of classroom seats (based on the comparison of enrollment with target capacity), and the utilization rate (calculated by dividing the school's enrollment by its capacity). The information is derived from the New York City Department of Education's (DOE's) *Utilization Profiles: Enrollment – Capacity – Utilization* (informally known as the "*Blue Book*") for the 2017-2018 year. As Table 3 shows, Sub-district 1 contains 13 elementary schools, plus an annex to one of the 13 schools. Collectively, the schools accommodated 14,039 elementary school students in 2017-2018 but had space to accommodate only 11,188 students under desired conditions, and thus had a shortfall of 2,851 seats. The sub-district's elementary school utilization rate was 125 percent.

Queens Boulevard, Queens

Figure 1: Public Elementary and Intermediate Schools Within CSD 24, Sub-district 1

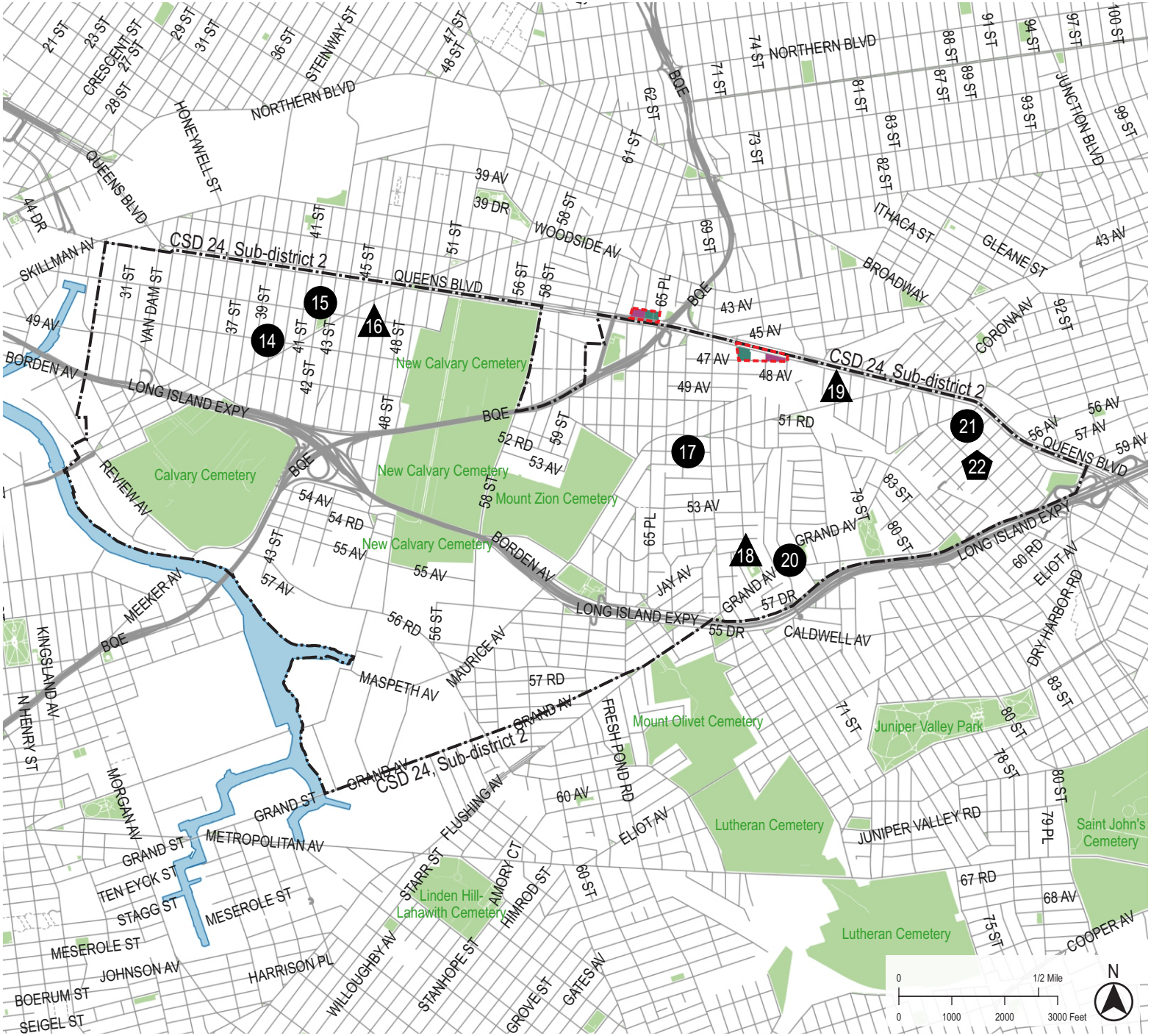
- Proposed Rezoning Area
- Projected Development Site (Applicant-Owned)
- Projected Development Site (Non Applicant-Owned)
- # Elementary Schools (see Table 6-1)
- # Elementary/Intermediate Schools (see Table 6-1)
- # Intermediate Schools (see Table 6-1)

Urban Cartographics

Queens Boulevard, Queens

Figure 2: Public Elementary and Intermediate Schools Within CSD 24, Sub-district 2

- Proposed Rezoning Area
- Projected Development Site (Applicant-Owned)
- Projected Development Site (Non Applicant-Owned)
- # Elementary Schools (see Table 6-2)
- # Elementary/Intermediate Schools (see Table 6-2)
- # Intermediate Schools (see Table 6-2)



Urban Cartographics

Table 3						
2017-2018 Elementary School Enrollment, Capacity, and Utilization						
CSD 24 Sub-district 1						
Map #	School	Location	Enrollment	Target Capacity	Available Seats	Utilization Rate
2	P.S. 7 (Louis F. Simeone School)	80-55 Cornish Ave.	993	952	-41	104%
1	P.S. 12 (James B. Colgate School)	42-00 72nd St.	1,219	846	-373	144%
4	P.S. 13 (Clement C. Moore School)	55-01 94th St.	1,597	1,282	-315	125%
8	P.S. 14 (Fairview School)	107-01 Otis Ave.	1,454	1,196	-258	122%
8	P.S. 14 Annex	107-01 Otis Ave.	237	174	-63	136%
11	P.S. 16 (The Nancy DeBenedittis School)	41-15 104th St.	1,462	1,195	-267	122%
9	P.S. 19 (Marino Jeantet School)	98-02 Roosevelt Ave.	1,465	1,137	-328	129%
3	P.S. 89 (Elmhurst School)	85-28 Britton Ave.	1,961	1,305	-656	150%
13	P.S. 143 (Louis Armstrong School)	34-74 113th St.	757	773	16	98%
13	P.S./I.S. 269	34-74 113th St.	340	241	-99	141%
9	P.S. 298	98-02 Roosevelt Ave.	240	310	70	77%
10	P.S. 307 (Pioneer Academy)	40-20 100th St.	934	641	-293	146%
12	P.S. 330	110-08 Northern Blvd.	590	433	-157	136%
5	Tiffany School	43-18 97th Pl.	790	703	-87	112%
		Total	14,039	11,188	-2,851	125%

Sub-district 2

Table 4 lists all elementary schools within Sub-district 2 of CSD 24, and Figure 2 shows their locations. As Table 4 shows, Sub-district 2 contains six elementary schools. Collectively, the schools accommodated 4,641 elementary school students in 2017-2018 but had space to accommodate only 4,180 students under desired conditions, and thus had a shortfall of 4,611 seats. The sub-district's elementary school utilization rate was 111 percent.

Table 4						
2017-2018 Elementary School Enrollment, Capacity, and Utilization						
CSD 24 Sub-district 2						
Map #	School	Location	Enrollment	Target Capacity	Available Seats	Utilization Rate
20	P.S. 58 (The School of Heroes)	72-24 Grand Ave.	1,027	977	-50	105%
22	P.S. 102 (Bayview School)	55-24 Van Horn St.	901	728	-173	124%
14	P.S. 199 (Maurice A. Fitzgerald School)	39-20 48th Ave.	578	559	-19	103%
17	P.S. 229 (Emanuel Kaplan School)	67-25 51st Rd.	1,469	1,077	-392	136%
15	The Children's Lab School	45-45 42nd St.	368	355	-13	104%
21	Elm Tree Elementary School	86-37 53rd Ave.	298	484	186	62%
		Total	4,641	4,180	-461	111%

Combined Study Area

Table 5 shows the 2017-2018 enrollment, capacity, and utilization information for Sub-districts 1 and 2 combined. As the table shows, the study area schools accommodated 18,680 elementary school students in 2017-2018 but had space to accommodate only 15,368 students under desired conditions, and thus had a shortfall of 3,312 seats. The study area's elementary school utilization rate was 122 percent.

Table 5
2017-2018 Elementary School Enrollment, Capacity, and Utilization
CSD 24 Sub-districts 1 and 2 Combined

Study Area	Enrollment	Target Capacity	Available Seats	Utilization Rate
Sub-district 1	14,039	11,188	-2,851	125%
Sub-district 2	4,641	4,180	-461	111%
Combined	18,680	15,368	-3,312	122%

Middle Schools

Sub-district 1

Table 6 lists all middle schools within Sub-district 1 of CSD 24, and Figure 1 shows their locations. As Table 6 shows, Sub-district 1 contains three middle schools. Collectively, the schools accommodated 3,131 middle school students in 2017-2018 but had space to accommodate only 3,066 students under desired conditions, and thus had a shortfall of 65 seats. The sub-district's middle school utilization rate was 102 percent.

Table 6
2017-2018 Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 1

Map #	School	Location	Enrollment	Target Capacity	Available Seats	Utilization Rate
7	I.S. 61 (Leonardo Da Vinci School)	98-50 50th Ave.	2,238	2,149	-89	104%
13	P.S./I.S. 269	34-74 113th St.	160	113	-47	142%
6	Corona Arts and Sciences Academy	98-11 44th Ave.	733	804	71	91%
		Total	3,131	3,066	-65	102%

Sub-district 2

Table 7 lists all middle schools within Sub-district 2 of CSD 24, and Figure 2 shows their locations. Sub-district 2 contains five middle schools. Collectively, the schools accommodated 5,698 middle school students in 2017-2018 but had space for another 146 students. The sub-district's middle school utilization rate was 98 percent.

Table 7
2017-2018 Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 2

Map #	School	Location	Enrollment	Target Capacity	Available Seats	Utilization Rate
19	I.S. 5 (Walter Crowley Intermediate School)	50-40 Jacobus St.	1,798	1,562	-236	115%
18	I.S. 73 (Frank Sansivieri Intermediate School)	70-02 54th Ave.	1,571	1,556	-15	101%
18	I.S. 73 Minischool	70-02 54th Ave.	400	447	47	89%
22	P.S. 102 (Bayview School)	55-24 Van Horn St.	425	343	-82	124%
16	!.S. 125 (Thom. J. McCann Woodside School)	46-02 47th Ave.	1,504	1,936	432	78%
		Total	5,698	5,844	146	98%

Combined Study Area

Table 8 shows the 2017-2018 enrollment, capacity, and utilization information for Sub-districts 1 and 2 combined. As the table shows, the study area schools accommodated 8,829 middle school students in 2017-2018 and had space for another 81 students. The study area's middle school utilization rate was 99 percent.

Table 8
2017-2018 Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-districts 1 and 2 Combined

Study Area	Enrollment	Target Capacity	Available Seats	Utilization Rate
Sub-district 1	3,131	3,066	-65	102%
Sub-district 2	5,698	5,844	146	98%
Combined	8,829	8,910	81	99%

Future No-Action Conditions

Future Enrollment

The starting point for the projected public elementary and middle school enrollments in 2022-2023 consists of the DOE's ten-year enrollment projections for CSD 24, contained in Demographic Projection 2019-2028. According to those projections, the school district would have enrollments of 24,670 elementary school level students and 12,133 middle school students in the 2022-2023 school year. The projected enrollments for Sub-district 1 (12,906 elementary school students and 2,892 middle school students) and Sub-district 2 (4,094 elementary school students and 5,616 middle school students) were calculated using the SCA-approved percentages for the sub-district's share of the total district enrollment: 52.42 percent for Sub-district 1 and 16.63 percent for Sub-district 2 in the case of elementary school students and 23.26 percent for Sub-district 1 and 46.29 percent for Sub-district 2 in the case of middle school students.

The SCA also maintains an inventory of known future residential development projects that will generate additional students whose numbers must be added to these projections. Each year the SCA releases two lists, Projected Housing Starts for PS Level Analysis and Projected Housing Starts for MS Level Analyses, that provide housing unit numbers by CSD sub-district. The lists released in June 2019 provide estimates of new housing units to be completed by 2024. Table 9 shows the housing unit numbers for Sub-districts 1 and 2 and applies the housing multipliers for CSD 24 to calculate the numbers of additional elementary and middle school students.

Table 9
SCA Housing Projections per Sub-district

Grade Level	Housing Multiplier	Housing Units	Additional Students
Sub-district 1			
Elementary	0.38	2,282	867
Middle	0.13	2,330	303
Sub-district 2			
Elementary	0.38	1,015	386
Middle	0.13	998	130

Finally, the projected numbers of students generated by projected no-action scenario development within the Project Areas are calculated and added to the future enrollment figures. Under the no-action scenario, redevelopment of the seven projected development sites would add 528 housing units: 166 in Project Area 1 in CSD 24 Sub-district 1 and 366 in Project Area 2 in CSD 24 Sub-district 2. Table 10 shows the anticipated numbers of public school students generated by this development.

Table 10
Students from No-Action Development

Grade Level	Housing Multiplier	Housing Units	Additional Students
Sub-district 1			
Elementary	0.38	166	63
Middle	0.13	166	22
Sub-district 2			
Elementary	0.38	362	138
Middle	0.13	362	47

Table 11 totals the numbers from the Demographic Projection 2019-2028, the Projected Housing Starts, and the projected no-action development on the projected development sites to calculate the projected school 2022-2023 enrollments. Absent the proposed actions, it is estimated that Sub-district 1 will serve 13,836 elementary school students and 3,217 middle school students, and that Sub-district 2 will serve 4,618 elementary school students and 5,793 middle school students.

Table 11
2022-2023 No-Action Enrollment

Study Area	Demographic Projection	Housing Starts	Project Area Development	Projected Enrollment
Sub-district 1				
Elementary	12,906	867	63	13,836
Middle	2,892	303	22	3,217
Sub-district 2				
Elementary	4,094	386	138	4,618
Middle	5,616	130	47	5,793

Future Capacity

Several projects are underway to reduce the current overcrowding in CSD 24. The SCA's FY15-19 Projects in Progress lists two projects in Sub-district 1 scheduled for completion before 2022: a 980-seat addition to P.S. 143 to open in September 2020 and a new 646-seat middle school (I.S. 419) at 111-10 Astoria Boulevard to open in September 2021. These two facilities will increase the sub-district's capacity to 12,168 elementary school seats and 3,777 middle school seats.

Elementary Schools

Sub-district 1

Table 12 shows the future no-action 2022-2023 elementary school enrollment, capacity, and utilization projections for CSD 24 Sub-district 1. Enrollment is projected to be 13,836 students (a slight decline from the 2017-2018 level), and target capacity will increase to 12,128 seats. There would be a shortfall of 1,668 seats, and the utilization rate would be 114 percent.

Table 12
2022-2023 No-Action Elementary School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 1

Enrollment	Target Capacity	Available Seats	Utilization Rate
13,836	12,168	-1,668	114%

Sub-district 2

Table 13 shows the future no-action 2022-2023 elementary school enrollment, capacity, and utilization projections for CSD 24 Sub-district 2. Enrollment is projected to be 4,618 students (a slight decline from the 2017-2018 level), and target capacity will remain at 4,180 seats. There would be a shortfall of 438 seats, and the utilization rate would be 110 percent.

Table 13
2022-2023 No-Action Elementary School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 2

Enrollment	Target Capacity	Available Seats	Utilization Rate
4,618	4,180	-438	110%

Combined Study Area

Table 14 shows the future no-action 2022-2023 enrollment, capacity, and utilization information for Sub-districts 1 and 2 combined. As the table shows, the study area schools are projected to accommodate 18,454 elementary school students and to have the space to accommodate 16,348 students under desired conditions. There would thus be a shortfall of 2,106 seats. The study area's elementary school utilization rate was 113 percent.

Table 14
2022-2023 No-Action Elementary School Enrollment, Capacity, and Utilization
CSD 24 Sub-districts 1 and 2 Combined

Study Area	Enrollment	Target Capacity	Available Seats	Utilization Rate
Sub-district 1	13,836	12,168	-1,668	114%
Sub-district 2	4,618	4,180	-438	110%
Combined	18,454	16,348	-2,106	113%

Middle Schools

Sub-district 1

Table 15 shows the future no-action 2022-2023 middle school enrollment, capacity, and utilization projections for CSD 24 Sub-district 1. Enrollment is projected to be 3,217 students (a small increase from the 2017-2018 level), and target capacity will increase to 3,777 seats. There would be 560 available seats, and the utilization rate would be 85 percent.

Table 15
2022-2023 No-Action Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 1

Enrollment	Target Capacity	Available Seats	Utilization Rate
3,217	3,777	560	85%

Sub-district 2

Table 16 shows the future no-action 2022-2023 middle school enrollment, capacity, and utilization projections for CSD 24 Sub-district 2. Enrollment is projected to be 5,793 students (a small increase from the 2017-2018 level), and target capacity will remain at 5,844 seats. There would be 51 available seats, and the utilization rate would be 99 percent.

Table 16
2022-2023 No-Action Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 2

Enrollment	Target Capacity	Available Seats	Utilization Rate
5,793	5,844	51	99%

Combined Study Area

Table 17 shows the future no-action 2022-2023 middle school enrollment, capacity, and utilization information for Sub-districts 1 and 2 combined. As the table shows, the study area schools are projected to accommodate 9,010 middle school students and to have the space to accommodate 9,621 students under desired conditions. There would thus be 611 available seats. The study area's middle school utilization rate was 94 percent.

Table 17
2022-2023 No-Action Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-districts 1 and 2 Combined

Study Area	Enrollment	Target Capacity	Available Seats	Utilization Rate
Sub-district 1	3,217	3,777	560	85%
Sub-district 2	5,793	5,844	51	99%
Combined	9,010	9,621	611	94%

Future With-Action Conditions

Elementary Schools

Sub-district 1

As discussed at the beginning of the Technical Memorandum, the increased number of housing units developed as a result of the proposed actions are projected to generate an additional 21 elementary school students in Sub-district 1 of CSD 24. As Table 18 shows, that enrollment increase would raise the anticipated shortfall in the sub-district's elementary schools to 1,689 seats (from 1,668 seats under no-action conditions). The increase would be too small to change the schools' utilization rate, which would be a projected 114 percent either with or without the proposed actions.

Table 18
2022-2023 With-Action Elementary School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 1

Future No-Action Enrollment	Students Generated by the Proposed Actions	Total Future Enrollment	Target Capacity	Available Seats	Utilization Rate
13,836	21	13,857	12,168	-1,689	114%

Sub-district 2

The increased number of housing units developed as a result of the proposed actions are projected to generate an additional 23 elementary school students in Sub-district 2. As Table 19 shows, that enrollment increase would raise the anticipated shortfall in the sub-district's elementary schools to 461 seats (from 438 seats under no-action conditions). The additional students would increase the schools' utilization rate from 110 percent under no-action conditions to 111 percent with the proposed actions.

Table 19
2022-2023 With-Action Elementary School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 2

Future No-Action Enrollment	Students Generated by the Proposed Actions	Total Future Enrollment	Target Capacity	Available Seats	Utilization Rate
4,618	23	4,641	4,180	-461	111%

Combined Study Area

The increased number of housing units developed as a result of the proposed actions are projected to generate a total of 44 additional elementary school students in Sub-districts 1 and 2 of CSD 24. As Table 20 shows, that enrollment increase would raise the anticipated shortfall in the study area's elementary schools to 2,150 seats (from 2,106 seats under no-action conditions). The increase would be too small to change the schools' utilization rate, which would be a projected 113 percent either with or without the proposed actions.

Table 20
2022-2023 With-Action Elementary School Enrollment, Capacity, and Utilization
CSD 24 Sub-districts 1 and 2 Combined

Study Area	Future No-Action Enrollment	Students Generated by the Proposed Actions	Total Future Enrollment	Target Capacity	Available Seats	Utilization Rate
Sub-district 1	13,836	21	13,857	12,168	-1,689	114%
Sub-district 2	4,618	23	4,641	4,180	-461	111%
Combined	18,454	44	18,498	16,348	-2,150	113%

Middle Schools

Sub-district 1

As discussed at the beginning of the Technical Memorandum, the increased number of housing units developed as a result of the proposed actions are projected to generate an additional seven middle school students in Sub-district 1 of CSD 24. As Table 21 shows, that enrollment increase would reduce the anticipated number of available elementary school seats to 553 seats (from 560 seats under no-action conditions). The increase would be too small to change the schools' utilization rate, which would be a projected 85 percent either with or without the proposed actions.

Table 21
2022-2023 With-Action Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 1

Future No-Action Enrollment	Students Generated by the Proposed Actions	Total Future Enrollment	Target Capacity	Available Seats	Utilization Rate
3,217	7	3,224	3,777	553	85%

Sub-district 2

The increased number of housing units developed as a result of the proposed actions are projected to generate an additional eight middle school students in Sub-district 2 of CSD 24. As Table 22 shows, that enrollment increase would reduce the anticipated number of available elementary school seats to 43 seats (from 51 seats under no-action conditions). The increase would be too small to change the schools' utilization rate, which would be a projected 99 percent either with or without the proposed actions.

Table 22
2022-2023 With-Action Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-district 2

Future No-Action Enrollment	Students Generated by the Proposed Actions	Total Future Enrollment	Target Capacity	Available Seats	Utilization Rate
5,793	8	5,801	5,844	43	99%

Combined Study Area

The increased number of housing units developed as a result of the proposed actions are projected to generate a total of 15 additional middle school students in Sub-districts 1 and 2 of CSD 24. As Table 23 shows, that enrollment increase would reduce the anticipated number of available seats in the study area's middle schools to 596 seats (from 611 seats under no-action conditions). The increase would be too small to change the schools' utilization rate, which would be a projected 94 percent either with or without the proposed actions.

Table 23
2022-2023 With-Action Middle School Enrollment, Capacity, and Utilization
CSD 24 Sub-districts 1 and 2 Combined

Study Area	Future No-Action Enrollment	Students Generated by the Proposed Actions	Total Future Enrollment	Target Capacity	Available Seats	Utilization Rate
Sub-district 1	3,217	7	3,224	3,777	553	85%
Sub-district 2	5,793	8	5,801	5,844	43	99%
Combined	9,010	15	9,025	9,621	596	94%

Conclusions

According to the *CEQR Technical Manual*, a significant adverse schools impact may result if a proposed action would result in:

- o A collective utilization rate within the sub-district of at least 105 percent; and
- o An increase of 5 percent or more in the collective utilization rate between the future no-action and with-action conditions.

Under both no-action and with-action conditions, the projected 2022-2023 elementary schools utilization rate would exceed 105 percent in both Sub-district 1 and Sub-district 2 of CSD 24 and in the study area consisting of the two sub-districts combined. Although the shortfalls in all three study areas would increase as a result of the proposed actions, the increase would be too small to change the utilization rate in Sub-district 1 or the combined study area, and it would increase the utilization rate by one percent in Sub-district 2. Because the enrollment increases would not increase the utilization rate by at least 5 percent in any study area, the proposed actions would not have a significant adverse impact on elementary schools.

Because the intermediate school facilities would be below capacity in all three study areas, the proposed actions would not have a significant adverse impact on intermediate school enrollment, capacity, and utilization.

In summary, the proposed actions would not have a significant adverse schools impact.