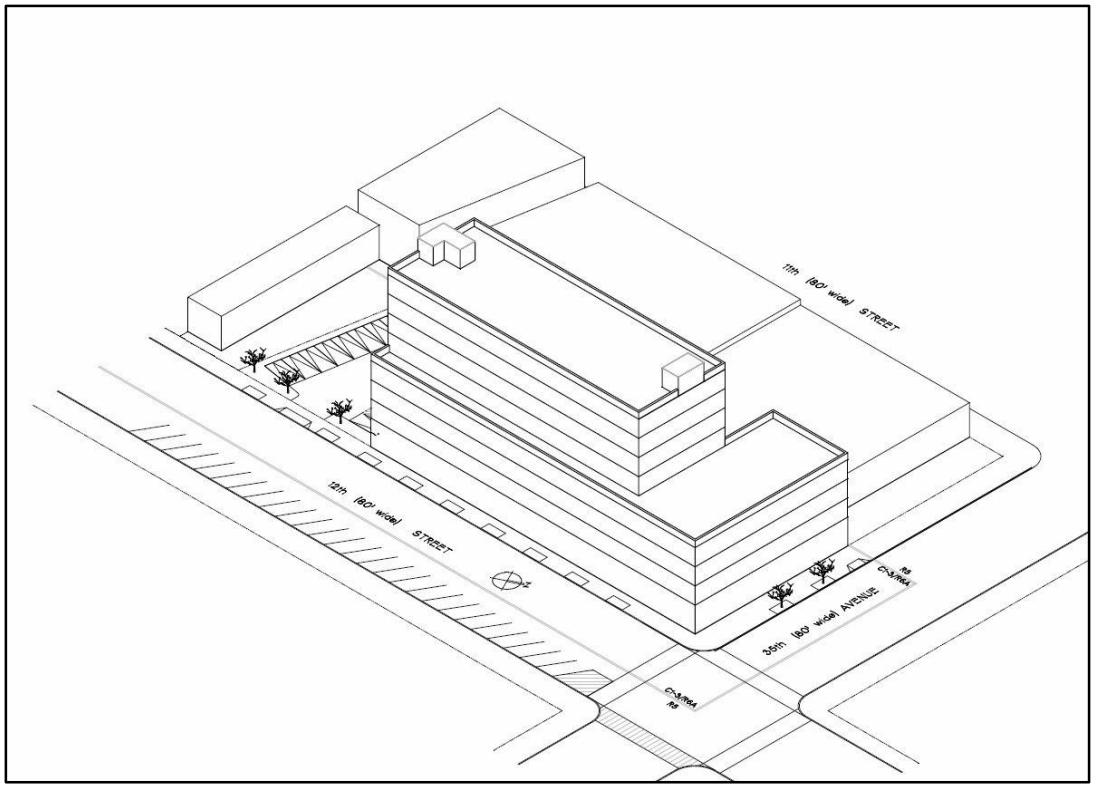
12th Street Rezoning

Environmental Assessment Statement (EAS)



CEQR No. 18DCP079Q

Prepared for:
Ravi Management, LLC

Prepared by:
Philip Habib & Associates

May 4, 2018

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Environmental Assessment Statement

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Environmental Assessment Statement

(EAS) Form

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

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

Part I: GENERAL INFORMATION

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

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

2. *Project Name* 12th Street Rezoning EAS

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
18DCP079Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
N180212ZRQ I180211ZMQ	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT Ravi Management, LLC		
NAME OF LEAD AGENCY CONTACT PERSON Robert Dobruskin			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Steven Sinacori		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 666 Fifth Avenue, 20th Floor		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10103
TELEPHONE 212.730.3423	EMAIL rdobrus@planning.nyc.gov		TELEPHONE 212.822.2212	EMAIL steven.sinacori @akerman.com	

5. *Project Description*

Ravi Management, LLC is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the proposed rezoning area a Mandatory Inclusionary Housing (MIH) Area.

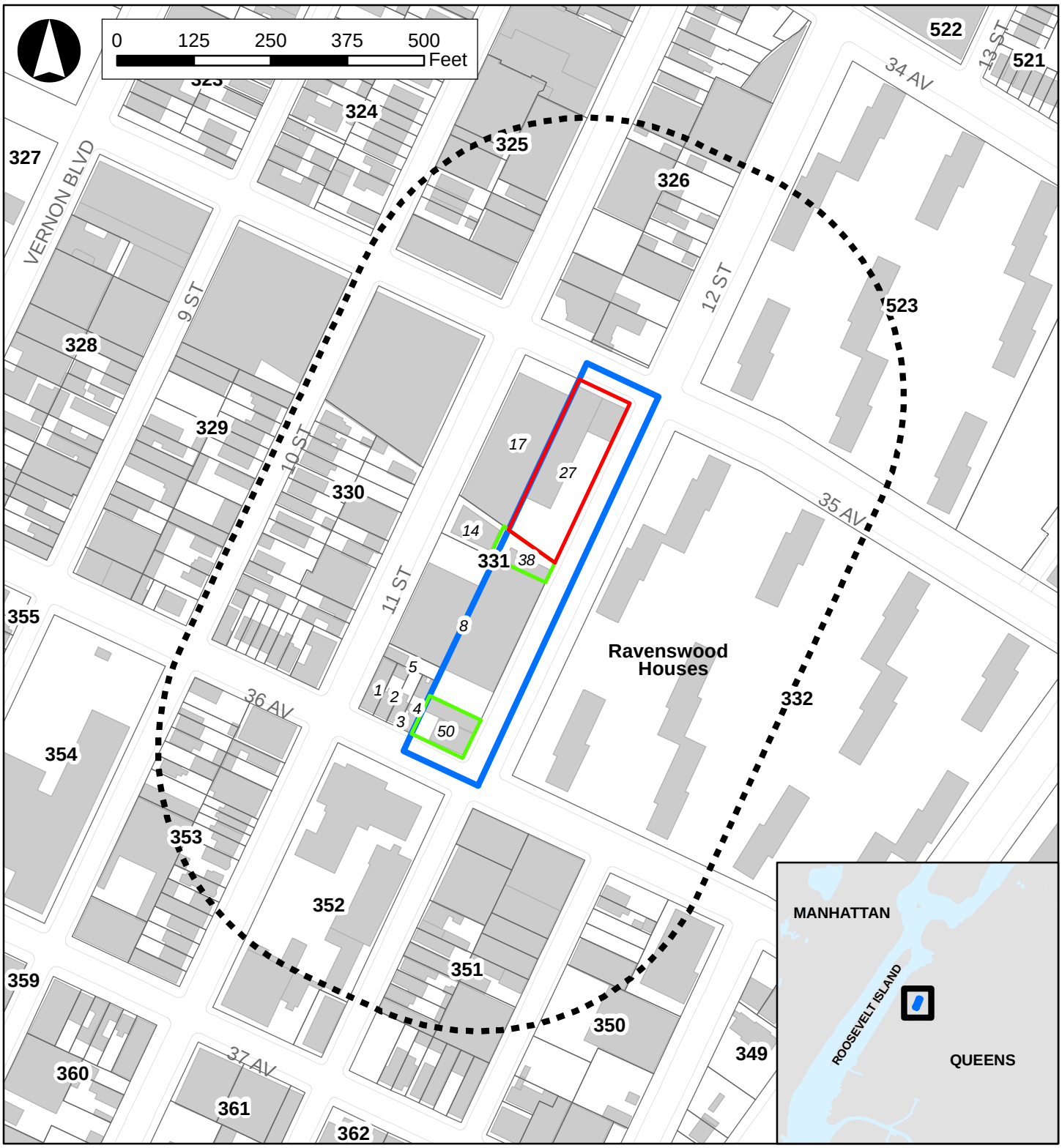
The proposed rezoning area consists of the eastern half of Queens Block 331, including Lot 27 (the proposed development site), Lot 50, and the eastern portions of Lots 8 and 38. In total, the proposed rezoning area comprises approximately 57,904 square feet of lot area bounded by 35th Avenue to the north, 12th Street to the east, 36th Avenue to the south, and, to the west, a line approximately 92.6 feet west of, and parallel to, 12th Street (see Figure 1).

In the RWCDS* future with the Proposed Actions, the Applicant would demolish the existing warehouse on Lot 27 and construct a new eight-story (85-foot tall), approximately 92,946 gross square foot (gsf) (approximately 88,520 zoning square foot [zsf]) mixed-use residential and commercial building on the site, with a floor area ratio (FAR) of 3.6. It is anticipated that the proposed building would contain 77,196 gsf (73,520 zsf) of residential space with 82 dwelling units (DUs). 30 percent of the residential floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of qualifying ground-floor retail space and up to 77 surface and below-grade accessory parking spaces.

Lots 38 and 50 in the proposed rezoning area are also expected to be redeveloped with mixed-use residential and commercial buildings in the RWCDS 2024 future with the Proposed Actions. It is therefore anticipated that the Proposed Actions would result in a net increase of approximately 109,680 gsf (104,457 zsf) of residential space with 116 DUs (39 affordable) and approximately 22,143 gsf (21,089 zsf) of commercial space in the proposed rezoning area by 2022. Absent the Proposed Actions, no changes are expected to occur in the proposed rezoning area.

*As detailed in Attachment A, "Project Description," the RWCDS for Lot 27 assumes the maximum permitted built FAR of 3.6, resulting in higher numbers than presented in the Applicant's architectural drawings in the Land Use Application, which assume a built FAR of 3.54. The applicant proposes to construct an approximately 87,033 zsf building (a difference

Figure 1
Project Site Location



Source: New York City Department of City Planning (PLUTO 2016), DoITT

Legend

- Applicant-owned Proposed Development Site
- Proposed Rezoning Area
- Projected Development Site
- Building Footprint
- 400-Foot Radius
- **331** Block
- *27* Lot

of 1,487 zsf from the RWCDS), with 74 residential DUs (a difference of 8 DUs from the RWCDS), approximately 14,246 zsf of qualifying ground-floor retail (a difference of 754 zsf from the RWCDS), and 71 surface and underground accessory parking spaces (a difference of 6 spaces from the RWCDS).

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 1	STREET ADDRESS 11-14 35th Avenue; 35-30 12th Street; 3541-49 11th Street; 35-58 12th Street
TAX BLOCK(S) AND LOT(S) Block 331, Lots 8, 27, 38, 50		ZIP CODE 11106
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS 12th Street (east), 35th Avenue (north), 36th Avenue (south)		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R5		ZONING SECTIONAL MAP NUMBER 9a

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

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

- ☐ CITY MAP AMENDMENT
- ☒ ZONING MAP AMENDMENT
- ☒ ZONING TEXT AMENDMENT
- ☐ SITE SELECTION—PUBLIC FACILITY
- ☐ HOUSING PLAN & PROJECT
- ☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
- SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION
- ☐ ZONING CERTIFICATION
- ☐ ZONING AUTHORIZATION
- ☐ ACQUISITION—REAL PROPERTY
- ☐ DISPOSITION—REAL PROPERTY
- ☐ OTHER, explain:
- ☐ CONCESSION
- ☐ UDAAP
- ☐ REVOCABLE CONSENT
- ☐ FRANCHISE

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

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

***Department of Environmental Protection*:** ☐ YES ☒ NO 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
- ☒ TAX MAP
- ☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP
- ☒ ZONING MAP
- ☒ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)
- ☒ SANBORN OR OTHER LAND USE MAP

Physical Setting (both developed and undeveloped areas)

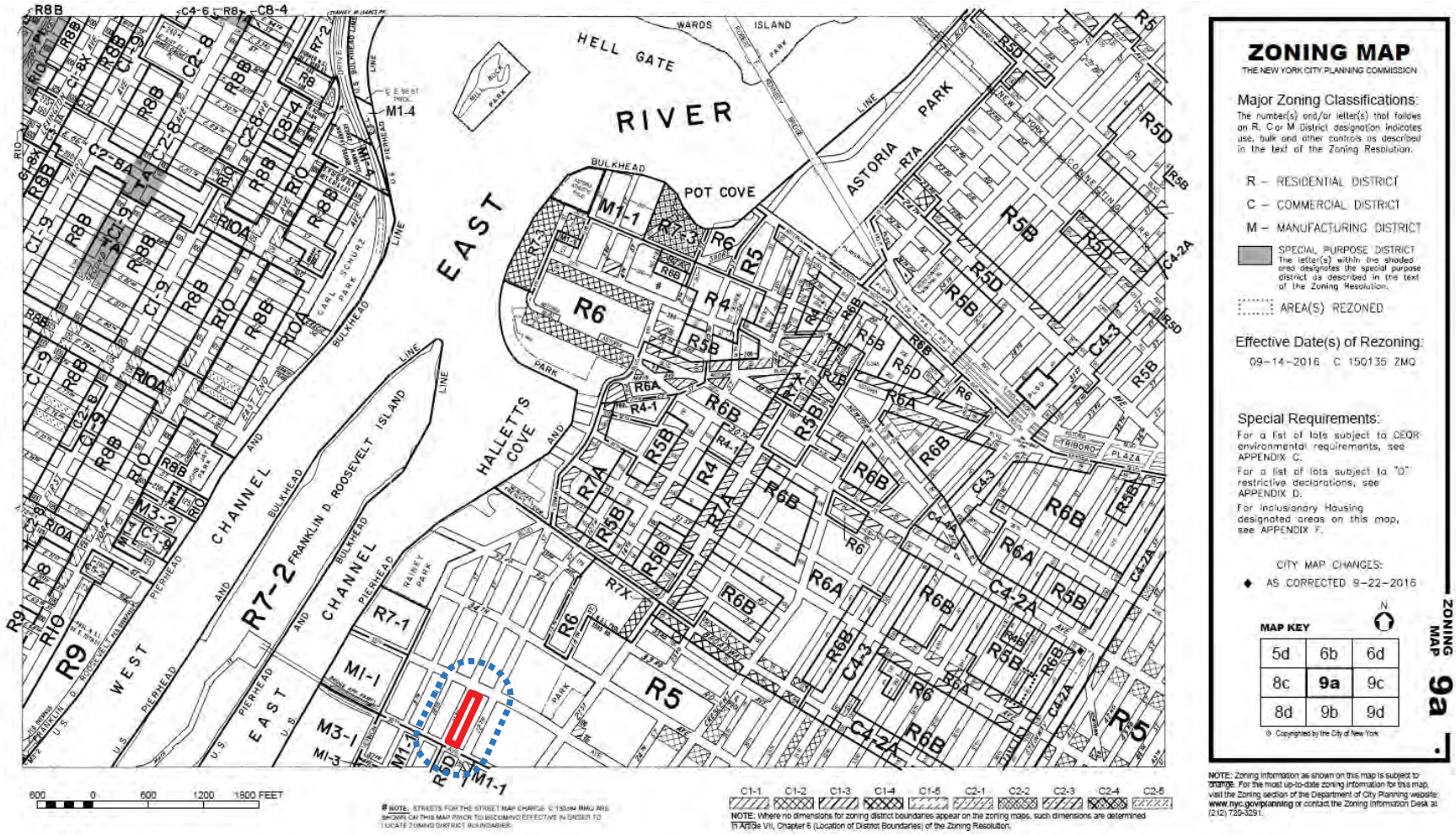
Total directly affected area (sq. ft.): approximately 57,904

Roads, buildings, and other paved surfaces (sq. ft.): approximately 57,904

Waterbody area (sq. ft) and type: N/A

Other, describe (sq. ft.): N/A

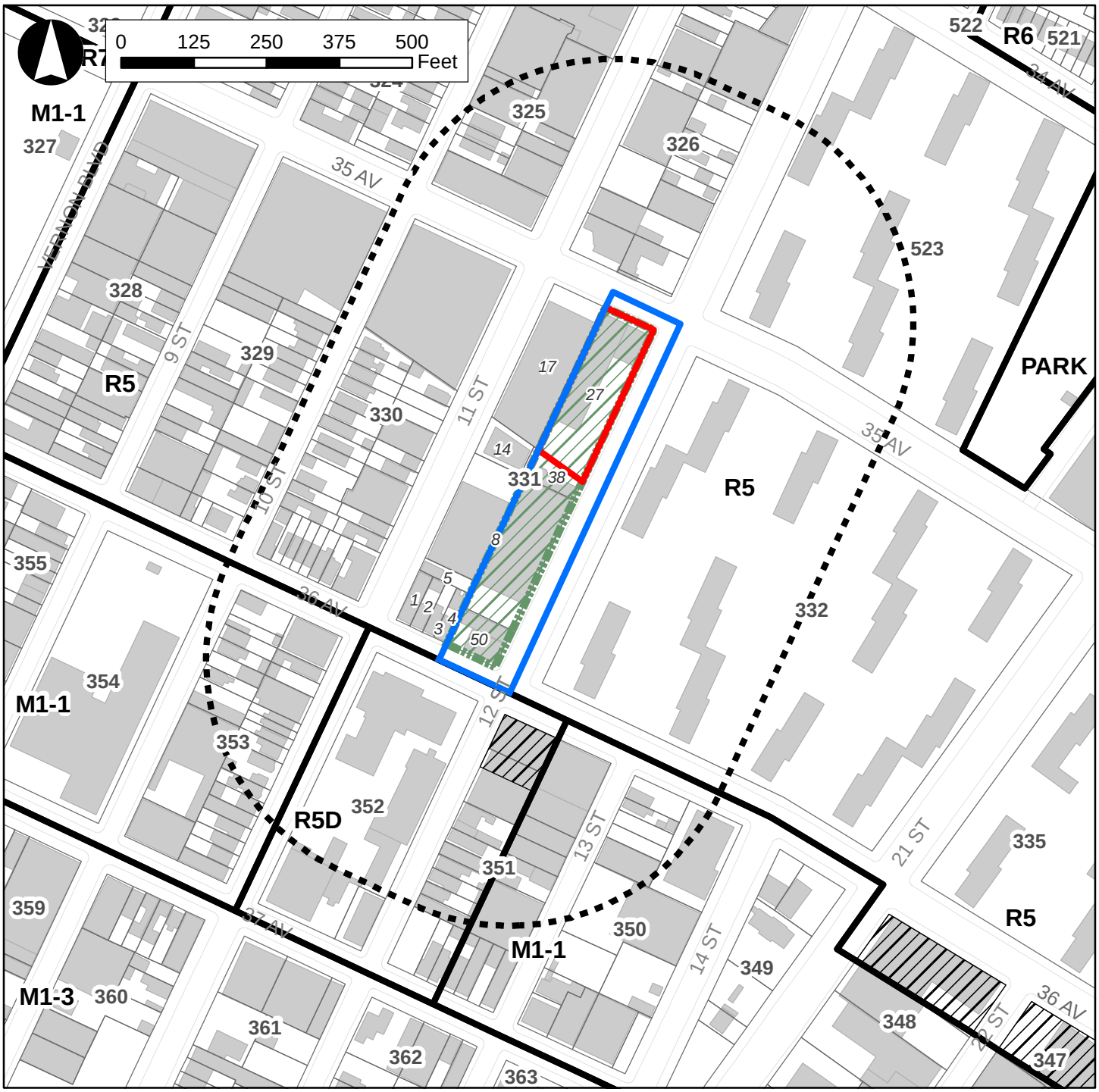
8. *Physical Dimensions and Scale of Project* (if the project affects multiple sites, provide the total development facilitated by the action)



Proposed Rezoning Area

400-Foot Radius

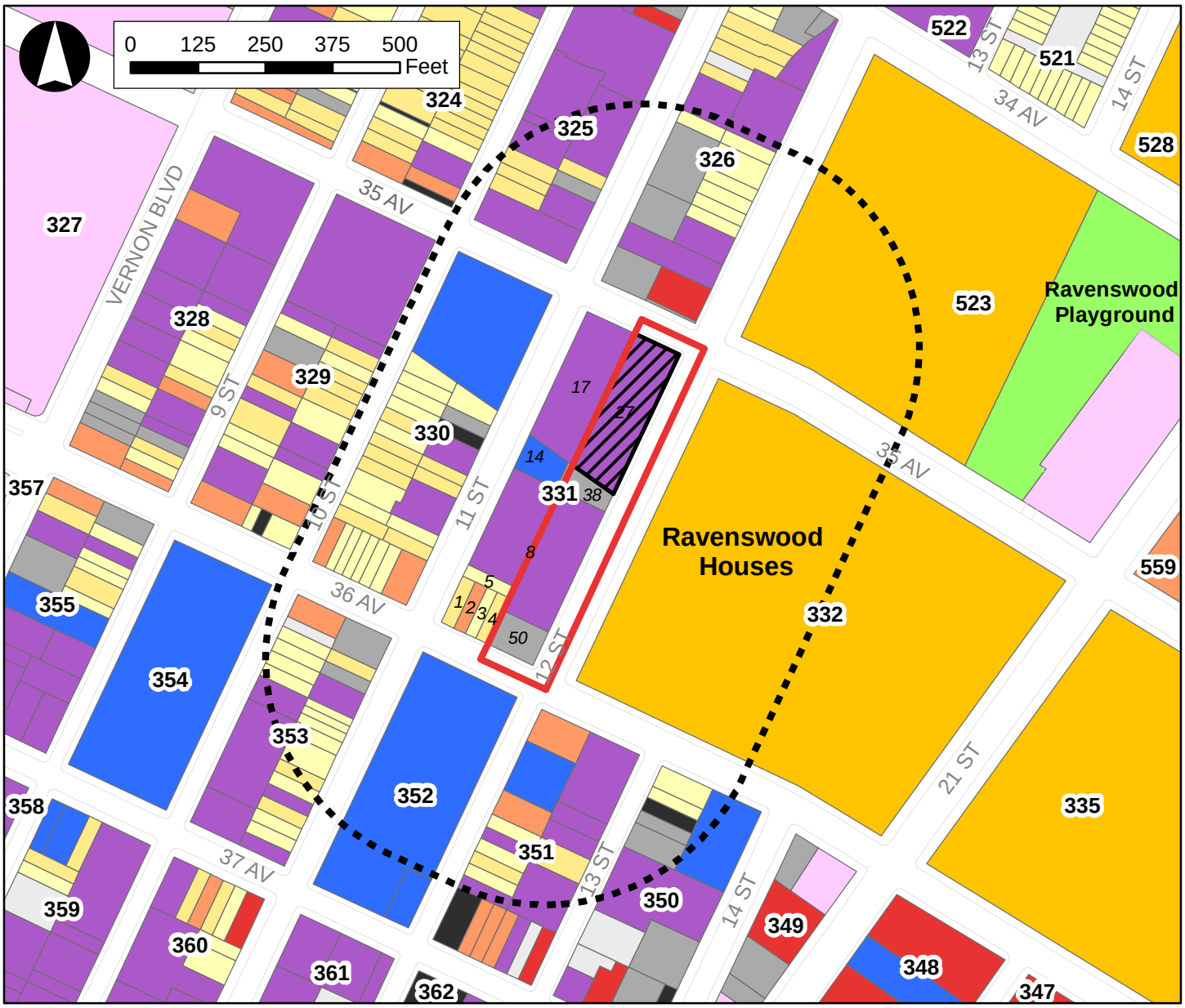
Proposed Zoning Map



Source: New York City Department of City Planning (PLUTO 2016), DoITT

Legend

- Proposed Development Site
- Proposed R6A Rezoning Area
- Proposed C1-3 Commercial Overlay
- R5 Existing Zoning District
- Existing C1-3 Commercial Overlay
- 400-Foot Radius
- Building Footprint
- 331 Block
- 27 Lot



Legend

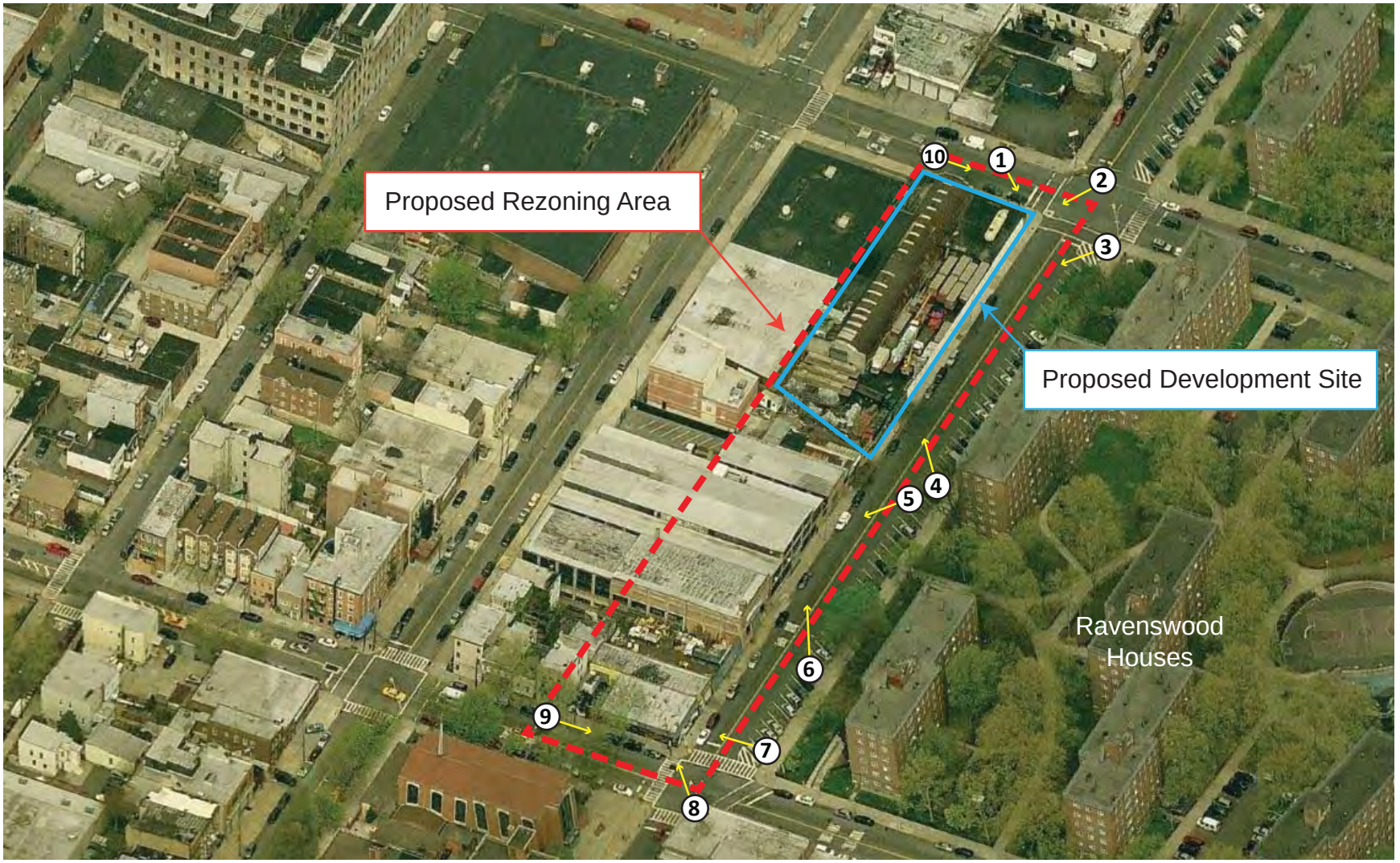
- Proposed Development Site
- Proposed Rezoning Area
- 400-Foot Radius
- One and Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities and Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data
- **331** Block
- *27* Lot

Source: New York City Department of City Planning (PLUTO 2016), DoITT

12th Street Rezoning EAS

Figure 4

Tax Map - Block 331



*Aerial view of the proposed rezoning area and surrounding neighborhood from the south, courtesy of Bing Maps.

① → Photo Location

Photo 1: View southeast across 35th Avenue at the northern edge of the proposed rezoning area and proposed development site

Photo 2: View southwest of the proposed development site from the intersection at 35th Avenue and 12th Street

**All photos taken on March 28, 2018*

Photo 3: View southwest across 12th Street at the eastern edge of the proposed rezoning area and proposed development site

Photo 4: View north across 12th Street at the proposed rezoning area and proposed development site

**All photos taken on March 28, 2018*

Photo 5: View southwest across 12th Street at the eastern edge of the proposed rezoning area

Photo 6: View north along 12th Street at the proposed rezoning area and proposed development site in the background

**All photos taken on March 28, 2018*

Photo 7: View of the proposed rezoning area west from the intersection of 36th Avenue and 12th Street

Photo 8: View of the proposed rezoning area northwest from the intersection of 36th Avenue and 12th Street

**All photos taken on March 28, 2018*

Photo 9: View east from 36th Avenue along the southern edge of the proposed rezoning area

Photo 10: View east along 35th Avenue at the northern edge of the proposed rezoning area and proposed development site

**All photos taken on March 28, 2018*

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 131,823

NUMBER OF BUILDINGS: 3

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): Lot 27: 92,946; Lot 38: 16,065; Lot 50: 22,812

HEIGHT OF EACH BUILDING (ft.): up to 85 feet

NUMBER OF STORIES OF EACH BUILDING: up to 8 stories

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: approximately 24,589

The total square feet not owned or controlled by the applicant: approximately 33,470

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: up to 24,427 sq. ft. (width x length)

VOLUME OF DISTURBANCE: up to 244,270 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: up to 24,427 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.)	approx. 104,457	approx. 22,143		
Type (*e.g.,* retail, office, school)	116 (39 affordable) units	ground-floor retail		

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

If "yes," please specify:

NUMBER OF ADDITIONAL RESIDENTS: approx. 271

NUMBER OF ADDITIONAL WORKERS: approx. 73

Provide a brief explanation of how these numbers were determined: Number of residents was calculated by multiplying the number of DUs and the average persons per household in Queens Community District 1 (2.43 persons/household, derived from U.S. Census Bureau 2010 estimates); for retail, three employees per 1,000 sf; for parking facilities, one employee per 50 parking spaces; for residential, one employee per 25 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:

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): All sites completed and fully operational by 2024

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: up to 24 months per site

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☐ YES ☒ NO

IF MULTIPLE PHASES, HOW MANY? Each building constructed independently

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Refer to Attachment B, "Supplemental Screening," for more details.

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

☒ RESIDENTIAL ☒ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☒ OTHER, specify: Public Facilities and Institutions

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?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
○ If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 200 or more residential units?	☐	☒
○ Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
○ Directly displace more than 500 residents?	☐	☒
○ Directly displace more than 100 employees?	☐	☒
○ Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
○ **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)	☐	☒
○ **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)	☐	☒
○ **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)	☐	☒
○ **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?	☐	☒
○ 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?	☐	☒
○ If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐

	YES	NO
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☐	☒
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attachment B, "Supplemental Screening."		
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: See Attachment B, "Supplemental Screening."	☐	☐
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	☐	☒

	YES	NO
Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?		
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(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): 4,715		
○ 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): Approx. 18,599,197.4 annual MBTUs		
(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) See Attachment B	☐	☐
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☐	☒
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒

	YES	NO
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☒	☐
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. See Attachment B, "Supplemental Screening."		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. See Attachment B, "Supplemental Screening."		
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. See Attachment B, "Supplemental Screening."		

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
PHILIP HABIB	12/18/17
SIGNATURE	

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

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

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

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

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

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

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

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

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

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

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

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

TITLE	LEAD AGENCY
Deputy Director, Environmental Review and Assessment Division	New York City Department of City Planning
NAME	**DATE**
Olga Abinader	5/04/2018

SIGNATURE

Olga Abinader

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 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 that finds the proposed project:
and related 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.

Hazardous Material, Air Quality, and Noise

1. A proposed new (E) designation (E-480) has been incorporated to the proposed project to ensure that the proposed actions will not result in significant adverse impacts related to hazardous material, air quality, or noise. Refer to "Appendix 1: (E) Designations" for a list of the sites affected by the proposed (E) designations and applicable (E) designation requirements.

Land Use, Zoning, and Public Policy

2. This EAS includes a detailed Land Use, Zoning, and Public Policy section, which analyzes the potential significance of the proposed rezoning and text amendment on land use, zoning and public policy in the study area. The proposed actions would rezone the area from an R5 zoning district to an R6A/C1-3 zoning district for mixed-use residential and commercial development. The zoning text amendment to designate the area a Mandatory Inclustionary Housing (MIH) designated area will allow an increased FAR on the project sites and would allow for affordable dwelling units on the sites. The analysis concludes that the proposed actions would not result in significant adverse impacts on land use, zoning, or public policy.

Open Space

3. This EAS includes a detailed Open Space section, which analyzes the potential significance of the proposed rezoning and text amendment on open space resources in the study area. The Proposed Actions would not result in the direct displacement or alteration of existing public open space resources in the study area. The passive open space ratio for the residential study area would remain above the City's guidelines ratio of 0.5 acres of passive open space per 1,000 residents, and residents in the half-mile study area would continue to be well-serve by passive open space resources. The analysis concludes that the proposed actions would not result in significant adverse impacts on open space.

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).

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME: Olga Abinader	DATE: 5/04/2018
SIGNATURE: Olga Abinader	
TITLE: Chair, Department of City Planning	
NAME: Marisa Lago	DATE: 5/07/2018
SIGNATURE	

Attachment A

Project Description

I. INTRODUCTION

Ravi Management, LLC (the "Applicant") is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Avenue (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1 (the "proposed development site") (refer to **Figure A-1**, "Project Location Map"). The discretionary actions include: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 (the "proposed rezoning area") from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the proposed rezoning area a Mandatory Inclusionary Housing (MIH) Area. Collectively, the zoning map amendment and the zoning text amendment are the "Proposed Actions" for the purposes of the environmental analysis.

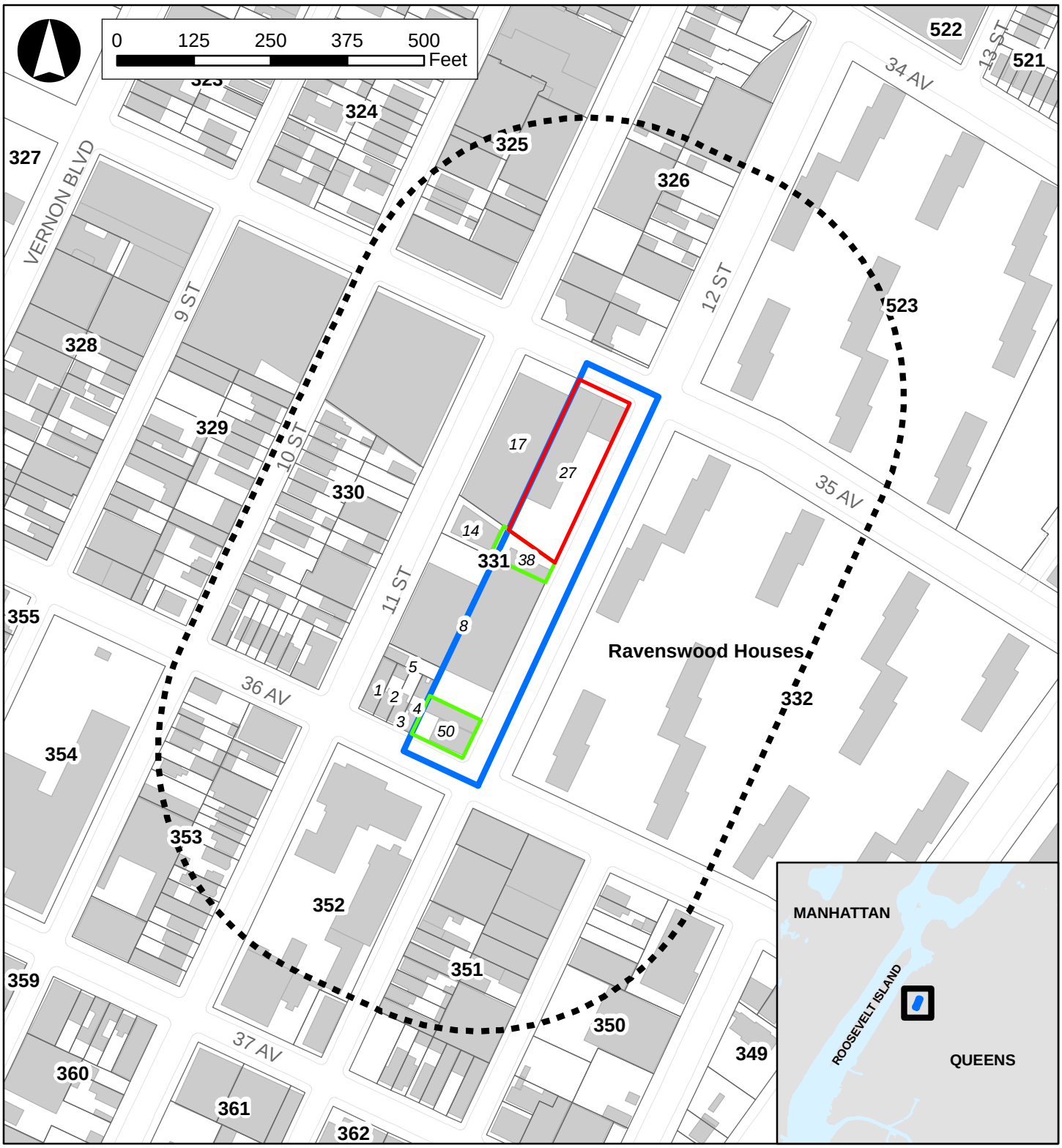
As shown in **Figure A-1**, the proposed rezoning area consists of the eastern half of Queens Block 331, including Lot 27 (the proposed development site), Lot 50, and the eastern portions of Lots 8 and 38. In total, the proposed rezoning area comprises approximately 57,904 square feet (sf) of lot area bounded by 35th Avenue to the north, 12th Street to the east, 36th Avenue to the south, and, to the west, a line approximately 92.6 feet west of, and parallel to, 12th Street.

The 24,589 sf Applicant-owned proposed development site on Lot 27 contains a single-story, approximately 10,320 sf warehouse which currently stores cranes and other construction-related equipment. The proposed development site is currently in an R5 zoning district which permits Use Groups 1-4, and as such, the existing warehouse on the site is a nonconforming use. In the future with the Proposed Actions, the applicant proposes to demolish the existing warehouse and construct a new eight-story, 85-foot tall building with a floor area ratio (FAR) of 3.54 on the site. The new, approximately 89,668 gross square foot (gsf) (approximately 87,033 zoning square foot [zsf]) mixed-use residential and commercial building would contain approximately 77,196 gsf (72,787 zsf) of residential space with 74 dwelling units (DUs), and 30 percent of the residential floor area (22 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (14,246 zsf) of ground-floor retail space and up to 71 surface and underground accessory parking spaces.

However, for conservative analysis purposes, the reasonable worst-case development scenario (RWCDS) assumes that in the future with the Proposed Actions, the Applicant could construct a new eight-story building with the maximum permitted FAR of 3.6 on the site. Under the RWCDS, it is assumed that the approximately 92,946 gsf (88,520 zsf) mixed-use residential and commercial building would contain 77,196 gsf (73,520 zsf) of residential space with 82 DUs, and 30 percent of the residential floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development under the RWCDS would also include approximately 15,750 gsf (15,000 zsf) of ground-floor retail space and up to 77 surface and underground accessory parking spaces.[1]

Two other sites in the proposed rezoning area are also expected to be redeveloped with mixed-use residential and commercial buildings in the 2024 future with the Proposed Actions: Lots 38 and 50. It is therefore anticipated that under the RWCDS the Proposed Actions would result in a net increase of

[1] As detailed below, the reasonable worst-case development scenario assumes the proposed development site would be built out to the maximum With-Action permitted FAR of 3.6. For conservative analysis purposes, this assumption is higher than shown in the Applicant's architectural drawings in the Land Use Application, which assume a built FAR of 3.54.



Source: New York City Department of City Planning (PLUTO 2016), DoITT

Legend

- Applicant-owned Proposed Development Site
- Proposed Rezoning Area
- Projected Development Site
- Building Footprint
- 400-Foot Radius
- **331** Block
- *27* Lot

approximately 109,680 gsf (104,457 zsf) of residential space with 116 DUs (39 affordable) and approximately 22,143 gsf (21,089 zsf) of commercial space in the proposed rezoning area by 2024. Absent the Proposed Actions, no changes are expected to occur in the proposed rezoning area.

As the Proposed Actions are discretionary actions, they are subject to environmental review pursuant to the *2014 City Environmental Quality Review (CEQR) Technical Manual*. This attachment introduces the Proposed Actions and sets the context in which to assess impacts, providing a discussion of existing conditions relating to the Proposed Actions; a description of the proposed development; the background of the Proposed Actions; a statement of the purpose and need for the Proposed Actions; and a discussion of the approvals required.

II. EXISTING CONDITIONS

Applicant-Owned Proposed Development Site

The Applicant-owned proposed development site at 11-14 35th Avenue (Queens Block 331, Lot 27) is located on the northeastern corner of the block, with approximately 92 feet of frontage along 35th Avenue to the north and approximately 275 feet of frontage along 12th Avenue to the east (refer to **Figure A-1**). The approximately 24,589 sf lot contains a single-story, approximately 10,320 sf warehouse which provides construction equipment and truck repairs and stores cranes and other construction-related equipment for the United Crane and Rigging Corporation. The site has an existing FAR of 0.42, and its existing warehouse use is nonconforming with the underlying R5 zoning for the site.

Table A-1: Proposed Rezoning Area – Existing Conditions on Block 331

Lot	Total Lot Area SF	Proposed Rezoning Area		Address	Zoning	Land Use	Building SF	Built FAR
		Lot Area SF	% of Total Lot Area					
8	41,600	23,167	56%	3541-49 11th Street / 35-40 12th Street	R5	Industrial/ Manufacturing (nonconforming)	40,000	0.96
27	24,589	24,589	100%	11-14 35th Avenue		Warehouse (nonconforming)	10,320	0.42
38	4,500	4,113	91%	35-30 12th Street		Auto Repair (nonconforming)	2,189	0.49
50	6,035	6,035	100%	35-58 12th Street		Auto Repair (nonconforming)	2,542	0.42
		57,904 Proposed Rezoning Area Total SF						

Notes: The Applicant-owned proposed development site is highlighted.
Sources: NYC DCP 2016 PLUTO Data; PHA Site Visits (March 2017).

Proposed Rezoning Area

The zoning map amendment would rezone the eastern portion of Queens Block 331 from an R5 zoning district to an R6A zoning district with a C1-3 commercial overlay. The approximately 57,904 sf proposed rezoning area comprises the eastern half of Queens Block 331, fronting 12th Street between 35th and 36th Avenues. In addition to the Applicant-owned proposed development site on Lot 27 detailed above, the proposed rezoning area encompasses all of Lot 50, as well as the eastern portions of Lots 8 and 38 on Block

331 (refer to **Table A-1**). None of the existing uses in the proposed rezoning area are permitted in the underlying R5 zoning district.

As shown in **Figure A-2**, "Land Use Map," Lot 8 is an approximately 41,600 sf through-lot located in the middle of Block 331 with frontages along 11th and 12th Streets. Lot 8 contains two industrial/ manufacturing buildings totaling approximately 40,000 sf (0.96 FAR) housing the All City Switchboard Corp. (switchgear and switchboard manufacturing) and Superior Selected Stone (wholesale). Approximately 23,167 sf of Lot 8 (56 percent of the lot) is located within the proposed rezoning area.

Lot 38, located immediately south of the proposed development site at 35-30 12th Street, contains a single-story, approximately 2,189 sf building housing Bravo One Auto Body Repair (0.49 FAR). As shown in **Figure A-2**, the majority of Lot 38 is located within the proposed rezoning area and the "25 Foot Rule" applies to the site. As outlined in Zoning Resolution Section 77-11, the "25 Foot Rule" applies to a zoning lot split between two or more zoning districts that permit different uses when the width of one district on the zoning lot measures 25 feet or less at every point (as would occur on Lot 38 in the future with the Proposed Actions). Therefore, upon approval of the Proposed Actions, the use and bulk regulations of the C1-3 commercial overlay, which would encompass 91 percent of the lot, could be applied to the entirety of Lot 38.

As shown in **Figure A-2**, Lot 50 is on the southeast corner of Queens Block 331 at 35-38 12th Street, with frontage along 12th Street and 36th Avenue. Lot 50 contains two single-story buildings totaling approximately 2,542 sf (0.42 FAR) which house America's Auto Repair.

Surrounding Area

The proposed rezoning area is located in the Ravenswood neighborhood of Queens (between Long Island City and Astoria). As shown in **Figure A-2**, the area within an approximate 400-foot radius of the proposed rezoning area is developed with a mix of residential, light industrial, institutional, and commercial uses. The remainder of Block 331 contains low-rise residential and mixed-use buildings along 36th Avenue and a three-story institutional building accommodating the Kingdom Hall of Jehovah's Witnesses at 35-27 11th Street.

Immediately east of the proposed rezoning area across 12th Street are the Ravenswood Houses, a New York City Housing Authority (NYCHA) public housing complex situated on 38 acres containing six- and seven-story apartment buildings surrounded by open space (refer to **Figure A-2**). North of the proposed rezoning area are several light industrial uses such as Lemode Plumbing & Heating at 34-55 11th Street and Drillco Equipment Co., Inc. at 10-05 35th Avenue, along with a number of private parking facilities and 'vacant/for lease' properties. Institutions within 400-feet of the proposed rezoning area include the St. Rita's Roman Catholic Church complex at 36-36 12th Street, the New York State Department of Corrections and Community Services' Division of Correctional Industries (Corcraft) Distribution Center at 10-06 35th Avenue, and the Hour Apartment House III, supportive housing for formerly incarcerated women and their children at 36-11 12th Street. The remainder of the surrounding 400-foot area contains low-density residential buildings, most of which range from one- to three-stories, averaging approximately three residential units per building (refer to **Figure A-2**).

It should be noted that the Ravenswood Generating Station is located along the East River Waterfront on Vernon Boulevard to the west and southwest of the proposed rezoning area. South of 38th Avenue, the power plant has four tall stacks, all of which are approximately 0.5-miles to the southwest of the proposed rezoning area.
The streets immediately surrounding Block 331 (35th Avenue, 12th Street, 36th Avenue, and 11th Street) are all wide streets with two-way traffic. The Roosevelt Island Bridge approach is four blocks to the west of

Legend

- Proposed Rezoning Area
- Proposed Development Site
- 400-Foot Radius
- One and Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities and Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data
- 27 Lot

Source: New York City Department of City Planning (PLUTO 2016), DoITT

the proposed rezoning area, at Vernon Boulevard and 36th Avenue. There are no subway stations or bus lines within 400-feet of the proposed rezoning area. The closest subway stations to the area are the Queensbridge-21st Street station (F train) approximately 0.5-miles to the south, and the 35th Avenue station (elevated N & W trains) approximately 0.6-miles to the southeast. The Q102 and Q103 buses run north-south along Vernon Boulevard to the west of the 400-foot study area, with stops at the intersections of 35th Avenue (Q103) and 36th Avenue (Q102 and Q103). Additionally, the Q69 bus runs north-south along 21st Street to the east of the 400-foot study area with stops at the intersections of 35th and 36th Avenues.

As shown in **Figure A-3**, "Zoning Map," the area within 400-feet of the proposed rezoning area north of 36th Avenue is currently zoned R5, a zoning designation which has been unchanged since 1961. As discussed above, many of the existing light industrial/manufacturing buildings within this R5 district can be characterized as nonconforming uses. An M1-1 zoning district lies directly to the south and west of the proposed rezoning area. In 2010, all of Block 352 and the western half of Block 351 to the south of the proposed rezoning area were rezoned from M1-1 to R5D to help facilitate new residential development ("Hour Children Rezoning"). The rezoning made way for 12 DUs at 36-11 12th Street dedicated to supportive housing for formerly incarcerated women and their children. Similarly, in the surrounding area beyond 400-feet of the proposed rezoning area, there has been a trend towards rezoning manufacturing districts as well as residential districts containing nonconforming uses to mixed-use districts to facilitate residential and commercial growth, such as along Vernon Boulevard and the East River waterfront at Hallett's Point and Astoria Cove. These rezonings have been in response to declining industrial/ manufacturing demand in the area, and the subsequent influx of hotel construction in manufacturing districts during the past decade, particularly in the blocks south of 36th Avenue. These rezonings include a R7-1 district that had replaced a portion of a nearby R5 district in 2006. Since this rezoning, the R7-1 district, located approximately a quarter-mile northwest of the proposed development site, has seen the approval of a new 17-story, 298,535 zsf residential building that would include 336 DUs.

III. THE PROPOSED ACTIONS

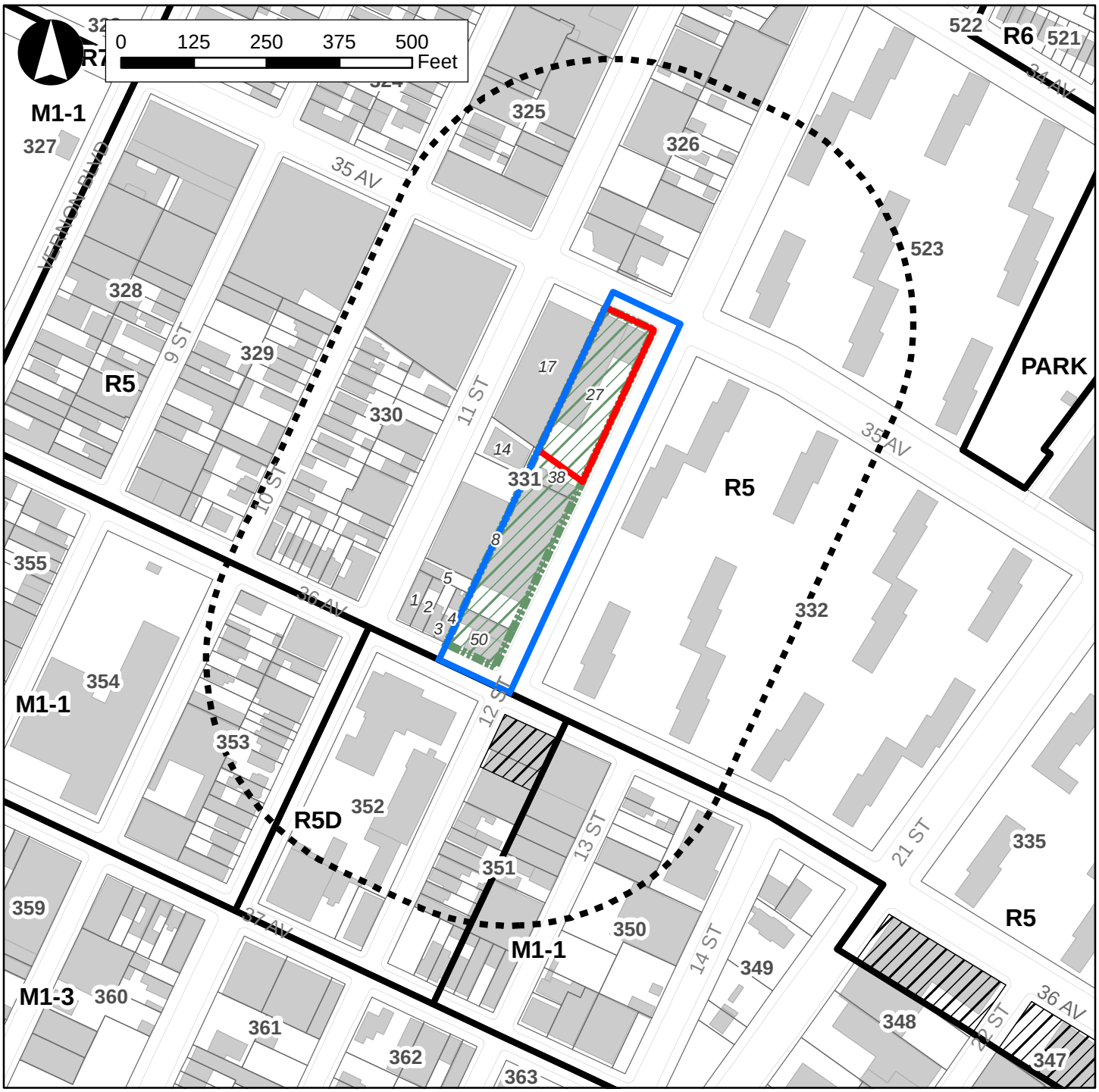
The Applicant is seeking two New York City Planning Commission (CPC) zoning changes: a zoning map amendment and a zoning text amendment. Both proposed zoning changes are discretionary actions; the zoning map amendment and zoning text amendment are subject to the Uniform Land Use Review Procedure (ULURP). The Proposed Actions are also subject to environmental review under the City Environmental Quality Review Act (CEQR).

Zoning Map Amendment

The zoning map amendment would rezone the eastern half of Queens Block 331 (92.6 feet west of 12th Street), fronting 12th Street between 35th and 36th Avenues, from an R5 zoning district to an R6A zoning district with a C1-3 commercial overlay (refer to **Figure A-3**). The proposed rezoning area includes all of Lots 27 and 50, and the eastern sections of Lots 8 and 38, totaling approximately 57,904 sf of lot area. The area contains light industrial/manufacturing uses, including the warehouse on the proposed development site, as well as auto repair uses, as detailed above.

R6A zoning districts allow a maximum residential FAR of 3.0, more than twice the existing R5 district's allowance of 1.25 residential FAR in the proposed rezoning area. Additionally, R6A districts permit a maximum building height of 85 feet with a Qualifying Ground Floor and mandate Quality Housing bulk regulations, in contrast to R5 districts which permit a maximum building height of 40 feet and do not require Quality Housing bulk regulations. (As discussed below, utilization of MIH would increase the permitted FAR and building heights within the proposed rezoning area.)

Figure A-3
Zoning Map



Source: New York City Department of City Planning (PLUTO 2016), DoITT

Legend

- Proposed Development Site
- Proposed R6A Rezoning Area
- Proposed C1-3 Commercial Overlay
- R5 Existing Zoning District
- Existing C1-3 Commercial Overlay
- 400-Foot Radius
- Building Footprint
- 331 Block
- 27 Lot

C1-3 districts are commercial overlays mapped within residential districts along streets that serve local retail needs. Typical retail uses include neighborhood grocery stores, restaurants and beauty parlors. In mixed buildings, commercial uses are limited to the first and second floors and must always be located below the residential use. The maximum commercial FAR is 2.0 in C1-3 overlays mapped within R6A zoning districts, and 1.0 for C1-3 overlays mapped within R5 zoning districts.

Zoning Text Amendment

The Applicant is proposing to map the proposed rezoning area as a Mandatory Inclusionary Housing (MIH) Area by creating a new map for Queens Community District 1 in Appendix F of the New York City Zoning Resolution. An MIH Area requires that either 25 percent of the developed residential floor area be affordable to households at or below 60 percent of the Area Median Income (AMI) or 30 percent at or below 80 percent of the AMI. The MIH Area sets a new maximum permitted residential FAR which supersedes the FAR permitted by the underlying zoning district. With both the designation of the proposed rezoning area as an MIH Area and its rezoning to an R6A/C1-3 zoning district, the maximum permitted FAR would be 3.6 and the maximum permitted building height would be 85 feet. Mapping of the MIH Area would facilitate development of approximately 22 affordable housing units on the proposed development site as the Applicant would provide affordable housing equivalent to 30 percent of the residential zsf developed at 80 percent of the AMI. Additionally, as detailed below, the reasonable worst-case development scenario (RWCDS) also assumes that two other sites in the proposed rezoning area (Lots 38 and 50) would likely be redeveloped with residential and retail uses under future conditions with the Proposed Actions, and would also utilize the additional FAR allowed under the MIH Program.

IV. PURPOSE AND NEED FOR THE PROPOSED ACTIONS

The proposed zoning map amendment to rezone the eastern half of Queens Block 331 from R5 to R6A/C1-3, combined with the proposed text amendment, would increase the permitted FAR in the proposed rezoning area from 1.25 to 3.6, allowing for the development of more residential and commercial space. The proposed zoning text amendment, which would designate the proposed rezoning area as an MIH Area, would require the Applicant to construct affordable DUs on the proposed development site in order to take advantage of the additional FAR provided through the MIH Program. As detailed below, the RWCDS also assumes that other sites in the proposed rezoning area would be redeveloped with residential and local retail uses under future conditions, and would also utilize the additional FAR under MIH. Therefore, the Proposed Actions would create new affordable housing in the proposed rezoning area, helping to address affordable housing goals set forth by the City in *Housing New York: A Five-Borough, Ten-Year Plan*.

The proposed rezoning would be in keeping with recent trends in the surrounding area. In 2010, all of Block 352 and the western half of Block 351 immediately south of the proposed rezoning area were rezoned from M1-1 to R5D to help facilitate new residential development ("Hour Children Rezoning"). Additionally, the trends along nearby Vernon Boulevard and the East River waterfront (i.e. Hallett's Point and Astoria Cove) have been towards rezoning manufacturing districts to mixed-use districts to facilitate residential and commercial growth. With the mapping of a C1-3 commercial overlay, the Proposed Actions would also allow the proposed rezoning area to accommodate new ground-floor commercial uses, activating the streetscapes along 35th Avenue, 12th Street, and 36th Avenue.

V. ANALYSIS FRAMEWORK

It is expected that the proposed development would be constructed over an approximately 24-month period, with completion and occupancy expected to occur by the end of December 2020. Additionally, two projected development sites have been identified in the proposed rezoning area that are likely to be developed as a result of the Proposed Actions (Lots 38 and 50 on Block 331). However, as described below, no formal redevelopment plans exist for the sites. Nonetheless, the sites meet the CEQR soft site criteria and, as such, are anticipated to be redeveloped by 2024. This Build Year reflects a reasonable estimate of the time needed for developers to demolish the existing structures on Lots 38 and 50, design the projects, obtain design approvals, and construct the projects (approximately five-to-six years). Accordingly, this environmental review will use 2024 as the Build Year for analysis of future conditions consistent with *CEQR Technical Manual* guidance.

The incremental difference between future No-Action and With-Action scenarios is the basis for the impact category analysis of this EAS. To determine the scenarios, standard methodologies have been used following *2014 CEQR Technical Manual* guidelines and employing reasonable, worst-case assumptions. These methodologies have been used to identify the amount and location of future development, as discussed below.

Future Without the Proposed Action (No-Action Condition)

In the 2024 future without the Proposed Actions (the No-Action scenario), no zoning changes are anticipated in the proposed rezoning area. As such, the eastern half of Queens Block 331 would retain its existing R5 zoning designation. The R5 zoning district permits a built residential FAR of 1.25. No commercial or industrial/manufacturing floor area is allowed in the R5 district.

Under RWCDS No-Action conditions, no changes are anticipated in the proposed rezoning area. In the future without the Proposed Actions, the area would continue to be occupied by warehouses, light industrial/manufacturing buildings, and auto body repair shops (refer to **Table A-1** above).

Though the Applicant-owned development site (Lot 27) is a site greater than 5,000 sf in size, is built to substantially less than the maximum allowed FAR under the existing R5 zoning district, and contains a nonconforming use, redevelopment of the site is unlikely since, according to New York City Department of Buildings (DOB) records, the existing structure was originally built in 1948 and has remained unchanged despite being zoned for residential uses in 1961.

Lot 38 is also anticipated to remain unchanged under the No-Action conditions for similar reasons. Though the site is built to substantially less than the maximum allowed FAR under the existing R5 zoning district and contains a nonconforming use, redevelopment of the site is unlikely since, according to DOB, the existing structure was originally built in 1951 and has remained unaltered since the 1961 zoning resolution that rezoned the site for residential uses.

Lot 50 is also not expected to be redeveloped under No-Action conditions. As the existing structure was originally built in 1941 and has remained unaltered since its original construction despite being rezoned for residential uses in 1961, it is unlikely that the site will be redeveloped.
As Lot 8 is not built to substantially less than the maximum allowable FAR under the existing R5 zoning district and contains buildings that accommodate unique services which are unlikely to move (switchgear and switchboard manufacturing and stone importing wholesalers), it is not considered a “soft-site” under CEQR criteria.

Future With the Proposed Action (With-Action Condition)

In the 2024 future with the Proposed Actions (the With-Action scenario), the proposed zoning map amendment and zoning text amendment would be implemented in the proposed rezoning area. As such, the proposed rezoning area would be remapped as an R6A zoning district with a C1-3 commercial overlay, and would be designated as an MIH Area. Under With-Action conditions, the maximum allowable FAR in the proposed rezoning area would increase to 3.6 when fully utilizing the additional FAR under the MIH Program.

Applicant-Owned Proposed Development Site

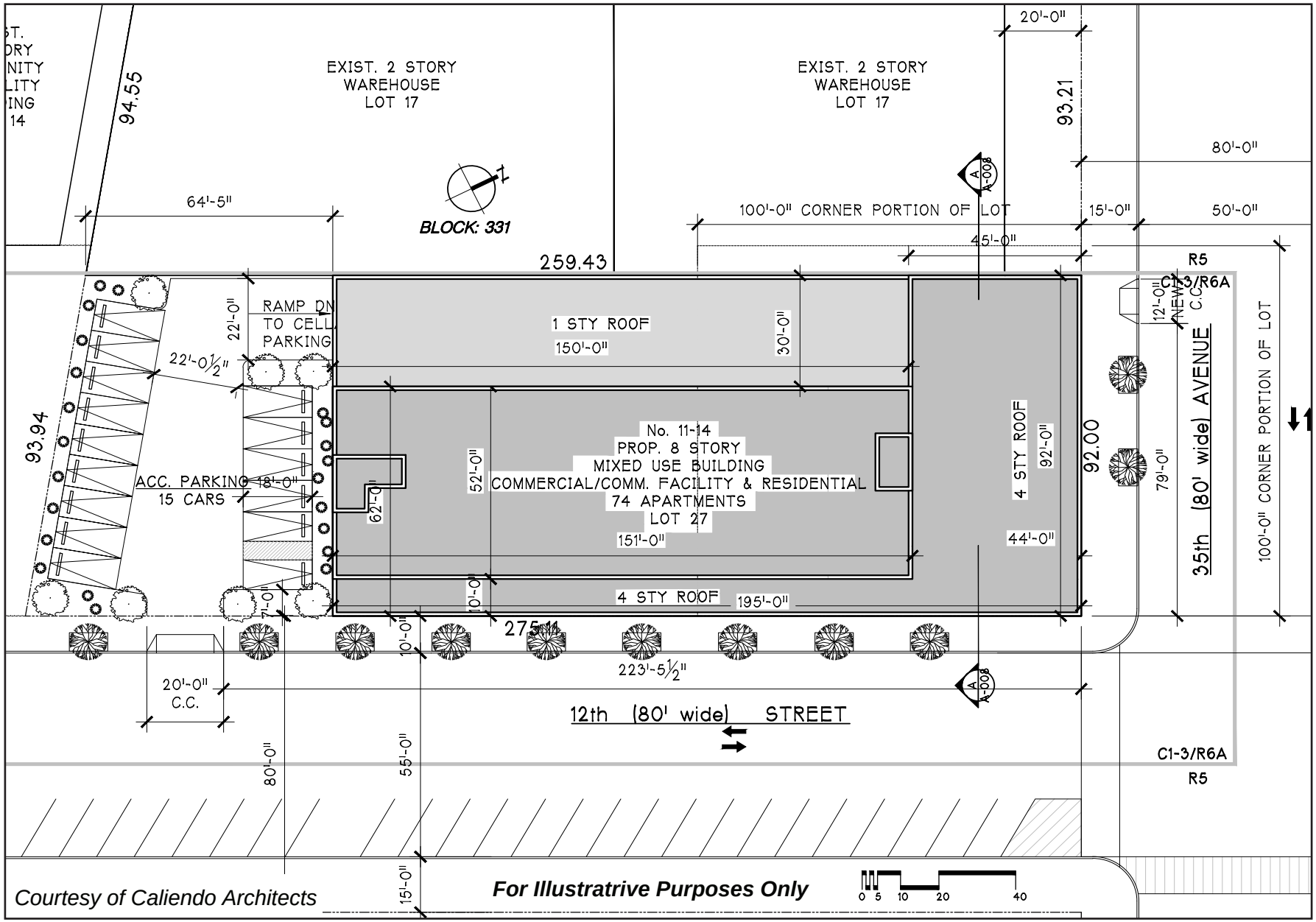
The Applicant owns the proposed development site at 11-14 35th Avenue (Queens Block 331, Lot 27). With approval of the Proposed Actions, the Applicant intends to redevelop the site. As detailed in the RWCDS Memorandum for this environmental review (refer to **Appendix 1**), in the future with the Proposed Actions, the Applicant intends to redevelop the site with a mixed-use residential and commercial building with an FAR of 3.54. As this is less than the maximum permitted FAR of 3.6 in the future with the Proposed Actions, it is not considered the RWCDS for the site. As detailed in **Tables A-2** and **A-3** below, under the With-Action RWCDS, the Applicant-owned proposed development site could be redeveloped to the maximum permitted FAR of 3.6, with an eight-story (85-foot tall), approximately 92,946 gsf (88,520 zsf) mixed-use residential and commercial building, consisting of a total of approximately 82 DUs (totaling approximately 77,196 gsf and 73,520 zsf), of which 30 percent of the residential zoning floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of qualifying ground-floor local retail space with a floor height of approximately 15 feet.[2]

As discussed above, the maximum FAR permitted under the MIH Program set forth in Section 23-154 of the Zoning Resolution requires provision of either (i) affordable housing in an amount equivalent to at least 25 percent of the residential floor area within the development, priced at or below 60 percent AMI (Option 1); or (ii) affordable housing in an amount equivalent to at least 30 percent of the residential floor area within the development, priced at or below 80 percent AMI (Option 2). As indicated above, the Applicant proposes to utilize Option 2 of the MIH Program in the proposed development on Lot 27, providing affordable housing equivalent to 30 percent of the residential floor area, at 80 percent AMI.

R6A zoning districts require parking spaces for a minimum of 50 percent of market-rate DUs. As the proposed rezoning area is located in a Designated Transit Zone, no parking spaces are required for affordable DUs. Additionally, for RWCDS conservative analysis purposes, it is conservatively assumed that the ground-floor retail spaces would require one parking space per 300 sf. Therefore, it is anticipated that the Proposed Actions would result in a total of up to 77 surface and underground accessory parking spaces (27 accessory residential spaces and up to 50 accessory commercial spaces) on Lot 27 (refer to **Table A-3** below).

As shown in **Figure A-4a**, "Site Plan," the proposed building on Lot 27 would have approximately 92 feet of frontage along 35th Avenue and approximately 196 feet of frontage along 12th Street. An accessory at-grade parking lot with 15 unenclosed parking spaces would be located at the rear of the building on 12th Street, utilizing an existing 20-foot curb cut, and would provide access to an underground parking garage in the building's cellar, which would accommodate up to 62 accessory parking spaces for the building. It is anticipated that the main residential entrance to the proposed building would be adjacent to the parking lot, with a secondary residential entrance on 35th Avenue. Retail entrances would be located on 35th Avenue

[2] The RWCDS assumes a built FAR of 3.6, resulting in numbers that are higher than shown in the Applicant's architectural drawings which assume a built FAR of 3.54.



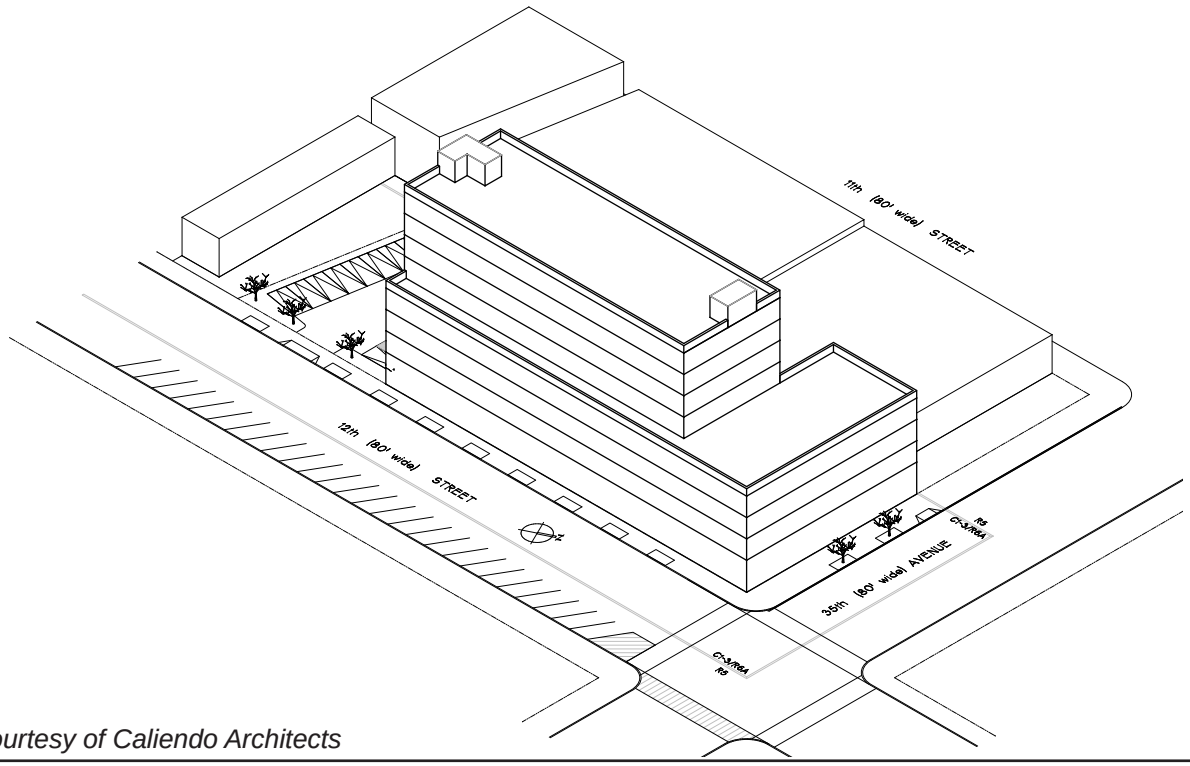
12th Street Rezoning EAS

Figure A-4a

Site Plan

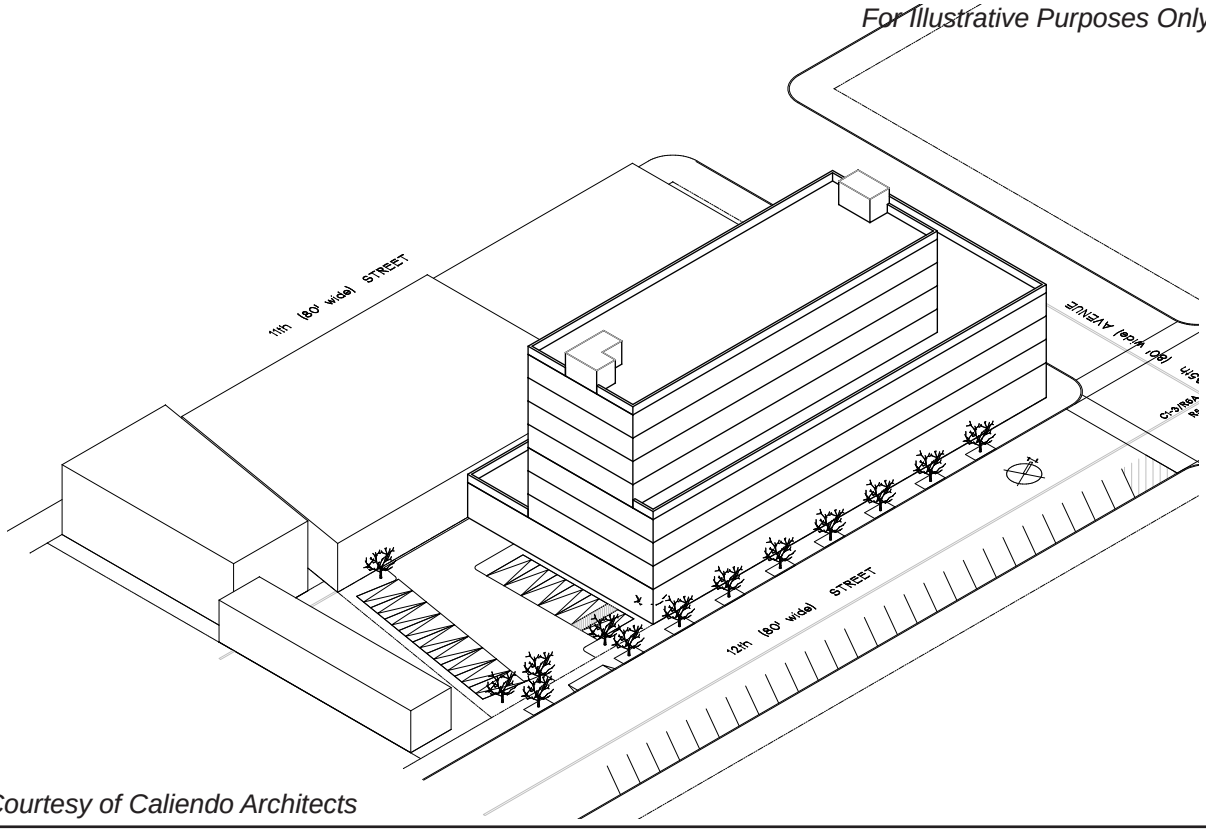
Applicant-owned Development Site (Lot 27) - Conceptual Renderings

For Illustrative Purposes Only



Courtesy of Caliendo Architects

For Illustrative Purposes Only



Courtesy of Caliendo Architects

and 12th Street. As shown in **Figure A-4b**, "Conceptual Development Massings," the base of the proposed building would rise 45 feet (four stories) before setting back 10 feet from 12th Street and 44 feet from 35th Avenue. The proposed building would reach a maximum height of 85 feet (eight stories), as permitted when utilizing the MIH Program.

Proposed Rezoning Area – Projected Development Sites

To produce a reasonable, conservative estimate of future growth, the lots in the proposed rezoning area have been divided into two categories: projected development sites and other sites. The projected development sites are considered likely to be developed within the five-year analysis period for the Proposed Actions (i.e. by 2024), while the other sites are unlikely to be developed in the future with the Proposed Actions. In addition to the Applicant-owned development site, which would be developed in the future with the Proposed Actions as detailed above, two other projected development sites have been identified in the proposed rezoning area: Lot 38 at 35-30 12th Street, and Lot 50 on the southeastern corner of Block 331 (35-58 12th Street). These properties are not owned or controlled by the Applicant.

Lot 38

As detailed in **Table A-2**, Lot 38 is a 4,500 sf lot which contains an existing, single-story auto repair building with an FAR of 0.49, well below 50 percent of the maximum allowable 3.4 FAR in the future with the Proposed Actions (see Note 3 in **Table A-2** regarding the lot's split zoning). As such, it is expected that Lot 38 would be redeveloped to the maximum permitted FAR of 3.4 and, in the R6A portion of the site, a building height of 85 feet. Under this scenario, Lot 38 would be redeveloped with an approximately 16,065 gsf (15,300 zsf) mixed-use residential and commercial building, consisting of approximately 14 DUs, of which five would be affordable units, and approximately 2,591 gsf (2,468 zsf) of ground-floor retail space. Additionally, the RWCDS With-Action development on Lot 38 would require up to 13 accessory parking spaces (five accessory residential spaces and up to eight accessory commercial spaces), which are expected to be waived pursuant to ZR Section 25-261: Waiver of Requirements for Small Number of Spaces for Development or Enlargement (up to five spaces in R6A districts) and ZR Section 36-232: Waiver of Requirements for Spaces Below Minimum Number in Districts with Very Low Parking Requirements (such as C1-3 overlays) (refer to **Table A-3**).

Table A-2: Proposed Rezoning Area Development Sites

Block	Lot	Lot Area SF	Existing Land Use	Existing Max. FAR	Built FAR	Proposed Max. FAR	Anticipated Development Site?
331	8	41,600 [1]	Industrial/Manufacturing (nonconforming)	1.25	0.96	1.25 / 3.6 (2.56) [1]	No
	27	24,589	Warehouse (nonconforming)	1.25	0.42	3.6	Proposed
	38	4,500 [2]	Auto Repair (nonconforming)	1.25	0.49	1.25 / 3.6 (3.4) [3]	Projected
	50	6,035	Auto Repair (nonconforming)	1.25	0.42	3.6	Projected

Notes: The Applicant-owned proposed development site is highlighted.

[1] Approximately 23,166 sf of Lot 8 (approximately 56 percent of the lot) would be included in the proposed rezoning area (refer to **Figure A-2**).

[2] Approximately 4,113 sf of Lot 38 (approximately 91 percent of the lot) would be included in the proposed rezoning area. Therefore, it is expected that any future development would conform to the split zoning on the site.

Lot 50

As shown in **Figure A-1**, Lot 50 is a standard, rectangular-shaped lot with more than 5,000 sf of lot area, conditions expected to result in as-of-right development. Lot 50 currently contains two auto repair buildings with an existing built FAR of 0.42, well below 50 percent of the maximum allowable 3.6 FAR in the future with the Proposed Actions. As such, it is expected that this site would be redeveloped in the future with the Proposed Actions, in accordance with the proposed R6A zoning district, C1-3 commercial overlay, and MIH Area. As shown in **Table A-3**, under RWCDS With-Action conditions, Lot 50 would be redeveloped to the maximum permitted FAR of 3.6 and building height of 85 feet. Under this scenario, Lot 50 would be redeveloped with an approximately 22,812 gsf (21,726 zsf) mixed-use residential and commercial building, consisting of approximately 20 DUs, of which seven would be affordable units, and approximately 3,802 gsf (3,621 zsf) of ground-floor retail space. Additionally, the RWCDS With-Action development on Lot 50 would require up to 19 accessory parking spaces (seven accessory residential spaces and up to 12 accessory commercial spaces), which are expected to be waived pursuant to ZR Sections 25-261 and 36-232.

Total RWCDS Increment

As shown in **Table A-3**, the With-Action RWCDS development would result in a net increment of approximately 109,680 gsf (104,457 zsf) of residential space and approximately 22,143 gsf (21,089 zsf) of commercial space on Block 331. The Proposed Actions would result in a net increment of 116 DUs on the projected development sites, of which 39 would be affordable units pursuant to the MIH Program.

Table A-3: With-Action Scenario – Projected Development Sites on Block 331

Lot	Lot Area (sf)	FAR [1]	Residential		Commercial SF [2]	Total Mixed-Use Building SF	Parking Spaces [4]	Max. Building Height [6]
			SF [2]	DUs [3]				
27	24,589	3.6	73,520 zsf (77,196 gsf)	82 (27 affordable)	15,000 zsf (15,750 gsf)	88,520 zsf (92,946 gsf)	77	85
38	4,500	3.4 [5]	12,832 zsf (13,473 gsf)	14 (5 affordable)	2,468 zsf (2,591 gsf)	15,300 zsf (16,065 gsf)	0	85 (in R6A)
50	6,035	3.6	18,105 zsf (19,010 gsf)	20 (7 affordable)	3,621 zsf (3,802 gsf)	21,726 zsf (22,812 gsf)	0	85
Total RWCDS With-Action Increment on Block 331:			**104,457 zsf (109,680 gsf)**	**116 (39 affordable)**	**21,089 zsf (22,143 gsf)**	**125,546 zsf (131,823 gsf)**	**77**	**-**

Notes: The Applicant-owned proposed development site is highlighted.
[1] The proposed maximum allowable FAR in the proposed rezoning area increases from 3.0 to 3.6 FAR when utilizing the MIH Program.
[2] The estimate of maximum residential and commercial GSF is based on a standard rate of residential and commercial ZSF plus five percent. Total GSF does not include below-grade parking.
[3] Thirty percent of the residential floor area would be affordable units pursuant to the MIH Program. The estimates of RWCDS DUs are based on standard average unit sizes of approximately 1,000 gsf per market-rate unit and 850 gsf per affordable unit.
[4] As the proposed rezoning area is located within a Designated Transit Zone, parking would be provided for 50 percent of the market-rate units, in addition to up to 50 parking spaces for ground-floor retail space (conservatively assuming one space per 300 sf).
[5] Approximately 4,113 sf of Lot 38 (approximately 91 percent of the lot) would be included in the proposed rezoning area. Therefore, it is expected that any future development would conform to the split zoning on the site.
[6] A maximum building height of 85 feet is permitted with a qualifying ground-floor.

Other Sites in the Proposed Rezoning Area

Lot 8 currently contains two active, nonconforming industrial/manufacturing buildings with an existing FAR of 0.96. These buildings accommodate unique services which are unlikely to move (switchgear and switchboard manufacturing and stone importing wholesalers). Additionally, Lot 8 is encumbered by a New

York City Industrial Development Agency (IDA) lease, signed December 2001, which runs through July 1, 2026. The IDA program provides companies with access to triple tax-exempt bond financing and/or tax benefits to acquire or create capital assets in order to encourage economic development, assist in the retention of existing jobs, and create and attract new jobs. After the first 10 years of the IDA lease on Lot 8 (after 2011), there is no penalty for terminating operations or selling the site. However, as the property has a significant Payment in Lieu of Taxes (PILOT) with a full benefit amount that runs through June 2022 and a phased-out benefit running through 2026, it is unlikely that the site would be redeveloped by the 2024 Build Year, and as such, is not considered a RWCDS development site.

Lots 8 on Queens Block 331 is therefore expected to remain unchanged in the future with the Proposed Actions.

VI. REQUIRED APPROVALS AND REVIEW PROCEDURES

The proposed zoning map and text amendments are discretionary approvals subject to the Uniform Land Use Review Procedure (ULURP) and environmental review under City Environmental Quality Review (CEQR). CEQR is a process by which agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment. The CEQR process requires City agencies to assess, disclose, and mitigate to the greatest extent practicable the significant environmental consequences of their decisions to fund, directly undertake, or approve a project using screening thresholds and technical guidance provided in the *2014 CEQR Technical Manual*.

Attachment B

Supplemental Screening

I. INTRODUCTION

This EAS has been prepared in accordance with the guidelines and methodologies presented in the *2014 CEQR Technical Manual*. For each technical area, thresholds are defined, which if met or exceeded, require that a detailed technical analysis be undertaken. Using these guidelines, preliminary screening assessments were conducted for the Proposed Actions to determine whether detailed analysis of any technical area may be appropriate. Part II of the EAS Form identifies those technical areas that warrant additional assessment. For those technical areas that warranted a "Yes" in Part II of the EAS Form, supplemental screening assessments are provided in this attachment. Detailed analyses, as required, are provided in the subsequent attachments. The remaining technical areas detailed in the *CEQR Technical Manual* were not deemed to require supplemental screening because they do not trigger initial CEQR thresholds and/or are unlikely to result in significant adverse impacts. The areas screened out from any further assessment include: Socioeconomic Conditions; Community Facilities & Services; Natural Resources; Water & Sewer Infrastructure; Solid Waste & Sanitation Services; Energy; and Greenhouse Gas Emissions. **Table B-1** presents a summary of analysis screening information for the Proposed Actions.

Table B-1: Summary of CEQR Technical Area Screening

CEQR TECHNICAL AREA	SCREENED OUT PER EAS FORM	SCREENED OUT PER ATTACHMENT B: SUPPLEMENTAL SCREENING	DETAILED ANALYSIS REQUIRED
Land Use, Zoning, & Public Policy			X
Socioeconomic Conditions	X		
Community Facilities & Services	X		
Open Space			X
Shadows		X	
Historic & Cultural Resources		X	
Urban Design & Visual Resources			X
Natural Resources	X		
Hazardous Materials		X	
Water & Sewer Infrastructure	X		
Solid Waste & Sanitation Services	X		
Energy	X		
Transportation			X
Air Quality			X
Greenhouse Gas Emissions	X		
Noise			X
Public Health		X	
Neighborhood Character		X	
Construction		X	

As described in Attachment A, "Project Description," the Applicant is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1 (refer to **Figure A-1**). The discretionary actions include: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the area a

Mandatory Inclusionary Housing (MIH) Area. As shown in **Figure A-1**, the proposed rezoning area consists of the eastern half of Queens Block 331, including Lot 27 (the Applicant-owned proposed development site), Lot 50, and the eastern portions of Lots 8 and 38.

The 24,589 sf Applicant-owned proposed development site on Lot 27 currently contains a single-story, approximately 10,320 sf warehouse. In the RWCDS future with the Proposed Actions, the Applicant would demolish the existing warehouse and construct a new eight-story, 85-foot tall, approximately 92,946 gross square foot (gsf) (approximately 88,520 zoning square foot [zsf]) mixed-use residential and commercial building on the site, with a floor area ratio (FAR) of 3.6. The proposed building would contain 74 dwelling units (DUs), and 30 percent of residential floor area (22 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of ground-floor retail space and up to 71 surface and underground accessory parking spaces.[1]

Two other sites (Projected Development Sites) in the proposed rezoning area are also expected to be redeveloped with mixed-use residential and commercial buildings in the 2024 future with the Proposed Actions: Lots 38 (approximately 13,473 gsf) and 50 (approximately 19,010 gsf). It is therefore anticipated that overall, the Proposed Actions would result in a net increase of approximately 109,680 gsf (104,457 zsf) of residential space with 108 DUs (34 affordable) and approximately 22,143 gsf (21,089 zsf) of commercial space in the proposed rezoning area by 2024. Absent the Proposed Actions, no new development is expected to occur in the proposed rezoning area.

II. SUPPLEMENTAL SCREENING AND SUMMARY OF DETAILED ANALYSES

Land Use, Zoning, & Public Policy

A detailed assessment of land use and zoning is appropriate if an action would result in a significant change in land use or would substantially affect regulations or policies governing land use. An assessment of zoning is typically performed in conjunction with a land use analysis when the action would change the zoning on the site or result in the loss of a particular use. As the Proposed Actions include zoning map and text amendments, a detailed assessment of land use, zoning, and public policy is warranted and is provided in Attachment C, "Land Use, Zoning, & Public Policy."

The proposed rezoning area comprises of approximately 57,904 sf on the eastern half of Queens Block 331 fronting 12th Street between 35th and 36th Avenues. Of the five lots (Lots 8 27, 38, and 50) that either lie entirely or partially in the proposed rezoning area, none have existing uses that are permitted in the underlying R5 zoning district. The Proposed Actions would not introduce land uses that would be incompatible with existing or future land uses, zoning, or public policies within the study area. The development of three new mixed-use residential and commercial buildings on underutilized sites, which would occur as a result of the Proposed Actions in the 2024 RWCDS, would be consistent with existing conditions and trends in the study area as a whole, in terms of use and scale.

It is anticipated the Proposed Actions would have a positive effect on the surrounding area by activating the streetscape with ground-floor retail and introducing new affordable housing units in a neighborhood well-suited for such uses. The anticipated mixed-use buildings facilitated by the Proposed Actions would complement the established character of the surrounding area, and the proposed zoning map and text changes would result in densities and building bulks that would be within the range of what is currently

[1] The RWCDS assumes the proposed development site would be built out to the maximum With-Action permitted FAR of 3.6. For conservative analysis purposes, this assumption is higher than shown in the Applicant's architectural drawings in the Land Use Application, which assume a built FAR of 3.54.

permitted in the secondary study area. Additionally, the Proposed Actions would not conflict with any public policies applicable to the proposed rezoning area and secondary study area. Therefore, no significant adverse impacts on land use, zoning, or public policy, as defined by the guidelines for determining impact significance set forth in the *CEQR Technical Manual*, are anticipated in the 2024 future with the Proposed Actions in the proposed rezoning area or secondary study area.

Open Space

Open space is defined as publicly or privately owned land that is publicly accessible and has been designated for leisure, play or sport, or conservation land set aside for protection and/or enhancement of the natural environment. An open space assessment may be necessary if an action could potentially have a direct or indirect effect on open space resources in the surrounding area. A direct effect would "physically change, diminish, or eliminate an open space or reduce its utilization or aesthetic value." An indirect effect may occur when the population generated by an action would be sufficient to noticeably diminish the ability of an area's open space to serve the existing or future population. According to the guidelines established in the *CEQR Technical Manual*, an action that would add fewer than 200 residents or 500 employees, or a similar number of other users to an area, is typically not considered to have indirect effects on open space.

Pursuant to *CEQR* guidelines, a significant adverse open space impact may occur if a proposed project would reduce the open space ratio by more than five percent in areas that are currently below the City's median community district open space ratio of 1.5 acres per 1,000 residents. In areas that are extremely lacking in open space, a reduction as little as one percent may be considered significant, depending on the area of the City. These reductions may result in overburdening existing facilities or further exacerbating a deficiency in open space.

As detailed in Attachment D, "Open Space," the Proposed Actions would not result in the direct displacement or alteration of existing public open space resources in the study area. With respect to the reduction in open space in the study area, the residential total open space ratio would decrease by 1.29 percent from the No-Action condition. In addition, the active open space ratio would decrease from 1.32 to 1.30 and the passive open space ratio would decrease from 0.62 to 0.62. As the passive open space ratio for the residential study area would remain above the City's guideline ratio of 0.5 acres of passive open space per 1,000 residents, residents in the half-mile study area would continue to be well-served by passive open space resources. While the total and active open space ratios would remain less than the City's guideline ratios of 2.5 acres of open space, including 2.0 acres of active open space, per 1,000 residents, these guideline ratios are not considered *CEQR* impact thresholds on their own.

It should be noted that the reduction in the total open space ratio in the residential study area is further ameliorated by several factors, including the proposed rezoning area's proximity to additional large open space resources not included in the quantitative open space analysis and the current quality condition, variety, and relatively low utilization of these existing open space resources, as discussed in Attachment D.

Shadows

As stated in the *CEQR Technical Manual*, a shadow assessment considers projects that result in new shadows long enough to reach a sunlight-sensitive resource. Therefore, a shadow assessment is generally required only if the project would either (a) result in new structures (or additions to existing structures, including the addition of rooftop mechanical equipment) of 50 feet or more; or (b) be located adjacent to, or across the street from, a sunlight-sensitive resource.

As discussed in Attachment A, "Project Description," under the RWCDS for the Proposed Actions, three projected development sites would be developed with buildings that have a maximum height of 85 feet

(pursuant to the proposed R6A zoning with utilizing the MIH Program), approximately 45 feet taller than the maximum building heights permitted in the existing R5 district. However, as no new development is anticipated in the proposed rezoning area under RWCDS No-Action conditions, the new buildings on the three projected development sites would result in a net increase of over 50 feet under RWCDS With-Action conditions. Therefore, a preliminary shadows analysis was conducted for the Proposed Actions and is provided below. As shown in **Figure B-1**, the proposed rezoning area is not located adjacent to, or across the street from, any sunlight-sensitive resources.

Tier 1 Screening Assessment

According to the *CEQR Technical Manual*, the longest shadow that a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. The maximum shadow radius for the projected development sites within the proposed rezoning area (365.5 feet) was determined using the maximum height of approximately 85 feet in the RWCDS With-Action condition (Tier 1 Assessment). As shown in **Figure B-1**, within this longest shadow study area, there are no potentially sunlight-sensitive open space resources and no designated historic or scenic landmarks.

Tier 2 Screening Assessment

Due to the path of the sun across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, this area lies between -108 and +108 degrees from true north. The purpose of the Tier 2 screening is to determine whether the sunlight-sensitive resources identified in the Tier 1 screening are located within portions of the longest shadow study area that can receive shade from the proposed CSS.

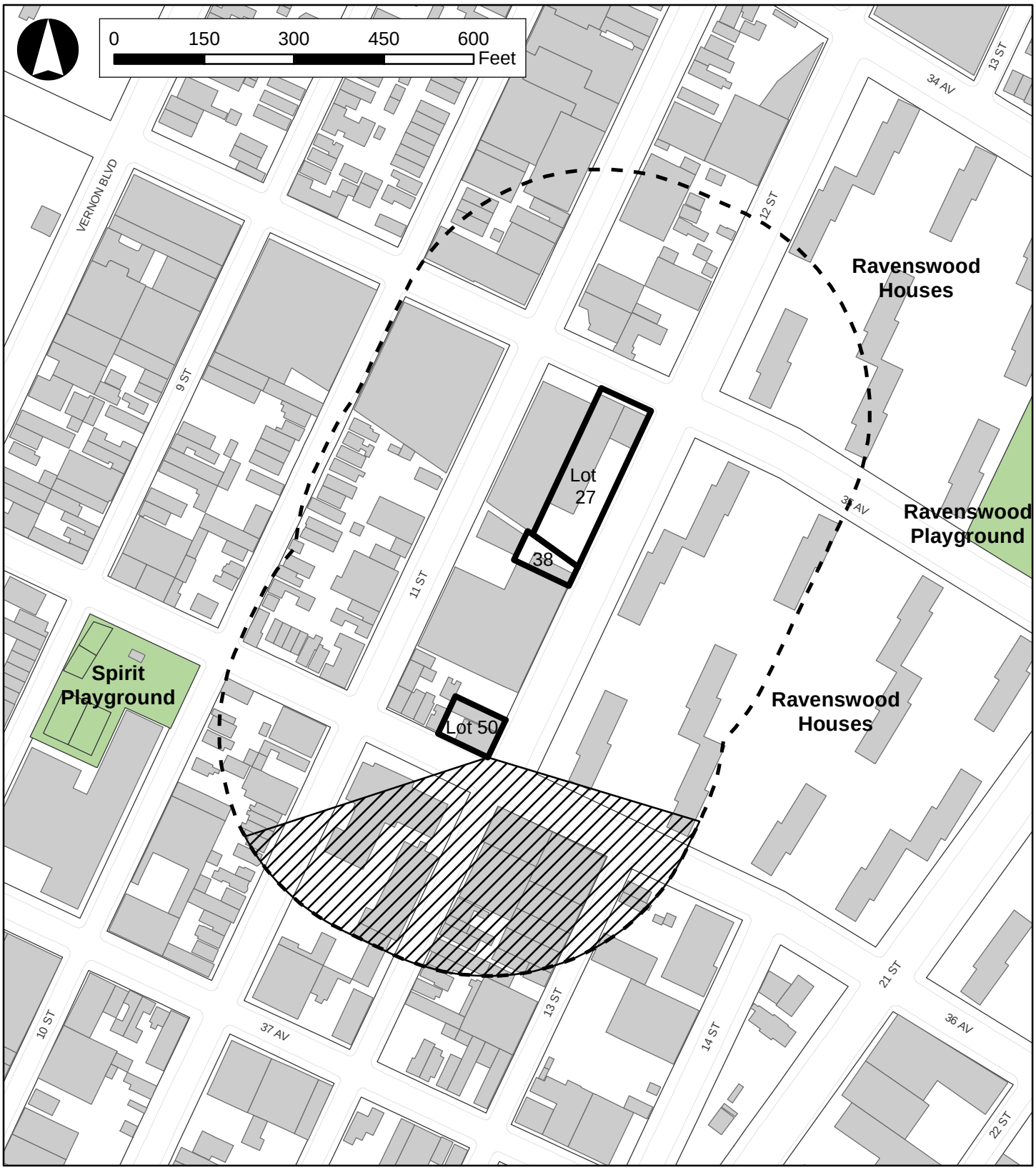
Figure B-1 provides a base map illustrating the results of the Tier 1 and Tier 2 screening assessments (i.e., the portion of the longest shadow study area lying within -108 degrees from the true north and +108 degrees from true north as measured from southernmost portions of the development sites). The Tier 1 and Tier 2 screening assessments show that no sunlight-sensitive open space resources are located within the longest shadow study area that could potentially be affected by project-generated shadows, and as such, the Proposed Actions do not warrant a detailed shadows assessment.

Historic & Cultural Resources

Historic and cultural resources are defined as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes properties that have been designated or are under consideration for designation as New York City Landmarks (NYCL) or Scenic Landmarks, or are eligible for such designation; properties within New York City Historic Districts; properties listed on or eligible for listing on the State and/or National Register of Historic Places (S/NR); and National Historic Landmarks. An assessment of architectural and/or archaeological resources is usually needed for projects that are located adjacent to historic or landmark structures or projects that require in-ground disturbance, unless such disturbance occurs in an area that has already been excavated.

According to *CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by a proposed action and in the area surrounding the identified development site. The historic resources study area is therefore defined as the project site as well as an approximately 400-foot radius around the project site. Archaeological resources are considered only in those areas where new excavation or ground disturbance is likely and would result in new in-ground disturbance, as compared to No-Action conditions (i.e., the projected development sites).

Longest Shadow Study Area: Tier 1 and Tier 2 Screening



There are no designated or eligible NYCLs or properties listed or eligible for listing on the S/NR in the proposed rezoning area or within a 400-foot radius of the area. Additionally, the New York City Landmarks Preservation Commission (LPC) determined that the proposed rezoning area does not contain any archaeological resources of concern (refer to **Appendix 2**). As such, the Proposed Actions would not result in significant adverse impacts to historic and cultural resources, and further analysis is not warranted.

Urban Design & Visual Resources

An area's urban design components and visual resources together define the look and character of the neighborhood. The urban design characteristics of the neighborhood encompass the various components of buildings and streets in the area, including building bulk, use, and type; building arrangement; block form and street pattern; streetscape elements; street hierarchy; and natural features. An area's visual resources are its unique or important public view corridors, vistas, or natural or built features. For CEQR analysis purposes, this includes only views from public and publicly accessible locations and does not include private residences or places of business.

An analysis of urban design and visual resources is appropriate if an action would (a) result in buildings that have substantially different height, bulk, form, setbacks, size, scale, use, or arrangement than exists in the area; (b) change block form, demap an active street or map a new street, or affect the street hierarch, streetwall, curb cuts, pedestrian activity, or streetscape elements; or (c) would result in above-ground development in an area that includes significant visual resources.

The Proposed Actions would result in physical alterations in the proposed rezoning area not permitted by existing zoning, which would be observable by pedestrians. Therefore, a detailed urban design analysis is appropriate and is provided in Attachment E, "Urban Design & Visual Resources." As discussed therein, the Proposed Actions would not result in significant adverse impacts to urban design or visual resources in the proposed rezoning area or within the secondary study area. The Proposed Actions would not alter the arrangement, appearance, or functionality of the proposed rezoning area such that the alteration would negatively affect a pedestrian's experience of the area. Rather, development anticipated in the With-Action condition would improve the pedestrian experience in the vicinity of the proposed rezoning area by replacing currently nonconforming industrial uses with mixed use residential/commercial buildings creating a more active and pedestrian friendly streetscape.

The anticipated With-Action streetwalls in the proposed rezoning area are generally consistent with existing development and the surrounding context, and would contribute to an enhanced pedestrian environment that would include improved sidewalk conditions and street tree plantings. The scale of RWCDS With-Action development would be appropriate for the scale of the streets adjacent to the proposed rezoning area and secondary study area. Furthermore, the proposed and projected developments would be consistent with existing taller buildings in the surrounding area in terms of height and bulk. In addition, the RWCDS With-Action developments would not obstruct or modify existing views of nearby visual resources.

Hazardous Materials

As detailed in the *CEQR Technical Manual*, the goal of a hazardous materials assessment is to determine whether an action 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. A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls, and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic). According to the *CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when: (a) hazardous materials exist on

a site and (b) an action would increase pathways to their exposure; or (c) an action would introduce new activities or processes using hazardous materials.

As detailed in Attachment F, "Hazardous Materials," the Proposed Actions will require (E)-designations for all three RWCDS projected development sites (Block 331, Lots 27, 38, and 50). With the requirements of the (E)-designation on the projected development sites, there would be no impact from the potential presence of contaminated materials. The implementation of the preventative and remedial measures outlined in the (E)-designations would reduce or avoid the potential of significant adverse hazardous materials impacts from potential construction in the proposed rezoning area resulting from the Proposed Actions. Following such construction, there would be no potential for significant adverse hazardous materials impacts.

Transportation

The objective of a transportation analysis is to determine whether an action may have a potential significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, bicyclists, and vehicles), on- and off-street parking, or goods movement.

The *CEQR Technical Manual* identifies minimum development densities that have the potential to result in significant adverse impacts to traffic conditions and therefore require a detailed traffic analysis. As shown in Table 16-1 of the *CEQR Technical Manual*, projects with single or multiple land uses which may result in fewer than 50 peak hour vehicle trips are generally unlikely to cause significant adverse impacts. For projects in Zone 4 (which includes all areas located within one-mile of subway stations, such as the proposed rezoning area), the development thresholds requiring trip generation analyses to determine the volume of vehicular trips during peak hours are 200 DUs, 75,000 gsf of office space, 10,000 gsf of retail or restaurant space, 15,000 gsf of community facility space, and 60 off-street parking spaces. As the Proposed Actions would result in a net increment of 22,143 sf of commercial space and 71 off-street parking spaces in the proposed rezoning area, an assessment of the Proposed Action's effect on the City's transportation system is required and is provided in Attachment G, "Transportation." Per *CEQR* guidelines, a screening assessment was completed to determine if the Proposed Actions warranted detailed analyses of traffic, parking, transit, or pedestrians. The screening assessment consisted of a Level 1 Project Trip Generation and a Level 2 Project-Generated Trip Assignment, presented in Attachment G.

As detailed in Attachment G, the Proposed Actions do not warrant detailed analyses of traffic, parking, or transit. No intersections in the vicinity of the proposed rezoning area would exceed the incremental 50-vehicle CEQR threshold for a detailed traffic analysis. Additionally, the anticipated development facilitated by the Proposed Actions would provide sufficient parking capacity to accommodate demand on-site in addition to adequate existing off-site public parking capacity. It is also not anticipated that any subway or bus lines in the vicinity of the proposed rezoning area would experience an increase of more than 200 peak hour rail or 50 peak hour bus transit riders, the CEQR thresholds for a detailed transit analysis. As such, no significant adverse impacts to traffic, parking, or transit would be expected in the future with the Proposed Actions.

According to the 2014 *CEQR Technical Manual* criteria, projected pedestrian volume increases of less than 200 pedestrians per hour at any pedestrian element would not typically be considered a significant impact, as the level of increase would not generally be noticeable and therefore would not require further analysis. The Proposed Actions would exceed this threshold during the weekday midday, weekday PM, and Saturday midday peak hours at two corners (12th Street/35th Avenue and 12th Street/36th Avenue) and one sidewalk (the west side of 12th Street between 35th and 36th Avenues) adjacent to the proposed rezoning area. Therefore, detailed pedestrian analyses were conducted for these three pedestrian elements and are provided

in Attachment G. As detailed therein, all pedestrian elements would operate at level of service (LOS) C or better during these three peak hours in the With-Action condition, and as such, no significant adverse pedestrian impacts would occur in the future with the Proposed Actions.

Air Quality

Mobile Sources

Localized increases in pollutant levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of an action. According to the screening threshold criteria outlined in Section 210 of Chapter 17 of the *CEQR Technical Manual*, detailed analysis is required for this area of the City if 170 or more auto-trips are generated in any given peak period at nearby intersections in the study area as a result of the Proposed Actions. The Proposed Actions would not exceed the CEQR threshold of 170 peak hour auto trips at nearby intersections in the study area, nor would it exceed the particulate matter emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, a quantified assessment of emissions from project-generated traffic is not warranted and no significant mobile source air quality impacts are expected as a result of the Proposed Actions.

Stationary Sources

Actions can result in stationary source air quality impacts when they (1) create new stationary sources of pollutants such as emission stacks from industrial plants, hospitals, or other large institutional uses, or building's boiler stack(s) used for heating/hot water, ventilation, or air conditioning systems (HVAC) that can affect surrounding uses; (2) introduce new sensitive receptors near existing (or planned future) emissions stacks that may adversely affect the new use; or (3) introduce potentially significant odors.

As detailed in Attachment H, "Air Quality," no significant air quality impacts would occur as a result of the Proposed Actions. No building-on-building impacts from HVAC emissions of the proposed or projected development sites would occur in the future with the Proposed Actions. No (E)-designations for the type of fuel use in HVAC systems or for stack locations are required for the proposed/projected development sites. Additionally, the air toxics concluded that existing permitted industrial sources currently operating within 400 feet of the proposed rezoning area do not exceed the applicable CEQR significant impact criteria or the Clean Air Act's National Ambient Air Quality Standards (NAAQS). Therefore, emissions released from nearby industrial sources would not result in significant adverse air toxics impacts in the proposed rezoning area.

Noise

The purpose of a noise analysis is to determine both a proposed project's potential effects on sensitive noise receptors and the effects of ambient noise levels on new sensitive uses introduced by the proposed project. The principal types of noise sources affecting the New York City environment are mobile sources (primarily motor vehicles), stationary sources (typically machinery or mechanical equipment associated with manufacturing operations or building HVAC systems) and construction noise (e.g. trucks, bulldozers, power tools, etc.).

As detailed in the detailed assessment provided in Attachment I, "Noise," noise from the increased traffic volumes generated by the Proposed Actions would not cause significant adverse noise impacts as the relative increases in noise levels would fall below the applicable *2014 CEQR Technical Manual* significant adverse impact threshold (3.0 dBA).

Based on the calculated With-Action L_{10} noise levels, the following composite window/wall attenuations were determined for future residential/community facility uses as well as commercial uses within the rezoning area:

- A minimum of 28 dBA composite window/wall attenuation is required for residential/community facility uses on the southern and eastern frontages of projected development site 2 (Lot 50). The required composite window/wall attenuation for commercial uses would be 5 dBA less.

- No special attenuation measures beyond standard construction practices would be required for residential/community facility uses and commercial uses on any other frontage within the proposed rezoning area.

The composite window/wall noise attenuations described above would be required through the assignment of an (E)-designation for noise to projected development site 2 (Block 331, Lot 50) in conjunction with the Proposed Actions. With implementation of the attenuation levels outlined above and described in **Table I-6** of Attachment I, the Proposed Actions and subsequent RWCDS projected developments would provide sufficient attenuation to achieve the *CEQR Technical Manual* interior noise level guidelines. Therefore, the Proposed Actions would not result in any significant adverse impacts related to noise attenuation.

Public Health

Public health involves the activities that society undertakes to create and maintain conditions in which people can be healthy. Many public health concerns are closely related to air quality, water quality, hazardous materials, and noise.

According to the guidelines of the *2014 CEQR Technical Manual*, a public health assessment may be warranted if a project results in (a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; (b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect groundwater to be used as a source of drinking water; (c) solid waste management practices that could attract vermin and result in an increase in pest populations; (d) potential significant adverse impacts to sensitive receptors from noise and odors; (e) vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts; (f) exceedances of accepted federal, state, or local standards; or (g) other actions that might not exceed the preceding thresholds but might, nonetheless, result in significant health concerns.

As detailed in the analyses provided in this EAS, the Proposed Actions would not result in significant adverse impacts in the areas of air quality, water quality, hazardous materials, or noise. Therefore, the Proposed Actions do not have the potential to result in significant adverse public health impacts, and further assessment is not warranted.

Neighborhood Character

As the EAS provides assessments of land use, zoning, and public policy (Attachment C), open space (Attachment D), urban design and visual resources (Attachment E), and noise (Attachment F), a preliminary screening analysis is necessary to determine if a detailed neighborhood character analysis is warranted.

Neighborhood character is an amalgam of various elements that give neighborhoods their distinct "personality." According to the *CEQR Technical Manual*, a preliminary assessment may be appropriate if a project has the potential to result in any significant adverse impacts on any of the following technical

areas: land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; or noise. Per the analyses provided in this EAS, although the proposed project required supplemental screening or assessment of some of these technical areas, there would be no action-generated significant adverse impacts.

The *CEQR Technical Manual* also states that for projects not resulting in significant adverse impacts to any technical areas related to neighborhood character, additional analyses may be required to determine if the Proposed Actions would result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. However, the *CEQR Technical Manual* indicates that neighborhood character impacts are rare and it would be unusual that, in the absence of a significant adverse impact in any of the relevant technical areas, a combination of moderate effects in the neighborhood would result in any significant adverse impact to neighborhood character.

As the Proposed Actions would not be considered to have any significant effects on any of the technical areas relating to neighborhood character, a neighborhood character assessment can be screened out, and no significant adverse neighborhood character impacts would occur. Therefore, no additional analysis is warranted for neighborhood character.

Construction

Although temporary, construction impacts can include noticeable and disruptive effects from a project that is associated with construction or could induce construction. Determination of the significance of construction impacts and need for mitigation is generally based on the duration and magnitude of the impacts. Based on *CEQR Technical Manual* guidelines, when the duration of construction is expected to be short-term (less than two years), any impacts resulting from construction generally do not require detailed assessment. Construction impacts are usually important when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, and air quality conditions.

According to the *CEQR Technical Manual*, construction duration is broken into short-term (less than two years) and long-term (two or more years). Where the duration of construction is expected to be short-term, any resulting impacts generally do not require detailed assessment. For conservative analysis purposes, it is estimated that the RWCDS Applicant-owned development site (Lot 27) could take up to 24 months to complete, while the projected development sites (Lots 38, 50) could each take up to 18 months to complete, with potential overlaps of construction period timing. As such, a preliminary assessment of potential construction impacts is warranted for the Proposed Actions.

Governmental Coordination and Oversight

The governmental oversight of construction in New York City is extensive and involves a number of city, state, and federal agencies. **Table B-2** shows the main agencies involved in construction oversight and each agency's areas of responsibility. The primary responsibilities lie with New York City agencies. The New York City Department of Buildings (DOB) has the primary responsibility for ensuring that construction meets the requirements of the Building Code, and that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both construction workers and the public. The areas of responsibility include the installation and operation of construction equipment, such as cranes and lifts, sidewalk sheds, safety netting, and scaffolding. The Mayor's Office of Environmental Remediation (OER) enforces the Noise Code, approves remedial action plans (RAPs) and Construction Health and Safety Plans (CHASPs), and regulates water disposal into the sewer system. The New York City Fire Department (FDNY) has primary oversight for compliance with the Fire Code and for the installation of tanks containing flammable materials. The New York City Department of Transportation

(DOT) reviews and approves any traffic land and sidewalk closures. The Landmarks Preservation Commission (LPC) approves studies and testing to prevent loss of archaeological materials and to prevent damage to fragile historic structures.

Table B-2: Construction Oversight in New York City

Agency	Area(s) of Responsibility
New York City	
Department of Buildings (DOB)	Primary oversight for the Building Code and site safety, noise*
Mayor's Office of Environmental Remediation (OER)	Noise*, hazardous materials, dewatering, air quality, dust mitigation
Fire Department (FDNY)	Compliance with the Fire Code, tank operation
Department of Transportation (DOT)	Traffic lane and sidewalk closures
Landmarks Preservation Commission (LPC)	Archaeological and historic architectural protection
New York State	
Department of Labor (DOL)	Asbestos workers
Department of Environmental Conservation (DEC)	Dewatering, hazardous materials, tanks, Stormwater Pollution Prevention Plan, Industrial State Pollution Discharge Elimination System (SPDES), if any discharge into the Hudson River
New York City Transit Authority (NYCT)	Bus stop relocation; any subsurface construction within 200 feet of a subway
United States	
Environmental Protection Agency (EPA)	Air emissions, noise, hazardous materials, toxic substances
Occupational Safety and Health Administration (OSHA)	Worker safety

***** The Noise Code is typically enforced by OER, except for Special Mixed-Use Districts, where it is enforced by DOB.

The New York State Department of Environmental Conservation (DEC) regulates discharge of water into rivers and streams, disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. The New York State Department of Labor (DOL) licenses asbestos workers. New York City Transit (NYCT) is in charge of bus stop relocations and any subsurface construction within 200 feet of a subway. On the federal level, the United States Environmental Protection Agency (EPA) has wide ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons. Much of the responsibility is delegated to the state level. The United States Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

Conceptual Construction Schedule and Activities

Hours of Work

Construction activities for buildings in New York City generally take place Monday through Friday, with exceptions that are discussed separately below. In accordance with City laws and regulations, construction work on the proposed development site would generally begin at 7AM on weekdays, with workers arriving to prepare work areas between 6AM and 7AM. Construction work would typically end at 3:30PM, but at times the workday could be extended to complete some specific tasks beyond normal work hours, such as completing the drilling of piles, finishing a concrete pour for a floor deck, or completing the bolting of a steel frame erected that day. The extended workday could last until about 9PM and would not include all construction workers on-site, but just those involved in the specific task requiring additional work time. Extended work hours would be subject to after-hours work variance permits from DOB. Additionally, all construction sites require preparation of a noise mitigation plan as outlined in Section 24-219 of the Administrative Code of the City of New York.

Occasionally, Saturday or overtime hours may be required to complete time-sensitive tasks. Weekend work requires a permit from the DOB and, in certain instances, approval of a noise mitigation plan from the DEP

under the City's Noise Code. The New York City Noise Control Code, as amended December 2005 and effective July 1, 2007, limits construction (absent special circumstances as described below) to weekdays between the hours of 7AM and 6PM, and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring after hours (weekdays between 6PM and 7AM and on weekends) may be permitted only to accommodate: (i) emergency conditions; (ii) public safety; (iii) construction projects by or on behalf of City agencies; (iv) construction activities with minimal noise impacts; and (v) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts and/or financial considerations. In such cases, the numbers of workers and pieces of equipment in operation would be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend work would be less than a normal workday. The typical weekend workday would be on Saturday from 7AM with worker arrival and site preparation to 5PM for site cleanup, or as specified in DOB-issued work variance permits.

Construction Sequencing

As with all construction projects in New York City, construction activities would normally take place Monday through Friday, although the delivery/installation of certain critical equipment could occur on weekend days with special permission from DOB. Construction staging would most likely occur on the projected development sites and may occasionally extend within portions of the sidewalks, curbs, and travel lanes of public streets adjacent to the sites. Any sidewalk or street closures require the approval of DOT's Office of Construction Management and Coordination (DOT-OCMC), the entity that insures critical arteries are not interrupted, especially in peak travel periods. Builders would be required to plan and carry out noise and dust control measures during construction. In addition, there would be requirements for street crossing and entrance barriers, protective scaffolding, and strict compliance with all applicable construction safety measures.

As previously noted, for conservative analysis purposes, it is assumed that the RWCDS Applicant-owned development site (Lot 27) could take up to 24 months to complete, while the projected development sites (Lots 38, 50) could each take up to 18 months to complete. It is therefore assumed that construction timelines would not overlap between Lots 27, 50, and 38. **Table B-3** illustrates the conceptual construction sequencing of the three RWCDS projected development sites associated with the Proposed Actions. As shown in the table, it is expected that construction of the Applicant-owned site would occur first. As there are no known plans for the construction of the two other projected development sites, it is not known when construction of these sites would occur, though it is assumed that construction of these sites would occur following completion of the Applicant-owned development site. It is expected that each site would undergo an initial six months of demolition/excavation/foundation work and six months of building superstructure erection. For the Applicant-owned development site, it is expected that the exterior and interior building fit-out would take approximately 12 months; for the projected development sites, it is expected that exterior and interior building fit-out would take approximately 6 months each. An outline of typical construction activities expected to take place during these stages is provided below.

Table B-3: Conceptual Construction Sequencing

Projected Development Sites	2019		2020		2021		2022		2023		2024	
	January - June	July - December	January - June	July - December	January - June	July - December	January - June	July - December	January - June	July - December	January - June	July - December
Lot 27												
Lot 50												
Lot 38												

KEY:	
	Demolition/Excavation/Foundation
	Building Superstructure
	Exterior/Interior Fit-Out

Typical Construction Activities

- Stage 1 (Months 1-6): Site clearance, excavation, and foundation. The first step in this construction phase would be a remediation of hazardous materials on each projected development site. Typical equipment used for these activities would include excavators, backhoes, tractors, pile-drivers, hammers, and cranes. Trucks would arrive at the sites to remove any material and construction debris. As discussed in the assessment of potential hazardous materials impacts above, remediation is required all three projected development sites, and all necessary abatement activities would be conducted in accordance with OER-approved Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP). Subsequently, the remainder of the sites would be cleared in preparation for excavation.

  Once soil remediation is completed, below grade excavation and construction would begin. Project construction activities are expected to be typical of similar medium-density construction projects in New York City, including digging; excavation for the foundation; dewatering (to the extent required), and reinforcing and pouring of the foundation. Typical equipment used for these activities would include excavators, backhoes, tractors, hammers, and cranes. Trucks would arrive at the sites with pre-mixed concrete and other building materials, and would remove any excavated material and construction debris.

- Stage 2 (Months 7-10): Erection of the superstructure. Once the foundations have been completed, the construction of the buildings' steel, block, and plank framework would take place. This process involves the installation of CMU blocks, beams, columns and decking or concrete plank, and would require the use of cranes, derricks, hoists, and welding equipment, as warranted.

- Stage 3 (Months 11-24): Façade and roof construction, mechanical installation, interior and finishing work. This would include the assembly of exterior walls and cladding; installation of heating, ventilation and air conditioning (HVAC) equipment and ductwork; installation and checking of elevator, utility, and life safety systems; and work on interior walls and finishes. During these activities, hoists and cranes would continue to be used as warranted, and trucks would remain in use for material supply and construction waste removal. It should be noted that much of this work occurs when the building is fully enclosed, and therefore is not disruptive to the surrounding neighborhood.

During the course of construction, traffic lanes and sidewalks adjacent to the projected development sites may have to be intermittently or temporarily closed or protected for varying periods of time to allow for certain construction activities. Any sidewalk or street closures would require the approval of DOT-OCMC, the entity that ensures critical arteries are not interrupted, especially in peak travel periods. Construction activities would be subject to compliance with the New York City Noise Code and EPA noise emission standards for construction equipment. In addition, there would be requirements for street crossing and entrance barriers, protective scaffolding, and strict compliance with all construction safety measures outlined in the DEP-approved CHASP.

As noted above, the last few months of construction (during the exterior/interior building fit-out stage) typically occur within the fully enclosed building envelope, and this stage is therefore not externally disruptive. Additionally, as the lots and projected buildings are not large, completion of each site could easily occur in less than the assumed 24 and 18 months. Furthermore, a Level 1 trip generation screening assessment (detailed below) determined that the number of person trips by mode as well as vehicle trips for all analysis peak hours would not result in greater than 50 peak hour vehicle trip-ends, 200 peak hour public transit riders, or 200 peak hour pedestrian trips. As such, potential overlapping construction timelines in the proposed rezoning area would not result in significant disturbances to the surrounding neighborhood.

Potential Impacts During Construction

In accordance with the *CEQR Technical Manual*, development facilitated by the Proposed Actions was reviewed to determine whether further analysis of the proposed construction activities is needed for any technical area, as discussed below.

Land Use and Neighborhood Character

According to the *CEQR Technical Manual*, a construction impact analysis of land use and neighborhood character is typically needed if construction would require continuous use of a property for an extended duration, thereby having the potential to affect the nature of the land use and character of the neighborhood. A land use and neighborhood character assessment for construction impacts looks at the construction activities that would occur on the site (or portions of the site) and their duration. The analysis determines whether the type and duration of the activities would affect neighborhood land use patterns or neighborhood character. For example, a single property might be used for staging for several years, resulting in a "land use" that would be industrial in nature. Depending on the nature of existing land uses in the surrounding area, this use of a single piece of property for an extended duration and its compatibility with neighboring properties may be assessed to determine whether it would have a significant adverse impact on the surrounding area.

Construction activities would affect land uses on the three projected development sites (which all currently accommodate industrial/warehousing uses), but would not alter surrounding land uses. Construction of each building would occur over a period of up to 24 months. As is typical with construction projects in New York City, during periods of peak construction activity there would be some disruption, predominantly noise, to the nearby area. There would be construction trucks and construction workers coming to the site as well as noise, sometimes intrusive, from building construction, and trucks and other vehicles backing up, loading, and unloading. These disruptions would be temporary in nature and would have limited effects on land uses in the surrounding area, particularly as most construction activities would take place on the projected development sites or on portions of sidewalks, curbs, and/or travel lanes of public streets immediately adjacent to the sites.

Throughout the construction period, access to residences, businesses, and institutions in the area surrounding the projected development sites would be maintained, as required by City regulations. In addition, as required by applicable laws and regulations, measures would be implemented to control noise, vibration, emissions, and dust on construction sites, including the erection of construction fencing. Because none of these impacts would be continuous or ultimately permanent and would be limited to the proposed rezoning area and its immediate vicinity, they would not create significant impacts on land use patterns or neighborhood character in the area. Therefore, while construction of the projected development sites would cause temporary impacts, it is expected that such impacts in any given area would be relatively short-term and therefore not create a neighborhood character impact. Therefore, no significant adverse construction impacts to land use or neighborhood character are expected as a result of the Proposed Actions and further assessment is not warranted.

Socioeconomic Conditions

According to the *CEQR Technical Manual*, construction impacts to socioeconomic conditions are possible if a development would entail construction of a long duration that could affect the access to and therefore viability of a number of businesses, and if the failure of those businesses has the potential to affect neighborhood character. Construction activities associated with the Proposed Actions would not result in any significant adverse impacts to socioeconomic conditions. Construction of the three projected development sites would be of limited duration, each lasting up to 24 months, with two periods of potential

six-month overlaps, as detailed above. Construction would, in some instances, temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the projected development sites, including 35th Avenue, 12th Street, and 36th Avenue. However, lane and/or sidewalk closures are expected to be of very limited duration and would not occur in front of entrances to any existing businesses. In addition, construction activities would not obstruct major thoroughfares used by customers or businesses, and businesses would not be significantly affected by any temporary reductions in the amount of pedestrian foot traffic or vehicular delays that could occur as a result of construction activities. As such, no significant adverse construction impacts to socioeconomic conditions are anticipated as a result of the Proposed Actions and further assessment is not warranted.

Community Facilities & Services

According to the *CEQR Technical Manual*, construction impacts on community facilities are possible if a community facility would be directly affected by construction (i.e., if construction would disrupt services provided at a facility or close a facility temporarily). Construction activities facilitated by the Proposed Actions would not physically displace or alter any existing community facilities. No community facilities would be directly affected by construction activities for an extended duration. The projected development sites would be surrounded by construction fencing and barriers that would limit the effects of construction on nearby facilities. Construction workers would not place any burden on public schools and would have minimal, if any, demands on libraries, child care facilities, and health care services in the area. Construction of the projected development sites would not block or restrict access to any community facilities in the area, and would not materially affect emergency response times. NYPD and FDNY emergency services and response times would not be materially affected as a result of the geographic distribution of the police and fire facilities and their respective coverage areas throughout the City. Therefore, no significant adverse construction impacts to community facilities are anticipated as a result of the Proposed Actions and further assessment is not warranted.

Open Space

According to the *CEQR Technical Manual*, construction impacts to open space are possible if open space resources are taken out of service for a period of time during the construction process. No open space resources would be disrupted during the construction of the projected development sites, nor would access to any publicly accessible open spaces be impeded during construction. Although construction activities may generate higher noise levels during the early stages of construction, those levels would be temporary and construction activities in the proposed rezoning area would be required to comply with the New York City Noise Code, which regulates construction noise to reduce the effects on noise sensitive receptors including public parks. Additionally, construction fences around the projected development sites would shield nearby open space resources from construction activities. As such, no construction impacts related to open space are expected as a result of the Proposed Actions, and no further assessment is warranted.

Historic and Cultural Resources

According to the guidelines in the *CEQR Technical Manual*, construction impacts may occur on historic and cultural resources if in-ground disturbances or vibrations associated with project construction could undermine the foundation or structural integrity of nearby resources. As discussed above, the proposed rezoning area does not contain any architecturally and/or archaeologically significant resources of concern, and there are no architectural or archaeological resources within 90 feet of the proposed rezoning area (refer to **Appendix 2**). Therefore, no construction impacts related to historic and cultural resources are anticipated as a result of the Proposed Actions, and further assessment is not warranted.

Natural Resources

According to the *CEQR Technical Manual*, a preliminary construction assessment is not required for natural resources unless the construction activities would disturb a site or be located adjacent to a site containing natural resources. As there are no natural resources within proposed rezoning area or its vicinity, no significant adverse construction impacts to natural resources are likely as a result of the Proposed Actions, and no further assessment is warranted.

Hazardous Materials

According to the guidelines of the *CEQR Technical Manual*, a construction assessment is not needed for hazardous materials unless the construction activities would disturb a site or be located adjacent to a site containing hazardous materials. A Phase I ESA was conducted for the Applicant-owned proposed development site on Lot 27, as detailed above. In the future with the Proposed Actions, all three projected development sites would be assigned (E)-designations pertaining to hazardous materials, requiring the fee owners to conduct a testing and sampling protocol and have an approved remediation plan where appropriate, to the satisfaction of the OER. Additionally, all applicable federal, state, and city regulations pertaining to the asbestos, lead paint, and other toxic substances would be required during and after completion of demolition activities, and any required CHASPs would be submitted to OER. Therefore, no significant adverse construction impacts related to hazardous materials are anticipated as a result of the Proposed Actions, and further assessment is not warranted.

Transportation

Construction of the proposed buildings would generate trips resulting from arriving and departing construction workers, movement of materials and equipment, and removal of construction waste, and thus, a Level 1 trip generation screening assessment was conducted to estimate the numbers of person and vehicle trips by mode expected to be generated by construction activity as a result of the Proposed Actions. As discussed above, construction of the projected development sites are expected to occur during the typical construction hours of 7AM and 3:30PM. Therefore, worker trips would be concentrated in off-peak hours and would not represent a substantial increment during the area's peak travel periods. Construction workers would use both public transportation and private automobiles. Construction workers typically park off-site for larger developments and at curbside in the vicinity of smaller developments. These curbside spaces are typically available as area residents use their autos to travel to work and elsewhere, and are vacated by construction workers in the afternoon before resident demand increases after the typical workday.

Truck movements would be spread throughout the day and would generally occur between the hours of 6AM and 3PM, depending on the stage of construction. Flaggers are expected to be present during construction to manage the access and movements of trucks to and from the proposed development site. Little if any rerouting of traffic is anticipated as a result of the construction of the proposed buildings. Additionally, moving lanes of traffic are expected to be available at all times along the affected streets except on limited days when cranes will be erecting planks. These conditions would be temporary and not result in significant adverse impacts on traffic conditions.

Construction activities could result in short-term disruption of pedestrian movements around the proposed rezoning area, occurring primarily as a result of to the temporary loss of curbside lanes from the staging of equipment and the movement of materials to and from the site. Additionally, it is anticipated that some sidewalks immediately adjacent to the projected development sites on 35th Avenue, 12th Street, and 36th Avenue could also be closed to accommodate heavy loading areas for at least several months of the construction period for activities associated with the construction of each projected development site. These activities would include the unloading of construction materials from trucks and the loading of trucks with

construction debris. Curb lane and/or sidewalk closures would not affect access points to public transportation including subway and bus stops. In these instances, pedestrians would either walk on the opposite side of the street or in a sectioned-off portion of the street. Detailed Maintenance and Protection of Traffic (MPT) Plans for each building would be submitted prior to construction for approval to DOT-OCMC, which issues permits for any street/sidewalk closures after evaluation of traffic and pedestrian conditions. Appropriate protective measures for ensuring pedestrian safety surrounding each of the proposed development sites would be implemented under these plans.

Level 1 Trip Generation Screening Assessment

As discussed above, a Level 1 trip generation screening assessment was conducted to estimate the numbers of person and vehicle trips by mode expected to be generated by construction activity as a result of the Proposed Actions. Construction worker modal splits and vehicle occupancy rates were based on the available U.S. Census data for workers in the construction industry (2010 Census data); based on these data, it is anticipated that approximately 23 percent of construction workers would commute to/from the construction sites by private autos at an average vehicle occupancy of 1.15 persons per vehicle and 77 percent would commute to/from the construction sites by public transit; no workers would commute to/from the construction sites by walking. The estimated construction worker trips were distributed throughout the work day based on projected work shift allocations and conventional arrival/departure patterns of construction workers, with most workers commuting during the hours before and after the work shift.

Construction truck trips would be made throughout the day, with more trips typically during the early morning. For analysis purposes, each truck delivery was assumed to result in two truck trips during the same hour (one "in" and one "out"), and each truck trip has a Passenger Car Equivalent (PCE) of 2.0, consistent with *CEQR Technical Manual* methodology.

Traffic

Based on the assumptions discussed above, the estimated number of hourly construction vehicles trips generated in 2019(Q4), which includes the construction of the Applicant-owned development site, was forecasted and is presented in Table B-4. As shown in Table B-4, in the 2019(Q4) peak construction period, the RWCDS associated with the Proposed Actions would generate an estimated 12 and 6 PCEs during the 6-7 AM and 3-4 PM construction peak hours, respectively. During the peak construction traffic period, no development sites within the proposed rezoning area would be completed and operational, and as such, no additional peak hour incremental trips generated from either the Applicant-owned development site or the two projected development sites are anticipated.

Additionally, the combined peak hour incremental trips generated by both ongoing construction of the two projected development sites and the Applicant-owned site that would be operational during the 2022(Q1) peak construction period were determined, and are presented in Table B-5, below.[2] As shown in the table, during the 2022(Q1) construction peak period, there would be a net increase of 28 PCEs during the 6-7 AM construction peak hour and a net increase of 43 PCEs during the 3-4 PM construction peak hour. As the peak hour incremental trips generated during these periods by construction activities would remain below the 50 PCE threshold referenced in the *CEQR Technical Manual*, it is not anticipated that the Proposed Actions would result in significant adverse construction transportation impacts. Therefore, as no significant

[2] In the 2022(Q1) construction peak period, the RWCDS associated with the Proposed Actions would generate an estimated 6 and 2 PCEs during the 6-7 AM and 3-4 PM construction peak hours, respectively. It was also conservatively determined that an operational Applicant-owned site would generate approximately 16 and 29 PCEs during the 6-7 AM and 3-4 PM construction peak hours, respectively.

adverse construction impacts on transportation are anticipated as a result of the Proposed Actions, no further analysis is warranted.

TABLE B-4: 2019(Q4) Hourly Construction Vehicle Trip Projections (in PCEs)

Time Period	Construction Worker Auto Trips			Construction Truck Trips			Total Construction Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
6-7 AM	6	0	6	3	3	6	9	3	12
7-8 AM	1	0	1	1	1	2	2	1	3
8-9 AM	0	0	0	1	1	2	1	1	2
9-10 AM	0	0	0	1	1	2	1	1	2
10-11 AM	0	0	0	1	1	2	1	1	2
11 AM-12 PM	0	0	0	1	1	2	1	1	2
12-1 PM	0	0	0	1	1	2	1	1	2
1-2 PM	0	0	0	1	1	2	1	1	2
2-3 PM	0	0	0	0	0	0	0	0	0
3-4 PM	0	6	6	0	0	0	0	6	6
4-5 PM	0	1	1	0	0	0	0	1	1

TABLE B-5: 2022(Q1) Peak Hour Construction and Operational Vehicle Trip Projections (in PCEs)

Time Period	Construction Worker Auto Trips			Construction Truck Trips			Incremental Operational Trips[1]			Total Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
6-7 AM	2	0	2	2	2	4	7	15	22	11	17	28
3-4 PM	0	2	2	0	0	0	23	18	41	23	20	43

Notes:

[1] Net incremental trips from the Applicant-owned development site (Lot 27) completed and operational by 2022(Q1).

Air Quality

Possible impacts on local air quality during construction of the three projected development sites include: fugitive dust (particulate) emissions from land clearing operations; and mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide.

Fugitive dust emissions could occur from land clearing, excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of the land clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. Much of the fugitive dust generated by construction activities consists of relatively large-size particles, which are expected to settle within a short distance from the construction site and to not significantly impact nearby buildings or people. All appropriate fugitive dust control measures, including watering of exposed areas and dust covers for trucks, would be employed during construction of the proposed development.

Mobile source emissions may result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near a construction site. Localized increases in mobile source emissions would be minimized by following standard traffic maintenance requirements, such as:

- Construction requiring temporary street closings would be performed during off-peak hours wherever possible;
- The existing number of traffic lanes would be maintained to the maximum extent possible; and
- Idling of delivery trucks or other equipment would not be permitted during unloading or other inactive times.
- Use of best available technologies with regard to emissions for construction equipment.
- Implementation of real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed.

Additionally, as detailed above in "Land Use, Zoning, & Public Policy," the buildings in the immediate vicinity of the projected development sites are predominately classified as industrial/ manufacturing. Due to the distances of sensitive receptors from the projected development sites, it is not expected that any fugitive dust or mobile source emissions occurring in the immediate vicinity of the sites would negatively affect these sensitive receptors. Therefore, no significant adverse construction impacts related to air quality are expected as a result of construction facilitated by the Proposed Actions, and further analysis is not warranted.

Noise

Impacts on noise levels during construction of the projected development sites would include noise and vibration from the operation of construction equipment and delivery vehicles traveling to and from the proposed construction site. The severity of impacts from these noise sources would depend on the noise characteristics of the equipment and activities involved, the construction schedule, and the distance to potentially sensitive noise receptors. Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site. Noise caused by construction activities would vary widely, depending on the phase on construction – demolition, land clearing and excavation, foundation and capping, erection of structural steel, construction of exterior walls, etc. – and the specific task being undertaken. Increased noise levels caused by construction activities can be expected to be most significant during the early phases of construction before the buildings are enclosed (approximately ten months for each building). Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant. Small increases in noise levels are expected to be found near a few defined truck routes and the streets in the immediate vicinity of the proposed rezoning area. Additionally, as detailed in Attachment F, "Noise," it is not anticipated that construction of the projected development sites would result in noise that would negatively affect nearby sensitive receptors.

Construction noise is regulated by the New York City Noise Control Code and by EPA emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7AM and 6PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. These regulations would be carefully followed in the future with the proposed action. In addition, appropriate low-noise emission level equipment and operational procedures would be used. Compliance with noise control measures would be ensured by directives to the construction contractor. Therefore, no significant adverse construction impacts related to noise are anticipated as a result of the Proposed Actions, and no further analysis is warranted.

Attachment C

Land Use, Zoning & Public Policy

I. INTRODUCTION

According to the *2014 CEQR Technical Manual* guidelines, a land use analysis evaluates the uses and development trends in an area that may be affected by a proposed action, and determines whether that action is compatible with those conditions or may affect them. Similarly, the analysis considers the proposed action's compliance with, and effect on, the area's zoning and other applicable public policies.

As detailed in Attachment A, "Project Description," the Applicant is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1 (refer to **Figure C-1**, "Land Use Map"). The Proposed Actions include: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 (including Lot 27, Lot 50, and p/o Lots 8 and 38) from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the area a Mandatory Inclusionary Housing (MIH) Area.

The 24,589 square foot (sf) Applicant-owned proposed development site on Lot 27 currently contains a single-story, approximately 10,320 sf warehouse and associated parking. In the RWCDS future with the Proposed Actions, the Applicant would demolish the existing warehouse and construct a new eight-story, 85-foot tall, approximately 92,946 gross square foot (gsf) (approximately 88,520 zoning square foot [zsf]) mixed-use residential and commercial building on the site, with a floor area ratio (FAR) of 3.6. The proposed building would contain 82 dwelling units (DUs), and 30 percent of residential floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of qualifying ground-floor retail space and up to 77 surface and underground accessory parking spaces.[1]

Two other sites in the proposed rezoning area are also expected to be redeveloped with mixed-use residential and commercial buildings in the 2024 future with the Proposed Actions: Lots 38 and 50. It is therefore anticipated that the Proposed Actions would result in a net increase of approximately 109,680 gsf (104,457 zsf) of residential space with 116 DUs (39 affordable) and approximately 22,143 gsf (21,089 zsf) of commercial space in the proposed rezoning area by 2024. Absent the Proposed Actions, no changes are expected to occur in the proposed rezoning area.

Under CEQR guidelines, a land use assessment, which includes a basic description of existing and future land use and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. The analysis presented below discusses existing and future conditions with and without the Proposed Actions for a primary study area, coterminous with the proposed rezoning area, and an approximately 400-foot secondary study area (as shown in **Figure C-1**).

[1] The RWCDS assumes the proposed development site would be built out to the maximum With-Action permitted FAR of 3.6. For conservative analysis purposes, this assumption is higher than shown in the Applicant's architectural drawings in the Land Use Application, which assume a built FAR of 3.54.

Legend

- Proposed Rezoning Area
- Proposed Development Site
- 400-Foot Radius
- Land Use Study Area
- One and Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities and Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data
- 27 Lot

Source: New York City Department of City Planning (PLUTO 2016), DoITT

II. PRINCIPAL CONCLUSIONS

No significant adverse impacts on land use, zoning, or public policy, as defined by the guidelines for determining impact significance set forth in the *CEQR Technical Manual*, are anticipated in the 2024 future with the Proposed Actions in the proposed rezoning area or secondary study area. The Proposed Actions would not generate land uses that would be incompatible with existing land uses, zoning, or public policy in the secondary study area. The proposed zoning map and text amendments would facilitate the development of new mixed-use residential/commercial buildings on three underutilized sites which currently contain nonconforming warehouses and auto body repair shops in an existing residential district (Block 331, Lots 27, 38, and 50). As such, the Proposed Actions would have a positive effect on the surrounding area by activating the streetscapes of 35th Avenue, 12th Street, and 36th Avenue with ground-floor retail spaces, and introducing affordable housing in a neighborhood well-suited for such uses. The anticipated mixed-use buildings facilitated by the Proposed Actions would complement the established character of the surrounding area, and the proposed zoning map and text changes would result in densities and building bulks that would be within the range of what is currently permitted in the secondary study area. Additionally, as detailed below, the Proposed Actions would not conflict with any public policies applicable to the proposed rezoning area and secondary study area.

III. METHODOLOGY

Existing land uses were identified through a review of a combination of sources including field surveys, secondary sources such as the New York City Department of City Planning's (DCP's) Primary Land Use Tax Lot Output (PLUTO) data files, as well as online Geographic Information System (GIS) databases such as NYCityMap and the New York City Open Accessible Space Information System (OASIS). New York City Zoning Maps and the Zoning Resolution (ZR) of the City of New York were consulted to describe existing zoning districts in the study areas and provided the basis for the zoning evaluation of the No-Action and With-Action scenarios. Relevant public policy documents were utilized to describe existing public policies pertaining to the study areas, and served as the basis for the No-Action and With-Action discussions of public policy.

Land use, zoning, and public policy are addressed and analyzed for two geographical areas for the Proposed Actions: (1) the proposed rezoning area and (2) the secondary study area, which includes properties within 400 feet of the proposed rezoning area, which have the potential to experience indirect impacts as a result of the Proposed Actions. The secondary study area is generally bounded by 10th Street to the west, midblock between 36th and 37th Avenues to the south, 14th Street/21st Street to the east, and midblock between 34th and 35th Avenues to the north. Both study areas have been established in accordance with *CEQR Technical Manual* guidelines and can be seen in **Figure C-1**.

IV. EXISTING CONDITIONS

Land Use

Proposed Rezoning Area

The approximately 57,904 sf proposed rezoning area comprises the eastern half of Queens Block 331, fronting 12th Street between 35th and 36th Avenues. In addition to the Applicant-owned proposed development site on Lot 27, the proposed rezoning area encompasses all of Lot 50 and the eastern portions

of Lots 8 and 38 on Block 331 (refer to **Figure C-1**). As detailed below, none of the existing uses in the proposed rezoning area are permitted in the underlying R5 zoning district.

Lot 8

As shown in **Figure C-1**, Lot 8 is an approximately 41,600 sf through-lot located in the middle of Block 331 with approximately 185 feet of frontage along 11th Street and approximately 250 feet of frontage along 12th Street. Lot 8 contains two industrial/manufacturing buildings totaling approximately 40,000 sf (0.96 FAR) housing the All City Switchboard Corp. (switchgear and switchboard manufacturing) and Superior Selected Stone (wholesale). Approximately 23,167 sf of Lot 8 (56 percent of the lot) is located within the proposed rezoning area.

Lot 27

The Applicant-owned proposed development site at 11-14 35th Avenue (Lot 27) is located on the northeastern corner of the block, with approximately 92 feet of frontage along 35th Avenue and approximately 275 feet of frontage along 12th Avenue (refer to **Figure C-1**). The approximately 24,589 sf lot contains a single-story, approximately 10,320 gsf warehouse (0.42 FAR) which provides construction equipment repairs and stores cranes and other construction-related equipment for the United Crane and Rigging Corporation.

Lot 38

Lot 38 is an approximately 4,500 sf site located at 35-30 12th Street. The lot contains a single-story, approximately 2,189 sf building housing Bravo One Auto Body Repair (0.49 FAR). As shown in **Figure C-1**, the majority of Lot 38 (91 percent of the lot area, or approximately 4,113 sf) is located within the proposed rezoning area.

Lot 50

As shown in **Figure C-1**, Lot 50 is on the southeast corner of Block 331, with approximately 65 feet of frontage along 36th Avenue and approximately 92.6 feet of frontage along 12th Street. Lot 50 contains two single-story buildings totaling approximately 2,542 sf (0.42 FAR) which house America's Auto Repair.

Secondary Study Area

The proposed rezoning area is located in the Ravenswood neighborhood of Queens (between Long Island City and Astoria). As shown in **Figure C-1**, the area within an approximate 400-foot radius of the proposed rezoning area is developed with a mix of residential uses, sometimes with ground-floor retail/restaurant space; light industrial uses; institutions/public facilities; and parking lots. The secondary study area includes one vacant lot on 11th Street, and one commercial building, the Raven One Stop Food Center on the southeast corner of 35th Avenue and 12th Street, immediately north of the proposed rezoning area. There are no transportation/utility uses or open space resources in the secondary study area.

As shown in **Table C-1**, the secondary study area is predominately residential (approximately 63.2 percent of total lot area and approximately 67.6 percent of total built area). Low-rise one- and two-family houses and multi-family walkups are located to the north, west, and south of the proposed rezoning area (refer to **Figure C-1**). A few of these low-rise residential buildings contain ground-floor retail uses along 36th Avenue and 12th Street. The two superblocks of the New York City Housing Authority (NYCHA)-operated Ravenswood Houses in the secondary study area comprise approximately 52.6 percent of the total lot area and approximately 59.1 percent of the total built area in the secondary study area. Located immediately

northeast and east of the proposed rezoning area, the Ravenswood Houses have a combined total of 16 acres containing a total of 14 six-story buildings with 1,011 DUs surrounded by private open space.

Table C-1: Existing Land Uses within the Secondary Study Area

Use[1]	Lot Area (sf)	Percent of Total Lot Area	Built Area (sf)	Percent of Total Built Area
Residential One & Two Family	94,878	7.2%	61,395	4.2%
Residential Multi-Family Walk-Up	44,899	3.4%	62,985	4.3%
Residential Multi-Family Elevator	697,319	52.6%	871,585	59.1%
Mixed Residential & Commercial	24,451	1.8%	34,587	2.4%
Commercial & Office	6,147	0.5%	2,225	0.1%
Industrial & Manufacturing	356,005	19.3%	262,898	17.8%
Transportation & Utility	0	-	0	-
Public Facilities & Institutions	152,220	11.5%	155,013	10.5%
Open Space & Recreation	0	-	0	-
Parking Facilities	46,356	3.5%	23,279	1.6%
Vacant Land	2,129	0.1%	0	-
Totals:	***1,324,404 sf***	***100.0%***	***1,473,967 sf***	***100.0%***

Notes: [1] Refer to **Figure C-1**.
Sources: DCP's 2016 PLUTO data; PHA Site Visits (March 2017).

As shown in **Figure C-1**, the secondary study area also contains a substantial amount of industrial/manufacturing uses (approximately 19.3 percent of total lot area and approximately 17.8 percent of total built area in the secondary study area). The vast majority of these are light industrial uses (i.e. warehouses and auto body repair shops), such as the Drillco Equipment Company at 10-05 35th Avenue; Lily Import & Export Corporation at 34-19 10th Street; Crosslands Transportation, Inc. at 35-44 11th Street; Napa Auto & Truck Parts at 35-34 11th Street; Drapemasters at 36-02 13th Street; and the Metro Meter Shop Inc. at 36-15 13th Street.

The secondary study area also contains a significant amount of institutions/public facilities (approximately 11.5 percent of total lot area and approximately 10.5 percent of total built area). St. Rita's Roman Catholic Church complex is located immediately south of the proposed rezoning area, across 36th Avenue (refer to **Figure C-1**). To the southeast of the proposed rezoning area is the Hour Apartment House III, supportive housing for formerly incarcerated women and their children located at 36-11 12th Street, and the Jackson Development Center, a preschool located at 36-02 14th Street. Immediately west of the proposed rezoning area at 35-27 11th Street is the Kingdom Hall of Jehovah's Witnesses, and further west at 10-06 35th Avenue is the New York State Department of Corrections and Community Services' Division of Correctional Industries (Corcraft) Distribution Center (refer to **Figure C-1**).

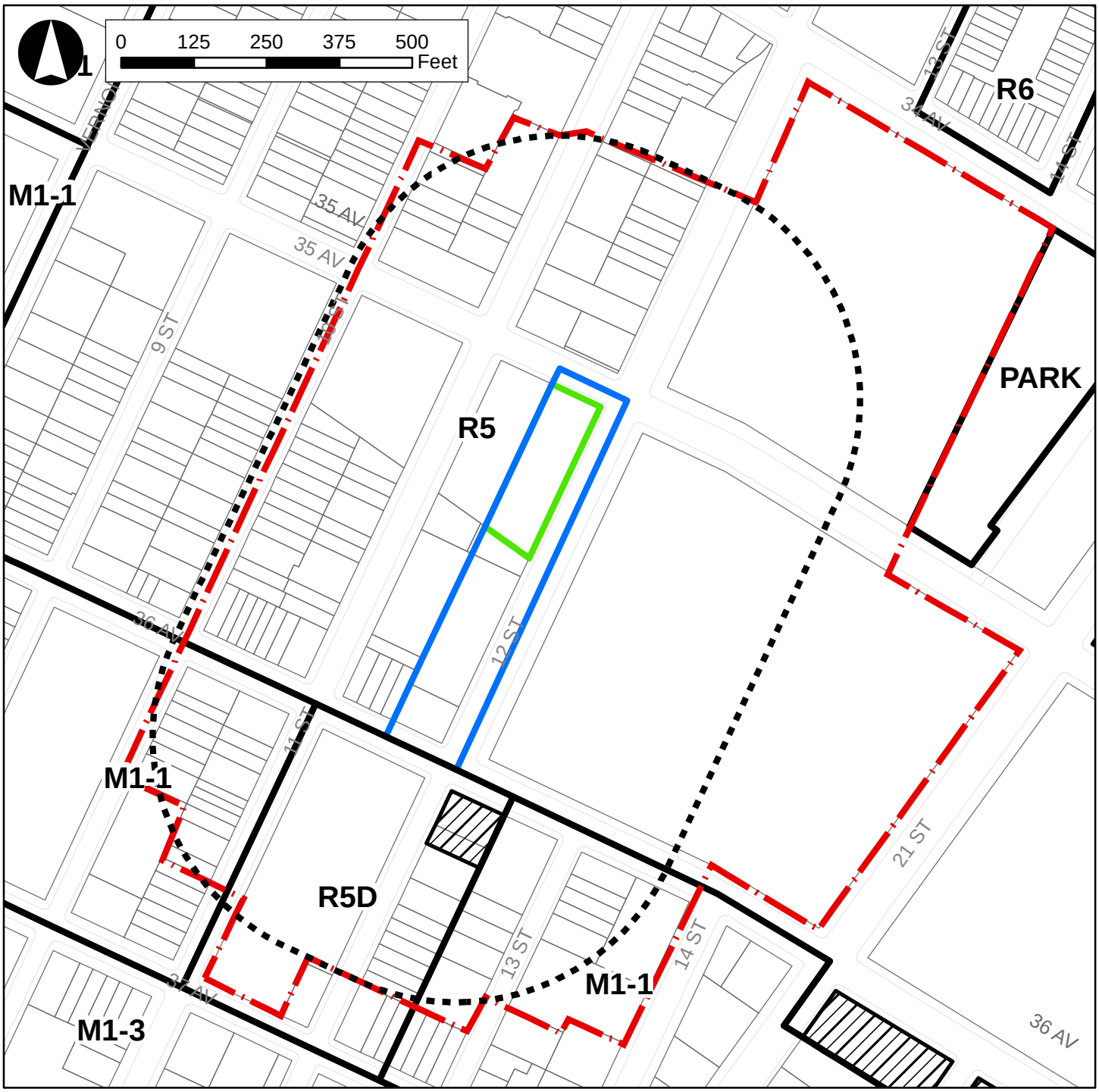
Zoning

Proposed Rezoning Area

R5 District

The proposed rezoning area is located in an R5 zoning district (refer to **Figure C-2**, "Existing Zoning Map"). R5 districts allow a variety of housing with a maximum residential FAR of 1.25 which typically produces three- and four-story attached houses and small apartment buildings. With a height limit of 40 feet, R5 districts provide a transition between lower- and higher-density neighborhoods. To ensure compatibility with neighborhood scale, the maximum streetwall height of a new building is 30 feet, above which a setback of 15 feet is required from the streetwall of the building. In addition, any portion of a building that exceeds a height of 33 feet must be set back from a rear or side yard line. Detached houses

Figure C-2
Existing Zoning Map



Legend

- Proposed Rezoning Area
- Proposed Development Site
- 400-Foot Radius
- Land Use Study Area
- R5 — Existing Zoning Districts
- C1-3 Commercial Overlay

Source: New York City Department of City Planning (PLUTO 2016), DoITT

must have two side yards that total at least 13 feet, each with a minimum width of five feet. Semi-detached houses need one eight-foot wide side yard. Apartment buildings need two side yards, each at least eight feet wide. Front yards must be 10 feet deep. Cars can park in the side or rear yards, and parking is permitted within the front yard when the lot is wider than 35 feet. Off-street parking is required for 85 percent of DUs.

Secondary Study Area

As shown in **Figure C-2**, the area within 400-feet of the proposed rezoning area north of 36th Avenue is currently zoned R5, a zoning designation which has been unchanged since 1961. As discussed above, many of the existing light industrial/manufacturing buildings within this R5 district can be characterized as nonconforming uses. An M1-1 zoning district lies directly to the south and west of the proposed rezoning area. In 2010, all of Block 352 and the western half of Block 351 to the south of the proposed rezoning area were rezoned from M1-1 to R5D and R5D/C1-3 to help facilitate new residential and mixed-use development ("Hour Children Rezoning"). Similarly, in the surrounding area beyond 400-feet of the proposed rezoning area, there has been a trend towards rezoning manufacturing districts as well as residential districts containing nonconforming uses to mixed-use districts to facilitate residential and commercial growth.

Table C-2: Existing Zoning Regulations in the Secondary Study Area

Zoning District	Description	Permitted Use Groups	Maximum Permitted FAR
R5	General Residential District	1-4	R: 1.25 CF: 2.0
R5D	Contextual Residential District	1-4	R: 2.0 CF: 2.0
M1-1	Light Manufacturing District	4-14, 15-16	M: 1.0 CF: 2.4
C1-3 Commercial Overlay	Local Retail Commercial Overlay	1-6	R & CF: Same as underlying R district C: 1.0

Notes: Refer to **Figure C-2**.
Source: New York City Zoning Resolution.

R5D District

R5D zoning districts are contextual residential districts designed to encourage residential growth along major corridors in auto-dependent areas of the City. R5D districts serve as a transition between lower-density districts and moderate-density districts. Characterized by moderate-density, multi-family housing, R5D districts have a maximum residential FAR of 2.0, a height limitation of 40 feet, and required off-street parking for 66 percent of all DUs. In R5D districts, the minimum lot width for single- and two-family detached houses is 25 feet; side yards are not required for lots less than 30 feet wide. The front yard must be at least five feet deep, not to exceed a depth of 20 feet.

M1-1 District

M1-1 zoning districts are light manufacturing districts, which are typically buffers between heavier industrial districts and adjacent residential or commercial districts. Nearly all industrial uses are permitted in M1-1 districts if they meet the stringent M1 performance standards. M1-1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities, and also permit offices, hotels, houses of worship, and most retail uses. M1-1 districts have a maximum FAR of 1.0, and building heights cannot penetrate the sky exposure plane, which begins 30 feet above the streetline. A minimum 20-foot rear yard and off-street parking are required in M1-1 zoning districts.

C1-3 Commercial Overlay

An approximately 100-foot deep C1-3 commercial overlay is located on the southeast corner of 36th Avenue and 12th Street (refer to **Figure C-2**). Commercial overlays are usually mapped in residential neighborhoods along streets that serve local retail needs. Typical retail uses include neighborhood grocery stores, restaurants, and beauty parlors. The maximum commercial FAR is 1.0 for commercial overlays mapped in R5D districts, and in mixed-use buildings, commercial uses must always be located below residential uses.

Public Policy

Public policies applicable to the proposed rezoning area and secondary study area are discussed below. The Proposed Actions' consistency with each of these policies is assessed in Section VI: "Future With the Proposed Actions (With-Action Condition)."

One New York: The Plan for a Strong and Just City

In April 2015, Mayor de Blasio released *One New York: The Plan for a Strong and Just City* (*OneNYC*), a comprehensive plan for a sustainable and resilient city for all New Yorkers that speaks to the profound social, economic, and environmental challenges faced. *OneNYC* is the update to the sustainability plan for the City started under the Bloomberg administration, previously known as *PlaNYC 2030: A Greener, Greater New York* (*PlaNYC*). Growth, sustainability, and resiliency remain at the core of *OneNYC*, but with the poverty rate remaining high and income inequality continuing to grow, the de Blasio administration added equity as a guiding principle throughout the plan. The plan focuses on population growth; aging infrastructure; and global climate change. Since the 2011 and 2013 updates of *PlanNYC*, the City has made considerable progress towards reaching original goals and completing initiatives. *OneNYC* includes updates on the progress towards the 2011 sustainability initiatives and 2013 resiliency initiatives and also sets additional goals and outlines new initiatives under the organization of four visions: growth, equity, resiliency, and sustainability. Goals of the plan are to make New York City:

- A Growing, Thriving City by fostering industry expansion and cultivation, promoting job growth, creating and preserving affordable housing, supporting the development of vibrant neighborhoods, increasing investment in job training, expanding high-speed wireless networks, and investing in infrastructure;
- A Just and Equitable City by raising the minimum wage, expanding early childhood education, improving health outcomes, making streets safer, and improving access to government services;
- A Sustainable City by reducing greenhouse gas emissions, diverting organics from landfills to attain Zero Waste, remediating contaminated land, and improving access to parks; and
- A Resilient City by making buildings more energy efficient, making infrastructure more adaptable and resilient, and strengthening coastal defenses.

Housing New York

In May 2014, the City released *Housing New York*, a five-borough, ten-year strategy to build and preserve affordable housing throughout New York City in coordination with strategic infrastructure improvements to foster a more equitable and livable City through an extensive community engagement process. The plan outlines more than 50 initiatives to support the administration's goal of building or preserving 200,000 units of high-quality affordable housing to meet the needs of more than 500,000 people. The plan intends to do this through five guiding policies and principles: fostering diverse, livable neighborhoods; preserving the affordability and quality of the existing housing stock; building new affordable housing for all New Yorkers; promoting homeless, senior, supportive, and accessible housing; and refining City financing tools

and expanding funding sources for affordable housing. *Housing New York* further calls for 15 neighborhood studies to be undertaken in communities across the five boroughs that offer opportunities for affordable housing.

New York City Food Retail Expansion to Support Health Program

The New York City Food Retail Expansion to Support Health (FRESH) Program provides zoning and financial incentives to promote the establishment and retention of neighborhood grocery stores in communities that lack full-line grocery stores throughout the five boroughs. The proposed rezoning area and secondary study area is located within a designated FRESH-eligible area that provides tax incentives.

The FRESH program is open to grocery store operators renovating existing retail space or developers seeking to construct or renovate retail space that will be leased by a full-line grocery store operator. Stores that benefit from the program must fall within designated FRESH-eligible areas. Stores that benefit from the FRESH program must also meet the following criteria:

- Provide a minimum of 6,000 sf of retail space for a general line of food and nonfood grocery products intended for home preparation, consumption and utilization;
- Provide at least 50 percent of a general line of food products intended for home preparation, consumption and utilization;
- Provide at least 30 percent of retail space for perishable goods that include dairy, fresh produce, fresh meats, poultry, fish and frozen foods; and
- Provide at least 500 sf of retail space for fresh produce.

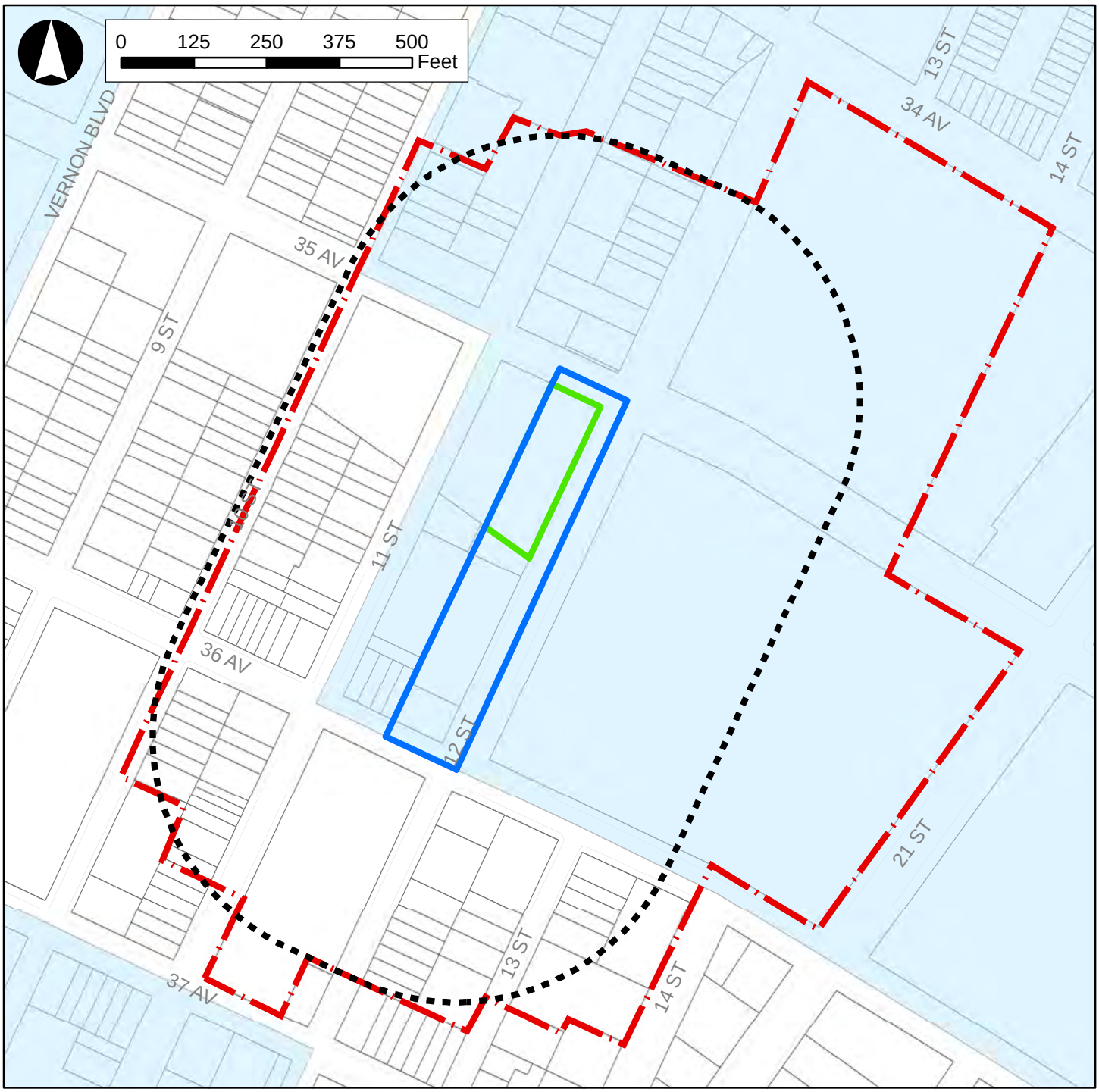
Financial incentives are available to eligible grocery store operators and developers to facilitate and encourage FRESH Food Stores in the designated area. These incentives include real estate tax reductions, sales tax exemptions, floor area bonuses, and mortgage recording tax deferrals.

Local Waterfront Revitalization Program

Proposed projects that are located within the designated boundaries of New York City's Coastal Zone must be assessed for their consistency with the City's Waterfront Revitalization Program (WRP). As illustrated in **Figure C-3**, "Coastal Zone Boundary Map," the proposed rezoning area and a portion of the secondary study area fall within the City's designated coastal zone.

The federal Coastal Zone Management Act (CZMA) of 1972 was enacted to support and protect the distinctive character of the waterfront and to set forth standard policies for reviewing proposed development projects along coastlines. The program responded to City, State, and Federal concerns about the deterioration and inappropriate use of the waterfront. In accordance with the CZMA, New York State adopted its own Coastal Management Program (CMP), which provides for local implementation when a municipality adopts a local WRP, as is the case in New York City. The New York City WRP is the City's principal coastal zone management tool. The WRP was originally adopted in 1982 and approved by the New York State Department of State (NYSDOS) for inclusion in the New York State CMP. The WRP encourages coordination among all levels of government to promote sound waterfront planning and requires consideration of the program's goals in making land use decisions. NYSDOS administers the program at the State level, and DCP administers it in the City. The WRP was revised and approved by the City Council in October 1999. In August 2002, NYSDOS and federal authorities (i.e., the U.S. Army Corps of Engineers [USACE] and the U.S. Fish and Wildlife Service [USFWS]) adopted the City's 10 WRP policies for most of the properties located within its boundaries.

Figure C-3
Coastal Zone Boundary Map



Legend

- Proposed Rezoning Area
- Land Use Study Area
- Proposed Development Site
- Coastal Zone Boundary
- 400-Foot Radius

Source: New York City Department of City Planning (PLUTO 2016), DoITT

In October 2013, the City Council approved revisions to the WRP in order to proactively advance the long-term goals laid out in Vision 2020: The New York City Comprehensive Waterfront Plan, released in 2011. The changes solidify New York City's leadership in the area of sustainability and climate resilience planning as one of the first major cities in the U.S. to incorporate climate change considerations into its Coastal Zone Management Program. They also promote a range of ecological objectives and strategies, facilitate interagency review of permitting to preserve and enhance maritime infrastructure, and support a thriving, sustainable working waterfront. The NYSDOS approved the revisions to the WRP on February 3, 2016. The U.S. Secretary of Commerce concurred with the State's request to incorporate the WRP into the New York State CMP.

In 2013, the New York City Panel on Climate Change (NPCC) released a report (*Climate Risk Information 2013: Observations, Climate Change Projections, and Maps*) outlining New York City-specific climate change projections to help respond to climate change and accomplish PlaNYC goals, which are described below. The 2013 NPCC report predicted future City temperatures, precipitations, sea levels, and extreme event frequency for the 2020s and 2050s. Subsequently, in January 2015, the Second NPCC (NPCC2) released an updated report that presented the full work of the NPCC2 from January 2013 to 2015 and include temperature, precipitation, sea level, and extreme event frequency predictions for the 2081 to 2100 time period. While the projections will continue to be refined in the future, current projections are useful for present planning purposes and to facilitate decision-making in the present that can reduce existing and near-term risks without impeding the ability to take more informed adaptive actions in the future. Specifically, the NPCC2 report predicts that mean annual temperatures will increase by 2.0 to 2.8˚F, 4.1 to 5.7˚F, 5.3 to 8.8˚F, and 5.8 to 10.3˚F by the 2020s, 2050s, 2080s, and 2100, respectively; total annual precipitation will rise by one to eight percent, four to 11 percent, five to 13 percent, and -1 to +19 percent by the 2020s, 2050s, 2080s, and 2100, respectively; sea level will rise by four to eight inches, 11 to 21 inches, 18 to 39 inches, and 22 to 50 inches by the 2020s, 2050s, 2080s, and 2100, respectively; heat waves and heavy downpours are also very likely to become more frequent, more intense, and longer in duration, with coastal flooding very likely to increase in frequency, extent, and elevation.

V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

Land Use & Zoning

Proposed Rezoning Area

In the 2024 future without the Proposed Actions, no zoning changes would occur in the proposed rezoning area. As such, the eastern half of Queens Block 331 would retain its existing R5 zoning designation. Under RWCDS No-Action conditions, no changes are anticipated in the proposed rezoning area; it would continue to be occupied by warehouses, light industrial/manufacturing buildings, and auto body repair shops, as under existing conditions.

Secondary Study Area

There are no developments under construction or planned for completion in the approximately 400-foot secondary study area in the 2024 future without the Proposed Actions.

Quarter-Mile Radius

For the purposes of other analyses that have a larger study area than the land use assessment, future No-Action developments beyond a 400-foot radius of the proposed rezoning area were identified. As shown in

Figure C-4 and **Table C-3**, there are eight No-Action development sites within an approximate quarter-mile of the proposed rezoning area. Two commercial buildings are planned to the south of the proposed rezoning area: a two-story, 7,500 sf building at 13-19 37th Avenue with ground-floor retail space and medical office space on the second floor (No-Build Site #1), and a 10-story building at 37-24 10th Street with 37,000 sf of commercial space (offices, retail, warehouse space, and a restaurant) and 10,437 sf of "club community facility" space (#2). As shown in **Figure C-4**, there are also five hotels under construction or planned to the south of the proposed rezoning area: a nine-story, 175-room hotel at 12-02 37th Avenue (#2); an eight-story, 152-room hotel at 38-04 11th Street (#4); an 11-story, 77-room hotel at 37-17 12th Street (#5); a 13-story, 96-room hotel at 37-35 21st Street (#6); and a 13-story, 111-room hotel at 9-02 38th Avenue (#7). These five hotels are part of a larger trend of hotel redevelopment in the manufacturing zoning district to the south of the proposed rezoning area. As shown in **Figure C-4**, there is also one No-Action development site to the northwest of the proposed rezoning area anticipated to be constructed in the 2024 future without the Proposed Actions: a three-story residential building at 34-31 9th Street with six DUs.

Table C-3: Anticipated No-Action Developments

Map No.[1]	Block / Lot	Address	Residential	Commercial	Hotel	Community Facility	# of Floors
1	350 / 35	13-19 37th Avenue	-	7,500 sf	-	-	2
2	362 / 17	12-02 37th Avenue	-	-	175 rooms	-	9
3	359 / 32	37-24 10th Street	-	37,000 sf	-	10,437 sf	10
4	474 / 31	38-04 11th Street	-	-	152 rooms	-	8
5	362 / 13	37-17 12th Street	-	-	77 rooms	-	11
6	364 / 4	37-35 21st Street	-	-	96 rooms	-	13
7	475 / 30	9-02 38th Avenue	-	-	111 rooms	-	13
8	324 / 13	34-31 9th Street	6 DUs	-	-	-	3
		TOTALS:	**6 DUs**	**44,500 sf**	**611 rooms**	**10,437 sf**	**-**

Notes: Refer to **Figure C-4**.
Sources: New York City Department of Buildings (DOB); *New York YIMBY*

Public Policy

There are no planned changes to public policies that would be applicable to the proposed rezoning area or secondary study area in the 2024 future without the Proposed Actions.

VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

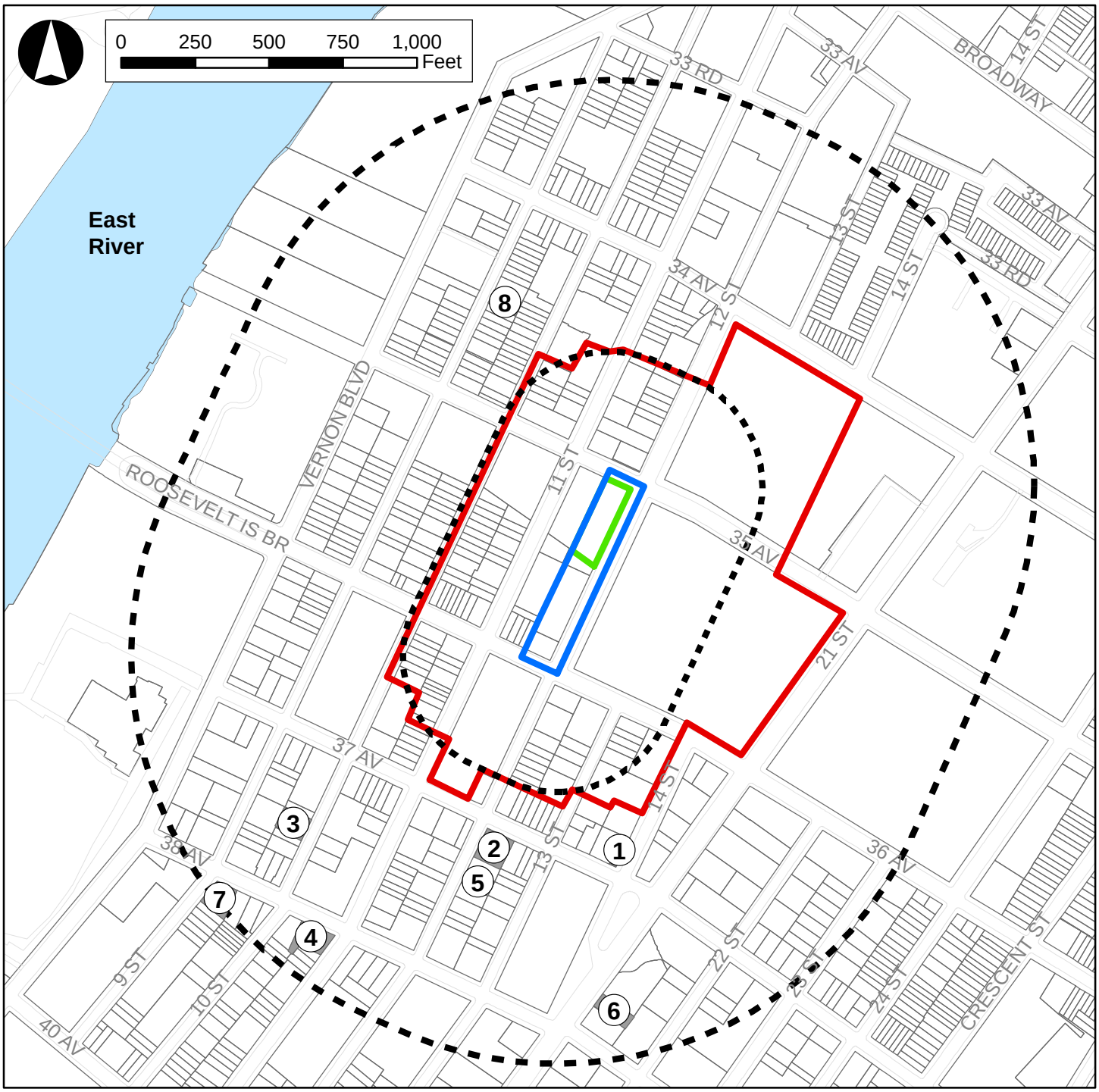
As described in Attachment A, "Project Description," the Applicant is seeking two New York City Planning Commission (CPC) zoning changes: (1) a zoning map amendment to change the proposed rezoning area from an R5 to an R6A zoning district with a C1-3 commercial overlay, and (2) a zoning text amendment to map the proposed rezoning area as a Mandatory Inclusionary Housing (MIH) Area. This section describes the land use and zoning conditions that would result from the Proposed Actions by the analysis year of 2024, and evaluates the potential for the Proposed Actions to result in significant adverse impacts related to land use and zoning, and their consistency with public policies.

Land Use

Proposed Rezoning Area

As detailed in **Table C-4** below, three sites in the proposed rezoning area are expected to be redeveloped in the 2024 RWCDS With-Action condition: Lots 27, 38, and 50. In the RWCDS future with the Proposed

Figure C-4
No-Action Developments



Legend

- Proposed Development Site
- Proposed Rezoning Area
- 400-Foot Radius
- Land Use Study Area
- Quarter-Mile Buffer
- (1) No-Action Sites (refer to Table C-3)

Source: New York City Department of City Planning (PLUTO 2016), DoITT

Actions, Lot 27, which is owned by the Applicant, would be redeveloped with an approximately 92,946 gsf (88,520 zsf) mixed-use residential and commercial building with an FAR of 3.6. The proposed building would include 82 residential units (totaling approximately 77,196 gsf and 73,520 zsf), of which 30 percent of the residential zoning floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of qualifying ground-floor retail space with a floor height of approximately 15 feet, and up to 77 surface and underground accessory parking spaces.

As shown in **Figure A-4a** in Attachment A, the proposed building on Lot 27 would have approximately 92 feet of frontage along 35th Avenue and approximately 196 feet of frontage along 12th Street. An accessory at-grade parking lot with 15 unenclosed parking spaces would be located at the rear of the building on 12th Street, utilizing an existing 20-foot curb cut, and would provide access to an underground parking garage in the building's cellar, which would accommodate up to 62 accessory parking spaces for the building. It is anticipated that the main residential entrance to the proposed building would be adjacent to the parking lot, with a secondary residential entrance on 35th Avenue. Retail entrances would be located on 35th Avenue and 12th Street. As shown in **Figure A-4b** in Attachment A, the base of the proposed building would rise 45 feet (four stories) before setting back 10 feet from 12th Street and 44 feet from 35th Avenue. The proposed building would reach a maximum height of 85 feet (eight stories), as permitted when utilizing the MIH Program.

In the future with the Proposed Actions, it is expected that the existing auto body and repair building on Lot 38 would be demolished, and the site would be redeveloped to the maximum permitted FAR of 3.4 and, in the R6A portion of the site, a building height of 85 feet. It is anticipated that Lot 38 would be redeveloped with an approximately 16,065 gsf (15,300 zsf) mixed-use residential and commercial building, consisting of approximately 14 DUs, of which five would be affordable units, and approximately 2,591 gsf (2,468 zsf) of ground-floor retail space. This development would require up to 13 accessory parking spaces, which are expected to be waived pursuant to ZR Sections 25-261 and 36-232 (refer to **Table C-4**).

Under 2024 With-Action conditions, it is expected that the existing auto body and repair buildings on Lot 50 would also be demolished, and the site would be redeveloped in accordance with the proposed R6A zoning district, C1-3 commercial overlay, and MIH Area. As shown in **Table C-4**, in the future with the Proposed Actions, Lot 50 would be redeveloped to the maximum permitted FAR of 3.6 and building height of 85 feet. Under this scenario, Lot 50 would be redeveloped with an approximately 22,812 gsf (21,726 zsf) mixed-use residential and commercial building, consisting of approximately 20 DUs, of which seven would be affordable units, and approximately 3,802 gsf (3,621 zsf) of ground-floor retail space. This development would require up to 19 accessory parking spaces, which are expected to be waived pursuant to ZR Sections 25-261 and 36-232.

As detailed in Attachment A, "Project Description," Lot 8 in the proposed rezoning area is unlikely to be redeveloped in the future with the Proposed Actions. As under existing and No-Action conditions, Lot 8 would continue to accommodate nonconforming industrial/manufacturing buildings in the 2024 future with the Proposed Actions. Additionally, as the Proposed Actions would only apply to the eastern half of Queens Block 331, they would not affect land uses in the surrounding area. Therefore, no changes to land uses are expected to occur in the secondary study area under With-Action conditions.

As shown in **Table C-4**, the With-Action RWCDS development for the Proposed Actions would result in a net increment of approximately 109,680 gsf (104,457 zsf) of residential space and approximately 22,143 gsf (21,089 zsf) of commercial space in the proposed rezoning area. The Proposed Actions would result in a net increment of 116 DUs on the projected development sites, of which 39 would be affordable units pursuant to the MIH Program.

Table C-4: With-Action Scenario – Projected Development Sites on Block 331

Lot	Lot Area (sf)	FAR [1]	Residential		Commercial SF [2]	Total Mixed-Use Building SF	Parking Spaces [4]	Max. Building Height
			SF [2]	DUs [3]				
27	24,589	3.6	73,520 zsf (77,196 gsf)	82 (27 affordable)	15,000 zsf (15,750 gsf)	88,520 zsf (92,946 gsf)	77	85
38	4,500	3.4 [5]	12,832 zsf (13,473 gsf)	14 (5 affordable)	2,468 zsf (2,591 gsf)	15,300 zsf (16,065 gsf)	0	85 (in R6A)
50	6,035	3.6	18,105 zsf (19,010 gsf)	20 (7 affordable)	3,621 zsf (3,802 gsf)	21,726 zsf (22,812 gsf)	0	85
Total RWCDS With-Action Increment on Block 331:			**104,457 zsf (109,680 gsf)**	**116 (39 affordable)**	**21,089 zsf (22,143 gsf)**	**125,546 zsf (131,823 gsf)**	**77**	**-**

Notes: The Applicant-owned proposed development site is highlighted.
[1] The proposed maximum allowable FAR in the proposed rezoning area increases from 3.0 to 3.6 FAR when utilizing the MIH Program.
[2] The estimate of maximum residential and commercial GSF is based on a standard rate of residential and commercial ZSF plus five percent. Total GSF does not include below-grade parking.
[3] Thirty percent of the residential floor area would be affordable units pursuant to the MIH Program. The estimates of RWCDS DUs are based on standard average unit sizes of approximately 1,000 gsf per market-rate unit and 850 gsf per affordable unit.
[4] As the proposed rezoning area is located within a Designated Transit Zone, parking would be provided for 50 percent of the market-rate units, in addition to up to 50 parking spaces for ground-floor retail space (conservatively assuming one space per 300 sf).
[5] Approximately 4,113 sf of Lot 38 (approximately 91 percent of the lot) would be included in the proposed rezoning area. Therefore, it is expected that any future development would conform to the split zoning on the site.

Secondary Study Area

The Proposed Actions are area-specific, and would therefore not result in any changes to land uses in the secondary study area under 2024 With-Action conditions.

Assessment

No significant adverse impacts on land use would occur in the proposed rezoning area or approximately 400-foot secondary study area in the 2024 future with the Proposed Actions. The proposed zoning map and text amendments would facilitate the development of new mixed-use buildings on three underutilized sites which currently contain nonconforming warehouses and auto body repair shops in an existing residential district. As such, the Proposed Actions would have a positive effect on the surrounding area by activating the streetscapes of 35th Avenue, 12th Street, and 36th Avenue with ground-floor retail spaces, extending the commercial corridor and pedestrian activity along 36th Avenue north along 12th Street and 35th Avenue. Additionally, the proposed MIH Area would introduce medium-density residential buildings with market-rate and affordable units, providing more housing options in a neighborhood well-suited for such development. The anticipated mixed-use buildings facilitated by the Proposed Actions would complement the established character of the surrounding area, and the Proposed Actions would not generate land uses that would be incompatible with existing land uses in the secondary study area. As such, the Proposed Actions would result in development that, in addition to being appropriate for the area, would improve the existing land use character of the proposed rezoning area and surrounding area. Therefore, the Proposed Actions would not result in significant adverse impacts to land uses in the proposed rezoning area or secondary study area.

Zoning

Proposed Rezoning Area

Zoning Map Amendment

The proposed zoning map amendment would change the underlying zoning of the proposed rezoning area from an R5 to an R6A district with a C1-3 commercial overlay (refer to **Figure C-4**, "Proposed Zoning Map"). R6A zoning districts allow a maximum residential FAR of 3.0, more than twice the existing R5 district's allowance of 1.25 residential FAR in the proposed rezoning area. Additionally, R6A districts permit a maximum building height of 75 feet with a Qualifying Ground Floor and mandate Quality Housing bulk regulations, in contrast to R5 districts which permit a maximum building height of 40 feet and do not require Quality Housing bulk regulations. (As discussed below, utilization of MIH would increase the permitted FAR and building heights within the proposed rezoning area.) C1-3 districts are commercial overlays mapped within residential districts along streets that serve local retail needs. Typical retail uses include neighborhood grocery stores, restaurants and beauty parlors. In mixed buildings, commercial uses are limited to the first and second floors and must always be located below the residential use. The maximum commercial FAR is 2.0 in C1-3 overlays mapped within R6A zoning districts, and 1.0 for C1-3 overlays mapped within R5 zoning districts.

Zoning Text Amendment

The Applicant is proposing to map the proposed rezoning area as an MIH Area by creating a new map for Queens Community District 1 in Appendix F of the ZR. An MIH Area requires affordable housing to be provided equivalent to either 25 or 30 percent of the residential floor area developed. The MIH Area sets a new maximum permitted residential FAR which supersedes the FAR permitted by the underlying zoning district. With both the designation of the proposed rezoning area as an MIH Area and its rezoning to an R6A/C1-3 zoning district, the maximum permitted FAR would be 3.6 and the maximum permitted building height would be 85 feet. Mapping of the MIH Area would facilitate development of approximately 27 affordable housing units on the proposed development site as the Applicant would provide affordable housing equivalent to 30 percent of the residential zsf developed at 80 percent Area Median Income (AMI). Additionally, as detailed above, the RWCDS for the Proposed Actions also assumes that two other sites in the proposed rezoning area would be redeveloped with residential and retail uses under future conditions with the Proposed Actions, utilizing the additional FAR allowed under the MIH Program. This would result in a total of 39 affordable DUs in the proposed rezoning area under 2024 With-Action conditions.

Secondary Study Area

The Proposed Actions are area-specific, and would therefore not result in any changes to zoning in the secondary study area under 2024 With-Action conditions.

Assessment

No significant adverse impacts to zoning are anticipated in the proposed rezoning area or secondary study area in the 2024 future with the Proposed Actions. The proposed zoning map and text amendments would facilitate the development of three underutilized sites which currently contain nonconforming warehouses and auto body repair shops in an existing residential district. As detailed above, the Proposed Actions would increase the permitted residential FAR of the proposed rezoning area from 1.25 to 3.6 (when utilizing the MIH Program), and map a C1-3 commercial overlay in the area, allowing up to 2.0 FAR of commercial uses on the lower-levels of buildings (below the residential uses). It is therefore anticipated that the three projected development sites in the proposed rezoning area would be redeveloped with mixed-use residential

buildings with ground-floor retail spaces in the future with the Proposed Actions, activating the streetscape. The retail and commercial spaces facilitated by the Proposed Actions would be in keeping with what is currently permitted in the existing M1-1 districts and C1-3 overlays to the south of the proposed rezoning area, and would extend the existing commercial corridor of 36th Avenue north along 12th Street and 35th Avenue. The increased residential FAR and proposed MIH Area in the proposed rezoning area would facilitate approximately 39 affordable DUs on the three sites as well as market-rate units, providing more housing options in a neighborhood well-suited for such development. As such, the proposed zoning map and text changes would result in uses, densities, and building bulks that would be within the range of what is currently permitted in the secondary study area and that is compatible with the area's existing character and built form.

Public Policy

There are no anticipated changes to public policy in the proposed rezoning area or secondary study area in the future with the Proposed Actions. The Proposed Actions would not introduce any new public policies or alter existing public policies pertaining to the proposed rezoning area or the secondary study area.

Assessment

The Proposed Actions would not conflict with any public policies applicable to the proposed rezoning area or secondary study area. As the proposed MIH Area would facilitate the development of 39 affordable DUs in the proposed rezoning area, the Proposed Actions would promote two public policies which call for the creation of affordable housing throughout the City: *One New York* and *Housing New York.* The creation of mixed-use residential buildings with lower-level commercial spaces as a result of the Proposed Actions would also promote the goals of developing vibrant, livable neighborhoods outlined in these two policies. Additionally, as discussed above and shown in **Figure C-3**, the proposed rezoning area and a portion of the secondary study area fall within New York city's coastal zone boundary as delineated in the Coastal Zone Boundary maps published by DCP. In accordance with the guidelines of the *2014 CEQR Technical Manual*, a Consistency Assessment Form (CAF) was prepared for the Proposed Actions as part of the EAS (refer to **Appendix 3**). The CAF lists the WRP policies and indicates whether the Proposed Actions would promote or hinder those policies, or if the policy is not applicable. This section provides additional information for the policies that have been checked "promote" or "hinder" in the CAF.

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.1 Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.

The proposed rezoning area is located in an established neighborhood with existing residential, mixed residential/commercial and public facilities/institutional uses. As discussed above, the Proposed Actions would facilitate the development of compatible residential and commercial uses. The proposed rezoning area is not located within a Significant Maritime and Industrial Area (SMIA), Special Natural Waterfront Area (SNWA), Priority Maritime Activity Zone (PMAZ), Recognized Ecological Complex (REC), or West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA), as defined in the WRP, and is therefore not located in a special area designation that may be affected by the development of new residential or commercial uses. As such, the Proposed Actions would promote Policy 1.1 of the WRP and would facilitate mixed residential/commercial development in an area well-suited to such development.

1.3 Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.

The proposed rezoning area is located in an established urban environment with adequate existing public facilities and infrastructure that can support the proposed and projected residential and commercial uses. As detailed above and in other sections of the EAS, the Proposed Actions would facilitate redevelopment in the proposed rezoning area at a density compatible with the capacity of surrounding roadways, mass transit, and essential community services such as schools, water and sewer infrastructure, and police and fire services. As such, the Proposed Actions promote policy 1.3 of the WRP.

Policy 6: Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.

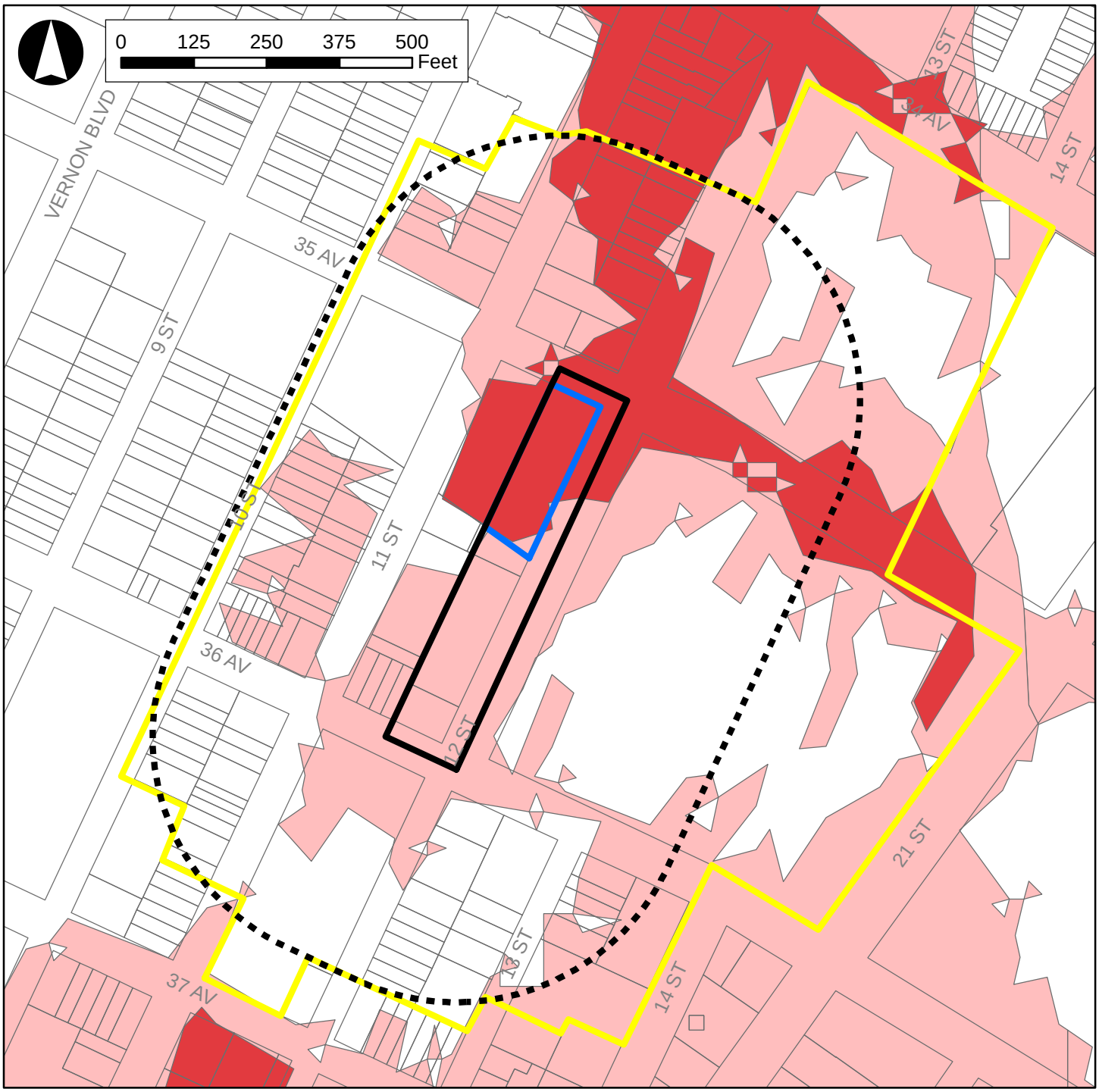
In June 2013, the Federal Emergency Management Agency (FEMA) issued Preliminary Work Maps for New York City to show coastal flood hazard data. Subsequently, the City made immediate accommodations to zoning regulations and upgrades to the New York City Building Code so that new construction would be built to these higher standards. In January 2015, FEMA issued Revised Preliminary Flood Insurance Rate Maps (FIRMs) for New York City, which are considered the best available flood hazard data, replacing the FEMA Preliminary Work Maps.

As shown in **Figure C-5a**, "NPCC 100-year Flood Projections," neither the proposed rezoning area nor the secondary study area are currently located in a FEMA Special Flood Hazard Area (SFHA), defined as the area that will be inundated by the flood event having a one-percent chance of being equaled or exceeded in any given year, also referred to as the "base flood" or "100-year flood" zone. The northern part of the proposed rezoning area, including Applicant-owned Lot 27, is located in the 2020s NPCC 100-year flood zone, and the entire proposed rezoning area is located in the 2050s NPCC 100-year floodplain. Moderate flood hazard areas are also shown on the FIRM, and are the areas between the limits of the base flood and the "0.2-percent-annual-chance" or "500-year flood" zones. As shown in **Figure C-5b**, "NPCC 500-Year Flood Projections," the proposed development site (Lot 27) falls within the 500-year floodplain, and the remainder of the proposed rezoning area is located in Zone X (unshaded), defined as an area of minimal flood hazard outside the SFHA and higher than the elevation of the 500-year floodplain. As such, the proposed rezoning area is susceptible to minimal flooding risk, and will continue to be so in the future. In addition, the NPCC recommends that these maps not be used to judge site-specific risks as they are subject to change.

6.2 Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in "New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms") into the planning and design of projects in the City's Coastal Zone.

In 2013, the New York City Panel on Climate Change (NPCC) released a report (*Climate Risk Information 2013: Observations, Climate Change Projections, and Maps*) outlining New York City-specific climate change projections to help respond to climate change and accomplish PlaNYC goals. The 2013 NPCC report predicted future City temperatures, precipitations, sea levels, and extreme event frequency for the 2020s and 2050s. Subsequently, in January 2015, the Second NPCC (NPCC2) released an updated report that presented the full work of the NPCC2 from January 2013 to 2015 and include temperature, precipitation, sea level, and extreme event frequency predictions for the 2081 to 2100 time period. While

Figure C-5a
NPCC 100-Year Flood Projections

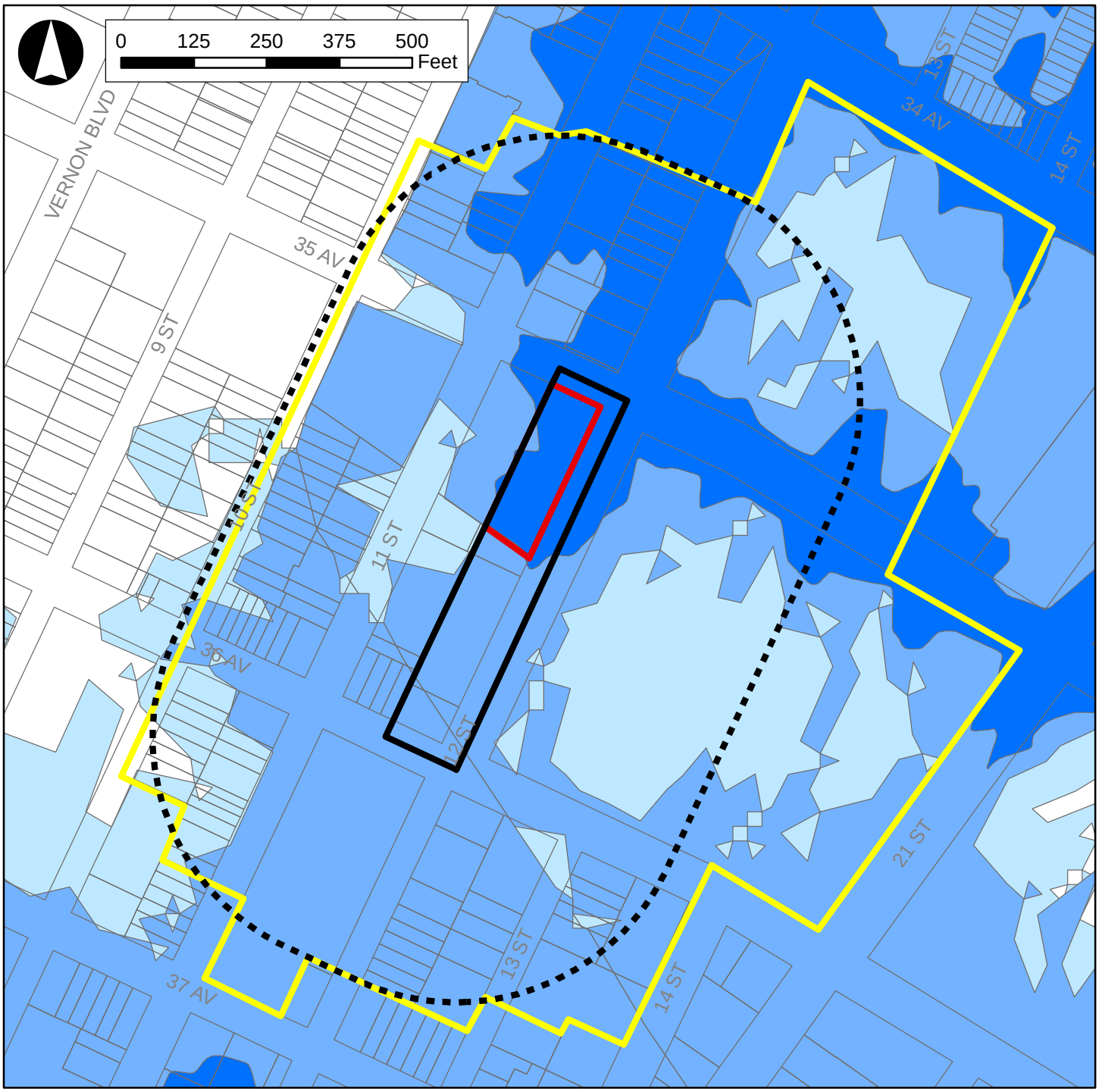


Legend

- Proposed Development Site
- Proposed Rezoning Area
- 400-Foot Radius
- Land Use Study Area
- 2020s NPCC 100-Year Floodplain Projections
- 2050s NPCC 100-Year Floodplain Projections

Source: New York City Department of City Planning (PLUTO 2016), FEMA

Figure C-5b
NPCC 500-Year Flood Projections



Legend

- Proposed Development Site
- Proposed Rezoning Area
- 400-Foot Radius
- Land Use Study Area
- FEMA 500-Year Floodplain
- 2020s NPCC 500-Year Floodplain Projection
- 2050s NPCC 500-Year Floodplain Projection

Source: New York City Department of City Planning (PLUTO 2016), FEMA

the projections will continue to be refined in the future, current projections are useful for present planning purposes and to facilitate decision-making in the present that can reduce existing and near-term risks without impeding the ability to take more informed adaptive actions in the future. Specifically, the NPCC2 report predicts that mean annual temperatures will increase by 2.0 to 2.8˚F, 4.1 to 5.7˚F, 5.3 to 8.8˚F, and 5.8 to 10.3˚F by the 2020s, 2050s, 2080s, and 2100, respectively; total annual precipitation will rise by 1 to 8 percent, 4 to 11 percent, 5 to 13 percent, and -1 to +19 percent by the 2020s, 2050s, 2080s, and 2100, respectively; sea level will rise by 4 to 8 inches, 11 to 21 inches, 18 to 39 inches, and 22 to 50 inches by the 2020s, 2050s, 2080s, and 2100, respectively; heat waves and heavy downpours are also very likely to become more frequent, more intense, and longer in duration, with coastal flooding very likely to increase in frequency, extent, and elevation.

As detailed above and shown in **Figure C-5a**, the proposed rezoning area, while located within the Coastal Zone, is not located within the currently applicable 100-year floodplain. As presented in **Figure C-5b**, the proposed development site (Lot 27) falls within the 500-year floodplain. The proposed rezoning area is not expected to fall within the predicted 2020s or 2050s 100-year floodplains, as published by the NPCC. As such, the rezoning area is susceptible to minimal flooding risk, and will continue to be so in the future. In addition, the NPCC recommends that these maps not be used to judge site-specific risks and they are subject to change.

Policy 7: Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.

Policy 7.1: Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.

As detailed above, the RWCDS for the proposed rezoning area assumes the three proposed and projected development sites would be redeveloped with mixed residential/commercial buildings in the future with the Proposed Actions. No new activities or processes using hazardous materials would be introduced to these sites under RWCDS With-Action conditions. As described in the Hazardous Materials section in Attachment B, "Supplemental Screening," a Phase I Environmental Site Assessment (ESA) was conducted for the Applicant-owned proposed development site (Lot 27) in March 2017, which identified two Recognized Environmental Conditions (RECs) on the site (refer to **Appendix 4**). The Phase I ESA recommended completion of a Phase II ESA in order to determine if any of the identified RECs have adversely impacted the environmental quality of the site and/or may result in potential exposure risks for future occupants. As Phase I ESAs have not been completed for the other two RWCDS projected development sites (Lots 38 and 50), (E)-designations would be required for the sites in the future with the Proposed Actions. Therefore, the Proposed Actions and associated RWCDS would be consistent with Policy 1.7 of the WRP.

Attachment D

Open Space

I. INTRODUCTION

An open space assessment may be necessary if a project could potentially have a direct or indirect effect on open space resources in the area. According to the 2014 *CEQR Technical Manual*, a direct open space impact would result in the physical loss of public open space, change the use of an open space so that it no longer serves the same user population, limit public access to an open space, or cause increased noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness, whether on a permanent or temporary basis. As the Proposed Actions would not physically affect any existing open space or recreational resource, they would not have any direct impacts on open space resources in the area.

An indirect effect on open space may occur when a population generated by a proposed action would be sufficiently large to noticeably diminish the ability of an area's open spaces to serve the future population. According to the guidelines established in the *CEQR Technical Manual*, a project that would add more than 200 residents or 500 employees, or a similar substantial number of other users to an area, is typically assessed for any potential indirect effects on open space. Under RWCDS With-Action conditions, the Proposed Actions would facilitate an increment of approximately 116 dwelling units (DUs), introducing a net increase of approximately 271 residents to the study area.[1] The Proposed Actions would also result in a net increment of approximately 22,143 gross square feet (gsf) of retail space, resulting in a net increase of approximately 73 employees.[2] The expected number of residents exceeds the *CEQR* threshold of 200 residents for a detailed open space analysis, while the expected number of workers is well below the *CEQR* threshold of 500 employees for a detailed open space analysis. Accordingly, this analysis of open space will focus exclusively on the open space needs of the study area residential population. A quantitative assessment was conducted to determine whether the Proposed Actions would significantly reduce the amount of open space available for the area's residential population, and is presented below.

II. PRINCIPAL CONCLUSIONS

Pursuant to *CEQR* guidelines, a project may result in a significant adverse impact on open space resources if (a) there would be a direct displacement/alteration of existing open space within the study area that has a significant adverse effect on existing and anticipated users; or (b) it would reduce the open space ratio and consequently result in overburdening existing facilities or further exacerbates a deficiency in open space.

The Proposed Actions would not result in the direct displacement or alteration of existing public open space resources in the study area. With respect to the reduction in open space in the study area, the residential total open space ratio would decrease by 1.29 percent from the No-Action condition. In addition, both the active and passive open space ratios would also experience a 1.29 percent decrease, where the active open space ratio would decrease from 1.32 to 1.30 and the passive open space ratio would decrease from 0.62 to 0.61. As the passive open space ratio for the residential study area would remain above the City's guideline ratio of 0.5 acres of passive open space per 1,000 residents, residents in the half-mile study area would continue to be well-served by passive open space resources. While the total and active open space ratios

[1] Residential increment is based on an average of 2.34 persons per household in Queens Community District 1 from the U.S. Census Bureau's 2010-2015 Five-Year ACS Estimates.
[2] Worker increment is based on the standard assumption of three workers for every 1,000 gsf of retail space, one worker for every 15,000 gsf of storage/warehouse space, and one worker for every 1,000 gsf of auto repair space.

would remain less than the City's guideline ratios of 2.5 acres of open space, including 2.0 acres of active open space, per 1,000 residents, these guideline ratios are not considered *CEQR* impact thresholds on their own.

The reduction in the total open space ratio in the residential study area is further ameliorated by several factors, including the proposed rezoning area's proximity to additional large open space resources not included in the quantitative open space analysis and the current quality condition, variety, and relatively low utilization of existing open space resources.

III. METHODOLOGY

The analysis of open space resources has been conducted in accordance with the guidelines established in the *2014 CEQR Technical Manual*. Using 2014 *CEQR Technical Manual* methodology, the adequacy of open space in the study area is assessed quantitatively using a ratio of usable open space acreage to the study area population, referred to as the open space ratio. This quantitative measure is then used to assess the changes in the adequacy of open space resources by the analysis year of 2024, both without and with the Proposed Actions. In addition, qualitative factors are considered in making an assessment of the Proposed Actions' effects on open space resources.

Open Space Study Area

In accordance with the guidelines established in the 2014 *CEQR Technical Manual,* the open space study area is generally defined by a reasonable walking distance that users would travel to reach local open space and recreational resources. That distance is typically a half-mile radius for residential projects. Pursuant to *CEQR* guidelines, the residential open space study area includes all census tracts that have at least 50 percent of their area located within a half-mile of the proposed rezoning area and all publicly accessible open spaces within those census tracts. The proposed rezoning area encompasses portions of Block 331in the Ravenswood neighborhood of Queens Community District (CD) 1. As shown in **Figure D-1**, the open space study area is roughly bounded by 31st Avenue to the north, 30th Street to the east, Queens Plaza to the south, and the East River to the west. The study area includes the following census tracts: 33, 37, 39, 43, 45, 47, 53, 77, and 85 (all located in Queens CD 1).

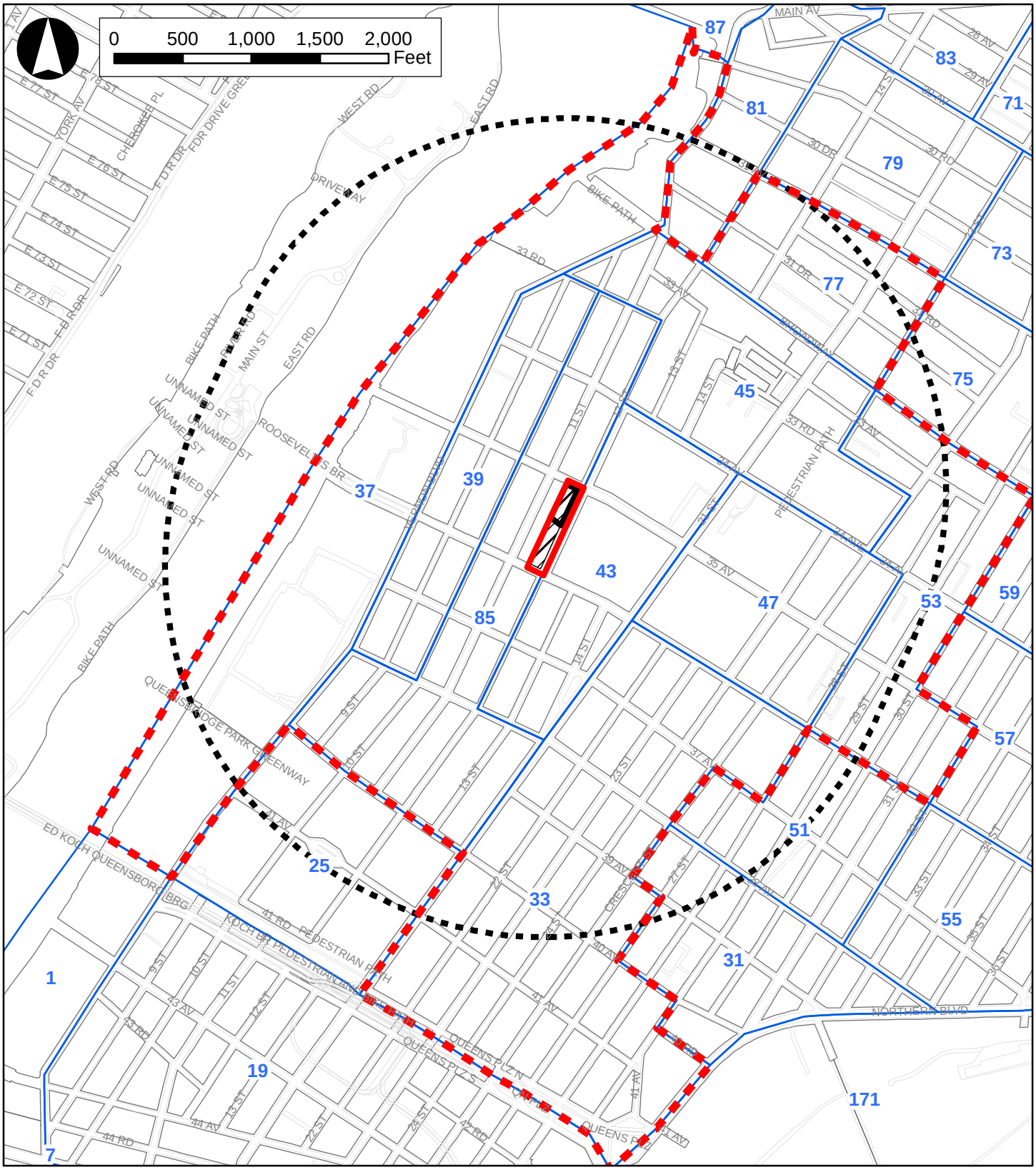
There are additional nearby public open spaces located immediately outside the study area boundary which are likely utilized by study area residents, such as the Queensbridge Park Greenway, Queensbridge "Baby" Park, Dutch Kills Green, and numerous greenstreets (Queens Plaza North) located just south of the open space study area. However, for conservative analysis purposes, only open spaces located within the study area were included in the quantitative analysis per *CEQR* guidelines. Nearby open spaces located beyond the study area are discussed qualitatively below.

Analysis Framework

Direct Effects Analysis

According to the 2014 *CEQR Technical Manual*, a project would have a direct effect on an open space if it causes the physical loss of public open space because of encroachment onto the space or displacement of the space; changes the use of an open space so that it no longer serves the same user population; limits public access to an open space; or causes increased noise or air pollutant emissions, odors, or shadows that would affect its usefulness, whether on a permanent or temporary basis. As there are no publicly accessible open spaces in the proposed rezoning area, the Proposed Actions would not have any direct effects and no further analysis is warranted. Additionally, as detailed in other sections of this EAS, the Proposed Actions

Open Space Study Area



Legend

- Proposed Development Site
- Proposed R6A Rezoning Area
- Proposed C1-3 Commercial Overlay
- Half-Mile Radius
- 85 Census Tract
- Open Space Study Area

would not result in the imposition of noise, air pollutant emissions, odors, or shadows on public open spaces that may alter their usability.

Indirect Effects Analysis

Indirect effects occur to an area's open spaces when a project would add enough population, either workers or residents, to noticeably diminish the ability of an area's open space to serve the existing or future population. The 2014 *CEQR Technical Manual* methodology suggests conducting an initial quantitative assessment to determine whether more detailed analyses are appropriate, but also recognizes that for projects introducing a large population into an area that is underserved by open space, it may be necessary for a full, detailed analysis to be conducted. The proposed rezoning area is not located within an underserved or well-served area as identified in the *CEQR Technical Manual*. However, it should be noted that in the larger study area, census tracts 45, 47, 53, and 77 are within areas identified as underserved by open space (see **Figure D-2**).

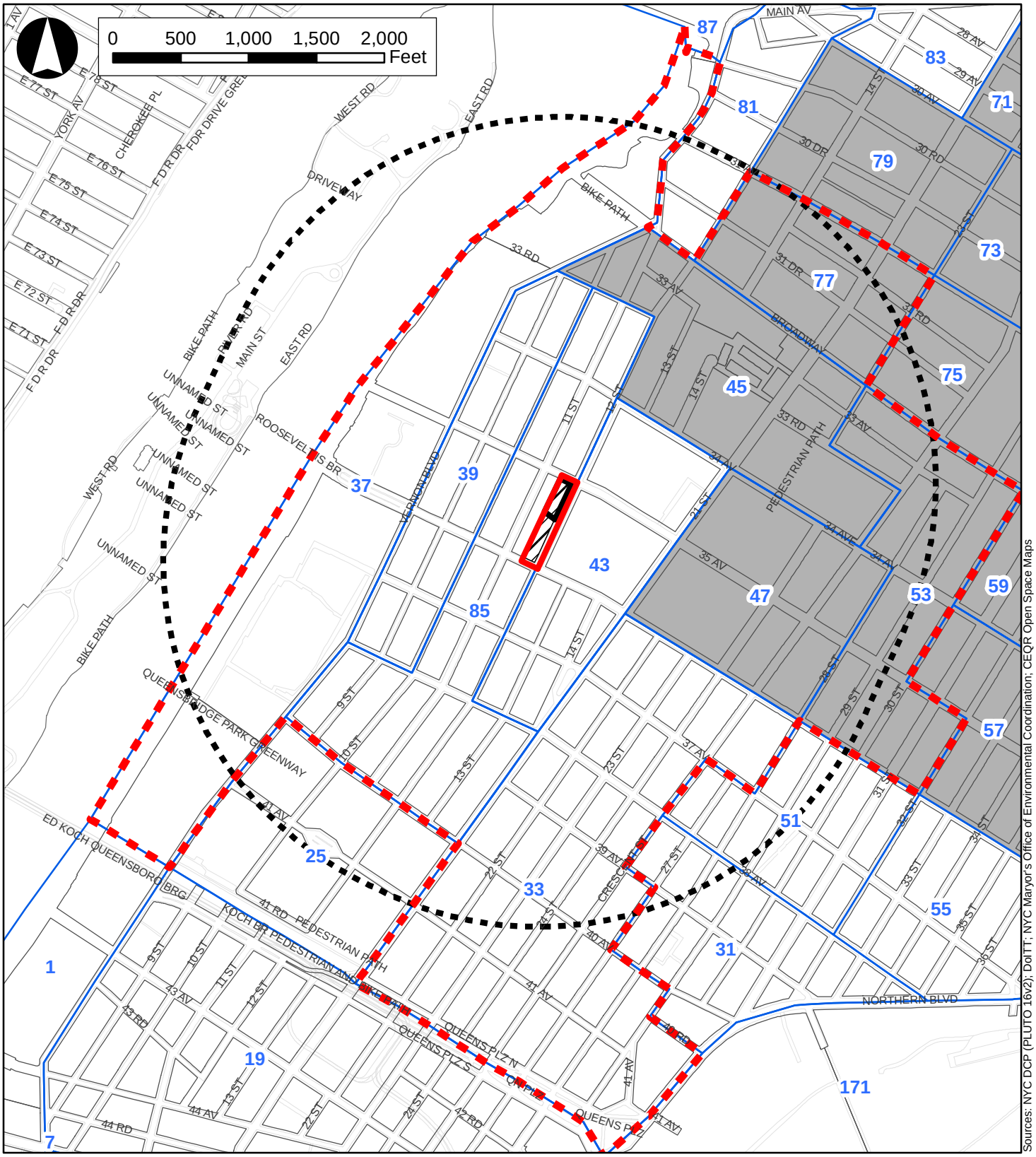
With an inventory of available open space resources and potential users, the adequacy of open space in the study area can be assessed both quantitatively and qualitatively. The quantitative approach computes the ratio of open space acreage to the population in the study area and compares this ratio with *CEQR* guidelines. The qualitative assessment examines other factors that can affect conclusions about adequacy, including proximity to additional resources beyond the study area, the availability of private recreational facilities, and the demographic characteristics of the area's population. Specifically, the analysis in this attachment includes:

- Characteristics of the open space users: residents. To determine the number of residents in the study area, 2011-2015 American Community Survey (ACS) data have been compiled for census tracts comprising the open space study area.
- An inventory of all publicly accessible passive and active recreational facilities in the open space study area.
- An assessment of the quantitative ratio of open space in the study area by computing the ratio of open space acreage to the population in the study area and comparing this open space ratio with certain guidelines. The New York City Department of City Planning (DCP) generally recommends a comparison to the median open space ratio in New York City, which is 1.5 acres of open space per 1,000 residents, and a planning goal of 2.5 acres per 1,000 residents.
- An evaluation of qualitative factors affecting open space use.
- A final determination of the adequacy of open space in the open space study area.

IV. DETAILED ANALYSIS

Pursuant to the guidelines of the 2014 *CEQR Technical Manual,* a preliminary open space assessment was conducted which provided a comparison of the total existing open space ratios and in the future with and without the Proposed Actions. As the study area will exhibit a decrease in the open space ratio (approximately -1.23 percent) under the future With-Action conditions, a detailed open space assessment is warranted and is provided below.

Underserved Open Space Areas



Sources: NYC DCP (PLUTO 16v2); DoITT; NYC Mayor's Office of Environmental Coordination; CEQR Open Space Maps

Legend

- Proposed Development Site
- Proposed R6A Rezoning Area
- Proposed C1-3 Commercial Overlay
- Half-Mile Radius
- Open Space Study Area
- 85 Census Tract
- Underserved Area

Existing Conditions

Demographic Characteristics of the Study Area

To determine the residential population served by existing open space resources, 2011-2015 ACS data were compiled for the nine census tracts comprising the study area. With an inventory of available open space resources and the number of potential users, open space ratios were calculated and compared with existing citywide averages and planning goals set forth by DCP. As mentioned above and shown in **Figure D-1**, the open space study area is comprised of nine census tracts. **Table D-1** shows the 2011-2015 ACS total population figures for each census tract in the study area, as well as for the study area as a whole. As shown in the table, the ACS data indicate that the study area has a total residential population of approximately 21,041 people.

Table D-1: Existing Study Area Population Characteristics

Census Tract	Total Population	Under 5 Years		5 to 9 Years		10 to 14 Years		15 to 19 Years		20 to 64 Years		65+ Years		Median Age
		#	%	#	%	#	%	#	%	#	%	#	%	
33	2,806	113	4.0	109	3.9	108	3.8	101	3.6	2,208	78.7	167	6.0	32.3
37	0	0	-	0	-	0	-	0	-	0	-	0	-	-
39	1,646	113	6.9	106	6.4	10	0.6	172	10.4	1,093	66.4	152	9.2	34.8
43	2,418	204	8.4	154	6.4	127	5.3	253	10.5	1,426	59.0	254	10.5	32.4
45	3,533	159	4.5	65	1.8	210	5.9	116	3.3	2,159	61.1	824	23.3	49.6
47	4,011	198	4.9	347	8.7	295	7.4	215	5.4	2,383	59.4	573	14.3	33.4
53	4,043	217	5.4	32	0.8	78	1.9	72	1.8	3,093	76.5	551	13.6	36.9
77	1,446	90	6.2	30	2.1	44	3.0	40	2.8	1,156	79.9	86	5.9	31.3
85	1,138	109	9.6	99	8.7	107	9.4	84	7.4	665	58.4	74	6.5	31.3
Study Area Total	**21,041**	**1,203**	**5.7**	**942**	**4.5**	**979**	**4.7**	**1,053**	**5.0**	**14,183**	**67.4**	**2,681**	**12.7**	**35.2**
Queens	**2,301,139**	**143,698**	**6.2**	**127,687**	**5.5**	**122,910**	**5.3**	**126,548**	**5.5**	**1,472,493**	**64.2**	**307,903**	**13.3**	**37.7**

Source: U.S. Census Bureau's 2011-2015 ACS Five-Year Estimates "Median Age by Sex" & "Sex by Age"
Notes: Refer to **Figure D-1**

The median population age for individual census tracts within the residential study area ranged from a high of 49.6 years (tract 45) to a low of 31.3 years (tracts 77 and 85). As shown in **Table D-1**, the study area's weighted average median age of 35.2 years is lower than the median age for Queens as a whole, which is 37.7 years.

Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children four years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages five through nine typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for activities such as ball playing, running, and skipping rope. Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 20 and 64 continue to use court game facilities and fields for sports, as well as more individualized recreation such as rollerblading, biking, and jogging, requiring bike paths, promenades, and vehicle-free roadways. Adults also gather with families for picnicking, ad hoc active sports such as Frisbee, and recreational activities in which all ages can participate. Senior citizens typically engage in active recreation such as tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

The residential population of the study area was broken down by age groups, as seen in **Table D-1**. As shown in the table, approximately 80.1 percent of the study area residents are adults, with approximately 67.4 percent between the ages of 20 and 64 and approximately 12.7 percent age 65 and older. Conversely,

19.9 percent of the study area population are children, with 5.7 percent under age five and 14.2 percent between ages five and 19. As such, the study area has a slightly lower proportion of children compared to Queens as a whole; in the borough 22.5 percent of residents are age 19 and younger and 77.5 percent of residents are age 20 and older. This data could reflect a proportionately lower demand for playgrounds and playing fields as compared to the borough.

Inventory of Open Space Resources in the Study Area

According to the 2014 *CEQR Technical Manual*, open space may be public or private and may be used for active or passive recreational purposes. Pursuant to *CEQR*, public open spaces are defined as facilities open to the public at designated hours on a regular basis and are assessed for impacts under *CEQR* guidelines, whereas private open spaces are not accessible to the general public on a regular basis, and are therefore only considered qualitatively. Field surveys and secondary sources were used to determine the number, availability, and condition of publicly accessible open space resources in the study area.

An open space is determined to be active or passive by the uses which the design of the space allows. 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, and typically contains benches, walkways and picnicking areas. However, some passive spaces can be used for both passive and active recreation; such as a green lawn or riverfront walkway, which can also be used for ball playing, jogging or rollerblading.

Within the defined study area, all publicly accessible open spaces were inventoried and identified by their location, size, owner, type, utilization, equipment, hours, and condition of available open space. The information used for this analysis was gathered from the New York City Department of Parks and Recreation's (DPR) website; DCP's Primary Land Use Tax Lot Output (PLUTO) data; and through PHA field inventories conducted in February 2017.

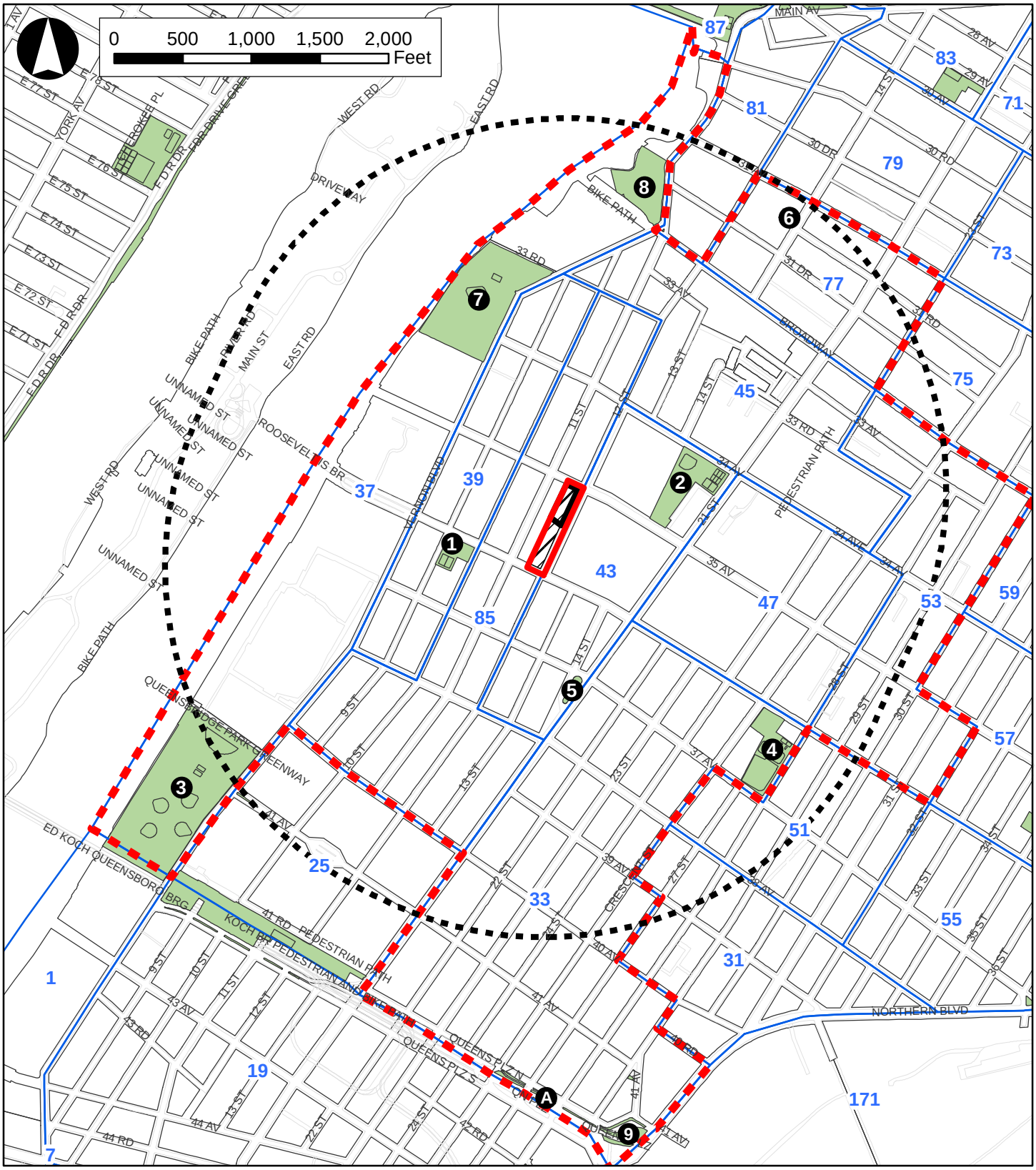
The condition of each open space facility was categorized as "Excellent," "Good," or "Fair." A facility was considered in excellent condition if the area was clean, attractive, and all equipment was present and in good repair. A good facility had minor problems such as litter, or older but operative equipment. A fair facility was one that was poorly maintained, had broken or missing equipment, lack of security, or other factors that would diminish the facility's attractiveness. Determinations were made based on visual assessments of the facilities.

Likewise, judgments as to the intensity of use of the facilities were qualitative, based on an observed degree of activity or utilization on a weekday from 11:00 AM until 3:00 PM, which is considered the weekday peak utilization period according to the 2014 *CEQR Technical Manual*. If a facility seemed to be at or near capacity with the majority of equipment in use, then utilization was considered heavy. If equipment was in use but could accommodate additional users, utilization was considered moderate. If equipment was being used by few people, utilization was considered light. **Table D-2** identifies the address, ownership, hours, acreage of active and passive open spaces in the study area, and their condition and utilization. **Figure D-3** maps their location in the study area.

Quantitative Analysis of Open Space Adequacy

There are nine publicly-accessible open space resources within the study area which are included in the quantitative analysis. These resources comprise a total of approximately 40.80 acres, of which approximately 68.14 percent (27.80 acres) is active open space and approximately 31.86 percent (13.00 acres) is passive open space.

Open Space Resources



In the study area, the closest public open space resource to the proposed rezoning area is the 0.79-acre Spirit Playground (#1), located at 36th Avenue between 9th and 10th Streets, east of the proposed rezoning area. Spirit Playground is jointly operated by DPR and the New York City Department of Education (DOE), and contains basketball and handball courts, playgrounds, spray showers, and benches. It is in excellent condition and is lightly utilized.

Just northwest of the proposed rezoning area is Ravenswood Playground (#2), which is located within the New York City Housing Authority's (NYCHA's) Ravenswood Houses campus and operated by DPR. The 2.76-acre playground is bounded by 21st Street, 34th Avenue, and 35th Avenue. This open space resource includes fitness equipment, playgrounds, basketball and handball courts, spray showers, and benches. It is lightly utilized and considered to be in good condition. Low utilization may be attributed to the adjacent Department of Sanitation (DSNY) transfer station which generally may produce excessive noises and unattractive odors.

Another open space resource in close proximity to the proposed rezoning area is Sixteen Oaks Grove (#5) bounded by 37th Avenue, 14th Street, and 21st Street to the southeast of the proposed rezoning area. The small, 0.22-acre park is operated by DPR and includes sixteen oak trees and benches. Mostly due to old, neglected benches and overflowing garbage cans and litter, this park is considered to be in fair condition and is lightly utilized.

Rainey Park (#7) is a waterfront open space located northwest of the proposed rezoning area, bounded by 33rd Road, Vernon Boulevard, 34th Avenue, and the East River. Rainey Park is operated by DPR, and contains 8.09 acres of recreational space, including baseball fields, playgrounds, eateries, bathrooms, bicycle paths, walking paths, dog-friendly areas, and benches. It is moderately utilized and is in excellent condition.

Queensbridge Park (#3) is located to the southwest of the proposed rezoning area on Vernon Boulevard roughly between 40th Avenue and 41st Road. Queensbridge Park is the largest open space resource within the open space study area, spanning 20.34 acres, and is operated by DPR. The waterfront park includes barbecuing areas, bathrooms, baseball fields, dog-friendly areas, eateries, handball courts, playgrounds, spray showers, bicycle paths, walking paths, and benches. It is in good condition and is moderately utilized.

In the northern section of the open space study area is the Socrates Sculpture Garden (#8), also a waterfront park located on Vernon Boulevard between Broadway and 30th Drive. The 4.89-acre park is operated by DPR and includes art installments, eateries, and benches. It is in excellent condition and is moderately utilized.

Also north of the proposed rezoning area is the Astoria Health Playground (#6) which is located on 14th Street between 31st Avenue and 31st Drive. The 0.21-acre park is located adjacent to the New York City Department of Health's Astoria Health Center and is operated by DPR. The playground includes amenities such as playground equipment and benches. However, according to DPR's website, the Astoria Health Playground is planned for reconstruction and is currently in the procurement phase. Funding from the Mayor's office ranges between $1 million and $3 million for the project, which is expected to be completed by 2019. Upon completion, the playground may include additional amenities in the future. The existing playground is in good condition and is lightly utilized.

Table D-2: Inventory of Existing Study Area Public Open Spaces

Map No.	Name	Address	Owner/ Agency	Amenities	User Groups	Hours of Access	Total Acres	Active		Passive		Condition & Utilization
								%	Acres	%	Acres	
1	Spirit Playground	36th Ave btwn 9th Street and 10th Street	DPR/DOE	Basketball and Handball Courts, Playgrounds, Spray Showers, Benches	Children, Teenagers, Adults	Dawn – 9PM	0.79	90	0.71	10	0.08	• Excellent Condition • Light Utilization
2	Ravenswood Playground	21st Street btwn 34th Avenue and 35th Avenue	DPR	Fitness Equipment, Playgrounds, Basketball and Handball Courts, Chess/Checkers Tables, Spray Showers, Benches	Children, Teenagers, Adults, Senior Citizens	Dawn – 12AM	2.76	80	2.21	20	0.55	• Good Condition • Light Utilization
3	Queensbridge Park	41st Road, 40th Avenue btwn the East River, Vernon Boulevard, and 21st Street	DPR	Barbecuing Areas, Bathrooms, Baseball Fields, Dog-friendly Areas, Eateries, Handball Courts, Playgrounds, Spray Showers, Bicycle Paths, Walking Paths, Benches	Children, Teenagers, Adults, Senior Citizens	Dawn – 9PM	20.34	80	16.27	20	4.07	• Good Condition • Moderate Utilization
4	Dutch Kills Playground	28 Street, Crescent Street btwn 37th Avenue and 36th Avenue	DPR/DOE	Playgrounds, Basketball and Handball Courts, Spray Showers, Benches, Bathrooms	Children, Teenagers, Adults	Dawn – 9PM	2.40	90	2.16	10	0.24	• Good Condition • Moderate Utilization
5	Sixteen Oaks Grove	37th Avenue, 14th Street, 21st Street	DPR	Benches	Adults, Senior Citizens	Dawn - Dusk	0.22	0	0.0	100	0.22	• Fair Condition • Light Utilization
6	Astoria Health Playground	14th Street btwn 31st Avenue and 31st Drive	DPR	Playground, Benches	Children, Teenagers, Adults	Dawn – 9PM	0.21	90	0.19	10	0.02	• Good Condition • Light Utilization
7	Rainey Park	Vernon Boulevard btwn 33rd Road and 34th Avenue	DPR	Baseball Fields, Dog-friendly Areas, Playgrounds, Eateries, Bathrooms, Bicycle Paths, Walking Paths, Benches	Children, Teenagers, Adults, Senior Citizens	Dawn – 9PM	8.09	70	5.66	30	2.43	• Excellent Condition • Moderate Utilization
8	Socrates Sculpture Park	Vernon Boulevard btwn Broadway and 30th Drive	DPR	Eateries, Benches, Art	Teenagers, Adults, Senior Citizens	Dawn – 9PM	4.89	10	0.49	90	4.40	• Excellent Condition • Moderate Utilization
9	Dutch Kills Green	Queens Plaza, Northern Boulevard	DOT/DPR	Benches	Teenagers, Adults, Senior Citizens	Dawn – 9PM	1.10	10	0.11	90	0.99	• Excellent Condition • Light Utilization
						Total Open Space in Quantitative Analysis:	**40.80**	**68.14**	**27.80**	**31.86**	**13.00**	

Sources: Department of Parks and Recreation's "Find A Park" website; DCP's PLUTO data; PHA site visits (February 2017).
Notes: Refer to **Figure D-3**

Dutch Kills Playground (#4), located southeast of the proposed rezoning area, is roughly bounded by 28th Street, Crescent Street, 36th Avenue, and 37th Avenue. The 2.4-acre playground is jointly operated by DPR and DOE, and includes amenities such as playgrounds, basketball and handball courts, spray showers, benches, and bathrooms. The existing playground is in good condition and is moderately utilized.

Dutch Kills Green (#9) is a greenstreet/park located on a former parking lot towards the eastern end of the plaza. This open spaces is jointly operated by the City's Department of Transportation (DOT) and DPR, and takes up approximately 1.1 acres in space. The park includes native plant wetlands, benches, a small amphitheater, and two historic Dutch millstones from the 1600's. This open space is in excellent condition and is lightly utilized. However, it should be noted that though this open space resource is found within the open space study area, it does not fall within the half-mile boundary of the proposed rezoning area.

As shown in **Table D-3** below, with a residential population of 21,041, the total open space ratio for residents in the study area is 1.94 acres per 1,000 residents, which is more than the citywide average of 1.50 acres of parkland per 1,000 residents, yet less than DCP's planning guideline of 2.50 acres per 1,000 residents. The area's existing active open space ratio (1.32 acres) is below the City's planning guidelines of 2.00 acres of active open space per 1,000 residents, while the passive open space ratio (0.62 acres) is slightly over the City's planning guidelines of 0.50 acres of passive open space per 1,000 residents.

Table D-3: Adequacy of Open Space Resources in the Study Area – Existing Conditions

	Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP's Open Space Guidelines		
		Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Residents	21,041	40.80	27.80	13.00	1.94	1.32	0.62	2.50	2.00	0.50

Sources: U.S. Census Bureau's 2010-2015 ACS Five-Year Estimates "Median Age by Sex" & "Sex by Age"; Department of City Planning Open Space Guidelines; Department of Parks and Recreation's "Find A Park" website

Qualitative Analysis of Open Space Adequacy

A series of greenstreets can be found along Queens Plaza North within the open space study area, spanning from 21st Street to Northern Boulevard. Though these open space resources are located within the open space study area, according to *CEQR* guidelines, greenstreets are not to be included in the quantitative analysis, and instead should be included in the qualitative analysis. The greenstreets (labeled "A" in **Figure D-3**) add native plantings and unique walking paths to the streetscape. These open spaces are in excellent condition and are lightly utilized.

Additionally, as mentioned above, there are several open space resources located immediately outside of the study area that, given their proximity to the study area, are likely utilized by study area residents. Two open space resources found within census tract 25 are in close proximity to the open space study area: the 0.66-acre Queensbridge "Baby" Park (approximately 3,000 feet to the southwest of the proposed rezoning area) and the 6-acre Queensbridge Park Greenway (approximately 3,000 feet to the southwest of the proposed rezoning area). The Queensbridge "Baby" Park is operated by DPR, includes handball courts and benches, is in good condition, and is lightly utilized. The Queensbridge Park Greenway is jointly operated by DOT and DPR, includes bicycle paths, walking paths, benches, and native plantings, is in excellent condition, and is heavily utilized.

Future Without the Proposed Actions (No-Action Condition)

Open Space Resources

In the future without the Proposed Actions, as discussed in Attachment C, "Land Use, Zoning, and Public Policy," no changes are anticipated in the proposed rezoning area; it would continue to be occupied by warehouses, light industrial/manufacturing buildings, and auto body repair shops. As such, no existing open space resources are expected to be affected as a result of any new developments within the proposed rezoning area. Under the No-Action condition, no removal of any existing nor the addition of any new open space resources would be anticipated by the analysis year 2024.

Study Area Population

Under RWCDS No-Action conditions, approximately six additional DUs and 15 additional residents are anticipated in the open space study area (refer to Attachment C). As such, it is anticipated that the residential population will increase to 21,056 under the No-Action condition by the analysis year 2024.

Quantitative Analysis of Open Space Adequacy

As shown in **Table D-4** below, in the absence of the Proposed Actions, the available public open spaces in the study area would be identical to existing conditions, with approximately 40.80 acres of open space (27.80 active acres and 13.00 passive acres). Since no significant change in residential population is anticipated in the No-Action condition, the total open space ratio would remain relatively the same as the existing condition, at approximately 1.94 acres per 1,000 residents. This would continue to be slightly above the citywide average of 1.50 acres of parkland per 1,000 residents yet below DCP's recommended planning guideline of 2.50 acres per 1,000 residents. The active and passive open space ratios would remain relatively similar as well at 1.32 acres per 1,000 residents (below DCP's recommended guidelines), and 0.62 acres per 1,000 residents (surpassing DCP's recommended guidelines), respectively.

Table D-4: Adequacy of Open Space Resources in the Study Area – No-Action Conditions

Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP's Open Space Guidelines		
	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
21,056[1]	40.80	27.80	13.00	1.94	1.32	0.62	2.50	2.00	0.50

Sources: U.S. Census Bureau's 2010-2015 ACS Five-Year Estimates "Median Age by Sex" & "Sex by Age"; Department of City Planning Open Space Guidelines; Department of Parks and Recreation's "Find A Park" website

[1] Residential increment based on an average of 2.34 persons per household in Queens Community District 1 (U.S. Census Bureau's 2011-2015 Five-Year ACS Estimates).

Qualitative Analysis of Open Space Adequacy

Although the study area's open space resources would continue to be below DCP's recommended open space guidelines under No-Action conditions, this deficiency would be ameliorated by additional open space resources not included in the quantitative assessment. Although resources such as Queensbridge "Baby" Park and the Queensbridge Park Greenway are not included in the quantitative analysis per *CEQR* guidelines, they are in close proximity to the proposed rezoning area and add a considerable amount of publicly-accessible active and passive open space (approximately 6.66 acres) for utilization by study area residents.

Future With the Proposed Actions (With-Action Condition)

Open Space Resources

In the future with the Proposed Actions, it is anticipated that portions of the proposed rezoning area would be redeveloped with residential and mixed-use buildings, as discussed below. No new on-site, shared open space resources are anticipated as a result of the Proposed Actions.

Study Area Population

Under RWCDS With-Action conditions, portions of the proposed rezoning area would be developed with approximately 116 new DUs. This increment, along with the additional population anticipated from the no-build sites identified in Attachment C, "Land Use, Zoning, & Public Policy," would introduce an additional 284 residents to the open space study area in the future with the Proposed Actions. Therefore, the residential population of the open space study area in With-Action conditions would total 21,327 people.

Quantitative Analysis of Open Space Adequacy

In the future with the Proposed Actions, there would continue to be 40.80 acres of open space in the study area, of which 27.80 acres would be for active uses and 13.00 acres would be for passive uses (refer to **Table D-5**). With an estimated future residential population of 21,327, the total open space ratio per 1,000 residents would drop slightly to 1.91 acres per 1,000 residents (a decrease of 0.03 acres, and a -1.29 percent change from the No-Action conditions), continuing to be above the citywide average of 1.50 acres of parkland per 1,000 residents yet below DCP's recommended planning guideline of 2.50 acres per 1,000 residents. Under With-Action conditions, the active open space ratio would decrease to 1.30 acres per 1,000 residents (a decrease of approximately 0.02 acres). The passive open space ratio would decrease slightly to 0.61 acres per 1,000 residents. The active open space ratio would continue to be below the City's recommended guidelines, while the passive open space ratio would continue to be above the City's guidelines.

Table D-5: Adequacy of Open Space Resources in the Study Area – With-Action Conditions

Total Population	Open Space Acreage			Open Space Ratios Per 1,000-People			DCP's Open Space Guidelines		
	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
21,327[1]	40.80	27.80	13.00	1.91	1.30	0.61	2.50	2.00	0.50

Sources: U.S. Census Bureau's 2010-2015 ACS Five-Year Estimates "Median Age by Sex" & "Sex by Age"; Department of City Planning Open Space Guidelines; Department of Parks and Recreation's "Find A Park" website

[1] Residential increment based on an average of 2.34 persons per household in Queens Community District 1 (U.S. Census Bureau's 2011-2015 Five-Year ACS Estimates).

Though the area would continue to fall short of the amount of open space resources recommended by the City, especially in regards to active open space, the demand for open space generated by the Proposed Actions would not exacerbate the No-Action deficiency. Since the decrease in the total open space ratio for the study area is below the significant impact threshold of five percent and the area is not underserved, the Proposed Actions would not result in significant adverse impacts to open space, as per the 2014 *CEQR Technical Manual*.

Qualitative Analysis of Open Space Adequacy

As previously stated, the Proposed Actions would not result in any direct displacement of existing public open space resources, nor would the Proposed Actions significantly exacerbate the deficiency in open space

in the study area. The study area contains nine publicly accessible open spaces, most of which are in good to excellent condition. These open spaces provide a range of active and passive amenities, including playgrounds and fitness equipment, basketball and handball courts, baseball fields, chess/checkers tables, benches, bathrooms, spray showers, art installments, dog-friendly areas, bicycle paths, and walking paths. Vast amounts of open space resources are also located immediately adjacent to the open space study area, including Queensbridge "Baby" Park and the Queensbridge Park Greenway. These are significant open space resources which would likely be utilized by study area residents, alleviating any low ratios of open space resources located within the study area.

The population added as a result of the Proposed Actions is not expected to noticeably affect utilization of the study area's open spaces. In the future with the Proposed Actions, ratios of open spaces to residents would continue to be higher than citywide averages of open space yet lower than the optimal planning goals furnished by DCP, particularly regarding active open space. The residents generated by the Proposed Actions are not expected to have any special characteristics, such as a disproportionately older or younger population, that would place heavy demands on facilities that cater to specific user groups. The residents in the future with the Proposed Actions are expected to exhibit similar characteristics to the current residents of the study area and the breakdown of the population is expected to remain the same.

Assessment

Pursuant to *CEQR* guidelines, a significant adverse open space impact may occur if a proposed project would reduce the open space ratio by more than five percent in areas that are currently below the City's median community district open space ratio of 1.5 acres per 1,000 residents. In areas that are extremely lacking in open space, a reduction as little as one percent may be considered significant, depending on the area of the City. These reductions may result in overburdening existing facilities or further exacerbating a deficiency in open space.

With respect to the reduction in open space in the study area, the residential total open space ratio would decrease by 1.29 percent from the No-Action condition. In addition, both the active and passive open space ratios would also experience a 1.29 percent decrease, where the active open space ratio would decrease from 1.32 to 1.30 and the passive open space ratio would decrease from 0.62 to 0.61. As the passive open space ratio for the residential study area would remain above the City's guideline ratio of 0.5 acres of passive open space per 1,000 residents, residents in the half-mile study area would continue to be well-served by passive open space resources. While the total and active open space ratios would remain less than the City's guideline ratios of 2.5 acres of open space, including 2.0 acres of active open space, per 1,000 residents, these guideline ratios are not considered *CEQR* impact thresholds on their own.

The reduction in the total open space ratio in the residential study area is further ameliorated by several factors, including the proposed rezoning area's proximity to additional large open space resources not included in the quantitative open space analysis and the current quality condition, variety, and relatively low utilization of existing open space resources.

Attachment E

Urban Design & Visual Resources

I. INTRODUCTION

Together, the urban design components and visual resources of an area define the distinctive identity of a neighborhood. In an urban design and visual resources assessment guided by the *2014 CEQR Technical Manual*, one considers whether and how a proposed action may change the experience of a pedestrian in the study area. The assessment focuses on the components of a project that may have the potential to alter the arrangement, appearance, and functionality of the built environment, as experienced by pedestrians in the study area. These components include building bulk, use, and type; building arrangement; block form and street pattern; streetscape elements; street hierarchy; natural features and visual resources. The concept of bulk is created by the size of a building and the way it is massed on a site. Height, length, and width define a building's size; volume, shape, setbacks, lot coverage, and density define its mass. A visual resource can include views of the waterfront, public parks, landmark structures and districts or otherwise distinct buildings, and natural resources.

This attachment considers the potential of the Proposed Actions to affect the urban design characteristics and visual resources of the proposed rezoning area and secondary study area. The analysis follows the guidelines of the *CEQR Technical Manual* and addresses each of the urban design characteristics for existing conditions and the future without and with the Proposed Actions for the analysis year of 2024. As detailed in Attachment A, "Project Description," the Applicant is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1 (refer to **Figure E-1**). The Proposed Actions include: (i) a zoning map amendment to rezone the project area from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the area a Mandatory Inclusionary Housing (MIH) Area. As shown in **Figure E-1**, the proposed rezoning area consists of the eastern half of Queens Block 331, including Lot 27 (the Applicant-owned proposed development site), Lot 50, and the eastern portions of Lots 8 and 38.

The 24,589 sf Applicant-owned proposed development site on Lot 27 currently contains a single-story, approximately 10,320 sf warehouse. In the RWCDS future with the Proposed Actions, the Applicant would demolish the existing warehouse and construct a new eight-story (85-foot tall), approximately 92,946 gross square foot (gsf) (approximately 88,520 zoning square foot [zsf]) mixed-use residential and commercial building on the site, with a floor area ratio (FAR) of 3.6. The proposed building would contain 82 dwelling units (DUs), and 30 percent of residential floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of ground-floor retail space and up to 77 surface and underground accessory parking spaces.[1]

Two other sites in the proposed rezoning area are also expected to be redeveloped with mixed-use residential and commercial buildings in the 2024 future with the Proposed Actions: Lots 38 and 50. It is therefore anticipated that the Proposed Actions would result in a net increase of approximately 109,680 gsf (104,457 zsf) of residential space with 116 DUs (39 affordable) and approximately 22,143 gsf (21,089 zsf)

[1] The RWCDS assumes the proposed development site would be built out to the maximum With-Action permitted FAR of 3.6. For conservative analysis purposes, this assumption is higher than shown in the Applicant's architectural drawings in the Land Use Application, which assume a built FAR of 3.54.

of commercial space in the proposed rezoning area by 2024. Absent the Proposed Actions, no development is expected to occur in the proposed rezoning area.

II. PRINCIPAL CONCLUSIONS

The proposed actions would result in alterations to current height/setback requirements and would represent a notable change in the urban design character of the project site compared to No-Action conditions. The visual appearance and thus the pedestrian experience in the vicinity of the proposed rezoning area would change considerably. However, this change would not constitute a significant adverse urban design impact in that it would not alter the arrangement, appearance, or functionality of the project site such that the alteration would negatively affect a pedestrian's experience of the area. Rather, development anticipated in the With-Action condition would improve the pedestrian experience in the vicinity of the project site by replacing currently nonconforming industrial uses with mixed use residential/commercial buildings with ground-floor retail space, creating a more active and pedestrian friendly streetscape.

The proposed streetwalls are generally consistent with existing development in the proposed rezoning area and the surrounding context and would contribute to an enhanced pedestrian environment that would include improved sidewalk conditions and street tree plantings. The scale of future development would be appropriate for the scale of the streets adjacent to the project site and study area. Additionally, the proposed development would be consistent with existing taller buildings in the surrounding area in terms of height and bulk (i.e. Ravenswood Houses).

The With-Action development would not modify existing views of any visual resources located within, or visible from, the project site and study area.

III. METHODOLOGY

Determining Whether an Urban Design Analysis is Necessary

Urban design is the totality of components that may affect a pedestrian's experience of public space. These components include streets, buildings, visual resources, open space, natural features, and wind and sunlight conditions. These elements, as defined in the *2014 CEQR Technical Manual*, are described below:

- ***Streets***. The arrangement and orientation of streets define the location and flow of activity in an area, set street views, and create the blocks on which buildings and open spaces are organized. The apportionment of street space between cars, bicycles, transit, and sidewalk areas is critical to making a successful streetscape, as is the careful design of street furniture, grade, materials used, and permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, or newsstands.

- ***Buildings.*** A building's street walls form the most common backdrop in the city for public space. A building's size, shape, setbacks, lot coverage, placement on the zoning lot and block, the orientation of active uses, and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape. The public realm also extends to building façades and rooftops, offering more opportunity to enrich the visual character of an area.

- ***Visual Resources.*** A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

- ***Open Space.*** For the purpose of urban design, open space includes public and private areas such as parks, yards, cemeteries, parking lots and privately owned public spaces.

- ***Natural Features.*** Natural features include vegetation and geologic, topographic, and aquatic features. Rock outcroppings, steep slopes or varied ground elevation, beaches, or wetlands may help define the overall visual character of an area.

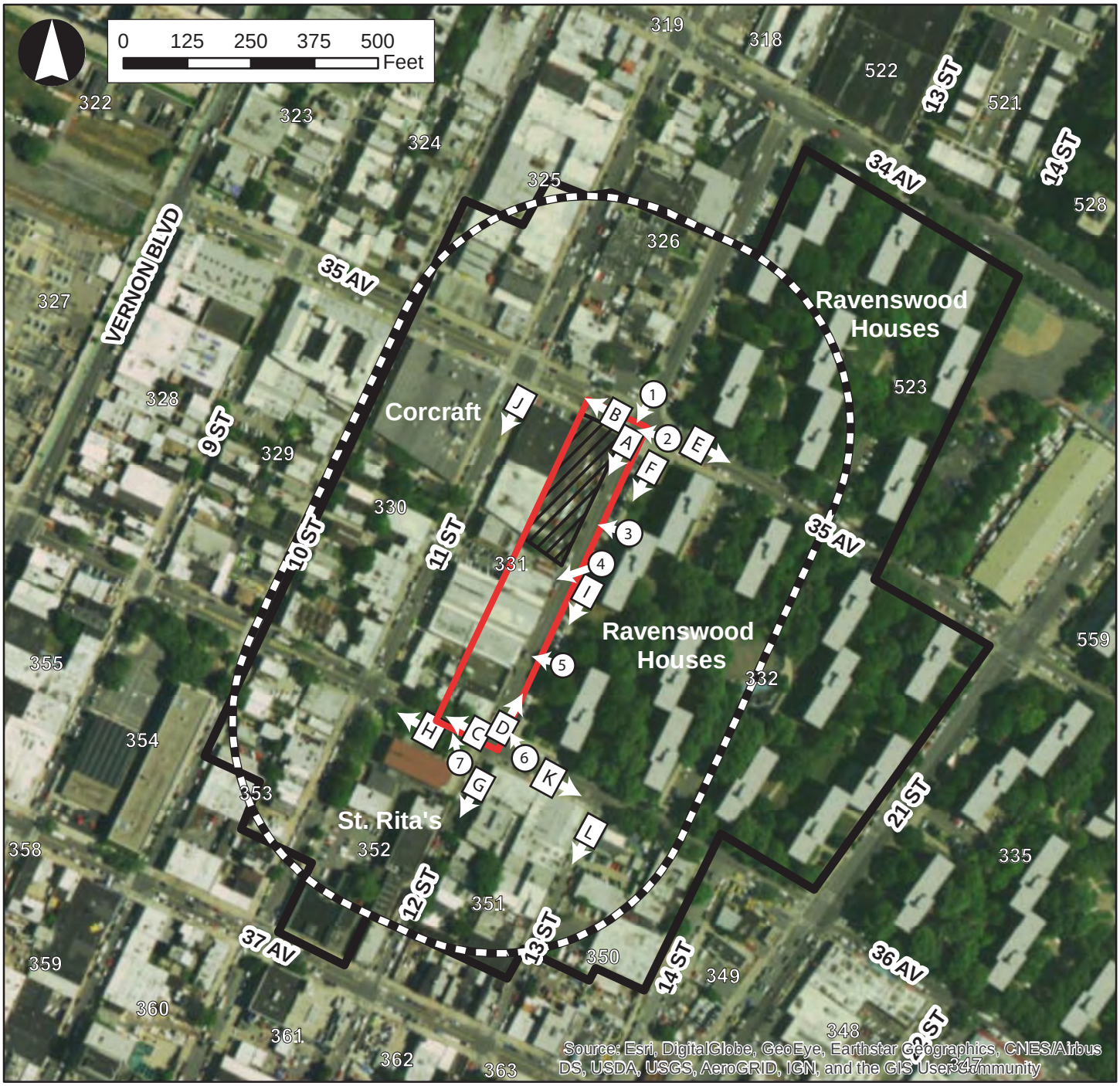
- ***Wind.*** Channelized wind pressure from between tall buildings and down washed wind pressure from parallel tall buildings may cause winds that jeopardize pedestrian safety.

Based on the *CEQR Technical Manual*, an assessment of urban design and visual resources 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. Examples include projects that permit the modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed "as-of-right" or in the future without the proposed project. The Proposed Actions would result in physical alterations in the proposed rezoning area not allowed by existing zoning, which would be observable by pedestrians. Therefore, the Proposed Actions meet the threshold for an assessment of potential impacts to urban design and visual resources.

Per criteria of Section 230 of the *CEQR Technical Manual*, a wind condition analysis is not required for the Proposed Actions. The proposed rezoning area is located in the Ravenswood neighborhood of Queens, and is not located in a high wind location such as immediately along the waterfront, or other location where winds from the waterfront are not attenuated by buildings or natural features, which may result in an exacerbation of wind conditions due to "channelization" or "downwash" effects that may affect pedestrian safety. Therefore, a pedestrian wind conditions analysis is not warranted for the Proposed Actions.

Study Area

As defined in the *2014 CEQR Technical Manual*, the urban design and visual resources study areas consist of the areas where the Proposed Actions may influence land use patterns and the built environment, and are generally consistent with the land use analysis in Attachment C, "Land Use, Zoning, & Public Policy." For visual resources, the view corridors within the secondary study area from which such resources are publicly viewable should be identified. Pedestrian views to the proposed rezoning area are limited primarily to surrounding streets. Therefore, for the purpose of this assessment, the primary study area consists of the proposed rezoning area, and the secondary study area includes of the area within an approximate 400-foot radius of the proposed rezoning area. As shown in **Figure E-1**, the secondary study area is generally bounded by 10th Street to the west, midblock between 36th and 37th Avenues to the south, 14th Street/21st Street to the east, and midblock between 34th and 35th Avenues to the north.



Legend

- Proposed Rezoning Area
- Proposed Development Site
- 400-Foot Radius
- Urban Design Study Area
- 349 Block Number
- 3 Views of Proposed Rezoning Area
- E Views of Study Area Streetscape

IV. EXISTING CONDITIONS

Urban Design

Proposed Rezoning Area

The approximately 57,904 sf proposed rezoning area comprises the eastern half of Queens Block 331, fronting 12th Street between 35th and 36th Avenues. In addition to the Applicant-owned proposed development site on Lot 27, the proposed rezoning area encompasses all of Lot 50 and the eastern portions of Lots 8 and 38 on Block 331 (refer to **Figure E-1**).

Lot 8

As shown in **Figure E-1**, Lot 8 is an approximately 41,600 sf through-lot located in the middle of Block 331 with approximately 185 feet of frontage along 11th Street and approximately 250 feet of frontage along 12th Street. Approximately 23,167 sf of Lot 8 (56 percent of the lot) is located within the proposed rezoning area. Lot 8 contains two red-brick industrial/manufacturing buildings totaling approximately 40,000 sf (0.96 FAR). Both buildings are built-out to the lot line, creating continuous streetwalls along 11th and 12th avenues. The larger building on Lot 8 is two- to three-stories tall and houses the All City Switchboard Corp. (switchgear and switchboard manufacturing). Immediately south is an adjacent two-story building which houses Superior Selected Stone (wholesale). The lot also accommodates a small at-grade parking and loading area with an entrance on 11th Street.

Lot 27

The Applicant-owned proposed development site at 11-14 35th Avenue (Lot 27) is located on the northeastern corner of Block 331, with approximately 92 feet of frontage along 35th Avenue and approximately 275 feet of frontage along 12th Avenue (refer to **Figure E-1**). The approximately 24,589 sf lot contains a single-story, approximately 10,320 gsf red-brick warehouse (0.42 FAR) fronting 35th Avenue. As shown in **Figure E-2a**, the remainder of the lot contains at-grade parking surrounded by aluminum fencing. The warehouse and lot store cranes and other construction-related equipment for the United Crane and Rigging Corporation.

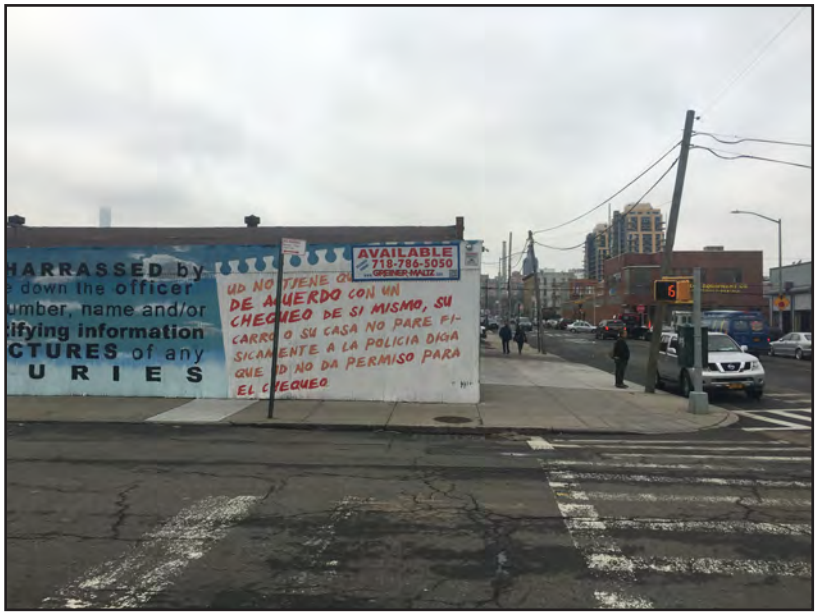
Lot 38

Lot 38 is an irregularly-shaped, approximately 4,500 sf site with approximately 35 feet of frontage along 12th Street. The lot contains a single-story, approximately 2,189 sf building housing Bravo One Auto Body Repair (0.49 FAR) and adjacent at-grade vehicle parking (refer to **Figure E-2a**). The majority of Lot 38 (91 percent of the lot area, or approximately 4,113 sf) is located within the proposed rezoning area.

Lot 50

As shown in **Figure E-1**, Lot 50 is on the southeast corner of Block 331, with approximately 65 feet of frontage along 36th Avenue and approximately 92.6 feet of frontage along 12th Street. Lot 50 contains two single-story brick buildings totaling approximately 2,542 sf (0.42 FAR) and adjacent at-grade vehicle parking for America's Auto Repair. The two buildings are constructed out to the lot lines, creating continuous streetwalls along 12th Street and 36th Avenue, and are covered in graffiti (refer to **Figure E-2b**).

1. View looking south from 35th Avenue



2. View looking west from 12th Street and 35th Avenue

3. View looking west from 12th Street

4. View looking southwest from 12th Street

**All photos taken on March 28, 2018*

5. View looking west from 12th Street

6. View looking west from 12th Street

7. View looking north from 36th Avenue

**All photos taken on March 28, 2018*

Secondary Study Area

Streets & Streetscape

As discussed above, the secondary study area has been defined as the area within an approximate 400-foot radius of the proposed rezoning area. Thoroughfares in the study area generally adhere to a standard street grid with northeast-southwest streets and east-west avenues creating rectangular blocks. As shown in **Figure E-1**, the two blocks encompassing the New York City Housing Authority (NYCHA) Ravenswood Houses to the east and northeast of the proposed rezoning area (Blocks 332 and 523) are "superblocks" approximately three times the size of others in the area.

All streets in the secondary study area accommodate predominately local traffic. 12th Street north of 36th Avenue, which forms the eastern boundary of the proposed rezoning area, measures 80 feet in width and features north- and southbound travel lanes, parallel parking on the west side, angled parking on the east side, and a 15-foot wide concrete sidewalk on the east side of the street fronting the Ravenswood Houses. South of 36th Avenue, 12th Street narrows to 50 feet in width and includes a single northbound travel lane and street-side parallel parking. 35th and 36th Avenues, which also create the proposed rezoning area's northern and southern borders, respectively, both feature east- and westbound travel lanes, 15-foot wide concrete sidewalks, and parallel parking on both sides of the street. 35th Avenue west of 12th Street measures 72 feet in width, while 35th Avenue east of 12th Street measures 80 feet in width. The street widths at 36th Avenue are slightly narrower, measuring 65 feet in width on the section of the street west of 12th Street, while 36th Avenue east of 12th Street measures 75 feet in width. Both 35th and 36th Avenues accommodate the heaviest traffic within the secondary study area. To the west of the proposed rezoning area, 11th Street measures 75 feet in width and features north- and southbound travel lanes and street-side parallel parking. 10th Street includes a single northbound travel lane and offers parallel parking on both sides of the street. 13th Street, located southeast of the proposed rezoning area, includes north- and southbound travel lanes and street-side parallel parking. Both 10th Street and 13th Street are the narrowest streets found within the secondary study area, each measuring 45 feet in width.

Concrete sidewalks flank all streets in the secondary study area, and are generally in fair condition. All sidewalks in the secondary study area accommodate numerous curb cuts as well as street lights, street signs, utility poles, fire hydrants, and occasional street trees. There is no street furniture in the secondary study area, except for two payphones and a mailbox at the intersection of 12th Street and 36th Avenue (refer to **Figure E-3)**.

Buildings

The secondary study area includes portions of ten blocks within an approximate 400-foot radius of the proposed rezoning area. As shown in **Figures E-4, E-5, and E-6**, these blocks contain a variety of building types, heights, and densities.

Block 325

Buildings in the southern portion of Block 325 located within the secondary study area are generally considered medium density, ranging from 0.88–2.0 FAR and one- to two-stories in height, except for newer residential buildings which are generally built to three stories (specifically found on 10th Street). A majority of these buildings contain industrial/manufacturing uses, along with one single-story parking garage and four small residential buildings. The residential buildings on Block 325 are generally located on small lots, whereas industrial/manufacturing uses are found on much larger lots. Most buildings are generally built to the streetline creating a continuous streetwall, though usually without windows and active pedestrian uses;

A. View looking south on 12th Street

B. View looking west on 35th Avenue

C. View looking west on 36th Avenue

D. View looking north on 12th Street

**All photos taken on March 28, 2018*

E. View looking east on 35th Avenue

F. View looking south on 12th Street

G. View looking south on 12th Street

H. View looking west on 36th Avenue

**All photos taken on March 28, 2018*

I. View looking south on 12th Street

J. View looking south on 11th Street

K. View looking east on 36th Avenue

L. View looking south on 13th Street

**All photos taken on March 28, 2018*

new residential buildings are generally set back 15 feet from the streetline, where the front yard typically functions as private parking. Most buildings were constructed before 1962, except for the few instances of new residential buildings, which were built in 2004. Buildings in Block 325 are predominately faced in redbrick.

Block 326

Buildings in the southern portion of Block 326 located within the secondary study area are generally low density, with built FARs atypically around 1.0. Existing buildings include a mixture of industrial/manufacturing, parking garages and lots, and small residential buildings. Industrial/manufacturing buildings are mostly built on larger lots, ranging between one- and 1.5-stories in height, and are built out to the lot lines, creating continuous (and inactive) streetwalls. Accessory parking lots are largely surrounded by aluminum or chain-link fencing. One- to two-story residential buildings are generally located on small, narrow lots, and are usually setback 20- to 65-feet from the streetline, creating extensive front yards that typically accommodate parking. Most buildings are predominately faced in redbrick, except for a few built with cinderblock. The majority of these buildings were built prior to 1963.

Block 330

Buildings on Block 330 located immediately west of the proposed rezoning area generally vary in use, density, and heights. The block's largest lot (Lot 19) contains a public facility/institutional use and houses Corcraft – the New York State Department of Correctional Facilities' Division of Industry. The building is 2 stories tall at 1.55 FAR, and is made of redbrick. Two 1-story, 1.0 FAR industrial/manufacturing buildings are located on 11th Street, which were both built in 1958. Both buildings are built out to the lot lines. The remainder of the lots found in Block 330 are fairly smaller and narrower and generally contain residential uses. Most of the residential buildings were constructed in the early 20th century, range in height between 1–2 stories, and have FARs between 0.24–1.39. There are two slightly larger pre-war residential buildings found on the block, built to 3.04–3.29 FAR and rising to 4 stories each. There are also several newer 3-story residential buildings located on 10th and 11th Street, which were built between 2004 and 2009. Most of the newer residential buildings contain setbacks with front yard parking. Mixed use buildings on the southwest and southeast corners of Block 330 contain ground-floor retail/restaurant spaces, rise to 3–4 stories in height, and are built with FARs that range from 1.99–3.2 – among the tallest and most dense in the secondary study area. The streetwalls created by these two buildings, particularly fronting 10th and 11th Street, are also some of the largest in the area. Block 330 also contains one vacant lot and one parking lot on 11th street, which are located adjacent to each other and are lined with fencing along the streetline.

Block 331

As discussed above, the proposed rezoning area encompasses the eastern half of Block 331. The remaining lots on the block accommodate residential and public facility/institutional uses. The Kingdom Hall of Jehovah's Witness located on 11th Street is a three-story, 2.0 FAR building constructed in 2008, faced in redbrick. One- to three-story residential buildings on the southwest corner of the block are all built to the streetline creating a continuous streetwall. These residential buildings are low- to medium density, ranging from 0.43 to 1.91 FAR, and were all constructed before 1941. One of these buildings on 36th Avenue contains a ground-floor dental office.

Blocks 332 & 523

Buildings on Block 332 and 523 located within the secondary study area are generally medium density, with built FARs ranging from 1.2–1.33. All buildings located on these blocks are owned and operated by NYCHA, and are better known as the Ravenswood Houses. The Ravenswood Housing campus follows the

i. Multi-family residential on 12th Street (Ravenswood Houses)

ii. Industrial building on 13th Street

iii. Commercial buildings on 36th Avenue

iv. One- to two-family residential on 12th Street

v. Multi-family residential on 11th Street

vi. Industrial building on 11th Street

vii. Residential/community facility on 12th Street
(Hour Apartment House III)

viii. Multi-family residential with ground-floor commercial on 11th Street

ix. Multi-family residential on 11th Street

x. Industrial building on 35th Avenue

typical "tower in the park" model, with tall, high density buildings spread out across acres of open space or "super blocks," with paved paths, playgrounds, parking lots, and landscaped green spaces. The buildings located at Ravenswood Houses are the tallest in the secondary study area, ranging in height from six and eight stories. The buildings on Block 332 contain 579 DUs, and the buildings on Block 523 contain 432 DUs. The streetline and paved paths of the Ravenswood Houses are generally lined by metal fencing.

Blocks 350, 351, & 353

The buildings on Blocks 350, 351, and 353 located within the secondary study area include a mix of building uses, heights, and densities. The smaller, narrower lots generally contain residential uses and parking lots, and the larger lots typically accommodate industrial/manufacturing and public facility/institutional uses. There are also several mixed-use residential/commercial buildings containing ground-floor retail along 36th Avenue. Most of the buildings on these blocks are built out to the streetline – particularly along 36th Avenue and 11th, 12th, and 13th Streets – creating continuous streetwalls. Parking lots on these blocks are generally surrounded by fencing at the lot line.

The industrial/manufacturing buildings on Blocks 350, 351, and 353 were mostly built in the mid-20th century and generally feature redbrick facades. These buildings typically contain adjacent, at-grade accessory parking lots, and range from one to two stories and 0.5–2.07 FAR. Many of the residential buildings in these blocks were constructed in the early 20th century, are 1–3 stories in height, and are mostly built to the streetline. However, there are a few instances where setbacks on residential buildings – some stretching as far back as 50 feet – break up the streetwall. Public facility/institutional uses include the Jackson Development Center, a two-story, 0.68 FAR building constructed on the northeast corner of Block 350 in 1957; and the Hour Apartment House, a three-story, 2.57 FAR building constructed on the midblock of Block 351 fronting 12th Street in 2003.

Block 352

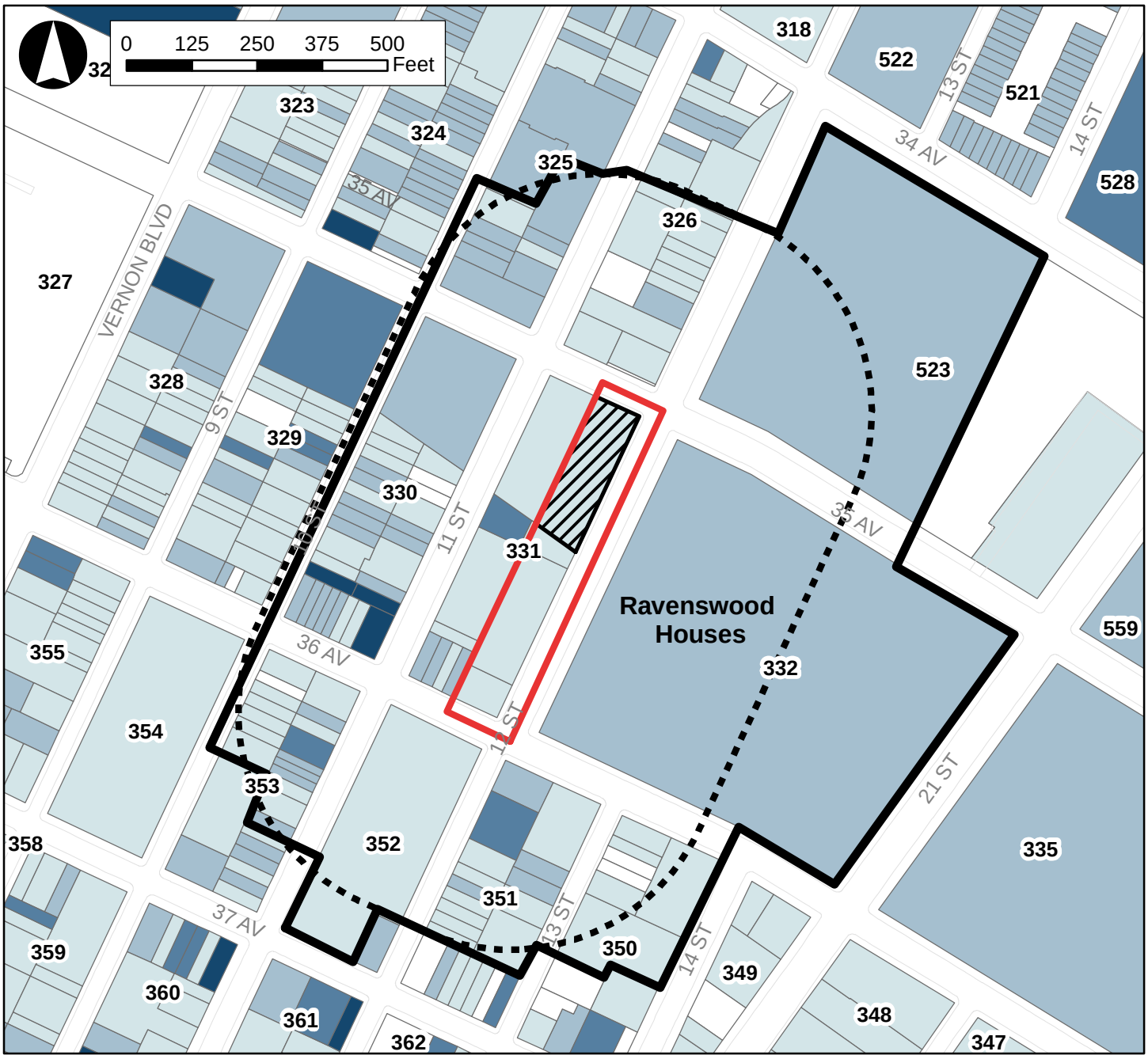
The buildings on Block 352 are entirely utilized as public facility/institutional spaces. The block contains six buildings, including Saint Rita's Roman Catholic Church complex (comprised of a church building, parochial school, rectory, playground, and basketball court) and Voice Charter School. The six buildings range from one to three stories, and collectively have a FAR of 0.58. Saint Rita's rectory, parochial school, and church building were built in 1907, 1952, and 1966, respectively. Most of the buildings, streetwalls, and fencing on Block 352 are built to the streetline, with various setbacks in several locations.

Open Space & Natural Resources

The topography of the secondary study area is generally flat. There are no significant natural resources such as aquatic features, beaches, or wetlands in the study area. As detailed above, there are some street trees in the secondary study area, and the Ravenswood Houses on Blocks 332 and 523 are surrounded by grass and trees (see **Figure E-7**). Playgrounds and a basketball court can also be found on portions of the Ravenswood Houses (Block 332) located within the urban design study area.

Visual Resources

There are no significant visual resources in the proposed rezoning area or approximate 400-foot secondary study area. As shown in **Figure E-2b**, the East River, a significant visual resource outside of the study area, can be seen from several vantage points along 35th and 36th Avenues in the secondary study area.



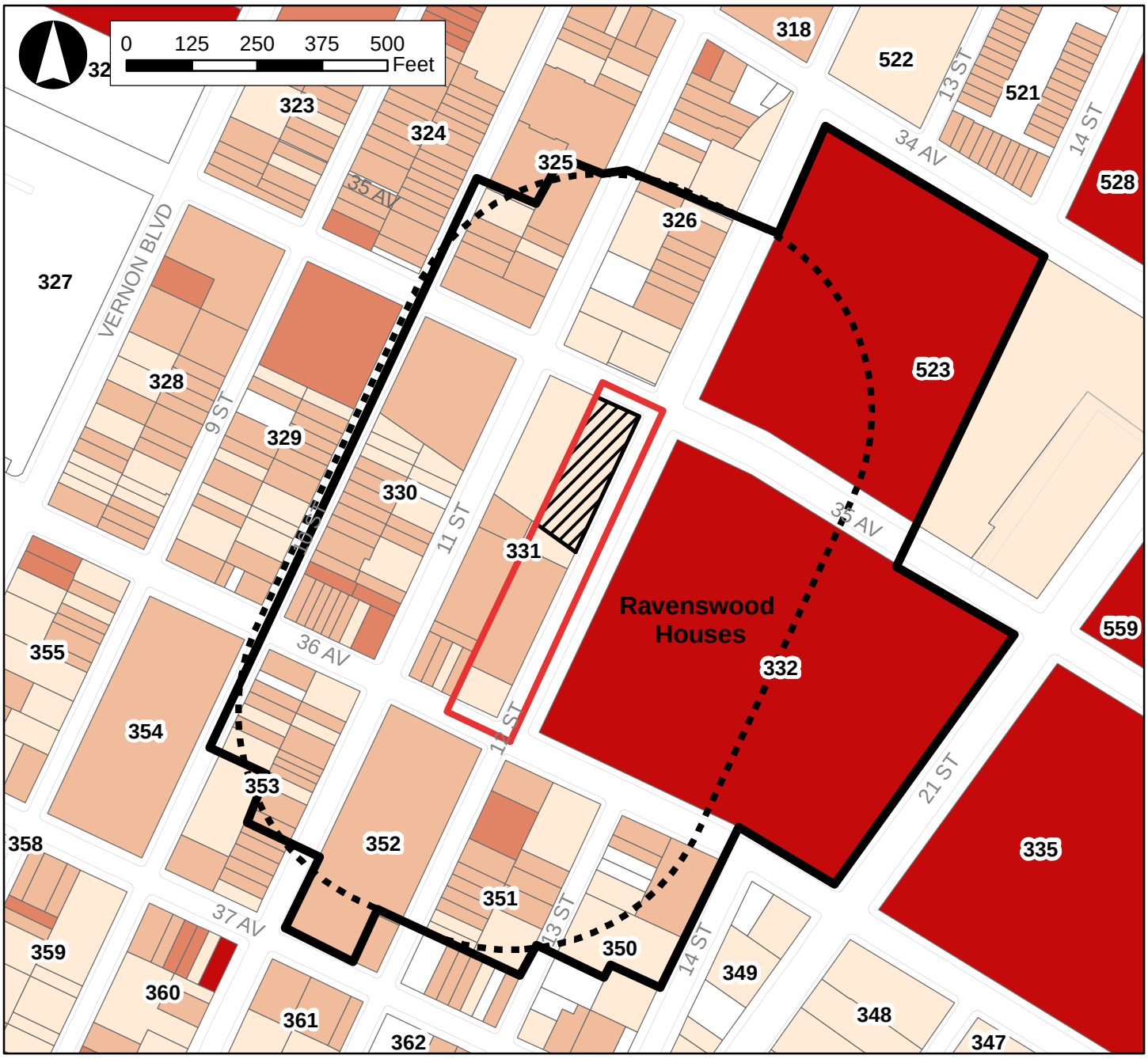
Legend

- Proposed Rezoning Area
- Proposed Development Site
- 400-Foot Radius
- Urban Design Study Area
- *331* Block

Existing Built FAR

- 0.0 FAR
- 0.1 - 1.0 FAR
- 1.1 - 2.0 FAR
- 2.1 - 3.0 FAR
- 3.1+ FAR

Source: New York City Department of City Planning (PLUTO 2016), DoITT



Legend

- Proposed Rezoning Area
- Proposed Development Site
- 400-Foot Radius
- Urban Design Study Area
- *331* Block

Existing Building Heights

- No Building
- 1 Floor
- 2-3 Floors
- 4-5 Floors
- 6+ Floors

Source: New York City Department of City Planning (PLUTO 2016), DoITT

V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

Urban Design

Proposed Rezoning Area

In the 2024 future without the Proposed Actions, no changes would occur in the proposed rezoning area. It is expected that lots in the area would continue to be occupied by warehouses, light industrial/manufacturing buildings, and auto body repair shops. No new construction would occur on the Applicant-owned proposed development site or on any projected development sites in the proposed rezoning area.

Secondary Study Area

No changes to urban design are anticipated in the approximately 400-foot secondary study area in the 2024 future without the Proposed Actions. As detailed in Attachment C, "Land Use, Zoning, & Public Policy," there are no developments under construction or planned in the secondary study area for the 2024 analysis year. Additionally, no street or streetscape alterations are anticipated to occur and no new open space resources are planned in the secondary study area.

Visual Resources

In the 2024 future without the Proposed Actions, no changes to visual resources or existing views of visual resources in the proposed rezoning area or secondary study area are expected to occur.

VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

As described in Attachment A, "Project Description," the Applicant is seeking two New York City Planning Commission (CPC) zoning changes: (1) a zoning map amendment and (2) a zoning text amendment. This section describes the urban design conditions that would result from the Proposed Actions by the analysis year of 2024, and evaluates the potential for the Proposed Actions to result in significant adverse impacts related to urban design and visual resources..

Urban Design

Under With-Action conditions, the proposed zoning map and text amendments would be implemented, modifying the use and bulk regulations of the proposed rezoning area. The proposed zoning map amendment would change the underlying zoning of the proposed rezoning area from an R5 to an R6A district with a C1-3 commercial overlay, and the proposed zoning text amendment would create a new map for Queens Community District 1 in Appendix F of the ZR, mapping the proposed rezoning area as a Mandatory Inclusionary Housing (MIH) Area. In the future with the Proposed Actions, the maximum residential FAR of the proposed rezoning area would be increased from 1.25 to 3.6 (when utilizing the MIH Program) and the maximum commercial FAR would be increased from 0.0 to 2.0 FAR. When providing a Qualifying Ground Floor and adhering to the Quality Housing bulk regulations of the proposed R6A district, the maximum streetwall height in the proposed rezoning area would increase from 30 to 40 feet, and the maximum permitted building height would increase from 40 feet to 85 feet. Additionally, the MIH Program would require affordable housing to be provided equivalent to either 25 or 30 percent of residential floor area development in the future with the Proposed Actions.

1. Ravenswood Houses

Proposed Rezoning Area

The Proposed Actions would not entail any changes to topography, street pattern and hierarchy, block shapes, open space, or natural features in the proposed rezoning area. The Proposed Actions would alter the urban design of the Applicant-owned proposed development site (Block 331, Lot 27). In the RWCDS future with the Proposed Actions, the existing single-story warehouse on Lot 27 would be demolished and replaced with a new approximately 92,946 gsf (88,520 zsf) mixed-use residential/commercial building with an FAR of 3.6. The proposed new building would have a base height of four-stories (45 feet) and would be setback 44 feet from 35th Avenue and 10 feet from 12th Street, before reaching a maximum building height of eight-stories (85 feet excluding mechanical bulkhead). Most of the ground-floor (approximately 15,750 gsf) would be occupied by "qualifying" local retail space with floor heights of approximately 15 feet, and residential uses would occupy floors one through eight.

As shown in **Figure E-8a**, the proposed building on Lot 27 would have approximately 92 feet of frontage along 35th Avenue and approximately 196 feet of frontage along 12th Street. An accessory at-grade parking lot with 15 unenclosed parking spaces would be accessible at the site's eastern frontage along 12th Street. Vehicles would enter the parking lot using an existing 20-foot curb-cut located approximately 223 feet south of 35th Avenue. Access to a below-grade parking garage in the building's cellar would be located at the westernmost section of the ground-level parking area. It is anticipated that the main residential entrance to the proposed building would be located adjacent to the parking lot, with a secondary residential entrance on 35th Avenue. Retail entrances would be located on 35th Avenue and 12th Street. In conformance with ZR Section 33-03, street trees would be planted for every 25 feet of street frontage along the perimeter of the proposed development site.

In the RWCDS future with the Proposed Actions, it is also expected that the existing auto body and repair buildings on Lots 38 and 50 would be demolished, and the sites would be redeveloped in accordance with the proposed R6A zoning district, C1-3 commercial overlay, and MIH Area (refer to **Figure E-8a/b**). Lot 38 is anticipated to be redeveloped to the maximum permitted FAR of 3.4 and, in the R6A portion of the site, a building height of 85 feet. It is anticipated that Lot 38 would be redeveloped with an approximately 16,065 gsf (15,300 zsf) mixed-use residential and commercial building with ground-floor retail space. Under RWCDS With-Action conditions, it is anticipated that Lot 50 would be redeveloped with an approximately 22,812 gsf (21,726 zsf) mixed-use residential and commercial building with ground-floor retail space. It is expected that parking on both projected development sites would be waived pursuant to ZR Sections 25-261 and 36-232. The RWCDS for the Proposed Actions assumes that the existing building on Lot 8 would not change under With-Action conditions.

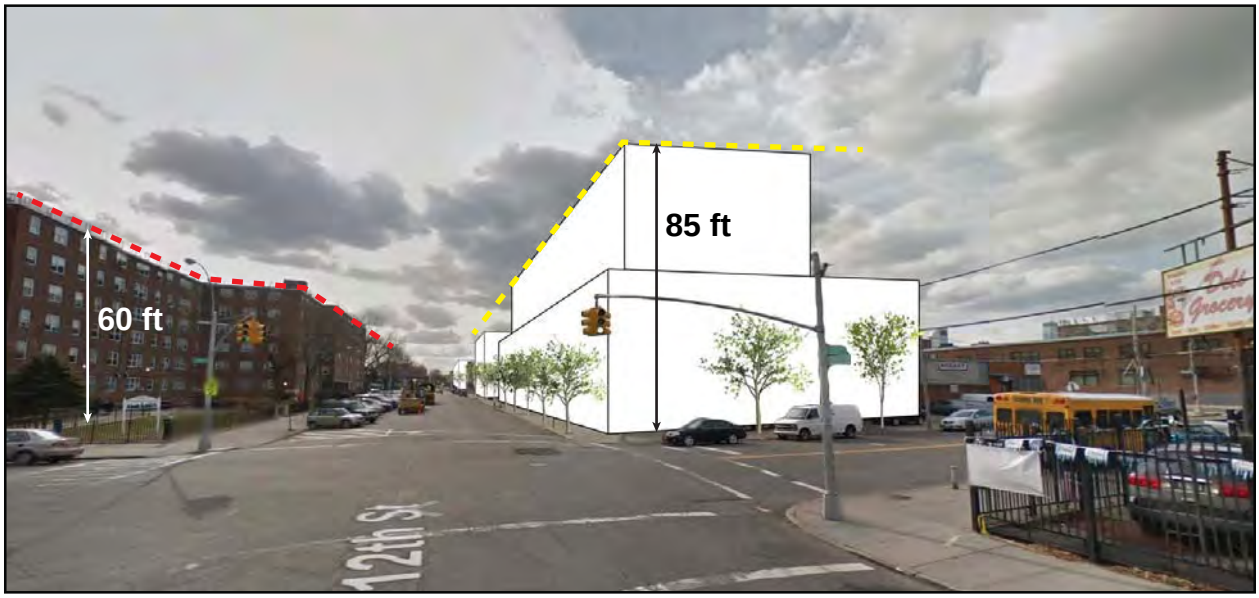
Assessment

No significant adverse to urban design would occur in the proposed rezoning area in the 2024 future with the Proposed Actions. The anticipated mixed-use buildings facilitated by the Proposed Actions would not be incompatible with the existing character of the secondary study area. The proposed zoning map and text changes would result in uses, densities, and building bulks that would be within the range of what is currently permitted in the vicinity of the proposed rezoning area. The proposed R6A district is a contextual zoning district that mandates Quality Housing bulk regulations not required in the existing R5 district of the proposed rezoning area. As such, development anticipated as a result of the Proposed Actions would be consistent with the character of the surrounding neighborhood, with high lot coverage buildings set at or near the streetline, as well as amenities relating to interior space, recreation areas, and landscaping.

The proposed zoning map and text amendments would facilitate the development of three new mixed-use buildings on three underutilized sites in the proposed rezoning area (Lots 27, 38, and 50) which currently contain nonconforming warehouses and auto body repair shops in an existing residential district. The

Figure E-8a
No-Action vs. With-Action Comparison:
View south along 12th Street

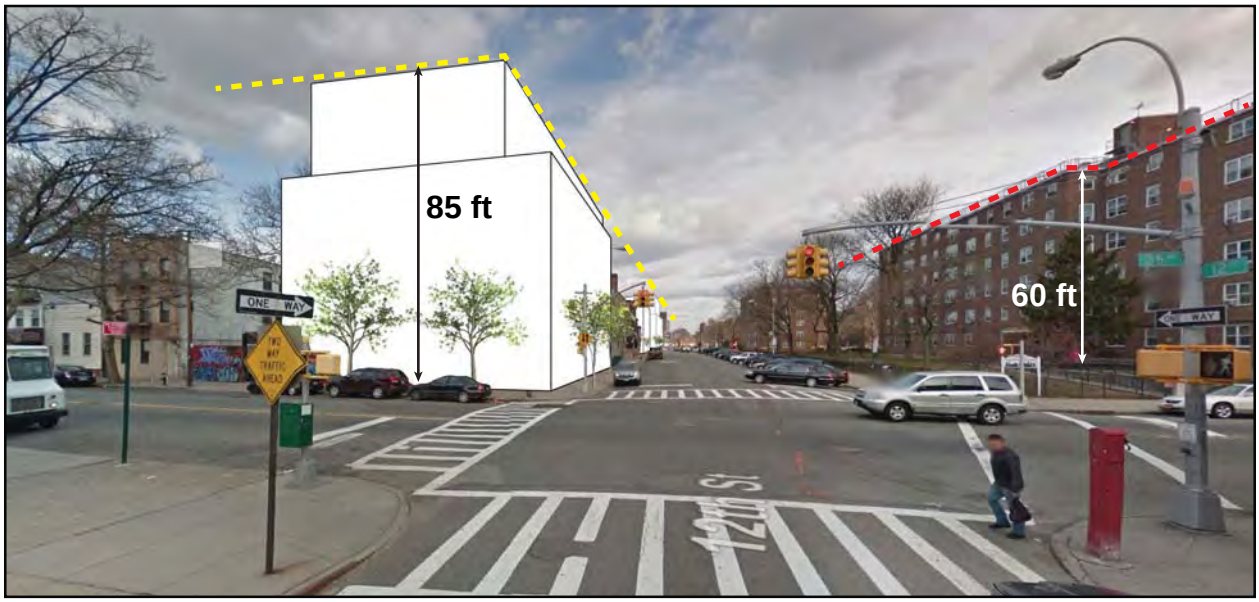
Existing/No-Action



With-Action

Figure E-8b
No-Action vs. With-Action Comparison:
View north along 12th Street

Existing/No-Action



With-Action

Proposed Actions would have a positive effect on the surrounding area by activating the streetscapes of 35th Avenue, 12th Street, and 36th Avenue with ground-floor retail spaces, extending the commercial corridor and pedestrian activity along 36th Avenue north along 12th Street and 35th Avenue. Due to the streetwall requirements of the proposed contextual district, the ground-floor level of the proposed and projected development sites would be built at or near the street line on all frontages, thereby maintaining a uniform streetwall from the perspective of the pedestrian along 35th Avenue, 12th Street, and 36th Avenue, similar to existing buildings in the area such as the All City Switchboard Corp. building on Lot 8 (refer to **Figure E-2a**). In addition to active ground-floor uses, the Proposed Actions would result in the planting of street trees, further improving the pedestrian experience in the proposed rezoning area. As such, the Proposed Actions would not result in any significant adverse impacts to urban design in the proposed rezoning area, but rather, are expected to enhance the pedestrian experience along 35th Avenue, 12th Street, and 36th Avenue.

Secondary Study Area

As the Proposed Actions are area-specific, they would not alter building uses, bulks, or arrangements in the secondary study area, or result in any changes to topography, open spaces, natural features, streets, or buildings in the secondary study area under 2024 With-Action conditions.

Assessment

While the Proposed Actions would alter the design of the proposed rezoning area by allowing modifications to the existing use and bulk requirements as detailed above, the building bulks of the proposed and projected development sites would be compatible with the scale of existing buildings in the surrounding area. Overall, the proposed project would not adversely affect any urban design features of the study area, and would not result in significant adverse impacts to the experience of the pedestrian in the secondary study area.

Visual Resources

No changes to visual resources or existing views of visual resources would occur in the future with the Proposed Actions. As discussed above, the proposed rezoning area and secondary study area do not contain any significant visual resources. As development facilitated by the Proposed Actions is limited to existing blocks, views of the East River from vantage points along 35th and 36th Avenues in the secondary study area would not be obstructed in the 2024 With-Action condition. As such, the Proposed Actions would not result in any significant adverse impacts on visual resources.

Attachment F

Hazardous Materials

I. INTRODUCTION

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

As detailed in Attachment A, "Project Description," the Applicant is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1 (refer to **Figure A-1** in Attachment A, "Project Description"). The Proposed Actions include: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 (including Lot 27, Lot 50, and p/o Lots 8 and 38) from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the area a Mandatory Inclusionary Housing (MIH) Area.

The 24,589 square foot (sf) Applicant-owned proposed development site on Lot 27 currently contains a single-story, approximately 10,320 sf warehouse and associated parking. In the RWCDS future with the Proposed Actions, the Applicant would demolish the existing warehouse and construct a new eight-story, 85-foot tall, approximately 92,946 gross square foot (gsf) (approximately 88,520 zoning square foot [zsf]) mixed-use residential and commercial building on the site, with a floor area ratio (FAR) of 3.6. The proposed building would contain 82 dwelling units (DUs), and 30 percent of residential floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of qualifying ground-floor retail space and up to 77 surface and underground accessory parking spaces.[1]

Two other sites in the proposed rezoning area are also expected to be redeveloped with mixed-use residential and commercial buildings in the 2024 future with the Proposed Actions: Lots 38 and 50. It is therefore anticipated that the Proposed Actions would result in a net increase of approximately 109,680 gsf (104,457 zsf) of residential space with 116 DUs (39 affordable) and approximately 22,143 gsf (21,089 zsf) of commercial space in the proposed rezoning area by 2024. Absent the Proposed Actions, no changes are expected to occur in the proposed rezoning area.

[1] The RWCDS assumes the proposed development site would be built out to the maximum With-Action permitted FAR of 3.6. For conservative analysis purposes, this assumption is higher than shown in the Applicant's architectural drawings in the Land Use Application, which assume a built FAR of 3.54.

II. PRINCIPAL CONCLUSIONS

The proposed action would not result in any significant adverse hazardous materials impacts. A Phase I Environmental Site Assessment (ESA) was prepared for the Applicant-owned proposed development site (Lot 27 on Queens Block 331), concluding that the historic site operations as an import and export facility and transportation and construction facilities may have impacted the environmental quality of the site including soil, groundwater, and soil vapor. Additionally, historical and current operations related to auto repairs, filling stations, and industrial uses were identified at immediately adjoining properties and in the vicinity of Lot 27, which could have also adversely impacted the quality of the site. As a result of these two Recognized Environmental Conditions (RECs), the Phase I ESA conducted for Lot 27 recommended the completion of a Phase II ESA prior to construction of the proposed project. This would require an (E)-designation for Lot 27. Additionally, as no Phase I ESAs have been completed for the projected development sites in the proposed rezoning area (Lots 38 and 50), (E)-designations would also be required for the sites in the future with the Proposed Actions. With the requirements of the (E)-designations (E-480) on the projected development sites, there would be no impact from the potential presence of contaminated materials. The implementation of the preventative and remedial measures outlined in the (E)-designations (E-480) would reduce or avoid the potential of significant adverse hazardous materials impacts from potential construction in the proposed rezoning area resulting from the Proposed Actions. Following such construction, there would be no potential for significant adverse hazardous materials impacts.

III. METHODOLOGY

The assessment of hazardous materials on the proposed development site (Lot 27) is based upon information provided in the *Phase I Environmental Site Assessment* (ESA), *11-14 35th Avenue, Long Island City, NY 11106*, prepared by Fleming-Lee Shue on March 31, 2017 (the executive summary of this report is provided in **Appendix 4**). The Phase I ESA was conducted in conformance with the American Society of Testing and Materials' (ASTM) International Standard Process E 1527-13 as well as the United States Environmental Protection Agency (EPA) All Appropriate Inquiry (AAI) requirements (November 2005), including generally accepted protocols for lenders as well.

The Phase I ESA utilized historic documents and regulatory agency lists and databases of documented hazardous waste sites, waste handlers, and spills; site inspections and interviews with site contacts, operators, owners, and neighboring property operators and owners; United State Geological Survey (USGS) topographic maps, land use maps, zoning maps, and flood plain maps; and previous environmental reports, including Phase I ESAs.

IV. HISTORIC & EXISTING CONDITIONS

Applicant-Owned Proposed Development Site (Lot 27)

The approximately 24,589 sf proposed development site at 11-14 35th Avenue in the Ravenswood neighborhood of Queens. The site was developed with the existing single-story, approximately 10,320 sf warehouse between 1936 and 1947, with open lot space to the east and south (refer to **Figure A-1** in Attachment A). Historically, the site was used for commercial/industrial purposes: as an import/export facility from 1947 to 1980; a transportation facility 1980 to 2006; and its current use as a warehouse storing cranes and other construction-related equipment and providing construction equipment and truck repairs.

The historical use of Lot 27 as an import/export and transportation facility likely included auto repair and/or fueling operations for transportation equipment. These operations typically use petroleum productions and/or hazardous materials, the release of which may have impacted the environmental quality of the site, as detailed below.

Proposed Rezoning Area

The approximately 57,904 sf proposed rezoning area comprises the eastern half of Queens Block 331, fronting 12th Street between 35th and 36th Avenues (refer to **Figure A-1** in Attachment A). In addition to the Applicant-owned proposed development site on Lot 27 detailed above, the proposed rezoning area encompasses all of Lot 50, as well as the eastern portions of Lots 8 and 38 on Block 331. None of the existing uses in the proposed rezoning area are permitted in the underlying R5 zoning district.

Lot 8 contains two industrial/manufacturing buildings totaling approximately 40,000 sf housing the All City Switchboard Corp. (switchgear and switchboard manufacturing) and Superior Selected Stone (wholesale).

Lot 38, located immediately south of the proposed development site at 35-30 12th Street, contains a single-story, approximately 2,189 sf building housing Bravo One Auto Body Repair. The property has accommodated auto repair uses since 1980.

Lot 50 is on the southeast corner of the block at 35-38 12th Street, and contains two single-story buildings totaling approximately 2,542 sf which house America's Auto Repair.

Surrounding Area

As detailed in Attachment C, "Land Use, Zoning, and Public Policy," the area within an approximate 400-foot radius of the proposed rezoning area is developed with a mix of residential, light industrial, institutional, and commercial uses. The Phase I ESA reviewed EDR's United States Historical Auto Station database, and identified seven historic or current gas station/filling station/service station sites within a quarter-mile of Lot 27. In addition to these uses in the proposed rezoning area, detailed above, 35-27 11th Street (Block 331, Lot 14) was identified as a filling station from 1936 to 1991 and an auto repair shop from 1991 to 2006. This lot currently contains a three-story institutional building accommodating the Kingdom Hall of Jehovah's Witnesses. The remainder of Block 331 contains low-rise residential and mixed-use buildings along 36th Avenue.

EDR's database also identified various auto shops on at 34-60 12th Street, immediately north of the proposed rezoning area from 1967 to 2000; a metal fabricating and art spray enameling facility further north of the proposed rezoning area at 34-20 12th Street from 1967 to 2008; a playing card and match manufacturing facility to the northeast of the proposed rezoning area at 10-05 35th Avenue from 1962 to 1976, now occupied by DrillCo Equipment Co, Inc.; and a car wash facility from 1967 to 1976, and subsequent auto repair uses to the southeast of the proposed rezoning area. Additionally, based on the Phase I ESA conducted for the Applicant-owned proposed development site, there are no National Priorities Listing (NPL, or "Superfund") sites within one mile of Lot 27 (refer to the Phase I ESA in **Appendix 4** for more details).

V. PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA) FINDINGS

The Phase I ESA conducted for the proposed development site by Fleming-Lee Shue in March 2017 identified the following two Recognized Environmental Conditions (RECs):

- Historic Auto and Equipment Repair Operations at the Site: Lot 27 was historically used as an import and export facility and transportation and construction facilities that likely performed automobile and construction equipment repairs. General materials associated with these operations include lubricants, metals, solvents, petroleum fuels, and diesel fuel, among others. These historic uses of the site may have impacted the environmental quality of the site including soil, groundwater, and soil vapor.

- Historic and Current Auto and Industrial Operations at Surrounding Properties: historical and current operations related to auto repairs, filling stations, and industrial uses were identified at immediately adjoining properties and in the vicinity of the Lot 27. These operations of multiple gas and service stations and machine shops adjacent to the site could have adversely impacted the quality of the site, including soil, groundwater, and soil vapor.

The following additional potential environmental issue was noted in the Phase I ESA, although not included within the scope of work as defined in ASTM E 1527-13:

- Potential Mold: water damage to the ceiling, floors, and walls of the warehouse was observed during site inspections for the Phase I ESA. Water damage and staining indicates the potential for mold growth.

Based on the RECs identified in the Phase I ESA, a Phase II ESA was recommended for Lot 27, including soil, groundwater, and soil vapor sampling to determine if any of the identified RECs have adversely impacted the environmental quality of the site and/or may result in potential exposure risks for future occupants. This would require an (E)-designation on Lot 27, as detailed below. Additionally, the Phase I ESA noted that the observed mold could pose a health risk to building occupants and should be remediated appropriately based on potential exposure to building occupants.

VI. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

In the 2024 future without the Proposed Actions, no zoning changes would occur in the proposed rezoning area. As detailed in Attachment A, "Project Description," under RWCDS No-Action conditions, no changes would occur in the proposed rezoning area, and it would continue to be occupied by warehouses, light industrial/manufacturing buildings, and auto body repair shops, as under existing conditions.

VII. FUTURE WITH THE PROPOSED ACTION (WITH-ACTION CONDITION)

As detailed in Attachment A, "Project Description," in the future with the Proposed Actions, the proposed zoning map amendment and zoning text amendment would be implemented in the proposed rezoning area. In the 2024 RWCDS With-Action scenario, the Applicant would redevelop the proposed development site (Lot 27) with an eight-story (85-foot tall), approximately 92,946 gsf (88,520 zsf) mixed-use residential and commercial building, consisting of a total of approximately 82 DUs (27 affordable) and approximately 15,750 gsf of local retail space. As detailed above, the Phase I ESA conducted for Lot 27 recommended the

completion of a Phase II ESA prior to construction. This would require an (E)-designation on Lot 27, as detailed below.

Two additional sites in the proposed rezoning area are expected to be redeveloped in the 2024 RWCDS With-Action condition: Lots 38 and 50. No changes to Lot 8 in the proposed rezoning area is expected in the future with the Proposed Actions.

In the RWCDS With-Action scenario, it is expected that the existing auto body and repair buildings on Lots 38 and 50 would be demolished. Lot 38 would be redeveloped with an approximately 16,065 gsf mixed-use residential and commercial building, consisting of approximately 14 DUs (five affordable) and approximately 2,591 gsf of retail space. Lot 50 would be redeveloped with an approximately 22,812 gsf mixed-use residential and commercial building, consisting of approximately 20 DUs (seven affordable) and approximately 3,802 gsf of retail space. No Phase I ESAs have been completed for the RWCDS projected development sites (Lots 38 and 50). As such, (E)-designations will be required for the sites in the future with the Proposed Actions.

(E)-Designations

By placing (E)-designations on sites where there is a known or suspect environmental concern, the potential for an adverse impact to human health and the environment resulting from the Proposed Actions would be reduced or avoided. The (E)-designation provides the impetus to identify and address environmental conditions so that significant adverse impacts during site development would be reduced. The New York City Office of Environmental Remediation (OER) would provide the regulatory oversight of the environmental investigation and remediation during this process. Building permits are not issued by the DOB without prior OER approval of the investigation and/or remediation pursuant to the provisions of ZR Section 11-15.

The (E)-designations on the three RWCDS projected development sites in the proposed rezoning area would require the fee owners to conduct a testing and sampling protocol and have an approved remediation plan where appropriate, to the satisfaction of the OER. DOB will typically issue the foundation permits when OER approves the remedial action work plan – the actual remediation is usually done concurrently with the construction. The remediation plan provided to OER to satisfy the (E)-designation must also include a mandatory construction-related health and safety plan, which must also be approved by OER. The (E)-designation (E-480) text related to hazardous materials is as follows:

Task 1

The fee owners of the lot restricted by this (E) designation will be required to prepare a scope of work for any soil, gas, or groundwater sampling and testing needed to determine if contamination exists, the extent of the contamination, and to what extent remediation may be required. The scope of work will include all relevant supporting documentation, including site plans and sampling locations. This scope of work will be submitted to the OER for review and approval prior to implementation. It will be reviewed to ensure that an adequate number of samples will be collected and that appropriate parameters are selected for laboratory analysis.
No sampling program may begin until written approval of a work plan and sampling protocol is received from the OER. The number and location of sample sites should be selected to adequately characterize the type and extent of the contamination, and the condition of the remainder of the site. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for choosing sampling sites and performing sampling will be provided by OER upon request.

Task 2

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

If remediation is necessary according to test results, a proposed remediation plan must be submitted to OER for review and approval. The fee owners of the lot restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owners of the lot restricted by this (E) designation should provide proof that the work has been satisfactorily completed.

An OER-approved construction-related health and safety plan would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This Plan would be submitted to OER for review and approval prior to implementation.

The Proposed Actions will require (E)-designations for all three RWCDS projected development sites (Block 331, Lots 27, 38, and 50). With the requirements of the (E)-designations on the projected development sites, there would be no impact from the potential presence of contaminated materials. The implementation of the preventative and remedial measures outlined in the (E)-designations (E-480) would reduce or avoid the potential of significant adverse hazardous materials impacts from potential construction in the proposed rezoning area resulting from the Proposed Actions. Following such construction, there would be no potential for significant adverse hazardous materials impacts.

Attachment G

Transportation

I. INTRODUCTION

The objective of a transportation analysis is to determine whether an action would have a significant adverse impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, bicyclists, and vehicles), on- and off-street parking or goods movement. The *2014 CEQR Technical Manual* identifies minimum incremental development densities that potentially require a transportation analysis. As shown in Table 16-1 of the *CEQR Technical Manual*, projects with single or multiple land uses which may result in fewer than 50 peak hour vehicle trips are generally unlikely to cause significant adverse impacts. For projects in Zone 4 (which includes all areas located within one-mile of subway stations, such as the proposed rezoning area), the development thresholds requiring trip generation analyses to determine the volume of vehicular trips during peak hours are 200 DUs, 75,000 gross square feet (gsf) of office space, 10,000 gsf of retail or restaurant space, 15,000 gsf of community facility space, and 60 off-street parking spaces.

As the Proposed Actions would result in a net increment of 116 DUs, 22,143 gsf of local retail space, and 77 off-street parking spaces in the proposed rezoning area and exceeds the thresholds presented in Table 16-1 of the *CEQR Technical Manual*, a screening assessment of the Proposed Action's effect on the City's transportation system is warranted. Per *CEQR* guidelines, a screening assessment is required to determine if the Proposed Actions warrant detailed analyses of traffic, parking, transit, or pedestrians. The screening assessment consists of a Level 1 Project Trip Generation and a Level 2 Project-Generated Trip Assignment which determine if the Proposed Actions would generate or divert 50 peak-hour vehicle trips through any intersection, 200 peak-hour subway trips through a single station, 50 peak-hour bus trips on a single bus route in the peak direction, or 200 peak-hour pedestrian trips through a single pedestrian element. If any of these Level 2 screening thresholds are met or exceeded, a detailed analysis of the respective mode is required.

As described in Attachment A, "Project Description," the Proposed Actions involve two discretionary actions in the Ravenswood neighborhood of Queens Community District 1: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the area a Mandatory Inclusionary Housing (MIH) Area. The reasonable worst-case development scenario (RWCDS) for the Proposed Actions identifies three projected development sites in the proposed rezoning area. Under With-Action conditions, these three sites (which currently contain auto body repair shops and construction equipment storage warehousing) would be redeveloped with mixed-use residential and commercial buildings in the future with the Proposed Actions, resulting in a net increase of approximately 116 DUs and approximately 22,143 gsf of commercial space in the proposed rezoning area by 2024. Absent the Proposed Actions, no new development is expected to occur in the proposed rezoning area.

II. PRINCIPAL CONCLUSIONS

Based on Level 1 and Level 2 screening analyses specified in the *2014 CEQR Technical Manual*, detailed pedestrian analyses for the Proposed Actions and associated RWCDS are required for the weekday midday,

weekday PM, and Saturday midday peak periods. The results of the transportation analyses are summarized as follows:

Traffic

Based on the Level 2 vehicle trip assignment, the level of anticipated project-generated vehicle trips is not expected to result in an increase of 50 or more vehicles at any intersection in proximity to the proposed rezoning area. Therefore, as per *2014 CEQR Technical Manual* criteria, a detailed traffic analysis is not warranted for the Proposed Actions as significant adverse impacts to traffic are not anticipated.

Parking

The *2014 CEQR Technical Manual* states that if a detailed traffic analysis is not warranted, a detailed parking analysis is not required, as significant adverse impacts to parking would be unlikely.

Transit

The Proposed Actions are expected to facilitate new development that would generate new transit riders. It is anticipated that new subway riders would use either the Queensbridge-21st Street station (F train) approximately 0.5-miles to the south of the proposed rezoning area, or the 35th Avenue station (N & W trains) approximately 0.6-miles to the southeast. Each station would process less than 200 project-generated trips in any peak hour and, as such, the Proposed Actions would not result in any significant adverse subway impacts at any station. Accordingly, as per *2014 CEQR Technical Manual* criteria, detailed subway station analysis is not warranted.

The Metropolitan Transportation Authority (MTA) operates three bus lines in the vicinity of the proposed rezoning area: the Q102 and Q103 along Vernon Boulevard to the west and the Q69 along 21st Street to the east. Total peak hour project-generated bus demand is not expected to exceed the 50 bus trips per hour per direction threshold for a detailed analysis on any route as per *CEQR Technical Manual* criteria. Therefore, a detailed bus route analysis is not warranted for the Proposed Actions as significant adverse impacts to bus service are not expected.

Pedestrians

Detailed pedestrian analyses were conducted along one sidewalk (the west side of 12th Street between 35th and 36th Avenues) and two corner areas (12th Street/35th Avenue and 12th Street/36th Avenue) where project-generated pedestrian demand, including walk-only and transit trips, is expected to exceed the 200 pedestrian trips per hour threshold during the weekday midday, weekday PM, and Saturday midday peak hours. As detailed below, all three pedestrian elements would operate at LOS C or better during these peak hours in the With-Action condition, and therefore no significant adverse pedestrian impacts would result from the Proposed Actions.

III. LEVEL 1 AND LEVEL 2 SCREENING ANALYSES

Level 1 Screening

As development facilitated by the Proposed Actions would exceed the thresholds identified in the *CEQR Technical Manual*, a Level 1 Screening Assessment was prepared. The transportation planning factors used to forecast travel demand for the land uses are summarized in **Table G-1**. The trip generation rates, temporal

Table G-1: Transportation Planning Assumptions

Land Use:	**Residential**		**Local Retail**	
Size/Units:	116 DU		22,143 gsf	
Trip Generation:	(1)		(1)	
Weekday	8.075		205.0	
Saturday	9.6		240.0	
	per DU		per 1,000 gsf	
Temporal Distribution:	(1)		(1)	
AM	10.0%		3.0%	
MD	5.0%		19.0%	
PM	11.0%		10.0%	
SatMD	8.0%		10.0%	
	(2)		(4)	
Modal Splits:	All Periods		Weekday	Weekend
Auto	16.5%		11.0%	8.0%
Taxi	0.2%		0.0%	0.0%
Subway	62.0%		4.0%	7.0%
Bus	11.7%		3.0%	4.0%
Walk/Other	9.6%		82.0%	81.0%
	100.0%		100.0%	100.0%
	(3)		(3)	
In/Out Splits:	In	Out	In	Out
AM	20%	80%	50%	50%
MD	50%	50%	50%	50%
PM	65%	35%	50%	50%
Sat MD	50%	50%	50%	50%
Vehicle Occupancy:	(2,3)		(3)	
	All Periods		All Periods	
Auto	1.12		2.00	
Taxi	1.40		2.00	
Truck Trip Generation:	(1)		(1)	
Weekday	0.06		0.35	
Saturday	0.02		0.04	
	per DU		per 1,000 sf	
	(1)		(1)	
AM	12.0%		8.0%	
MD	9.0%		11.0%	
PM	2.0%		2.0%	
Sat MD	9.0%		11.0%	
	In	Out	In	Out
AM/MD/PM/SMD	50.0%	50.0%	50.0%	50.0%

Notes :

(1) Based on 2014 *City Environmental Quality Review (CEQR) Technical Manual.*

(2) Estimated from 2011-2015 American Community Survey (ACS) Data for Queens tracts 25, 39, 43, 45 and 85.

(3) Based on *Astoria Cove FEIS, Sep 2014* .

(4) Based on data from NYCDOT Trip Generation and Mode Choice Survey.

Table G-2: Travel Demand Forecast

Land Use:		**Residential**		**Local Retail**		**Total**	
Size/Units:		116	DU	22,143	gsf		
Peak Hour Person Trips:							
	AM	94		136		230	
	MD	48		862		910	
	PM	104		454		558	
	Sat MD	90		532		622	
Person Trips:							
		In	Out	In	Out	In	Out
AM	**Auto**	3	12	7	7	10	19
	Taxi	0	0	0	0	0	0
	Subway	12	47	3	3	15	50
	Bus	2	9	2	2	4	11
	Walk/Other	2	7	56	55	58	62
	Total	19	75	68	67	87	142
		In	Out	In	Out	In	Out
MD	**Auto**	4	4	47	47	51	51
	Taxi	0	0	0	0	0	0
	Subway	15	15	17	17	32	32
	Bus	3	3	13	13	16	16
	Walk/Other	2	2	354	354	356	356
	Total	24	24	431	431	455	455
		In	Out	In	Out	In	Out
PM	**Auto**	11	6	25	25	36	31
	Taxi	0	0	0	0	0	0
	Subway	43	23	9	9	52	32
	Bus	8	4	7	7	15	11
	Walk/Other	6	3	186	186	192	189
	Total	68	36	227	227	295	263
		In	Out	In	Out	In	Out
Sat MD	**Auto**	7	7	21	21	28	28
	Taxi	0	0	0	0	0	0
	Subway	29	29	19	19	48	48
	Bus	5	5	11	11	16	16
	Walk/Other	4	4	215	215	219	219
	Total	45	45	266	266	311	311
Vehicle Trips :							
		In	Out	In	Out	In	Out
AM	**Auto (Total)**	3	11	4	4	7	15
	Taxi	0	0	0	0	0	0
	Taxi Balanced	0	0	0	0	0	0
	Truck	0	0	0	0	0	0
	Total	3	11	4	4	7	15
		In	Out	In	Out	In	Out
MD	**Auto (Total)**	4	4	24	24	28	28
	Taxi	0	0	0	0	0	0
	Taxi Balanced	0	0	0	0	0	0
	Truck	0	0	0	0	0	0
	Total	4	4	24	24	28	28
		In	Out	In	Out	In	Out
PM	**Auto (Total)**	10	5	13	13	23	18
	Taxi	0	0	0	0	0	0
	Taxi Balanced	0	0	0	0	0	0
	Truck	0	0	0	0	0	0
	Total	10	5	13	13	23	18
		In	Out	In	Out	In	Out
Sat MD	**Auto (Total)**	6	6	11	11	17	17
	Taxi	0	0	0	0	0	0
	Taxi Balanced	0	0	0	0	0	0
	Truck	0	0	0	0	0	0
	Total	6	6	11	11	17	17

Total Vehicle Trips			
	In	Out	Total
AM	7	15	22
MD	28	28	56
PM	23	18	41
Sat MD	17	17	34

distributions, modal splits, vehicle occupancies, and truck trip factor each of land use were primarily based on those cited in the *CEQR Technical Manual*, 2011-2015 five-year American Community Survey (ACS) journey-to-work data for Queens, and recently completed environmental reviews. Factors are shown for the weekday AM, midday, and PM and Saturday midday peak periods.

Table G-2 presents the person and vehicle trips, respectively, expected to be generated by the RWCDS for the Proposed Actions. As shown in **Table G-2**, the Proposed Actions would generate approximately 230, 910, 558, and 622 person trips in the weekday AM, midday, and PM, and Saturday midday peak hours, respectively. As shown in the table, the Proposed Actions would not generate more than 200 peak-hour subway/rail or bus transit riders, therefore, no detailed analyses of vehicle or transit trips are warranted.

The Proposed Actions would generate a net 22, 56, 41, and 34 vehicle trips in the weekday AM, midday, PM, and Saturday midday peak hours, respectively (refer to **Table G-2**). The Proposed Actions would also generate a net 120, 712, 381, and 438 walk-only trips in the weekday AM, midday, PM, and Saturday midday peak hours, respectively (refer to **Table G-2**). Accounting for walk trips en route to and from subway stations and bus stops, pedestrian trips associated with the RWCDS are expected to total 200, 808, 491, and 566 in the weekday AM, midday, PM and Saturday midday peak hours, respectively. As the number of incremental peak hour trips would exceed the *CEQR Technical Manual* analysis thresholds for vehicles (50) during the weekday midday peak hour and pedestrians (200) during the weekday midday, weekday PM, and Saturday midday peak hours, Level 2 screening assessments were undertaken to identify specific locations and time periods that may require additional detailed vehicle and pedestrian analyses.

Level 2 Screening

Level 2 vehicle trip assignments were prepared for the weekday midday peak hour, while pedestrian trip assignments were prepared for weekday midday, weekday PM, and Saturday midday peak hours, which are provided in **Figures G-1** through **G-5**.

Based on the vehicle trip assignment (refer to **Figure G-1**), incremental vehicle volumes are not expected to exceed the 50 vehicle threshold at any intersection, and thus, significant adverse traffic impacts are not anticipated as a result of the Proposed Actions. Therefore, as per *2014 CEQR Technical Manual* criteria, a detailed traffic analysis is not warranted for the Proposed Actions as significant adverse impacts to traffic are not anticipated.

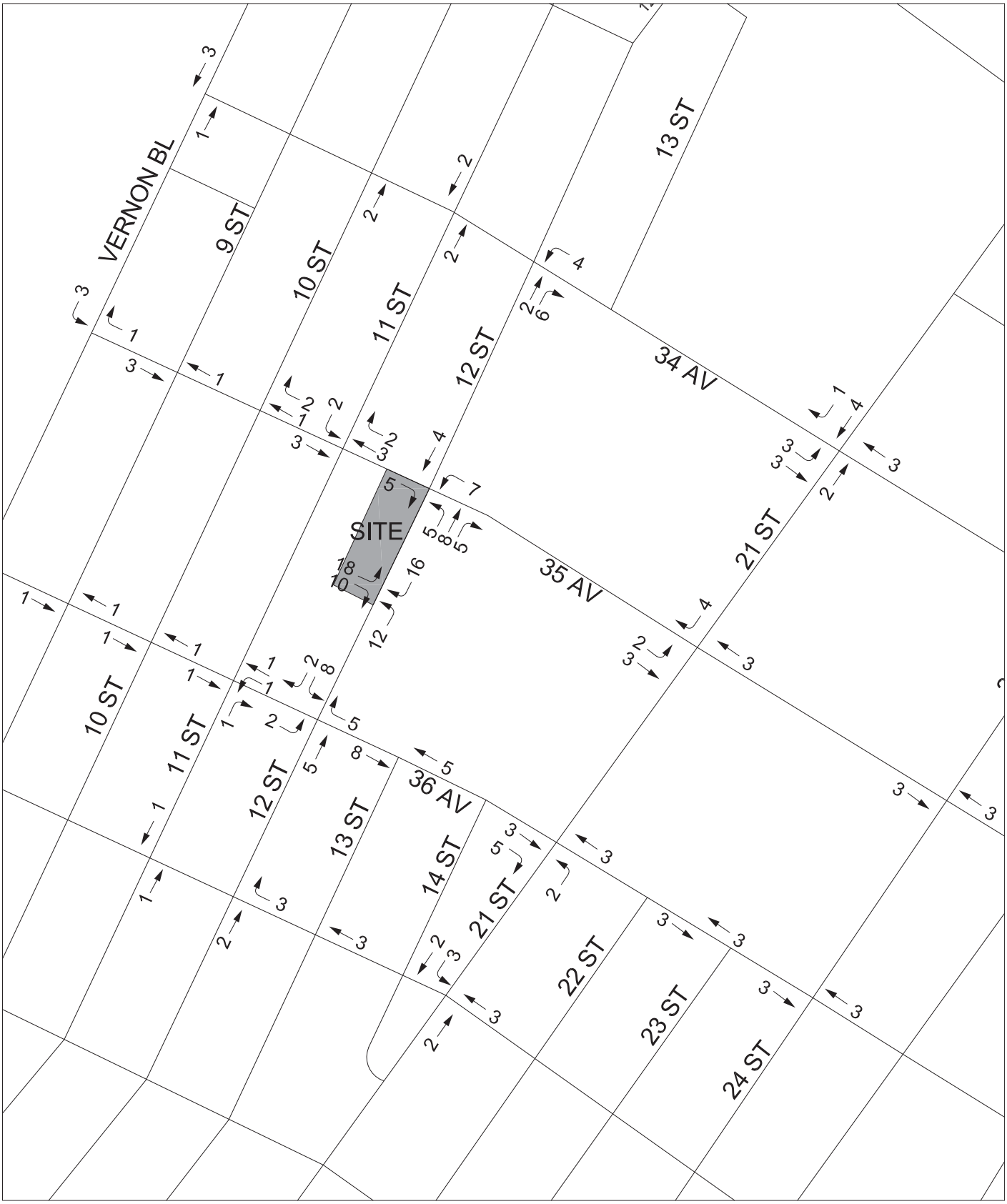
Based on the pedestrian trip assignments, incremental pedestrian volumes during the weekday midday peak hour are expected to exceed 200 at two corner areas (12th Street/35th Avenue and 12th Street/36th Avenue) and one sidewalk location (the east side of 12th Street between 35th and 36th Avenues), as shown in **Figure G-5**. As the potential for significant adverse pedestrian impacts at these three pedestrian elements could not be ruled out based on the Level 2 screening assessment, a detailed pedestrian analysis is warranted for the Proposed Actions and is provided below.

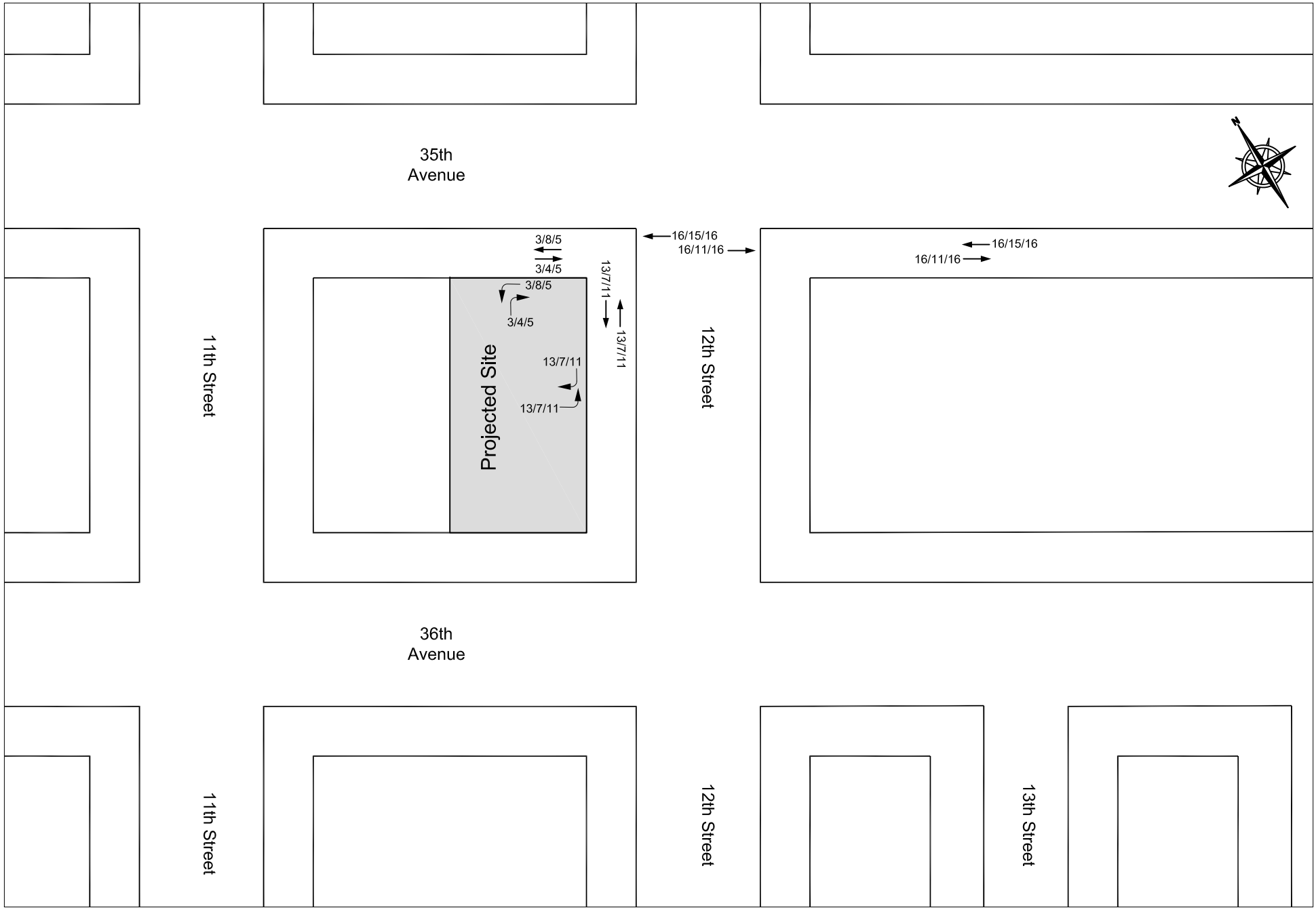
IV. DETAILED PEDESTRIAN ANALYSIS

Peak 15-minute pedestrian flow conditions during the weekday midday, weekday PM, and Saturday midday peak hours are analyzed using the *2000 Highway Capacity Manual* methodology and procedures outlined in the *CEQR Technical Manual.* Using this methodology, the congestion level of pedestrian facilities is determined by considering pedestrian volume, measuring the sidewalk or crosswalk width, determining the available pedestrian capacity, and developing a ratio of volume flows to capacity conditions. The resulting ratio is then compared to level of service (LOS) standards for pedestrian flow, which define a qualitative relationship at a certain pedestrian traffic concentration level. The evaluation of street crosswalks and

Figure G-1

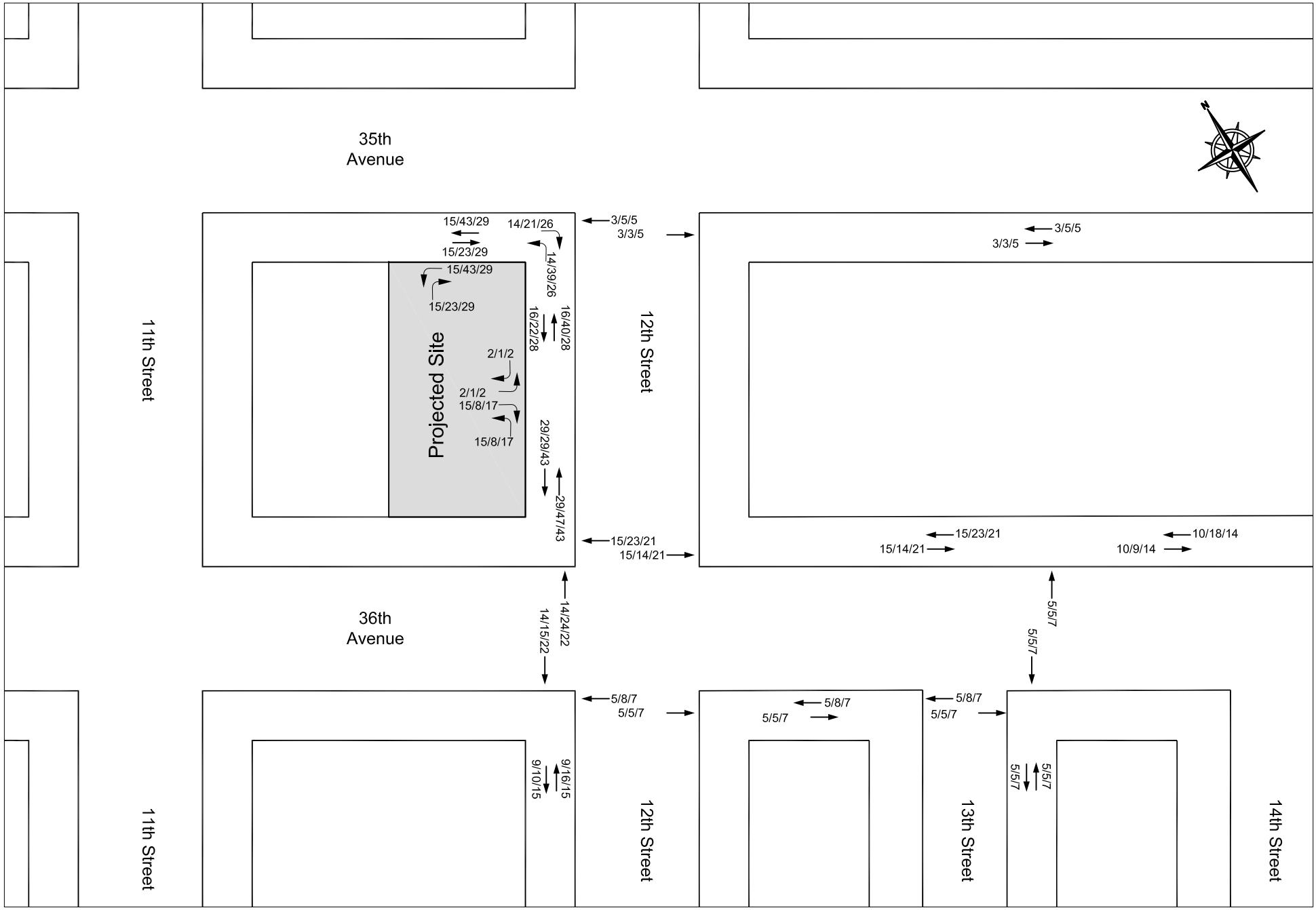
Project Increment Vehicle Trip Assignment
- Midday Peak Hour





13/7/11=MD/PM/SATMD Peak Hour

Figure G-2
MD/PM/SATMD Project Increment Bus Trip Assignment



15/8/17=MD/PM/SATMD Peak Hour

Figure G-3
MD/PM/SATMD Project Increment Subway Trip Assignment

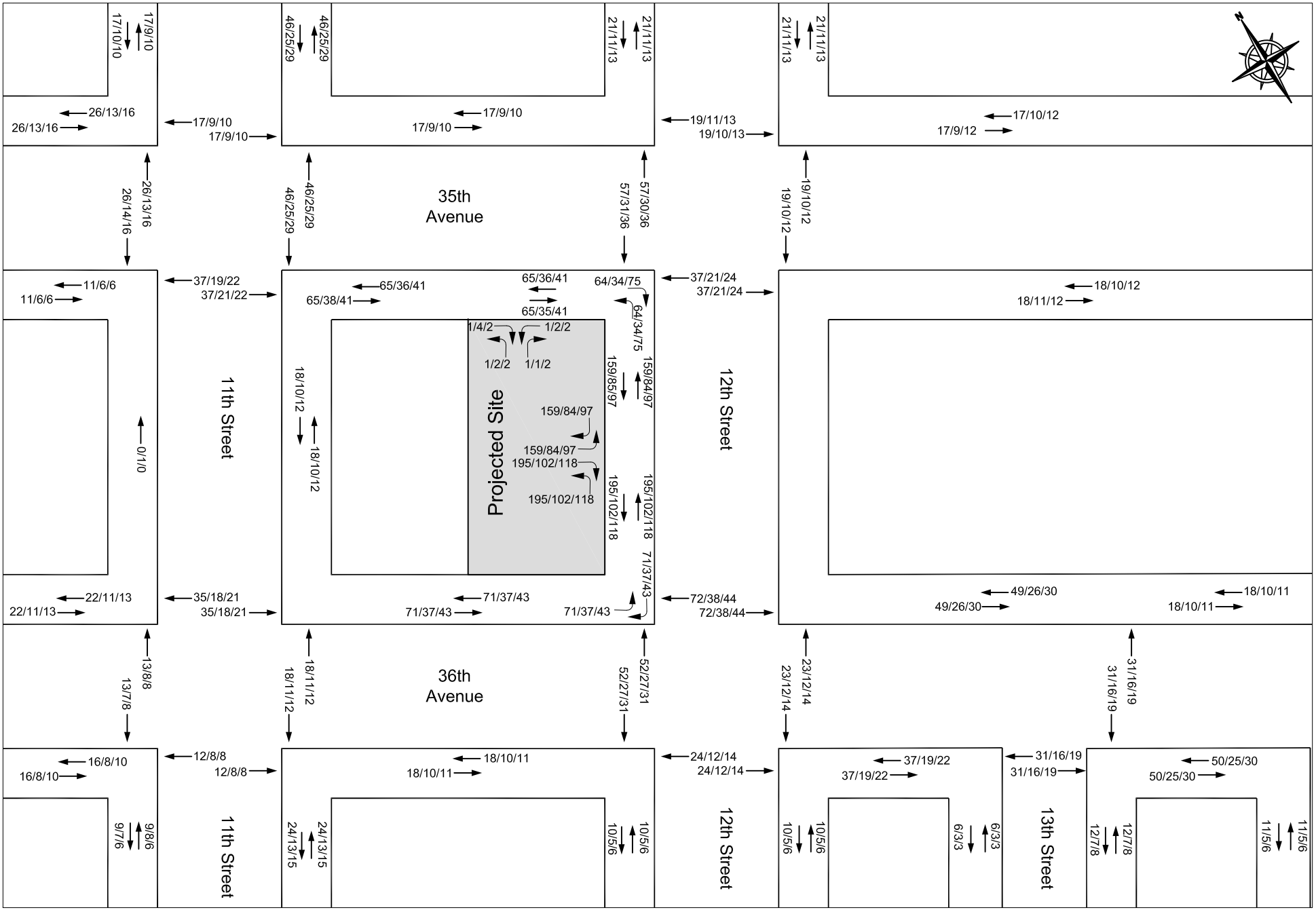


Figure G-4
MD/PM/SATMD Project Increment Walk Trip Assignment

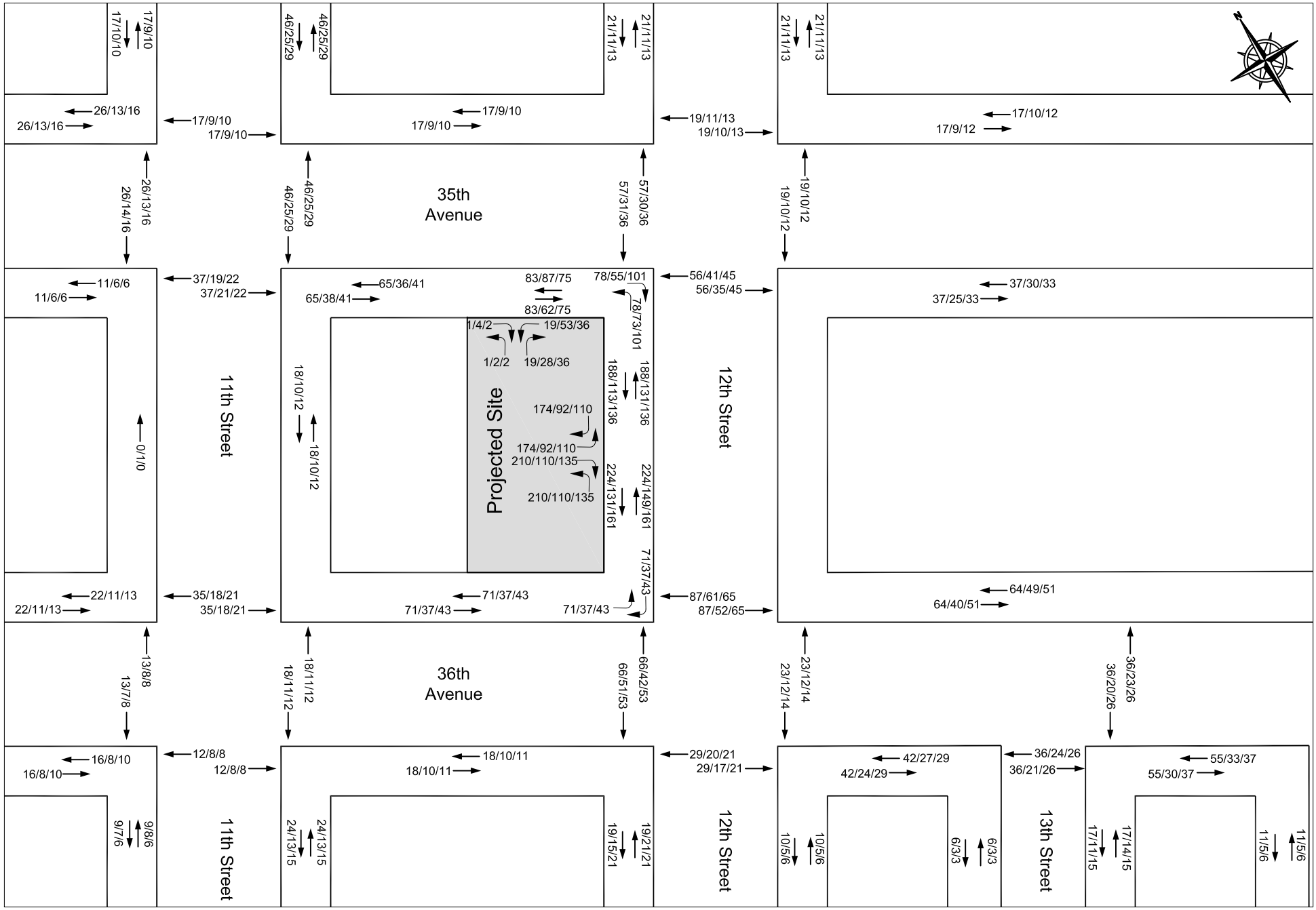


Figure G-5
MD/PM/SATMD Project Increment Pedestrian Trip Assignment

corners is more complicated, as these spaces cannot be treated as corridors due to the time incurred waiting for traffic lights. To effectively evaluate these facilities, a "time-space" analysis methodology is employed, which takes into consideration the traffic light cycle at intersections.

LOS standards are based on the average area available per pedestrian during the analysis period, typically expressed as a 15-mintue peak period. LOS grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. **Table G-3** defines the LOS criteria for pedestrian crosswalk/corner area and sidewalk conditions, as based on the *Highway Capacity Manual* methodology.

Table G-3: Pedestrian Crosswalk/Corner Area and Sidewalk Levels of Service Descriptions

LOS	Crosswalk/Corner	Crosswalk/Corner Area Criteria (sf/ped)	Non-Platoon Sidewalk Criteria (sf/ped)	Platoon Sidewalk Criteria (sf/ped)
A	Unrestricted	> 60	> 60	> 530
B	Slightly Restricted	> 40 to 60	> 40 to 60	> 90 to 530
C	Restricted, but Fluid	> 24 to 40	> 24 to 40	> 40 to 90
D	Restricted, Necessary to Continuously Alter Walking Stride and Direction	> 15 to 24	> 15 to 24	> 23 to 40
E	Severely Restricted	> 8 to 15	> 8 to 15	> 11 to 23
F	Forward Progress Only by Shuffling; No Reverse Movement Possible	≤ 8	≤ 8	≤ 11

Source: *CEQR Technical Manual*
Notes:
Based on average conditions for 15 minutes.
Sf/ped – square feet of area per pedestrian.

The analysis of sidewalk conditions includes a "platoon" factor in the calculation of pedestrian flow to more accurately estimate the dynamics of walking. "Platooning" is the tendency of pedestrians to move in bunched groups, or "platoons," once they cross a street where cross traffic required them to wait. Platooning generally results in an LOS poorer than that determined for average flow rates.

Significant Impact Criteria

Sidewalks

The *CEQR Technical Manual* impact criteria for a non-central business district (CBD) location are used to identify significant adverse impacts that could occur as a result of development facilitated by the Proposed Actions. These criteria define a significant adverse sidewalk impact in a non-CBD area to have occurred under platoon conditions if the average pedestrian space under the No-Action condition is greater than 44.3 sf per pedestrian (sf/ped), and the average pedestrian space under the With-Action condition is 40.0 sf/ped or less (LOS D or worse). If the average pedestrian space under the With-Action condition is greater than 40.0 sf/ped (LOS C or better), the impact would not be considered significant. If the No-Action pedestrian space is between 6.4 and 44.3 sf/ped, a reduction in pedestrian space under the With-Action condition should be considered significant based on **Table G-4**, which shows a sliding scale that identifies what decrease in pedestrian space is considered a significant impact for a given pedestrian space value in the No-Action condition. If the reduction in pedestrian space is less than the value in **Table G-4**, the impact is not considered significant. If the average pedestrian space under the No-Action condition is less than 6.4 sf/ped, then a reduction in pedestrian space greater than or equal to 0.3 sf/ped, under the With-Action condition, would be considered significant.

Table G-4: Significant Impact Criteria for Sidewalks with Platooned Flow in a Non-CBD Location

No-Action Condition Pedestrian Flow (sf/ped)	With-Action Condition Pedestrian Flow Increment to be Considered a Significant Impact (sf/ped)
> 44.3	With-Action Condition ≤ 40.0
43.5 to 44.3	Reduction ≥ 4.3
42.5 to 43.4	Reduction ≥ 4.2
41.6 to 42.4	Reduction ≥ 4.1
40.6 to 41.5	Reduction ≥ 4.0
39.7 to 40.5	Reduction ≥ 3.9
38.7 to 39.6	Reduction ≥ 3.8
37.8 to 38.6	Reduction ≥ 3.7
36.8 to 37.7	Reduction ≥ 3.6
35.9 to 36.7	Reduction ≥ 3.5
34.9 to 35.8	Reduction ≥ 3.4
34.0 to 34.8	Reduction ≥ 3.3
33.0 to 33.9	Reduction ≥ 3.2
32.1 to 32.9	Reduction ≥ 3.1
31.1 to 32.0	Reduction ≥ 3.0
30.2 to 31.0	Reduction ≥ 2.9
29.2 to 30.1	Reduction ≥ 2.8
28.3 to 29.1	Reduction ≥ 2.7
27.3 to 28.2	Reduction ≥ 2.6
26.4 to 27.2	Reduction ≥ 2.5
25.4 to 26.3	Reduction ≥ 2.4
24.5 to 25.3	Reduction ≥ 2.3
23.5 to 24.4	Reduction ≥ 2.2
22.6 to 23.4	Reduction ≥ 2.1
21.6 to 22.5	Reduction ≥ 2.0
20.7 to 21.5	Reduction ≥ 1.9
19.7 to 20.6	Reduction ≥ 1.8
18.8 to 19.6	Reduction ≥ 1.7
17.8 to 18.7	Reduction ≥ 1.6
16.9 to 17.7	Reduction ≥ 1.5
15.9 to 16.8	Reduction ≥ 1.4
15.0 to 15.8	Reduction ≥ 1.3
14.0 to 14.9	Reduction ≥ 1.2
13.1 to 13.9	Reduction ≥ 1.1
12.1 to 13.0	Reduction ≥ 1.0
11.2 to 12.0	Reduction ≥ 0.9
10.2 to 11.1	Reduction ≥ 0.8
9.3 to 10.1	Reduction ≥ 0.7
8.3 to 9.2	Reduction ≥ 0.6
7.4 to 8.2	Reduction ≥ 0.5
6.4 to 7.3	Reduction ≥ 0.4
< 6.4	Reduction ≥ 0.3

Source: *CEQR Technical Manual*

Corner Areas and Crosswalks

For a non-CBD area, *CEQR Technical Manual* criteria define a significant adverse corner area or crosswalk impact to have occurred if the average pedestrian space under the No-Action condition is greater than 26.6 sf/ped and, under the With-Action condition, the average pedestrian space decreases to 24 sf/ped or less (LOS D or worse). If the pedestrian space under the With-Action condition is greater than 24 sf/ped (LOS C or better), the impact should not be considered significant. If the average pedestrian space under the No-Action condition is between 5.1 and 26.6 sf/ped, a decrease in pedestrian space under the With-Action condition should be considered significant based on **Table G-5**, which shows a sliding scale that identifies

what decrease in pedestrian space is considered a significant impact for a given amount of pedestrian space in the No-Action condition. If the decrease in pedestrian space is less than the value in **Table G-5**, the impact is not considered significant. If the average pedestrian space under the No-Action condition is less than 5.1 sf/ped, then a decrease in pedestrian space greater than or equal to 0.2 sf/ped should be considered significant.

Table G-5: Significant Impact Criteria for Corners and Crosswalks in a Non-CBD Location

No-Action Condition Pedestrian Flow (sf/ped)	With-Action Condition Pedestrian Flow Increment to be Considered a Significant Impact (sf/ped)
> 26.6	With-Action Condition ≤ 24.0
25.8 to 26.6	Reduction ≥ 2.6
24.9 to 25.7	Reduction ≥ 2.5
24.0 to 24.8	Reduction ≥ 2.4
23.1 to 23,9	Reduction ≥ 2.3
22.2 to 23.0	Reduction ≥ 2.2
21.3 to 22.1	Reduction ≥ 2.1
20.4 to 21.2	Reduction ≥ 2.0
19.5 to 20.3	Reduction ≥ 1.9
18.6 to 19.4	Reduction ≥ 1.8
17.7 to 18.5	Reduction ≥ 1.7
16.8 to 17.6	Reduction ≥ 1.6
15.9 to 16.7	Reduction ≥ 1.5
15.0 to 15.8	Reduction ≥ 1.4
14.1 to 14.9	Reduction ≥ 1.3
13.2 to 14.0	Reduction ≥ 1.2
12.3 to 13.1	Reduction ≥ 1.1
11.4 to 12.2	Reduction ≥ 1.0
10.5 to 11.3	Reduction ≥ 0.9
9.6 to 10.4	Reduction ≥ 0.8
8.7 to 9.5	Reduction ≥ 0.7
7.8 to 8.6	Reduction ≥ 0.6
6.9 to 7.7	Reduction ≥ 0.5
6.0 to 6.8	Reduction ≥ 0.4
5.1 to 5.9	Reduction ≥ 0.3
< 5.1	Reduction ≥ 0.2

Source: *CEQR Technical Manual*

Existing Conditions

As detailed in the pedestrian assignment in **Figure G-1**, two corner areas (12th Street/35th Avenue and 12th Street/36th Avenue) and one sidewalk (the east side of 12th Street between 35th and 36th Avenues) were identified where project-generated pedestrian trips are expected to exceed the 200-trip CEQR analysis threshold during the weekday midday, weekday PM, and Saturday midday peak hours and, therefore, have been selected for analysis. Existing peak 15-minute pedestrian flow volumes were collected on Wednesday, April 5, 2017 and Saturday, April 8, 2017 during the weekday midday, weekday PM, and Saturday midday peak hours along analyzed sidewalk and corner areas that would experience project-generated pedestrian volumes of 200 or greater as per the Level 2 Screening analysis detailed above. Existing peak hour volumes, average pedestrian space, and LOS at these pedestrian elements are presented in **Tables G-6a** and **G-6b**. As indicated in the tables, all analyzed pedestrian elements are currently operating at LOS A in all analyzed peak hours, due to very low existing pedestrian volumes in the area.

Table G-6a: Existing Sidewalk Conditions

Location	Sidewalk	Total Width (feet)	Effective Width (feet)	Peak Hour Volumes			Pedestrian Space (SFP)			Platoon-Adjusted LOS		
				MD	PM	SMD	MD	PM	SMD	MD	PM	SMD
12th Street btwn 35th Avenue & 36th Avenue	West	9.5	4.7	9	5	5	>1000	>1000	>1000	A	A	A

Notes:
SFP - Square feet per pedestrian.
LOS - Level of Service.

Table G-6b: Existing Corner Area Conditions

Location	Corner	Pedestrian Space (SFP)			LOS		
		MD	PM	SMD	MD	PM	SMD
12th Street & 35th Avenue	SW	1406.3	882.0	999.3	A	A	A
12th Street & 36th Avenue	NW	781.5	450.2	1265.5	A	A	A

Notes:
SFP - Square feet per pedestrian.
LOS - Level of Service.

Future without the Proposed Actions

Estimates of 2024 No-Action peak hour pedestrian volumes on the analyzed pedestrian elements were developed by applying the annual background growth rates recommended in the *CERQ Technical Manual* to existing volumes. An annual compounded growth rate of 0.5 percent was applied for years 2017 (when pedestrian data were collected) through 2022, and 0.25 percent for years 2022 through 2024.

Tables G-7a and **G-7b** below show the forecasted No-Action peak hour pedestrian volumes, average pedestrian space, and LOS at the analyzed locations during the weekday midday peak hour. As shown in the tables, all analyzed pedestrian facilities are projected to continue to operate at LOS A in the weekday midday under No-Action conditions.

Table G-7a: No-Action Sidewalk Conditions

Location	Sidewalk	Total Width (feet)	Effective Width (feet)	Peak Hour Volumes			Pedestrian Space (SFP)			Platoon-Adjusted LOS		
				MD	PM	SMD	MD	PM	SMD	MD	PM	SMD
12th Street btwn 35th Avenue & 36th Avenue	West	9.5	4.7	52	30	31	854.1	1243.6	802.3	A	A	A

Notes:
SFP - Square feet per pedestrian.
LOS - Level of Service.

Table G-7b: No-Action Corner Area Conditions

Location	Corner	Pedestrian Space (SFP)			LOS		
		MD	PM	SMD	MD	PM	SMD
12th Street & 35th Avenue	SW	766.3	688.3	734.0	A	A	A
12th Street & 36th Avenue	NW	275.4	342.3	587.0	A	A	A

Notes:
SFP - Square feet per pedestrian.
LOS - Level of Service.

Future with the Proposed Actions

As discussed previously, the Proposed Actions and associated RWCDS would result in the incremental development of 116 DUs and approximately 22,143 gsf of commercial space in the proposed rezoning area. The Proposed Actions would generate new pedestrian demand on the analyzed sidewalk and other pedestrian elements by 2024. This new demand would include trips made solely by walking, as well as pedestrian trips en route from public transit facilities.

Pedestrian trips generated by the RWCDS (including walk-only, and trips to/from transit) were assigned to the three projected development sites. The assignment of project increment pedestrian trips generated by the RWCDS during the weekday midday peak hour were shown earlier in **Figure G-1**. Based on the peak hour project-generated pedestrian trips presented in **Figures G-2** through **G-5**, peak hour incremental pedestrian volumes were developed. These pedestrian volumes were added to the projected No-Action volumes to generate With-Action pedestrian volumes. These volumes were then applied to the analyzed sidewalk and corner areas.

Tables G-8a and **G-8b** show the forecasted With-Action peak hour pedestrian volumes, average pedestrian space, and LOS at the analyzed locations during the weekday midday peak hour. As shown in the tables, all analyzed pedestrian facilities are projected to operate at LOS C or better in all peak hours under With-Action conditions. As presented in **Table G-7a**, 12th Street's western sidewalk (between 35th and 36th Avenues) would decline from LOS A under No-Action conditions to LOS B under With-Action conditions in the weekday PM peak hour, and LOS A to LOS C in the weekday and Saturday midday peak hours. As the No-Action average pedestrian space would exceed 44.3 sf per pedestrian in all peak hours, and the With-Action average pedestrian space would remain above 40.0 sf per pedestrian (the *CEQR Technical Manual* significant impact criteria), this would not be considered a significant adverse impact.

Table G-8a: With-Action Sidewalk Conditions

Location	Sidewalk	Total Width (ft)	Effective Width (ft)	Peak Hour Volumes			Pedestrian Space (SFP)			Platoon-Adjusted LOS		
				MD	PM	SMD	MD	PM	SMD	MD	PM	SMD
12th Street btwn 35th Avenue & 36th Avenue	West	9.5	4.7	500	310	353	88.4	120.1	70.0	C	B	C

Notes:
SFP - Square feet per pedestrian.
LOS - Level of Service.

Table G-8b: With-Action Corner Area Conditions

Location	Corner	Pedestrian Space (SFP)			LOS		
		MD	PM	SMD	MD	PM	SMD
12th Street & 35th Avenue	SW	108.0	140.0	153.7	A	A	A
12th Street & 36th Avenue	NW	43.7	95.5	72.2	B	A	A

Notes:
SFP - Square feet per pedestrian.
LOS - Level of Service.

As presented in **Table G-8b**, the analyzed corners at 12th Street/35th Avenue and 12th Street/36th Avenue would continue to operate at LOS B or better under With-Action conditions. Therefore, per *CEQR Technical Manual* criteria, the Proposed Actions would not result in significant adverse pedestrian impacts.

Attachment H

Air Quality

I. INTRODUCTION

As detailed in Attachment A, "Project Description," the Applicant is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1 (refer to **Figure H-1**). The Proposed Actions include: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 (including Lot 27, Lot 50, and p/o Lots 8 and 38) from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the area a Mandatory Inclusionary Housing (MIH) Area.

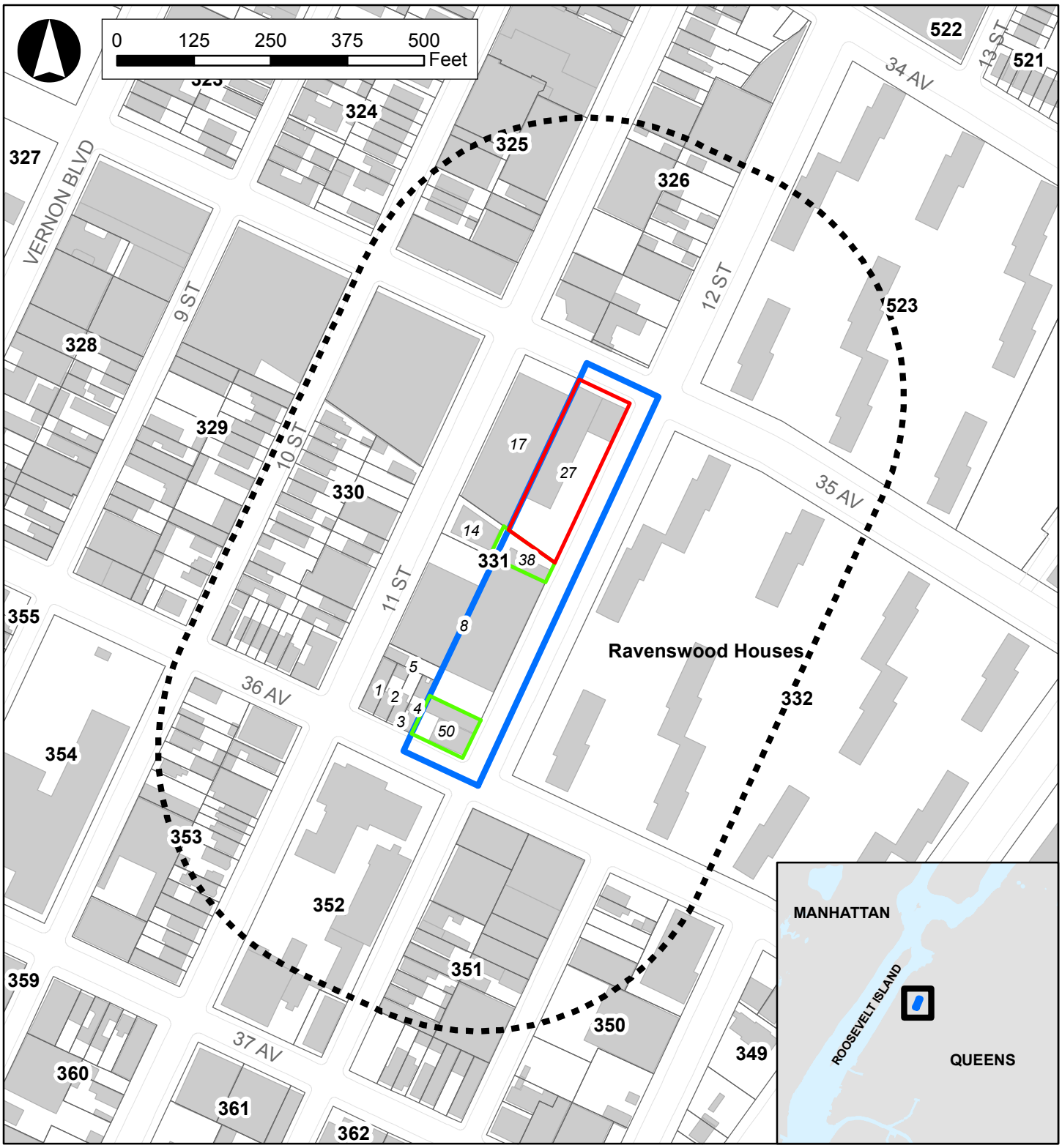
The 24,589 square foot (sf) Applicant-owned proposed development site on Lot 27 currently contains a single-story, approximately 10,320 sf warehouse and associated parking. In the reasonable worst-case development scenario (RWCDS) future with the Proposed Actions, the Applicant would demolish the existing warehouse and construct a new eight-story, 85-foot tall, approximately 92,946 gross square foot (gsf) mixed-use residential and commercial building on the site, with a floor area ratio (FAR) of 3.6.[1]

Two other sites in the proposed rezoning area are also expected to be redeveloped with mixed-use residential and commercial buildings in the 2024 future with the Proposed Actions: Lots 38 and 50. Lot 38 (Projected Development Site 2) would be redeveloped with an 85-foot tall, mixed-use commercial and residential building with approximately 16,095 gsf, and Lot 50 (Projected Development Site 3) would be redeveloped with an 85-foot tall, mixed-use commercial and residential building with approximately 22,812 gsf. Absent the Proposed Actions, no changes are expected to occur in the proposed rezoning area.

Emissions released from the gas-fired heating, ventilation, and air conditioning (HVAC) systems of the RWCDS With-Action buildings on the proposed/projected development sites could potentially impact local air quality. Because all three RWCDS buildings would be the same height, the HVAC emissions of each building could impact the others (i.e., the emissions from the Applicant's building on Lot 27 could impact the adjacent building on Lot 38 and, in turn, the emissions from the building on Lot 38 could impact the Applicant's building; the building on Lot 38 could impact the building on Lot 50 and the building on Lot 50 could impact the building on Lot 38). A project-on-project analysis is therefore required to determine whether the potential impacts of the HVAC emissions of these three RWCDS buildings would be significant.

A review of existing land uses using NYC Open Accessible Space Information System (OASIS) interactive mapping application, the New York City Department of City Planning's (DCP's) Primary Land Use and Tax Lot Output (PLUTO) data, Google imaging software, and site visits confirmed that there are no existing buildings within 400 feet of the proposed rezoning area that are taller than or as tall as the RWCDS developments (i.e., 85 feet tall). As such, no project-on-existing buildings analysis is warranted for the Proposed Actions. In addition, as there are no any major combustion emission sources (i.e., facilities permitted under the federal Title V program or permitted as a State facility) within 400 feet of the proposed rezoning area, no major source analysis is warranted.

[1] The RWCDS assumes the proposed development site would be built out to the maximum With-Action permitted FAR of 3.6. For conservative analysis purposes, this assumption is higher than shown in the Applicant's architectural drawings in the Land Use Application, which assume a built FAR of 3.54.



Source: New York City Department of City Planning (PLUTO 2016), DoITT

Legend

- Applicant-owned Proposed Development Site
- Proposed Rezoning Area
- Projected Development Site
- Building Footprint
- 400-Foot Radius
- 331 Block
- 27 Lot

However, as a number of industrial facilities were found to be located within 400 feet of the three RWCDS development sites, an analysis was conducted to determine whether the potential impacts of the air toxic emissions released from these facilities would significantly impact the proposed/projected developments.

The potential air quality impacts were estimated following the procedures and methodologies prescribed in the *New York City Environmental Quality Review 2014 Technical Manual (CEQR TM)*.

II. PRINCIPAL CONCLUSIONS

As detailed below, no significant adverse air quality impacts would occur as a result of the Proposed Actions. No building-on-building impacts from the HVAC emissions of the proposed or projected development sites would occur in the future with the Proposed Actions. To ensure that the proposed/projected development sites' combustion systems do not cause any significant adverse impacts, restrictions to fuel type, systems, and exhaust stack heights and location would be required through the mapping of (E)-Designations (E-480). With these restrictions in place, there would not be any adverse air quality impacts due to the proposed/projected development sites' combustion and process sources. Additionally, the air toxics analysis detailed below concludes that existing permitted industrial sources currently operating within 400 feet of the proposed rezoning area do not exceed the applicable CEQR significant impact criteria or the Clean Air Act's National Ambient Air Quality Standards (NAAQS). Therefore, emissions released from nearby industrial sources would not result in significant adverse air toxics impacts in the proposed rezoning area.

III. HVAC ANALYSIS

Relevant Air Pollutants

The United States Environmental Protection Agency (EPA) has identified several pollutants, which are known as criteria pollutants, as being of concern nationwide. For conservative analysis purposes, it is assumed that the RWCDS buildings in the proposed rezoning area would be heated by natural gas. Therefore, the two criteria pollutants associated with natural gas combustion – nitrogen dioxide (NO_2) and particulate matter smaller than 2.5 microns ($PM_{2.5}$) – were considered for analysis.

Applicable Air Quality Standards and Significant Impact Criteria

As required by the Clean Air Act, NAAQS have been established for the criteria pollutants by EPA. The NAAQS are concentrations set for each of the criteria pollutants in order to protect public health and the nation's welfare, and New York has adopted the NAAQS as the State ambient air quality standards. This analysis addressed compliance of the potential impacts with the one-hour and annual NO_2 NAAQS.

In addition to the NAAQS, the *CEQR TM* requires that projects subject to CEQR apply a $PM_{2.5}$ significant impact criteria (based on concentration increments) developed by the New York City Department of Environmental Protection (DEP) to determine whether potential adverse $PM_{2.5}$ impacts would be significant. If the estimated impacts of a proposed project are less than these increments, the impacts are not considered to be significant. This analysis addressed compliance of the potential impacts with the 24-hour and annual $PM_{2.5}$ CEQR significant incremental impact criteria.

The current standards and CEQR significant impact criteria that were applied to this analysis, together with their health-related averaging periods, are provided in **Table H-1**.

Table H-1: Applicable National Ambient Air Quality Standards and CEQR Threshold Values

Pollutant	Averaging Period	NAAQS	CEQR Thresholds
NO_2	1 Hour	0.10 ppm (188 µg/m^3)	--
	Annual	.053 ppm (100 µg/m^3)	--
$PM_{2.5}$	24 Hour	35 µg/m^3	7.65
	Annual	12 µg/m^3	0.3

NO_2 NAAQS

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).

The one-hour NO_2 NAAQS standard of 0.100 ppm (188 ug/m^3) is the three-year average of the 98th percentile of daily maximum one-hour average concentrations in a year. For determining compliance with this standard, the EPA has developed a modeling approach for estimating one-hour NO_2 concentrations that is comprised of three tiers: Tier 1, the most conservative approach, assumes a full (100 percent) conversion of NOx to NO_2; Tier 2 applies a conservative ambient NOx/NO_2 ratio of 80 percent to the NOx estimated concentrations; and Tier 3, which is the most precise approach, employs AERMOD's Plume Volume Molar Ratio Method (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. When Tier 3 is utilized, AERMOD generates eighth highest daily maximum one-hour NO_2 concentrations or total one-hour NO_2 concentrations if hourly NO_2 background concentrations are added within the model, and averages these values over the numbers of the years modeled. Total estimated concentrations are generated in the statistical form of the one-hour NO_2 NAAQS format and can be directly compared with the one-hour NO_2 NAAQS standard.

Based on DCP guidance, Tier 1, as the most conservative approach, should initially be applied as a preliminary screening tool to determine whether violations of the NAAQS is likely to occur. If exceedances of the one-hour NO_2 NAAQS were estimated, the less conservative Tier 3 approach was applied.

The annual NO_2 standard is 0.053 parts per million (ppm or 100 ug/m^3). In order to conservatively estimate annual NO_2 impacts, a NO_2 to NOx ratio of 0.75 percent, which is recommended by the DEP for an annual NO_2 analysis, was applied.

$PM_{2.5}$ CEQR Significant Impact Criteria

CEQR TM guidance includes the following criteria for evaluating significant adverse $PM_{2.5}$ incremental impacts:

> *Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour $PM_{2.5}$ background concentration and the 24-hour standard.*

A 24-hour $PM_{2.5}$ background concentration of 19.7 ug/m^3 was obtained from Queens College 2 monitoring station as the average of the 98th percentile for the latest three years of available monitoring data collected by the New York State Department of Environmental Conservation (NYSDEC) for 2014-2016. As the applicable background value is 19.7 ug/m^3, half of the difference between the 24-hour $PM_{2.5}$ NAAQS and this background value is 7.65 ug/m^3. As such, a significant impact criterion of 7.65 ug/m^3 was used for determining whether the potential 24-hour $PM_{2.5}$ impacts of the Proposed Actions are considered to be significant.

For an annual average adverse $PM_{2.5}$ incremental impact, according to *CEQR* guidance:

> *Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 ug/m^3 at any receptor location for stationary sources.*

The above 24-hour and annual significant impact criteria were used to evaluate the significance of predicted $PM_{2.5}$ impacts.

CEQR Screening Analysis

Based on CEQR guidance, a preliminary screening analysis needs to be conducted as a first step to predict whether the potential impacts of the HVAC emissions would be significant and therefore require a detailed analysis. The CEQR screening procedure is only applicable to single buildings that are more than 30 feet apart from the nearest building of similar or greater height. As such, the screening procedure could be only applied to Projected Development Site 2 (Lot 38) as it impacts Projected Development Site 3 (Lot 50) and vice versa (Site 3 as it impacts Site 2). The screening procedure is not applicable for the Applicant-owned Proposed Development Site (Lot 27) and Projected Development Site 2 because, as shown in **Figure H-1**, these lots are adjacent to each other. As such, a detailed analysis is applicable.

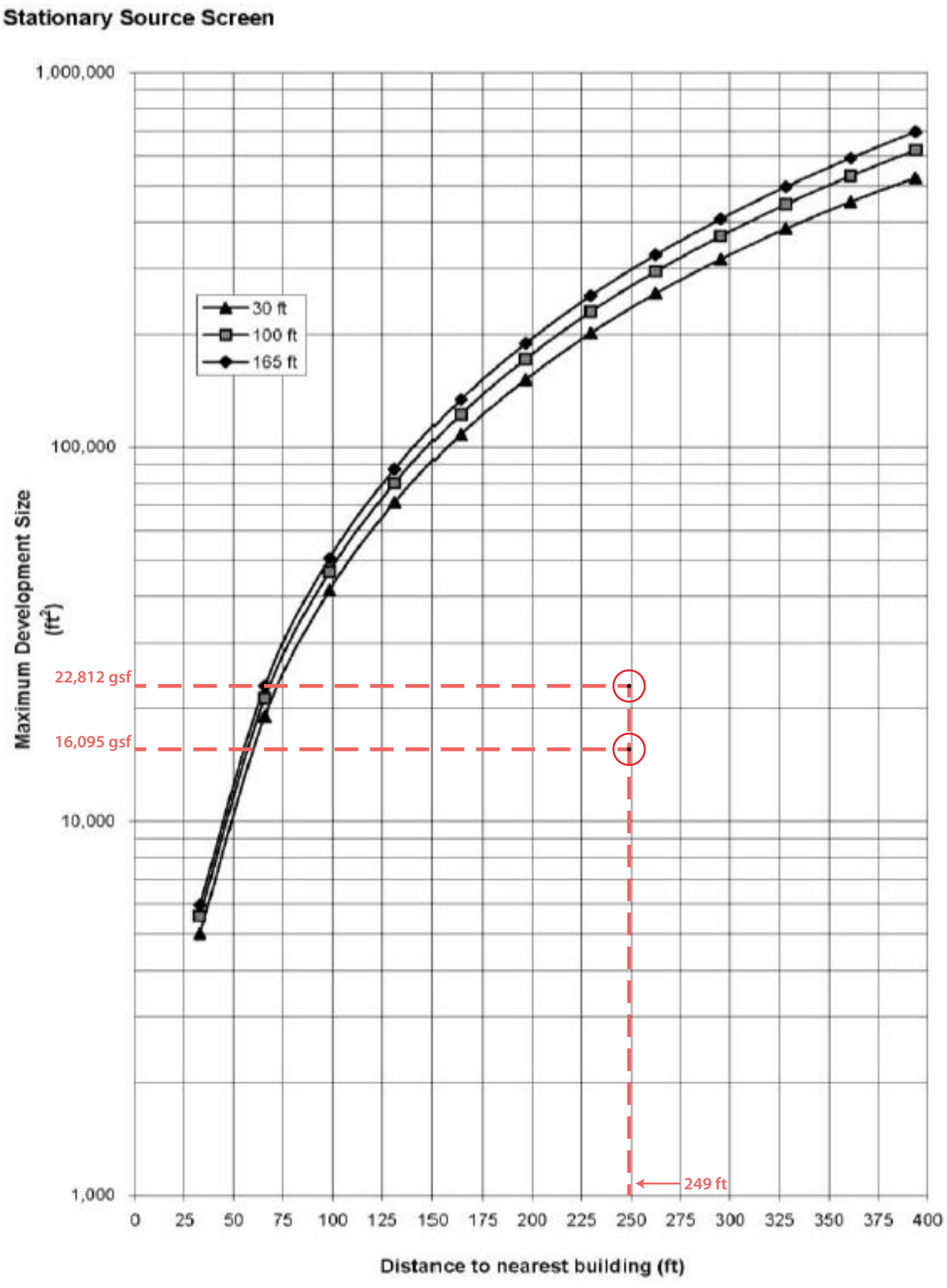
The total square footage of Projected Development Sites 2 and 3 were used in the analysis and Figure 17-3 of the *CEQR TM "Stationary Source Screen,"* for a corresponding stack height, was conservatively applied. This nomograph depicts the size of the development versus the distance below which a potential impact could occur, and provides a threshold distance. As required by *CEQR* screening procedures, the 30-foot curve was applied to the 85-foot tall buildings as the 30 feet curve height is closest to but not higher than the 88-foot tall stack height of this building (which is based on the building height and an assumed roof-top stack height of three feet).

If the actual distance between a stack and an affected building is greater than the estimated threshold distance for a building size, then that building passes the screening analysis (and no significant impact is predicted). However, if the actual distance is less than the threshold distance for a building, then there is a potential for a significant impact and a detailed analysis would be required.

The results of the screening analysis for project-on-project are that the threshold distances for Projected Development Sites 2 and 3, based on building sizes, are approximately 55 and 70 feet, respectively, while the actual distance between these two sites is approximately 249 feet. As such, both buildings passed the conservative screening analysis and no further (detailed) analysis of these buildings is required (see **Figure H-2**).

Detailed Analysis

A dispersion modeling analysis was conducted to estimate impacts from the HVAC emissions using the latest version of EPA's AERMOD dispersion model 12.1 (EPA version 16216r). In accordance with CEQR guidance, this analysis was conducted assuming stack tip downwash, urban dispersion surface roughness length, and elimination of calms. AERMOD's Plume Volume Molar Ratio Method (PVMRM) module was utilized for one-hour NO_2 analysis – to account for NOx to NO_2 conversion if warranted. Analyses were conducted with and without the effects of wind flow around the proposed/projected RWCDS buildings (i.e., with and without downwash) utilizing AERMOD Building Profile Input Program (BPIP) algorithm and both results are reported.


Stationary Source Screen
1,000,000
100,000
10,000
1,000
Maximum Development Size (ft²)
30 ft
100 ft
165 ft
22,812 gsf
16,095 gsf
249 ft
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
Distance to nearest building (ft)

Emission rates for HVAC analysis were estimated as follows:

- Because the proposed/projected developments would conservatively be heated by natural gas, emission rates of NOx and $PM_{2.5}$ were calculated based on annual natural gas usage corresponding to the gross floor area of each building, EPA AP-42 emission factors for firing natural gas combustion in small boilers, and gross heating value of natural gas;

- $PM_{2.5}$ emissions from natural gas combustion accounted for both filterable and condensable particulate matter;

- Short-term NO_2 and $PM_{2.5}$ emission rates were estimated by accounting for seasonal variation in heat and hot water demand; and

- The natural gas fuel usage factor 59.1 cubic foot per square foot per year was obtained from CEQR Table US1, Total Energy Consumption, Expenditures and Intensities, 2005, Part I: Housing Unit Characteristics and Energy Use Indicators for New York using the conservative factor for residential uses (even though the RWCDS buildings would be mixed-use residential and commercial).

Table H-2 provides estimated $PM_{2.5}$ and NO_2 short-term (e.g., 24-hour and one-hour) and annual emission rates for each development from the boiler firing natural gas. The diameter of the stacks and the exhaust's exit velocities were estimated based on values obtained from DEP "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million BTUs per hour). Boiler sizes were estimated based on assumption that all fuel would be consumed during the 100-day (or 2,400 hour) heating season. A stack exit temperature was assumed to be 300ºF (423ºK), which is appropriate for boilers, was assumed for all boilers.

Table H-2: Estimated Pollutant Short-term and Annual Emission Rates

Building ID[1]	**Stack Height**	**Total Floor Area**	**$PM_{2.5}$ Emission Rate[2]**		**NO_2 Emission Rate[3]**	
	feet	*ft^2*	*g/sec*	*g/sec*	*g/sec*	*g/sec*
			24-hr	*Annual*	*1-hr*	*Annual*
Applicant-owned Proposed Development Site (Lot 27)	88	92,946	2.19E-03	6.00E-04	2.88E-02	7.90E-03
Projected Development Site 2 (Lot 38)	88	16,095	3.80E-04	1.04E-04	4.99E-03	1.37E-03
Projected Development Site 3 (Lot 50)	88	22,812	5.38E-04	1.47E-04	7.08E-03	1.94E-03

Notes:

[1] Refer to **Figure H-1**.

[2] PM2.5 emission factor for natural gas combustion of 7.6 lb/106 cubic feet included filterable and condensable particulate matter (Filterable PM2.5 =1.9 lb/106 ft3 and condensable PM2.5=5.7 lb/10t3 (AP-42 Table 1.4-2).

[3] NOx emission factor for natural gas of 100 lb/106 ft3 for small uncontrolled boilers (AP-42, Table 1.4-1).

Meteorological Data

All analyses were conducted using the latest five consecutive years of meteorological data (2012-2016). Surface data was obtained from La Guardia Airport and upper air data was obtained from Brookhaven Station, New York. The data were processed by Trinity Consultants, Inc. using the current EPA AERMET and EPA procedures. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the five-year period.

Five years of meteorological data were combined into a single multiyear file to conduct 24-hour $PM_{2.5}$ and one-hour NO_2 modeling. The $PM_{2.5}$ special procedure which incorporated into AERMOD calculates concentrations at each receptor for each year modeled, averages those concentrations across the number of years of data, and then selects the highest values across all receptors of the five-year averaged highest values.

Background Concentrations

In order to conduct the one-hour NO_2 Tier 3 analysis, hourly NO_2 and hourly ozone background concentrations was developed from available monitoring data collected by the New York State Department of Environmental Conservation (NYSDEC) at the Queens College 2 monitoring station for the five consecutive years (2012 through 2016), and compiled into AERMOD's required hourly emission (NO_2) and concentration (ozone) data format.

The maximum one-hour NO_2 background concentration at Queens College 2 monitoring station of 64.3 ppb or 121.3 ug/m^3, which is three-year average of the 98th percentile of daily maximum one-hour concentrations for 2014 through 2016, and the annual NO_2 background concentration of 16.6 ppb or 31.3 ug/m^3, which is the maximum annual average for latest three years from Queens College 2 monitoring station, were also used. The maximum average annual $PM_{2.5}$ background concentration for the last three years is 7.5 ug/m^3.

Stacks and Receptor Locations

It was assumed that emissions from each building would be released through a single stack located on a flat roof that would be three feet above roof level. Stacks were initially placed 10 feet from the lot line of the adjacent building, as required by the New York City Building Code as a minimum allowable distance. If exceedances of the $PM_{2.5}$ significant impact criteria were predicted, set-backs from the lot line were increased, in 10-foot increments, until the threshold distance at which building would pass the analysis was determined.

Receptors were placed around all faces of the buildings being impacted in 10-foot increments on all floor levels, starting at ground level and extending up to the level of the upper windows (which were assumed to be five feet below roof level). More than 700 receptors on each building were considered. Modeling parameters used in the analysis are provided in **Table H-3**.

Table H-3: Modeling Parameters for HVAC Analysis

Model	AERMOD (EPA Version 16216r)
Source Type	Point Source
Number of emission points (stacks) considered	One stack on each building
Surface Characteristic	Urban Area Option
Urban Surface Roughness Length	1
Downwash effect	BPIP Program
Meteorological Data	Preprocessed by the AERMET meteorological preprocessor program by Trinity Consultants, Inc. Yearly meteorological data for 2012-2016 concatenated into single multiyear file for $PM_{2.5}$ modeling, as EPA recommended
Surface Meteorological Data	LaGuardia 2012-2016
Profile Meteorological Data	Brookhaven Station 2012-2016
Pollutant Background Concentrations	Queens College 2 monitoring stations data for 2012-2016
$PM_{2.5}$ Analysis	Special procedure incorporated into AERMOD where model calculates concentration at each receptor for each year modeled, averages those concentrations across the number of years of data, and then selects the highest across all receptors of the 5-year averaged highest values

Results

$PM_{2.5}$ Results

When considering results, it should be noted that when the HVAC emissions from buildings of the same height impact each other (such as the Applicant-owned Proposed Development Site on Projected Development Site 2, or vice versa), lesser impacts generally occur because the stacks are three feet above the roof and the upper window receptors (where the highest impacts occur) are five feet below the roof height, and, as such, the height separation between stack and receptors are eight feet (or greater with plume rise).

Results of dispersion analysis show that no significant impacts are predicted with the stack on the Applicant's building located at the minimum distance (10 feet as allowed by the Building Code) from the lot line of Projected Development Site 2. Therefore, no additional restrictions would be necessary for stack on Applicant-owned Proposed Development Site. In the case where Projected Development Site 2 emissions would impact the Applicant-owned Proposed Development Site, the results are even lower (because of the smaller building size), and additional restrictions would also not be required.

As such, $PM_{2.5}$ emissions from HVAC system would not cause significant impacts on the RWCDS proposed/projected development sites.

Figure H-3: Proposed/Projected Developments and Surrounding Toxic Facilities

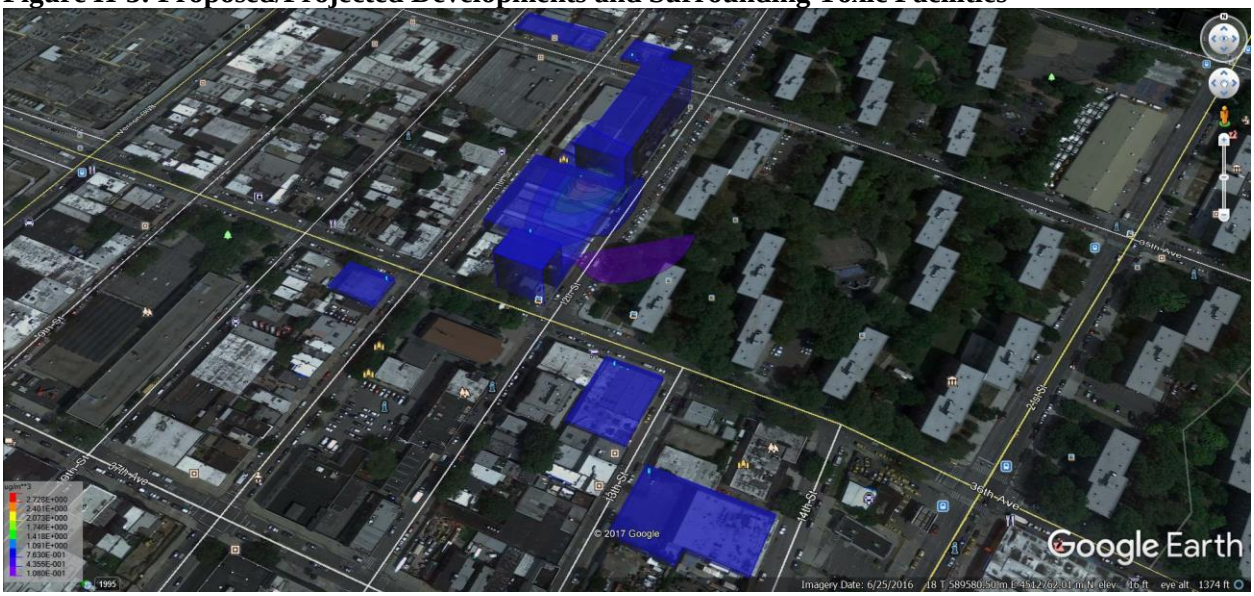


Table H-4: $PM_{2.5}$ Analysis Results

Building/Scenario	Receptor Buildings	Maximum 24-hr $PM_{2.5}$ Impacts	Maximum Annual $PM_{2.5}$ Impacts	CEQR Significant Impact Criteria 24hr/Annual
		µg/m³	*µg/m³*	*µg/m³*
Applicant-owned Proposed Development Site (Lot 27)	Projected Development Site 2 (Lot 38)	0.51	0.04	7.65/0.3
Projected Development Site 2 (Lot 38)	Applicant-owned Proposed Development Site (Lot 27)	0.11	0.007	7.65/0.3

NO_2 Results

The NO_2 analysis was conducted using the same stack locations and parameters as in the $PM_{2.5}$ analysis. Tier 1 analysis was sufficient to demonstrate compliance with one-hour NO_2 NAAQS of 188 ug/m^3 for proposed/projected RWCDS buildings and therefore, Tier 3 analysis was not necessary. With the Tier 1 analysis, the total one-hour NO_2 concentration with added background concentration is estimated to be less than the one-hour NO_2 NAAQS (**Table H-5**).

The estimated annual average NO_2 total concentrations, which include impacts and the NO_2 annual background concentration, were also less than the annual NO_2 NAAQS of 100 ug/m^3 for proposed/projected RWCDS buildings.

Therefore, NO_2 emissions would not cause significant impacts on the proposed/projected development sites.

Table H-5: NO_2 Analysis Results

Building/Scenario	Receptor Buildings	1-hr NO_2 Total Conc.[1]	Annual NO_2 Total Conc.[2]	NAAQS 1-hr/Annual
		µg/m^3	µg/m^3	µg/m^3
Applicant-owned Proposed Development Site (Lot 27)	Projected Development Site 2 (Lot 38)	138.2	31.7	188/100
Projected Development Site 2 (Lot 38)	Applicant-owned Proposed Development Site (Lot 27)	125.3	31.4	188/100 188/100

Notes:
[1] Includes one-hour NO_2 background concentration of 121.3 ug/m3
[2] Includes annual background concentration of 31.3 ug/m^3.

A summary of the results for all averaging time periods, with and without downwash effect, are presented in **Table H-6**.

Table H-6: Summary of Results (ug/m^3)

Pollutant	Modeled	Background	Total Conc.	Evaluation
$PM_{2.5}$				
Applicant-owned Proposed Development Site on Projected Development Site 2				
24-hr $PM_{2.5}$	0.51/0.41	N/A	0.51	7.65 (*CEQR Criteria)*
Annual $PM_{2.5}$	0.04/0.02	N/A	0.04	0.3 (*CEQR Criteria*)
Projected Development Site 2 on Applicant-owned Proposed Development Site				
24-hr $PM_{2.5}$	0.11/0.069	N/A	0.11	7.65 (*CEQR Criteria)*
Annual $PM_{2.5}$	0.007/0.002	N/A	0.007	0.3 (*CEQR Criteria*)
NO_2				
Applicant-owned Proposed Development Site on Projected Development Site 2				
1-hr NO_2	9.9/16.9	121.3	138.2	188 (NAQQS)
Annual NO_2	0.42/0.17	31.3	31.7	100 (NAAQS
Projected Development Site 2 on Applicant-owned Proposed Development Site				
1-hr NO_2	4.04/2.44	121.3	125.3	188 (NAQQS)
Annual NO_2	0.07/0.02	31.3	31.4	100 (NAAQS)

Notes: Modeled concentrations are shown with/without downwash effects.

To ensure that the proposed/projected development sites' combustion systems do not cause any significant adverse impacts on $PM_{2.5}$ and 1-hour NO_2 concentrations, the following restrictions would be required through the mapping of (E)-Designations (E-480) for air quality regarding fuel type, systems, and exhaust stack height and location. The text of the (E) designations (E-480) would be as follows:

> **Block 331, Lots 27, 38, 50 (Projected Development Sites 1, 2, and 3)**
>
> **Any new residential and/or commercial development on the above-referenced properties in the Ravenswood neighborhood of Queens must exclusively use natural**

gas as the type of fuel for heating, ventilating, and air conditioning systems, and ensure that the HVAC stacks are located at the highest tier or at least 88 feet above grade to avoid any potential significant adverse air quality impacts.

Results of the HVAC Analysis

The results of the HVAC analyses are as follows:

- No significant adverse air quality impacts from the HVAC emissions of each proposed/projected development on each other are predicted; and
- An E-designation (E-480) would be required to limit the minimum stack height for the proposed developments.

IV. INDUSTRIAL SOURCE ANALYSIS

In accordance with Section 220 (Stationary Sources) of the *CEQR TM*, "projects that would result in new uses (particularly schools, hospitals, and residences) located within 400 feet of manufacturing or processing facilities" may result in potentially significant impacts, and therefore require stationary source analyses. As several existing industrial facilities are located within 400 feet of the proposed rezoning area, an analysis was conducted to determine whether the potential impacts of the air toxic emissions released from these facilities would significantly impact the RWCDS proposed/projected developments.

Emissions

The first step in this analysis, which is to determine the types and amounts of emissions generated by the nearby industrial facilities, was to obtain emission data for these facilities that are permitted by the NYDEP.

A formal request for this information, with nearby block and lot numbers, was submitted to the DEP, and, based on the information received; permits for 11 industrial facilities were identified as currently operating within 400 feet of the proposed rezoning area. These are as follows:

- PA005798 - Casa Custom Woodworking, located at 36-10 13th Street (Block 351, Lot 23)
- PA019091 - Central Collison Inc., located at 10-12 36th Avenue (Block 353 Lot 20)
- PA036595 - Eckhoff Truck Bodies Inc, located at 36-22 14th Street (Block 350 Lot 8)
- PA038899 – 3S's Auto Collison Inc., located at 34-59 11th Street (Block 326 Lot 1)
- PB032609 - Florentine Craftsmen, located at 12-20 36th Avenue (Block 351 Lot 23)
- PB050301 - All City Switchboard, located at 35-41 11th Street (Block 331 Lot 8)
- PB495303 - All City Switchboard, located at 35-41 11th Street (Block 331 Lot 8)
- PB021307 - All City Switchboard, located at 35-41 11th Street (Block 331 Lot 8)
- PA052581 - Drillco Devices LTD, located at 10-05 35th Avenue (Block 325 Lot 1)
- PB001110 - Cutting Edge Wood Design, located at 34-47 10th Street (Block 325 Lot 7)
- PB032509 - Florentine Craftsman, located at 12-20 36th Avenue (Block 351 Lot 23)

Permits PA005798, PA019091, PA036595, PA038899, PA032609, PB050301 are for spray booth (painting); PB495303 is for welding, powder paint spraining, and curing of powder coatings; PA052581 is for metal treatment; PB00110 is for woodworking; PB021307 is for welding of steel products; and PB032509 is for jewelry melting operations.

The woodworking facility at 34-47 10th Street (PB001110) employs a "Grizzly" dust collector unit, which is a two-stage collection system consisting of dust collector (cyclone) and high efficiency filter cleaning system. The dust collector removes course particles and deposits them into collection drum. The clean air stream then passes through a filtration system in the second stage which captures up to 99 percent of the fine dust, down to 0.2 microns. As per the permit, this system is internally vented or no emissions are released into the atmosphere. Therefore, this facility was excluded from the further consideration and a total of 10 facilities were included in the analysis.

The data contained in the DEP permits were reviewed to determine the types of operations and pollutant emission rates, and served as the primary basis of the emission data for this analysis.

Facilities Considered

Facility types, addresses, block and lot numbers, permit numbers, and emitted pollutants for the facilities considered are provided in **Table H-7** below and mapped in **Figure H-4**.

Current Standards for Particulates

The analysis was conducted using the current (August 2016) edition of the NYSDEC DAR-1 database, which no longer includes short-term (one-hour) and annual guideline values (SGC and AGC) for $PM_{2.5}$ and PM_{10} but uses the federal standards for these pollutants.

The annual $PM_{2.5}$ federal standard is basically the same as DAR-1 AGC for $PM_{2.5}$. However, the federal standards for 24-hour $PM_{2.5}$ and PM_{10} are based on a 24-hour averaging period and, therefore, the previous SGC of 88 ug/m^3 for $PM_{2.5}$ or SGC of 380 ug/m^3 for PM_{10} no longer applies. Instead, the NAAQS of 35 ug/m^3 for 24-hour $PM_{2.5}$ and 150 ug/m^3 for PM_{10} were used in the analysis.

Permits and Pollutants

Facility No. 1

Casa Custom Woodworking (PA005798) at 36-10 13th Street is involved in wood products painting operations via a spray booth, and emits two types of pollutants – solids which is particulate matter and four solvents (n-butyl acetate, ethyl alcohol, xylene, and isopropanol). The facility is equipped with a fiberglass filter to control particulates with 85 percent efficiency. The permit contains hourly and annual emission rates for all pollutants.

Facility No. 2

Central Collison Inc. (PA019091) at 10-12 36th Avenue has auto body touch-up painting operations in a spray booth. According to the facility's description, 0.5 gallons of paint is consumed per hour or two gallons/day for four hours a day, 250 days a year. The permit lists two pollutant types as being emitted from its spray booth operations – solids and eight solvents. Solids (CAS number of NY075-00-0), which are particulate matter, are controlled by a fiberglass filter and plastic curtains, with an 80 percent control efficiency. The permit contains hourly and annual emission rates for all pollutants.

Land Uses & Industrial Permits

Legend

- Proposed Rezoning Area
- Proposed Development Site
- 400-Foot Radius

Land Uses

- One and Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities and Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data
- (1) Industrial Permit (see Table H-7)

Source: New York City Department of City Planning (PLUTO 2016), DoITT

Table H-7: Existing Toxic Facilities Permit Information

Map No.[1]	Facility Name	Block	Lot	Address	Permit No.	Facility Type	Pollutant Name	CAS No.	Pollutant Emission Rates	
									lb/hr	lb/year
Spray Booth Facilities										
1	Casa Custom Woodworking	351	23	36-10 13th Street	PA005798	Spray Booth	Particulates	NY075-00-0	0.06	120
							n-Butyl Acetate	123-86-4	2.1	4,200
							Ethyl Alcohol	64-17-5	2.1	4,200
							Xylene	1330-20-7	0.6	1,200
							Isopropanol	67-63-0	0.2	400
2	Central Collison Inc	353	20	10-12 36th Avenue	PA019091	Spray Booth	Particulates	NY075-00-0	0.02	20
							Acetone	67-74-1	0.61	610
							NLA	64742-89-8	0.54	540
							Toluene	108-88-3	0.18	180
							Isobutyl Acetate	110-19-0	0.18	180
							Xylene	1330-20-7	0.09	90
							MPA	108-65-6	0.18	180
							EER	763-69-9	0.018	18
							n-Butyl Acetate	123-86-4	1.0	1,000
3	Eckhoff Truck Bodies Inc	350	8	36-22 14th Street	PA036595	Spray Booth	Particulates	NY075-00-0	0.008	6.5
							Acetone	67-64-1	0.147	117.8
							Methanol	67-56-1	0.023	18.6
							Isopropyl Alcohol	67-63-0	0.039	31.0
							MIK	108-10-1	0.062	49.6
							Toluene	108-88-3	0.395	316.2
							Isobutyl Acetate	110-19-0	0.140	111.6
							MPA	108-65-6	0.016	12.4
							Dibutyl Phthalate	84-74-2	0.008	6.2
							Titanium Dioxide	13463-67-7	0.054	43.4
							Carbon Black	1333-86-4	0.016	12.4

Map No.[1]	Facility Name	Block	Lot	Address	Permit No.	Facility Type	Pollutant Name	CAS No.	Pollutant Emission Rates	
									lb/hr	lb/year
4	3S's Auto Collision Inc	326	1	34-59 11th Street	PA038899	Spray Booth	Particulates	NY075-00-0	0.008	6.5
							Acetone	67-64-1	0.147	117.8
							Methanol	67-56-1	0.023	18.6
							Isopropyl Alcohol	67-63-0	0.039	31.0
							MIK	108-10-1	0.062	49.6
							Toluene	108-88-3	0.395	316.2
							Isobutyl Acetate	110-19-0	0.140	111.6
							MPA	108-65-6	0.016	12.4
							Dibutyl Phthalate	84-74-2	0.008	6.2
							Titanium Dioxide	13463-67-7	0.054	43.4
							Carbon Black	1333-86-4	0.016	12.4
5	Florentine Craftsmen	351	23	12-20 36th Avenue	PA032609	Spray Booth	Solids (Particulates)	NY075-00-0	0.0003	0.7
							Acetone	67-64-1	0.093	186.0
							Propane	74-98-6	0.062	124.0
							n-Butane	106-97-8	0.031	62.0
							Dimethyl Carbonate	115-10-6	0.031	62.0
							NLA	64742-89-8	0.031	62.0
							MPA	108-65-6	0.031	62.0
							n-Butyl Acetate	123-86-4	0.016	31.0
							Xylene	1330-20-7	0.016	31.0
							Titanium Dioxide	13463-67-7	0.016	31.0
							Barium Sulfate	7727-43-7	0.016	31.0
							Ethylbenzene	100-41-4	0.003	6.20
							EGM	111-45-5	0.003	6.20
6	All City Switchboard	331	8	35-41 11th Street	PB050301	Spray Booth	Particulates	NY075-00-0	0.08	160
							Butoxyethanol, 2	111-76-2	0.355	710
							Butanol	35296-72-1	0.355	710
							Ammonia	7664-41-7	0.035	71
							Stoddard Solvent	8052-41-3	0.035	71

Map No.[1]	Facility Name	Block	Lot	Address	Permit No.	Facility Type	Pollutant Name	CAS No.	Pollutant Emission Rates	
									lb/hr	lb/year
Powder Coating, Welding, and Metal/Jewelry Melting Operations										
7	All City Switchboard	331	8	35-41 11th Street	PB495303	Curing of Powder Coatings	Particulates	NY075-00-0	0.006	6
							NOx	10102-44-0	0.002	2
							SO2	07446-09-5	0.001	1
8	All City Switchboard	331	8	35-41 11th Street	PB021307	Welding of Steel Products	Particulates	NY075-00-0	0.001	1
							Titanium Dioxide	13463-67-7	0.001	1
9	Drillco Devices LTD	325	1	10-05 35th Avenue	PA052581	Metal Treatment	Stoddard Solvent	8052-41-3	0.006	6
10	Florentine Craftsmen	351	23	12-20 36th Avenue	PB032509	Jewelry Melting	Particulates	NY075-00-0	0.001	2
							NOx	NY210-00-0	0.011	23.2
							SO2	07446-09-5	0.0001	0.08
							CO	00-630-08-0	0.0001	0.08

Notes: [1]Refer to **Figure H-3**.

Facility No. 3

Eckhoff Truck Bodies Inc (PA036595) at 36-22 14th Street is involved in truck body painting operations via a spray booth and emits two types of pollutants – solids (CAS number of NY079-00-0) and VOCs (CAS # NY998-00-0). According to the facility's description, 0.125 gallons of paint is consumed per hour or 0.5 gallons/day for four hours a day, 200 days a year. The solids, which are particulate matter with a current CAS number of NY075-00-0, are controlled by a fiberglass filter with 90 percent control efficiency. The permit contains hourly and annual emission rates for all pollutants, which were estimated based on detailed material balance calculations. The hourly and annual solvents emission rates are estimated to be 0.775 pounds per hour (lb/hr) or 620 pounds per year (lb/yr). The hourly and annual controlled (with the 90 percent control efficiency) solid emission rates are estimated to be 0.008 lb/hr or 6.5 lb/yr.

The groups of volatile organic compounds (VOCs) are a mixture of contaminants with different toxicities – not individual compounds. Therefore, the VOC group has no established guideline values in the DAR-1 database and representative contaminants were used instead. However, no paint type or MSDS for the paint are available from the permit application to identify the specific organic compounds. Therefore, based on evaluating different type of paints and thinners used in automotive paint composition in spray booth applications, a Sherwin-Williams paint was selected as being representative of the paint used in this facility, and the maximum percentages of each hazardous ingredient found in the different types of Sherwin-Williams paints were applied. A total of10ingredients were included in this evaluation, as identified by the paint's material safety data sheet (MSDS).

Facility No. 4

3S's Auto Collison Inc (PA038899) at 34-49 11th Street is involved in after collision car painting operations via a spray booth and emits two group of pollutants – solids (CAS number of NY079-00-0) and group of VOCs (CAS # NY998-00-0) which has no established guideline values in the DAR-1 database. The facility consumes 0.125 gallons of paint/hour or 100 gal/year.

The emissions of solids, which are particulate matter with a current CAS number of NY075-00-0, are controlled by a fiberglass filter with 90 percent control efficiency. The permit contains hourly and annual emission rates for the two groups of pollutants that are based on detailed material balance calculations. The hourly and annual solvents emission rates are estimated to be 0.775 lb/hr and 620 lb/yr. The hourly and annual solid controlled (with the 90 percent efficiency) emission rates are estimated to be 0.008 lb/hr or 6.5 lb/yr.

Similar to the analysis for permit PA036595, representative compounds were selected to substitute the group of VOCs from the same Sherwin-Williams paint with the maximum percentage of each hazardous ingredient found in the representative MSDS. A total of10ingredients were included in this evaluation.

Facility No. 5

Florentine Craftsmen (PB032609) at 12-20 36th Avenue is involved in jewelry painting operations via a spray booth, and emits two types of pollutants – solids and solvents. The solids are listed in the permit under the CAS of NY079-00-0 (particulate matter); the solvents are listed in the permit under the CAS number of NY198-00-0, which is not registered in the current 2016 edition of DAR-1. This should probably be the old CAS number of NY998-00-0, which could be identified as a group of total VOCs – family of compounds with different toxicities (not an individual compound), which have no established DAR-1 guideline value.

Therefore, individual chemicals with known guideline values were used for this analysis.

According to the equipment description, the facility consumes a maximum 0.05 gallon of paint per hour or 100 gal/yr for 2,000 hr/yr. The permit contains hourly and annual emission rates for two groups of pollutants that are based on detailed material balance calculations. The hourly and annual solvents emission rates are 0.31 lb/hr and 620 lb/yr. The hourly solids uncontrolled emission rate is 0.03 lb/hr; the controlled emission rate (after applying a control efficiency of 99 percent) is 0.0003 lb/hr. The annual controlled solids emission rate is 0.65 lb/yr.

Similar to permits PA036595 and PA038899, representative compounds were selected to substitute group of VOCs from the same Sherwin-Williams paint with the maximum percentage of each hazardous ingredient found in representative MSDS. A total of 10 ingredients were included in this evaluation.

Facility No. 6

All City Switchboard (PB050301) at 35-41 11th Street is involved in the painting of switchboard metal cabinets in a spray booth and emits two types of pollutants – solids and four solvents (i.e., ethyl glycol mono ether, butanol, ammonia, and mineral spirits). The solids are listed under the CAS number of NY075-00-0 (particulate matter). The facility consumes one gallon of paint per day for eight hours of operation or for 2,000 hr/yr and is equipped with a replaceable filter that controls solid emissions with an 85 percent efficiency. The permit contains short-term and annual emission rates of all pollutants.

Facility No. 7

All City Switchboard (PB495303) at 35-41 11th Street is also involved in the welding, powder paint spraining, and curing of powder coatings. The facility emits three pollutants as result of its combustion process – particulates, NOx, and SO_2. NOx is listed under CAS NY210-00-0, which in the current DAR-1 is listed under CAS #10102-44-0. The facility operates 1,000 hr/yr. No control of particulate matter is specified in the permit, and so none was applied in the analysis.

Facility No. 8

All City Switchboard (PB021307) at 35-41 11th Street is also involved in welding of steel products. The facility emits two pollutants – particulates and titanium dioxide. The permit contains short-term and annual emission rates of all pollutants. No control of particulate matter is specified in the permit, and so none was applied in the analysis.

Facility No. 9

Drillco Devices, LTD (PA052581) at 10-05 35th Avenue is involved in metal treatment and emits only one pollutant as result of treatment process – mineral oil. Permit contains short-term and annual emission rates of mineral oil.

Facility No. 10

Florentine Craftsmen (PB032509) at 12-20 36th Street is also involved in jewelry melting operations and emits four combustion pollutants – particulates (NY075-00-0), oxides of nitrogen (CAS #210-00-0; with the current NOx CAS being 10102-44-0), sulfur dioxide (CAS #07-446-09-5), and carbon monoxide (CAS # 00-630-08-0). The permit contains short-term and annual emission rates of all pollutants. No control of particulate matter is specified in the permit, and so none was applied in the analysis.

Particulate Emissions and Guideline Values

NYCDCP and DEP currently require analyzing particulate matter released from spray booth operations as $PM_{2.5}/PM_{10}$ emissions based on the $PM_{2.5}/PM_{10}$ fractions in the total mass of particulate matter. The USEPA data on cumulative particle size distribution for surface coating operations via spray booths shows that 28.6 percent of the total mass of particulate matter are $PM_{2.5}$ particles and 46.7 percent of the total mass of particulate matter are PM_{10} particles (EPA-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). Therefore, the factors of 0.286 and 0.467 were applied for the solids content listed in the permits to estimate $PM_{2.5}$ and PM_{10} emission rates.

The annual $PM_{2.5}$ federal standard of 12 ug/m^3 or DAR-1 AGC was used to determine whether annual $PM_{2.5}$ impacts were significant. However, short-term $PM_{2.5}$ impacts were evaluated on a 24-hour basis -- to be consistent with the federal standard – not with the previous one-hour SGC values -- and compared to both the 24-hr $PM_{2.5}$ NAAQS of 35 ug/m^3 and the 24-hour CEQR significant threshold criteria. Therefore, in **Tables H-18** through **H-19**, with estimated short-term and annual concentration ratios for all pollutants, only the annual concentration ratio is estimated for $PM_{2.5}$ -- in comparison with the annual standard of 12 ug/m^3.

Screening results for 24-hour/annual $PM_{2.5}$ and PM_{10} using pre-tabulated data from Table 17-3, "Industrial Source Screen" of the *CEQR TM* are presented in **Tables H-23** and **H-24** and compared to the 24-hour $PM_{2.5}/PM_{10}$ NAAQS and annual $PM_{2.5}$ NAAQS are presented in **Table H-27**.

Toxic Assessment Methodology

Toxic air pollutants can be grouped into two categories: carcinogenic air pollutants, and non-carcinogenic air pollutants. These include hundreds of pollutants, ranging from high to low toxicity. While no federal standards have been promulgated for toxic air pollutants, the USEPA and the New York State Department of Environmental Conservation (NYSDEC) have issued guidelines that establish acceptable ambient levels for these pollutants based on human exposure criteria. All of pollutants listed in the permits (for both the spray booths and baking facilities) are non-carcinogens.

In order to evaluate short-term and annual impacts of the non-carcinogenic toxic air pollutants, the NYSDEC has established short-term ambient guideline concentrations (SGCs) and ambient annual-average-based guideline concentrations (AGCs) for exposure limits. These are maximum allowable one-hour and annual guideline concentrations, respectively, that are considered acceptable concentrations below which there should be no adverse effects on the health of the general public. DAR-1 SGC and AGC values were applied to all solvents, nitrogen dioxide, carbon monoxide, and ethanol.

In accordance with established procedure to estimate impact of toxic pollutants using the DAR-1-based approach, ratios of one-hour and annual concentrations of each pollutant to its respective SGCs or AGCs (e.g., concentration-to-guideline values) were developed. These ratios were then used to determine whether the estimated concentration of each pollutant exceeds it applicable guideline value. If no exceedances are found (i.e., ratios are less than one), no adverse health effects would occur. If the concentration of any pollutant exceeds its applicable guideline value (either SGC or AGC), a more detailed analysis would be required.

CEQR Screening Analysis

For estimating potential impacts, the *CEQR TM* recommends using a screening procedure for industrial emission sources with toxic air pollutants as a first step in an analysis. This procedure uses pre-tabulated

pollutant concentration values based on a generic emission rate of one gram per second from Table 17-3, "Industrial Source Screen," of the *CEQR TM* for the applicable averaging time periods. 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 used to initially assess the potential impacts of the emissions from the existing facilities.

The minimum distance from the lot line of the Casa Custom Woodworking (Facility No. 1) and Florentine Craftsmen (Facilities No. 5 and No. 11) on Block 351, Lot 23 to the lot line of Lot 50 on Block 331, where the closest development site (Projected Development Site 3) is located, is approximately 164 feet. At this distance, based on a one gram per second emission rate (using Table 17-3), the maximum one-hour, 24-hour, and annual concentrations were estimated to be 4,626 ug/m^3, 1,618 ug/m^3 and 232 ug/m^3, respectively.

The minimum distance from the lot line of the Central Collision Inc. (Facility No.2) on Block 353, Lot 20 to the lot line of Lot 50 on Block 331, where the closest development site (Projected Development Site 3) is located, is approximately 178 feet. For the conservative purposes, a distance of 165 feet was used. At this distance, based on a one gram per second emission rate (using Table 17-3), the maximum one-hour, 24-hour, and annual concentrations were estimated to be 4,702 ug/m^3, 1,643 ug/m^3, and 236 ug/m^3, respectively.

The minimum distance from the lot line of the Eckhoff Truck Bodies Inc on Block 350, Lot 8 to the lot line of Lot 50 on Block 331, where the closest development site (Projected Development Site 3) is located, is approximately 377 feet. For the conservative purposes, a distance of 365 feet was used. At this distance, based on a one gram per second emission rate (using Table 17-3), the maximum one-hour, 24-hour, and annual concentrations were estimated to be 1,528 ug/m^3, 434 ug/m^3, and 62 ug/m^3, respectively.

The minimum distance from the lot line of the 3S's Auto Collision Inc. on Block 326, Lot 1 to the lot line of Lot 27 on Block 331, the closest RWCDS proposed/projected development site, is approximately 65 feet. At this distance, based on a one gram per second emission rate (using Table 17-3), the maximum one-hour, 24-hour, and annual concentrations were estimated to be 27,787 ug/m^3, 8,841 ug/m^3, and 1,368 ug/m^3, respectively.

Block 331, Lot 8, on which all three emission sources for the All City Switchboard facility (under PB050301, PB495303, and PB021307), is located adjacent to both Projected Development Sites 2 and 3. Therefore, critical distances to the closest development site (Projected Development Site 2) lot line were determined not from lot line of the Lot 8 but from central point of the working area depicted on engineering drawings for the spray booth. The minimum distance is estimated to be approximately 30 feet. At this distance, based on a one gram per second emission rate (using Table 17-3), the maximum one-hour, 24-hour, and annual concentrations were estimated to be 126,370 ug/m^3, 38,289 ug/m^3, and 6,160 ug/m^3, respectively.

The minimum distance from the lot line of the Drillco Devices LTD. on Block 325, Lot 1 to the lot line of Lot 27 on Block 331, the closest RWCDS proposed/projected development site, is approximately 184 feet. For conservative purposes, a distance of 165 feet was used. At this distance, based on a one gram per second emission rate (using Table 17-3), the maximum one-hour, 24-hour, and annual concentrations were estimated to be 4,702 ug/m^3, 1,643 ug/m^3, and 236 ug/m^3, respectively.

All values obtained from Table 17-3 of the *CEQR TM* for an emission rate of one gram per second were then multiplied by the actual emission rates of each compound under each permit to estimate actual pollutant concentrations. These values were then compared to the DAR-1 short-term (SGC) and annual (AGC) guideline concentrations where applicable. For annual $PM_{2.5}$ values, the federal standard was used, which is the same as the DAR-1 AGC value. Because some of the pollutants (ethyl alcohol, naphtha light aliphatic,

isobutyl acetate, dibutyl phthalate, titanium dioxide, and carbon black, propane, barium sulfate, ethylbenzene, butanol, Stoddard solvent, and n-butane have no SGC or AGC values and annual NO_2, SO_2, and CO have no AGC values or NAAQS, these pollutants are not presented in their respective tables.

Results of Screening Analysis

Estimated hourly and annual emission rates for all pollutants are provided below. The estimated concentrations of pollutants in comparison with the applicable DAR-1 SGC and AGC values (or federal standard) are provided in **Tables H-18** and **H-19**. The cumulative ratios for identical pollutants are provided in **Tables H-20** and **H-21**.

Table H-8: Estimated Pollutant Emission Rates Under PA005798

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m3***
Particulates	NY075-00-0	0.06	120	0.0076	0.0017	4,626	232	N/A	0.4014
n-Butyl Acetate	123-86-4	2.1	4,200	0.2646	0.0604			1224.0	14.015
Ethyl Alcohol	64-17-5	2.1	4,200	0.2646	0.0604			1224.0	14.015
Xylene	1330-20-7	0.6	1,200	0.0756	0.0173			349.7	4.0043
Isopropanol	67-63-0	0.2	400	0.0252	0.0058			116.6	1.3340

Table H-9: Estimated Pollutant Emission Rates Under PA019091

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m3***
Particulates	NY075-00-0	0.02	20	0.0025	0.0003	3,345	167	N/A	0.0484
Acetone	67-74-1	0.61	610	0.0769	0.0088			257.1	1.465
NLA	64742-89-8	0.54	540	0.0680	0.0078			227.6	1.2976
Toluene	108-88-3	0.18	180	0.0227	0.0026			75.86	0.4325
Isobutyl Acetate	110-19-0	0.18	180	0.0227	0.0026			75.86	0.4325
Xylene	1330-20-7	0.09	90	0.0113	0.0013			37.93	0.2154
MPA	108-65-6	0.18	180	0.0227	0.0026			75.86	0.4325
EER	763-69-9	0.018	18	0.0023	0.0003			7.59	0.0434
n-Butyl Acetate	123-86-4	1	1,000	0.1260	0.0144			421.5	2.401

Notes: NLA = Naphtha Light Aliphatic

MPA=Methoxypropylacetate

EER=Ethyl 3-etoxypropionate

Table H-10. Estimated Pollutant Emission Rates Under PA036595

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m3***
Particulates	NY075-00-0	0.008	6.5	0.0010	0.0001	1,528	62	N/A	0.085
Acetone	67-64-1	0.147	117.8	0.0186	0.0017			28.35	0.1050
Methanol	67-56-1	0.023	18.6	0.0029	0.0003			4.48	0.0166
Isopropyl Alcohol	67-63-0	0.039	31.0	0.0049	0.0004			7.46	0.0276
MIK	108-10-1	0.062	49.6	0.0078	0.0007			11.94	0.0442
Toluene	108-88-3	0.395	316.2	0.0498	0.0045			76.10	0.2820
Isobutyl Acetate	110-19-0	0.140	111.6	0.0176	0.0016			26.86	0.0995
MPA	108-65-6	0.016	12.4	0.0020	0.0002			2.98	0.0111
Dibutyl Phthalate	84-74-2	0.008	6.2	0.0010	0.0001			1.49	0.0055
Titanium Dioxide	13463-67-7	0.054	43.4	0.0068	0.0006			10.44	0.0387
Carbon Black	1333-86-4	0.016	12.4	0.0020	0.0002			2.98	0.0111

Notes: MIK=Methyl Isobutyl Ketone
MPA=Methoxypropylacetate

Table H-11. Estimated Pollutant Emission Rates Under PA038889

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m3***
Particulates	NY075-00-0	0.008	6.5	0.0010	0.0001	27,787	1,368	N/A	0.085
Acetone	67-64-1	0.147	117.8	0.0186	0.0017			515.5	2.318
Methanol	67-56-1	0.023	18.6	0.0029	0.0003			81.40	0.366
Isopropyl Alcohol	67-63-0	0.039	31.0	0.0049	0.0004			135.7	0.610
MIK	108-10-1	0.062	49.6	0.0078	0.0007			217.1	0.976
Toluene	108-88-3	0.395	316.2	0.0498	0.0045			1383.8	6.222
Isobutyl Acetate	110-19-0	0.140	111.6	0.0176	0.0016			488.4	2.196
MPA	108-65-6	0.016	12.4	0.0020	0.0002			54.27	0.244
Dibutyl Phthalate	84-74-2	0.008	6.2	0.0010	0.0001			27.13	0.122
Titanium Dioxide	13463-67-7	0.054	43.4	0.0068	0.0006			189.9	0.854
Carbon Black	1333-86-4	0.016	12.4	0.0020	0.0002			54.27	0.244

Notes: MIK=Methyl Isobutyl Ketone
MPA=Methoxypropylacetate

Table H-12. Estimated Pollutant Emission Rates Under PB032609

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m***
Particulates	NY075-00-0	0.0003	0.7	0.00004	0.00001	4,626	232	N/A	0.002
Acetone	67-64-1	186.00	0.0117	0.0027	186.00			54.21	0.621
Propane	74-98-6	124.00	0.0078	0.0018	124.00			36.14	0.414
n-Butane	106-97-8	62.00	0.0039	0.0009	62.00			18.07	0.207
Dimethyl Carbonate	115-10-6	62.00	0.0039	0.0009	62.00			18.07	0.207
NLA	64742-89-8	62.00	0.0039	0.0009	62.00			18.07	0.207
MPA	108-65-6	62.00	0.0039	0.0009	62.00			18.07	0.207
n-Butyl Acetate	123-86-4	31.00	0.0020	0.0004	31.00			9.03	0.103
Xylene	1330-20-7	31.00	0.0020	0.0004	31.00			9.03	0.103
Titanium Dioxide	13463-67-7	31.00	0.0020	0.0004	31.00			9.03	0.103
Barium Sulfate	7727-43-7	31.00	0.0020	0.0004	31.00			9.03	0.103
Ethylbenzene	100-41-4	6.20	0.0004	0.0001	6.20			1.81	0.021
Butoxyethanol, 2	111-76-2	6.20	0.0004	0.0001	6.20			1.81	0.021

Notes: For Dimethyl Carbonate, Dimethyl Ether (CAS # 115-10-6) was used

NLA = Naphtha Light Aliphatic

MPA=Methoxypropylacetate

Table H-13. Estimated Pollutant Emission Rates Under PB050301

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**Actual Conc.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m***
Particulates	NY075-00-0	0.08	160	0.01008	0.00230	126,370	6,160	N/A	14.17
Butoxyethanol, 2	111-76-2	0.355	710	0.04473	0.01021			5652.5	62.89
Butanol	35296-72-1	0.355	710	0.04473	0.01021			5652.5	62.89
Ammonia	7664-41-7	0.035	71	0.00441	0.00102			557.29	6.28
Stoddard solvent	8052-41-3	0.035	71	0.00441	0.00102			557.29	6.28

Notes: For mineral spirits, Stoddard Solvent (CAS # 8052-41-3) was used

Table H-14. Estimated Pollutant Emission Rates Under PB495303

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m3***
Particulates	NY075-00-0	0.006	6	0.00076	0.00009	126,370	6,160	96.04	0.5544
NOx	10102-44-0	0.002	2	0.00025	0.00003			31.59	0.1848
SO2	07446-09-5	0.001	1	0.00013	0.00001			16.43	0.0616

Notes: For NOx, current CAS number for NO2 10102-44-0 was used

Table H-15. Estimated Pollutant Emission Rates Under PB021307

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m3***
Particulates	NY075-00-0	0.001	1	0.00013	0.00001	126,370	6,160	N/A	0.0616
Titanium Dioxide	13463-67-7	0.001	1	0.00013	0.00001			16.4281	0.0616

Table H-16. Estimated Pollutant Emission Rates Under PB052581

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m3***
Stoddard Solvent	8052-41-3	0.006	6	0.00076	0.00009	4,702	236	3.57	0.0212

Notes: Stoddard Solvent was used as substitute for mineral oil

Table H-17. Estimated Pollutant Emission Rates Under PB032509

Pollutant Emission Rates						Conc. for 1g/sec		Actual Conc.	
Pollutant	**CAS No.**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**	**Hourly**	**Annual**
		lb/hr	***lb/year***	***g/s***	***g/s***	***ug/m3***	***ug/m3***	***ug/m3***	***ug/m3***
Particulates	NY075-00-0	0.001	2	0.00013	0.00003	4,626	232	N/A	0.0070
NOx	10102-44-0	0.011	23.2	0.00139	0.00033			6.430	0.0766
SO2	7446-09-5	0.0001	0.08	0.00001	0.00000			0.046	0.0000
CO	630-08-0	0.0001	0.08	0.00001	0.00000			0.046	0.0000

Table H-18: Estimated One-hour Concentration Ratios for All Facilities*

Chemical Name	CAS No.	Max. Estimated One-hour Concentration	SGC	C_a/SGC
		$\mu g/m^3$	$\mu g/m^3$	
PA005798				
n-Butyl Acetate	123-86-4	1224.0	95,000	1.29E-02
Xylene	1330-20-7	349.7	22,000	1.59E-02
Isopropanol	67-63-0	116.6	98,000	1.19E-03
PA019091				
Acetone	67-74-1	257.1	180,000	1.43E-03
Toluene	108-88-3	75.9	37,000	2.05E-03
Xylene	1330-20-7	37.9	22,000	1.72E-03
MPA	108-65-6	75.9	55,000	1.38E-03
EER	763-69-9	7.6	140	5.42E-02
n-Butyl Acetate	123-86-4	421.5	95,000	4.44E-03
PA036595				
Acetone	67-64-1	28.35	180,000	2.E-04
Methanol	67-56-1	4.48	33,000	1.E-04
Isopropyl Alcohol	67-63-0	7.46	98,000	8.E-05
MIK	108-10-1	11.94	31,000	4.E-04
Toluene	108-88-3	76.10	37,000	2.E-03
MPA	108-65-6	2.98	55,000	5.E-05
PA038899				
Acetone	67-64-1	515.5	180,000	3.E-03
Methanol	67-56-1	81.4	33,000	2.E-03
Isopropyl Alcohol	67-63-0	135.7	98,000	1.E-03
MIK	108-10-1	217.1	31,000	7.E-03
Toluene	108-88-3	1383.8	37,000	4.E-02
MPA	108-65-6	54.3	55,000	1.E-03
PB032609				
Acetone	67-64-1	54.2	180,000	3.01E-04
n-Butane	106-97-8	18.1	238,000	7.59E-05
Dimethyl Carbonate	115-10-6	18.1	150,000	1.20E-04
MPA	108-65-6	18.1	55,000	3.29E-04
n-Butyl Acetate	123-86-4	9.0	95,000	9.51E-05
Xylene	1330-20-7	9.0	22,000	4.11E-04
Butoxyethanol, 2	111-76-2	1.81	14,000	1.29E-04
PB050301				
Butoxyethanol, 2	111-76-2	5652.5	14,000	4.04E-01
Ammonia	7664-41-7	557.3	2,400	2.32E-01
PB495303				
NOx	10102-44-0	31.5925	188	1.68E-01
SO_2	07446-09-5	16.4281	196	8.38E-02
PB0032509				
NOx	10102-44-0	6.43014	188	3.42E-02
SO_2	07446-09-5	0.04626	196	2.36E-04
CO	630-08-0	0.04626	10,000	4.63E-06

***Notes on Table H-18 (above):**
The maximum 1-hour concentrations were estimated based on actual emission rates and pre-tabulated concentration of one gram per second obtained from CEQR Table 17-3, as follows:

PA005798	4,626 ug/m^3
PA019091	3,345 ug/m^3
PA036595	1,528 ug/m^3
PA038899	27,787 ug/m^3
PB032609	4,626 ug/m^3
PB050301	126,370 ug/m^3
PB495303	126,370 ug/m^3
PB021307	126,370 ug/m^3
PB032509	4,626 ug/m^3

NLA – Naphtha Light Aliphatic, Ethyl Alcohol, Isobutyl Acetate, Dibutyl Phthalate, Titanium Dioxide, Carbon Black, SGC values. Propane, Butane, Ethylbenzene, Barium Sulfate, Butanol, and Stoddard Solvent have no SCG values in the DAR-1 database. PA052581, PB001110, and PB021307 which have only one pollutant with no SCC or AGC (Stoddard Solvent, PM2.5, and Titanium Dioxide) were not included.

Table H-19: Estimated Annual Concentration Ratios for All Facilities

Chemical Name	CAS No.	Max Estimated Annual Concentration	AGC	C_a/AGC
		µg/m³	*µg/m³*	
PA005798				
$PM^{2.5}$	NY075-02-5	0.401	12	3.34E-02
n-Butyl Acetate	123-86-4	14.02	17,000	8.24E-04
Ethyl Alcohol	64-17-5	14.02	45,000	3.11E-04
Xylene	1330-20-7	4.004	100	4.00E-02
Isopropanol	67-63-0	1.334	7,000	1.91E-04
PA019091				
Particulates	NY075-00-0	0.048	12	4.04E-03
Acetone	67-74-1	1.465	30,000	4.88E-05
NLA	64742-89-8	1.298	3,200	4.05E-04
Toluene	108-88-3	0.433	5,000	8.65E-05
Isobutyl Acetate	110-19-0	0.433	565	7.66E-04
Xylene	1330-20-7	0.215	100	2.15E-03
MPA	108-65-6	0.433	2,000	2.16E-04
EER	763-69-9	0.043	64	6.78E-04
n-Butyl Acetate	123-86-4	2.401	17,000	1.41E-04
PA036595				
$PM_{2.5}$	NY075-02-5	0.0849	12	7.08E-03
Acetone	67-64-1	0.1050	30,000	3.50E-06
Methanol	67-56-1	0.0166	4,000	4.15E-06
Isopropyl Alcohol	67-63-0	0.0276	7,000	3.95E-06
MIK	108-10-1	0.0442	3,000	1.47E-05
Toluene	108-88-3	0.2820	5,000	5.64E-05
Isobutyl Acetate	110-19-0	0.0995	565	1.76E-04
MPA	108-65-6	0.0111	2,000	5.53E-06
Dibutyl Phthalate	84-74-2	0.0055	12	4.61E-04
Titanium Dioxide	13463-67-7	0.0387	24	1.61E-03
Carbon Black	1333-86-4	0.0111	7	1.58E-03

PA038899				
$PM_{2.5}$	NY075-02-5	0.0849	12	7.08E-03
Acetone	67-64-1	2.3179	30,000	7.73E-05
Methanol	67-56-1	0.3660	4,000	9.15E-05
Isopropyl Alcohol	67-63-0	0.6100	7,000	8.71E-05
MIK	108-10-1	0.9759	3,000	3.25E-04
Toluene	108-88-3	6.2216	5,000	1.24E-03
Isobutyl Acetate	110-19-0	2.1959	565	3.89E-03
MPA	108-65-6	0.2440	2,000	1.22E-04
Dibutyl Phthalate	84-74-2	0.1220	12	1.02E-02
Titanium Dioxide	13463-67-7	0.8540	24	3.56E-02
Carbon Black	1333-86-4	0.2440	7	3.49E-02
PB032609				
$PM_{2.5}$	NY075-02-5	0.0022	12	1.81E-04
Acetone	67-64-1	0.6207	30,000	2.07E-05
Dimethyl Carbonate	115-10-6	0.2069	29,000	7.13E-06
NLA	64742-89-8	0.2069	3,200	6.47E-05
MPA	108-65-6	0.2069	2,000	1.03E-04
n-Butyl Acetate	123-86-4	0.1034	17,000	6.08E-06
Xylene	1330-20-7	0.1034	100	1.03E-03
Titanium Dioxide	13463-67-7	0.1034	24	4.31E-03
Barium Sulfate	7727-43-7	0.1034	12	8.62E-03
Ethylbenzene	100-41-4	0.021	1,000	2.07E-05
Butoxyethanol, 2	111-76-2	0.021	1,600	1.29E-05
PB050301				
Particulates	NY075-00-0	14.168	12	1.18E+00
Butoxyethanol, 2	111-76-2	62.89	1,600	3.93E-02
Butanol	35296-72-1	62.89	1,500	4.19E-02
Ammonia	7664-41-7	6.283	100	6.28E-02
Stoddard Solvent	8052-41-3	6.283	3,200	1.96E-03
PB495303				
PM2.5	NY075-02-5	0.5544	12	4.62E-02
PB021307				
$PM_{2.5}$	NY075-05-2	0.0616	12	5.13E-03
Titanium Dioxide	13463-67-7	0.0616	24	2.57E-03
PB052581				
Stoddard Solvent	8052-41-3	0.1132	900	1.26E-04
PB032509				
$PM_{2.5}$	NY075-02-5	0.00696	12	5.80E-04

Notes: NOx, SO_2 and CO have no AGC or annual NAAQS and were not included. The maximum annual concentrations were estimated based on actual emission rates and pre-tabulated concentration of one gram per second obtained from CEQR Table 17-3 as follows:

PA005798	232 ug/m^3
PA019091	236 ug/m^3
PA036595	62 ug/m^3
PA038899	1,368 ug/m^3
PB032609	232 ug/m^3
PB050301	6,160 ug/m^3
PB495303	6,160 ug/m^3
PB021307	6,160 ug/m^3
PB032509	232 ug/m^3

Table H-20: Estimated Cumulative One-hour Concentration Ratios for Similar Pollutants

Chemical Name	CAS No.	Max. Estimated One-hour Concentration	SGC	C_a/SGC
		µg/m³	*µg/m³*	
Acetone	67-74-1	855.2	180,000	4.75E-03
Xylene	1330-20-7	396.7	22,000	1.80E-02
Toluene	108-88-3	1,536	37,000	4.15E-02
MIK	108-10-1	229	31,000	7.39E-03
Nitrogen Dioxide	10102-44-0	38.0	188	2.02E-01
			Total Cumulative One-hour Concentration:	**2.74E-01**

Table H-21: Estimated Cumulative Annual Concentration Ratios for Similar Pollutants

Chemical Name	CAS No.	Max Estimated Annual Concentration	SGC	C_a/SGC
		µg/m³	*µg/m³*	
PM2.5	NY075-02-5	1.54E+01	12	1.28E+00
Titanium Dioxide	13463-67-7	9.54E-01	24	3.98E-02

Note: Red = exceedance of the guideline ratio

Particulate Emission Rates

As stated above, NYCDEP/NYCDCP currently requires analyzing particulate matter released from spray booth operations as $PM_{2.5}$ emissions based on the $PM_{2.5}$ content in the total mass of $PM_{2.5}$ from the operations. USEPA data on cumulative particle size distribution for surface coating operations via spray booths shows that 28.6 percent of the total mass of particulate matter are $PM_{2.5}$ particles and 46.7 percent of the total mass of particulate matter are PM_{10} particles (EPA-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). Therefore, the particulate emission rates from the spray booth operations were estimated using controlled solids emission rates as shown in the permit and the $PM_{2.5}$ and PM_{10} fractions in the mass of the total particulate matter (e.g., factors of 0.286 and 0.467, respectively). Particulates from other operations, such as woodworking, metal treatment, and welding, were considered all 100 percent $PM_{2.5}$ emissions. Estimated $PM_{2.5}/PM_{10}$ emission rates from spray booths and other operations are provided in **Table H-22** and estimated 24-hour and annual concentrations in **Tables H-23** and **H-24**, respectively.

Table H-22: Estimated $PM_{10}/PM_{2.5}$ Emission Rates

Permit No.	$PM_{10}/PM_{2.5}$	Permitted Emission Rates		Fraction of PM10/PM2.5 in total Solids	Hourly	Annual
		lb/hr	lb/year	%	g/sec	g/sec
Spray Booth Facilities						
PA005798	PM_{10}	0.06		46.7%	0.0035	
	$PM_{2.5}$	0.06	120	28.6%	0.0022	0.00049
PA019091	PM_{10}	0.02		46.7%	0.0012	
	$PM_{2.5}$	0.02	20	28.6%	0.0007	0.00008
PA03695	PM_{10}	0.008		46.7%	0.0005	
	$PM_{2.5}$	0.008	6.5	28.6%	0.0003	0.00003
PA038899	PM_{10}	0.008		46.7%	0.0005	
	$PM_{2.5}$	0.008	6.5	28.6%	0.0003	0.00003
PB032609	PM_{10}	0.0003		46.7%	0.00002	
	$PM_{2.5}$	0.0003	0.7	28.6%	0.00001	0.000003
PB050301	PM_{10}	0.08		46.7%	0.00471	
	$PM_{2.5}$	0.08	160	28.6%	0.00288	0.00066
Other Facilities						
PB495303	$PM_{2.5}$	0.006	6	100%	0.00076	0.00009
PB021307	$PM_{2.5}$	0.001	1	100%	0.00013	0.00001
PB032509	$PM_{2.5}$	0.001	2	100%	0.00013	0.00003

Table H-23: Estimated 24-hour Concentration for $PM_{2.5}/PM_{10}$ for Spray Booths and Other Operations Based on Screening Analysis

Chemical Name	CAS No.	Max Estimated 24-hour Concentration	Total Estimated 24-hour Concentration	NAAQS	CEQR Significant Impact Criteria	Exceed Yes/No
		µg/m³	*µg/m³*	*µg/m³*	*µg/m³*	
Spray Booth Operations						
PA005798						
PM_{10}	NY075-00-5	5.71	49.7	150		No
$PM_{2.5}$	NY075-02-5	3.50	23.2	35	7.65	No
PB010091						
PM_{10}	NY075-00-5	1.93	45.9	150		No
$PM_{2.5}$	NY075-02-5	1.18	20.9	35	7.65	No
PA036595						
PM_{10}	NY075-00-5	0.20	44.2	150		No
$PM_{2.5}$	$PM_{2.5}$	0.13	19.8	35	7.65	No
PA038899						
PM_{10}	NY075-00-5	0.20	44.2	150		No
$PM_{2.5}$	$PM_{2.5}$	0.13	19.8	35	7.65	No
PB032609						
PM_{10}	NY075-00-5	0.16	44.2	150		No
PM2.5	NY075-02-5	0.10	19.8	35	7.65	No
PB050301						
PM_{10}	NY075-00-5	180.2	224.2	150		Yes
$PM_{2.5}$	NY075-02-5	110.4	130.1	35	7.65	Yes
The Other Operations						
PB495303						
$PM_{2.5}$	NY075-02-5	28.9	48.6	35	7.65	Yes
PB021307						
$PM_{2.5}$	NY075-02-5	4.8	24.5	35	7.65	No
PB032509						
$PM_{2.5}$	NY075-02-5	0.20	19.9	35	7.65	No

Notes:
24-hour $PM_{2.5}$ and PM_{10} background concentrations are 19.7 ug/m^3 and 44 ug/m^3.
The maximum 24-hour concentrations were estimated based on actual emission rates and pre-tabulated concentration of one gram per second obtained from CEQR Table 17-3, as follows:

PA005798	1,618 ug/m^3
PA019091	1,643 ug/m^3
PA036595	434 ug/m^3
PA038899	434 ug/m^3
PB032609	8,841 ug/m^3
PB050301	38,289 ug/m^3
PB495303	38,289 ug/m^3
PB021307	38,289 ug/m^3
PB032509	1,618 ug/m^3

Red = exceedance of the 24-hour $PM_{2.5}$ CEQR Significant Threshold Value or NAAQS

Table H-24: Estimated $PM_{2.5}$ Annual Concentration for Spray Booths and Other Facilities Based on Screening Analysis

Chemical Name	CAS No.	Max Estimated Annual Concentration	Total Estimated Annual Concentration	NAAQS	CEQR Significant Impact Criteria	Exceed Yes/No
		µg/m³	*µg/m³*	*µg/m³*	*µg/m³*	
Spray Booth Operations						
PA005798						
$PM_{2.5}$	NY075-02-5	0.11	7.6	12	0.3	No
PA019091						
$PM_{2.5}$	NY075-02-5	0.02	7.5	12	0.3	No
PA036595						
$PM_{2.5}$	NY075-02-5	0.002	7.5	12	0.3	No
PA038899						
$PM_{2.5}$	NY075-02-5	0.04	7.5	12	0.3	No
PB032609						
$PM_{2.5}$	NY075-02-5	0.001	7.5	12	0.3	No
PB050301						
$PM_{2.5}$	NY075-02-5	4.06	11.6	12	0.3	Yes
Other Operations						
PB495303						
$PM_{2.5}$	NY075-02-5	0.53	8.0	12	0.3	Yes
PB021307						
$PM_{2.5}$	NY075-02-5	0.09	7.6	12	0.3	No
PB032509						
$PM_{2.5}$	NY075-02-5	0.01	7.5	12	0.3	No

Note: The annual $PM_{2.5}$ background concentration is 7.5 ug/m^3

The maximum annual concentrations were estimated based on actual emission rates and pre-tabulated concentration of one gram per second obtained from CEQR Table 17-3, as follows:

PA005798	232 ug/m^3
PA019091	236 ug/m^3
PA036595	62 ug/m^3
PA038899	1,368 ug/m^3
PB032609	232 ug/m^3
PB050301	6,160 ug/m^3
PB495303	6,160 ug/m^3
PB021307	6,160 ug/m^3
PB032509	232 ug/m^3

Red = exceedance of the annual PM2.5 CEQR Significant Threshold value

Results of the CEQR Screening Analysis

With the exception of $PM_{2.5}$, estimated short-term and annual concentration ratios of all pollutants from the individual permits are less than one, indicating that the pollutants from the individual industrial facilities passed the screening analysis. However, because similar pollutants (acetone, toluene, xylene, methyl ethyl ketone, nitrogen dioxide, and titanium dioxide) are being released from the spray booth and other operations, these pollutants could have cumulative impacts. Therefore, the maximum estimated concentrations of each of these pollutants were added together, and the combined impacts of these similar pollutants were compared to the applicable guideline values. The result is that the combined (cumulative) short-term and annual ratios for each pollutant, except for $PM_{2.5}$, are less than the applicable SGC and AGC values.

Therefore, no further analysis for all of the pollutants considered, except $PM_{2.5}/PM_{10}$, is required.

- The maximum estimated 24-hour $PM_{2.5}$ concentration exceeds both the CEQR significant threshold value of 7.65 ug/m^3 and the respective NAAQS of 35 ug/m^3 under two individual permits (PB050301 and PB495303).

- The maximum estimated annual PM_{10} concentration exceeds NAAQS of 150 ug/m^3 under one permit (PB050301).

Even though exceedances of 24-hour $PM_{2.5}$ are found under two individual permits, a cumulative assessment is required to assure that the impact from all emission sources together would not exceed CEQR threshold or NAAQS.

For annual $PM_{2.5}$, concentration exceeds the CEQR significant annual threshold value of 0.3 ug/m^3 under the same two permits but is less than the annual $PM_{2.5}$ NAAQS of 12 ug/m^3 but the cumulative concentration from all permits is less than the AGC or annual NAAQS. However, the same conservative approach is required for the annual $PM_{2.5}$ analysis to assure that the combined impact from all emission sources together would not exceed CEQR annual threshold or NAAQS.

Detailed Analysis

A detailed dispersion analysis was conducted to estimate the cumulative $PM_{2.5}/PM_{10}$ impacts on the proposed developments from the emissions of all of the toxic emission sources combined. This detailed modeling analysis was conducted using the latest version of EPA's AERMOD dispersion model 7.12.1 (EPA version 16216r).

In accordance with *CEQR* guidance, this analysis was conducted assuming stack tip downwash, urban dispersion surface roughness length, the elimination of calms, with and without downwash. The building downwash algorithm was utilized to account for downwash effects on plume dispersion.

Stack Locations

Three facilities for the All City Switchboard (PB050301, PB495303, and PB021307) are located on Lot 8 (Nos. 6, 7, and 8 in **Figure H-4**), which is adjacent to both Projected Development Sites 2 and 3 and in close proximity to the Applicant-owned Proposed Development Site. The screening analysis found that maximum estimated 24-hour and annual $PM_{2.5}$ concentrations for two of these three facilities exceed both the CEQR significant impact thresholds and NAAQS. Therefore, considering the close proximity to the RWCDS proposed/projected developments, as well as the potential significant impacts, actual stack locations for each of these three emission sources were determined based on the engineering drawings for

these facilities found in the permit applications. The same procedure using engineering drawings was applied for the nearby facility (PA038899), which is located approximately 65 feet from Applicant-owned Lot 27 (No. 4 in **Figure H-4**). The other stack locations are not as critical because all these facilities are more than 150 feet away from the development sites. Therefore, the stacks for these facilities were located at the minimum distance (10 feet) from the lot line facing the closest development site.

Stack parameters for the $PM_{2.5}$ analysis were obtained from each permit and are provided in **Table H-25**. Permit PA052581 was not included because it does not emit particulates.

Table H-25: Stack Parameters Used in Modeling Analysis

Permit No.	Emission Rate			Height		Diameter		Temperature		Flow Rate	
	24-hr $PM_{2.5}$	24-hr PM_{10}	Annual $PM_{2.5}$								
	g/sec	g/sec	g/sec	ft	m	inches	meters	deg F	deg K	ft/sec	m/sec
PB050301	0.00288	0.00471	0.00066	24	7.32	40	1.02	75	297	40	12.19
PB495303	0.00076		0.00009	28	8.53	9"x12"	0.29	350	450	39	11.89
PB021307	0.00013		0.00001	33	10.1	12"x 26"	0.48	75	297	53	16.15
PA005798	0.0022	0.0035	0.00049	18	5.49	24	0.6096	75	297	43	13.11
PA032609	0.00001	0.00002	0.000003	11	3.35	24	0.6096	75	297	37	11.31
PA019091	0.0007	0.0012	0.00008	21	6.41	24	0.6096	100	311	70	21.34
PA036595	0.0003	0.0005	0.00003	22	6.71	42	1.07	70	293	16.3	4.98
PA038899	0.0003	0.0005	0.00003	15	4.58	34	0.86	70	293	32.5	9.91
PB032509	0.00013		0.00003	11	3.4	18	0.46	200	366	65	19.87

Notes:
For PA032609, PA036595, PA038899, and PB032509 – exhaust fan parameters are used
Equivalent round diameters for 9'x12", 12" x 26" cross-sections are 11.3" (0.29 m) and 19" (0.48 m), respectively

Meteorological Data

All analyses were conducted using the latest available five consecutive years of meteorological data (2012 to 2016). Surface data was obtained from La Guardia Airport and upper air data was obtained from Brookhaven station, New York. Data was processed by Trinity Consultants, Inc. using the current EPA AERMET and the EPA procedure. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the five-year period. Meteorological data were combined in a five-year set of meteorological conditions, which was used for all AERMOD modeling runs. Therefore, estimated 24-hour and annual $PM_{2.5}$ represent high 24-hour concentration averaged over five-years period as well as multi-year average of annual values averaged over five-years.

Background Concentrations

The 24-hour $PM_{2.5}$ background concentration was developed from monitoring data collected by the NYSDEC at Queens College 2 monitoring station as 19.7 ug/m^3, which is the average of the 98th percentile for the last three-years (2014-2016), and the annual $PM_{2.5}$ concentration is 7.5 ug/m^3, which is also three-year average value.

Summary of Modeling Inputs

All modeling assumptions, including stack parameters, are provided in **Table H-26**.

Table H-26: Modeling Parameters

Model	AERMOD (EPA Version 16238r)
Source Type	Point
Emission Sources and Receptor Coordinates	UTM NAD83 Datum and UTM Zone 18
Downwash Program	Building Profile Input Program (BPIP)
Surface Characteristics	Urban Area Option
Urban Surface Roughness Length	1
Population of the area (Brooklyn)	2,230,722 million with population density more than 750 people per sq. km
Emission Rates	Actual emission rates for $PM_{2.5}$ for cumulative analysis
Receptor Height (windows receptors)	Starting from ground level to upper windows level, with 10 feet increments
Meteorological Data	Preprocessed by the AERMET meteorological preprocessor program by Trinity Consultants, Inc. Yearly meteorological data for 2012-2016 concatenated into single multiyear file for $PM_{2.5}$ modeling, as EPA recommended
Surface Meteorological Data	LaGuardia 2012-2016
Profile Meteorological Data	Brookhaven Station 2012-2016
$PM_{2.5}$ Analysis	Special procedure incorporated into AERMOD where model calculates concentration at each receptor for each year modeled, averages those concentrations across the number of years of data, and then selects the highest across all receptors of the N-year averaged highest values
$PM_{2.5}/PM_{10}$ Background Concentration	Queens College 2 monitoring station data for 2014-2016

Receptor Locations

Receptors were located around all faces of each of development sites on each of floor starting from the ground level (six feet) and extending up to the upper window (receptors) level of 80 feet which is assumed to be five feet below building roof, in 10-foot increments. However, the highest impacts occurred at approximately the level of toxic facilities stacks, which is not higher than 35 feet. Overall, more than 1,500 receptors were considered, with 1,000 receptors placed on the Applicant building, to assure that maximum impacts are estimated.

Particulate Emissions Analysis

$PM_{2.5}$ emissions from all nine emission sources and PM_{10} emissions from six emission sources were modeled in one modeling run. As such, the total maximum predicted 24-hour and annual concentrations would represent the cumulative $PM_{2.5}$ as well as PM_{10} impacts from emission sources combined.

Because most of the facilities would operate from four to eight hours a day with a maximum of eight hours a day and approximately 250 days a year, emissions would not be released continuously throughout the day or annually. In the "Modeling Guidance and Examples for Commonly Asked Questions for one-hour NO_2 NAAQS Modeling," October 16, 2014, the EPA suggested to use a modeled hourly emission rate to represent intermittent emissions that are based on the facility's operating hours rather than the maximum hourly emission rate. This approach, as EPA stated, addresses both the worst-case meteorological conditions that could occur during the intermittent emissions as well as the probability of the intermittent emissions occurring.

Therefore, it was assumed that each facility would operate at peak load only during the work period, as shown in each permit, and, as such, there would be no emissions released into the atmosphere for the rest

of the day. As such, variable emissions rates by hours of the day were used in the 24-hour modeling analysis as follows:

- Facility No. 1 (Permit PA005798) would operate 8 hours a day
- Facility No. 2 (Permit PA019091) would operate 4 hours a day
- Facility No. 3 (Permit PA036595) would operate 2 hours a day
- Facility No. 4 (Permit PA038899) would operate 4 hours a day
- Facility No. 5 (Permit PB032609) would operate 8 hours a day
- Facility No. 6 (Permit PB050301) would operate 8 hours a day
- Facility No. 7 (Permit PB495303) would operate 4 hours a day
- Facility No. 8 (Permit PB021307) would operate 4 hours a day
- Facility No. 9 (Permit PB032509) would operate 8 hours a day

Because for $PM_{2.5}$ annual impact assessment total emission rates were averaged over the year (8,760 hours), no hourly variable emission factors were applied. Estimated emission rates for $PM_{2.5}$ and PM_{10} analyses are provided in **Tables H-22** and **H-25** above and estimated concentrations in **Tables H-27** and **H-28** below.

Table H-27: Estimated Annual $PM_{2.5}$ Impact and Total Concentration

Pollutant	Max 24-hr Impact	Background Conc. (1)	Total Conc.	CEQR Significant Impact Criteria	NAAQS
	ug/m³	*ug/m³*	*ug/m³*	*ug/m³*	*ug/m³*
$PM_{2.5}$	3.47	19.7	23.2	7.65	35
PM_{10}	5.67	44	49.7		150

Notes:

(1) $PM_{2.5}$ background concentration was obtained from NYS Monitoring Report for Queens College 2 as 19.7 ug/m^3, which is the average of the 98th percentiles for the last three years; the annual $PM_{2.5}$ concentration is 7.5 ug/m^3, which is also the three-year (2014-2016) average value.

Table H-28: Estimated Annual $PM_{2.5}$ Impact and Total Concentration

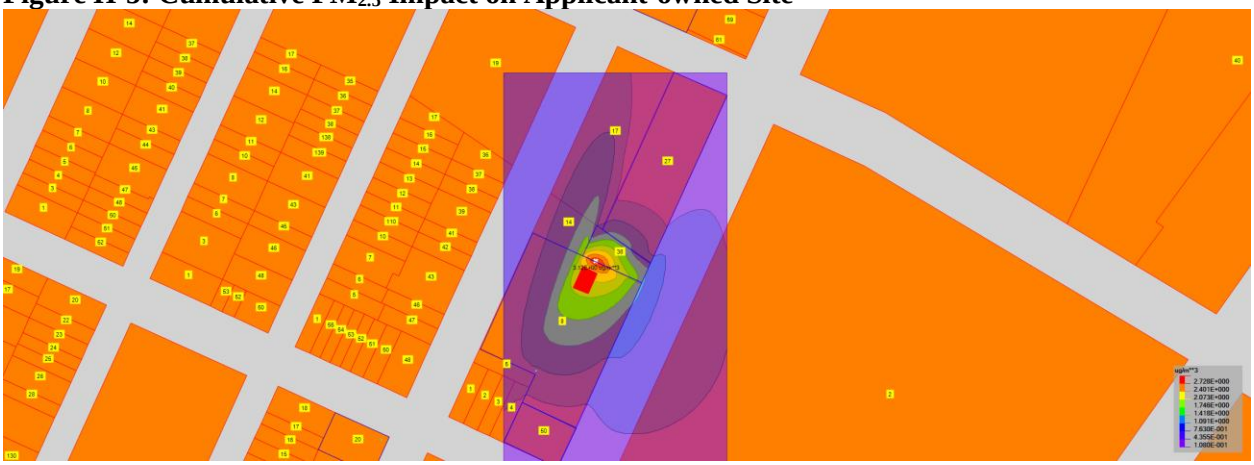
Pollutant	Max Annual Impact	Background	Total Conc.	CEQR Significant Impact Criteria	NAAQS
	ug/m³	*ug/m³*	*ug/m³*	*ug/m³*	*ug/m³*
$PM_{2.5}$	0.27	7.5	7.8	0.3	12

The three-year average of the 24-hour $PM_{2.5}$ background concentration (19.7 ug/m^3) was added to the maximum estimated 24-hour impact of 3.47 ug/m^3, and the impact and total estimated concentration were compared to the CEQR significant impact criteria of 7.65 ug/m3 and 24-hour $PM_{2.5}$ NAAQS of 35 ug/m^3. The three-year average of annual $PM_{2.5}$ background concentration of 7.5 ug/m^3 was added to the estimated annual impact (0.27 ug/m^3), and the total estimated concentration was compared to the CEQR annual significant impact criteria of 0.3 ug/m3 and annual $PM_{2.5}$ NAAQS of 12 ug/m^3.

The 24-hour PM_{10} background concentration (44 ug/m^3) was added to the maximum estimated 24-hour PM_{10} impact of 5.67 ug/m^3, and the total estimated concentration was compared to the 24-hour PM_{10} NAAQS of 150 ug/m^3.

The result of the analysis is that no exceedances of either the 24-hour/annual NAAQS for $PM_{2.5}$ or 24-hour PM_{10} NAAQS are predicted from the combined emissions of nearby industrial sources operating near the proposed development.

Figure H-5: Cumulative $PM_{2.5}$ Impact on Applicant-owned Site



Result of the Air Toxics Analysis

The result of this analysis of toxic air emissions that have the potential to be released from existing permitted industrial sources currently operating within 400 feet from the proposed development is that no exceedances of the applicable CEQR significant impact criteria and respective NAAQS are predicted. As such, the emissions released from the nearby existing industrial sources are not predicted to significantly impact the proposed developments.

CONCLUSION

The results of both the HVAC and air toxics analysis is that the proposed developments would not cause significant air quality impacts and that the proposed developments would not be significantly impacted by nearby existing sources. As such, the potential impacts of the Proposed Action are not considered to be significant.

Attachment I

Noise

I. INTRODUCTION

Ravi Management, LLC (the "Applicant") is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1 (the "proposed development site"). The discretionary actions include: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 (the "proposed rezoning area") from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the proposed rezoning area a Mandatory Inclusionary Housing (MIH) Area. Collectively, the zoning map amendment and the zoning text amendment are the "Proposed Actions" for the purposes of the environmental analysis. The proposed rezoning area consists of the eastern half of Queens Block 331, including Lot 27 (the proposed development site), Lot 50, and the eastern portions of Lots 8 and 38.

The 24,589 sf Applicant-owned proposed development site on Lot 27 contains a single-story, approximately 10,320 sf warehouse which currently stores cranes and other construction-related equipment. In the RWCDS future with the Proposed Actions, the Applicant would demolish the existing warehouse and construct a new eight-story (up to 85 feet tall), approximately 92,946 gross square foot (gsf) (approximately 88,520 zoning square foot [zsf]) mixed-use residential and commercial building on the site. The proposed building would contain 77,196 gsf (73,520 zsf) of residential space with 82 dwelling units (DUs), and 30 percent of the residential floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of ground-floor retail space and up to 77 surface and underground accessory parking spaces.

Two other sites in the proposed rezoning area are also expected to be redeveloped with mixed-use residential and commercial buildings in the 2024 future with the Proposed Actions: Lots 38 and 50. It is therefore anticipated that the Proposed Actions would result in a net increase of approximately 109,680 gsf (104,457 zsf) of residential space with 116 DUs (39 affordable) and approximately 22,143 gsf (21,089 zsf) of commercial space in the proposed rezoning area by 2024. Absent the Proposed Actions, no changes are expected to occur in the proposed rezoning area.

As discussed in Attachment G, "Transportation," the Proposed Actions would change traffic patterns and volumes in the general vicinity of the rezoning area. As local vehicular traffic is a major source of ambient noise in the area, this could lead to changes in the ambient noise levels. According to the 2014 *CEQR Technical Manual*, if existing noise passenger car equivalent (PCE) values are increased by 100 percent or more due to a proposed action (which is equivalent to an increase of 3.0 dBA or more) a detailed analysis is generally warranted. Conversely, if existing noise PCE values are not increased by 100 percent or more it is likely that the Proposed Actions would not cause a significant adverse vehicular noise impact, and therefore no further vehicular noise analysis is needed.

The noise analysis for the Proposed Actions was carried out in compliance with *CEQR Technical Manual* guidelines and consists of two parts:

- (1) A screening analysis to determine whether traffic generated by the Proposed Actions would have the potential to result in significant adverse noise impacts on existing sensitive receptors;

- (2) An analysis to determine the level of building attenuation necessary to ensure that interior noise levels for the proposed and projected developments satisfy applicable interior noise criteria. This attachment does not include an analysis of mechanical equipment because such mechanical equipment would be designed to meet all applicable noise regulations and, therefore, would not result in adverse noise impacts.

II. PRINCIPAL CONCLUSIONS

Noise from the increased traffic volumes generated by the Proposed Actions would not cause significant adverse noise impacts as the relative increases in noise levels would fall below the applicable *2014 CEQR Technical Manual* significant adverse impact threshold (3.0 dBA).

Based on the calculated With-Action L_{10} noise levels, the following composite window/wall attenuations were determined for future residential/community facility uses as well as commercial uses within the rezoning area:

- A minimum of **28 dBA** composite window/wall attenuation is required for residential/community facility uses on all building facades of Projected Development Site 3. The required composite window/wall attenuation for commercial uses would be 5 dBA less.

- **No special attenuation measures** beyond standard construction practices would be required for residential/community facility uses and commercial uses on any other frontage within the rezoning area.

The composite window/wall noise attenuations described above would be required through the assignment of an (E)-Designation (E-480) for noise to Projected Development Site 3 (Block 331, Lot 50) in conjunction with the proposed rezoning. With implementation of the attenuation levels outlined above and described in **Table I-6**, the Proposed Actions and subsequent RWCDS projected developments would provide sufficient attenuation to achieve the *CEQR Technical Manual* interior noise level guidelines. Therefore, the Proposed Actions would not result in any significant adverse impacts related to noise attenuation.

III. NOISE FUNDAMENTALS

Quantitative information on the effects of airborne noise on people is well documented. If sufficiently loud, noise may adversely affect people in several ways. For example, noise may interfere with human activities such as sleep, speech communication, and tasks requiring concentration or coordination. It may also cause annoyance, hearing damage, and other physiological problems. Although it is possible to study these effects on people on an average or statistical basis, it must be remembered that all the stated effects of noise on people vary greatly with the individual. Several noise scales and rating methods are used to quantify the effects of noise on people. These scales and methods consider factors such as loudness, duration, time of occurrence, and changes in noise level with time.

"A"-Weighted Sound Level (dBA)

Noise is typically measured in units called decibels (dB), which are ten times the logarithm of the ratio of the sound pressure squared to a standard reference pressure squared. Because loudness is important in the assessment of the effects of noise on people, the dependence of loudness on frequency must be taken into account in the noise scale used in environmental assessments. Frequency is the rate at which sound

pressures fluctuate in a cycle over a given quantity of time, and is measured in Hertz (Hz), where 1 Hz equals 1 cycle per second. Frequency defines sound in terms of pitch components. In the measurement system, one of the simplified scales that accounts for the dependence of perceived loudness on frequency is the use of a weighting network - known as A-weighting - that simulates the response of the human ear. For most noise assessments, the A-weighted sound pressure level in units of dBA is used due to its widespread recognition and its close correlation to perception. In this analysis, all measured noise levels are reported in dBA or A-weighted decibels.

Noise Descriptors Used In Impact Assessment

Because the sound pressure level unit, dBA, describes a noise level at just one moment, and very few noises are constant, other ways of describing noise over extended periods have been developed. One way of describing fluctuating sound is to describe the fluctuating noise heard over a specific time period as if it had been a steady, unchanging sound. For this condition, a descriptor called the "equivalent sound level", L_{eq}, can be computed. L_{eq} is the constant sound level that, in a given situation and time period (e.g., 1 hour, denoted by $L_{eq(1)}$, or 24 hours, denoted as $L_{eq(24)}$), conveys the same sound-energy as the actual time-varying sound. Statistical sound level descriptors such as L_1, L_{10}, L_{50}, L_{90}, and L_x, are sometimes used to indicate noise levels that are exceeded 1, 10, 50, and 90 percent of the time, respectively. Discrete event peak levels are given as L_1 levels. L_{eq} is used in the prediction of future noise levels, by adding the contributions from new sources of noise (i.e., increases in traffic volumes) to the existing levels and in relating annoyance to increases in noise levels.

For the purposes of this analysis, the maximum 1-hour equivalent sound level ($L_{eq(1)}$) has been selected as the noise descriptor to be used in the noise impact evaluation. $L_{eq(1)}$ is the noise descriptor used in the 2014 *New York City Environmental Quality Review (CEQR) Technical Manual for* noise impact evaluation, and is used to provide an indication of highest expected sound levels. $L_{10(1)}$ is the noise descriptor used in the 2014 *CEQR Technical Manual* for building attenuation. Hourly statistical noise levels (particularly L_{10} and L_{eq} levels) were used to characterize the relevant noise sources and their relative importance at each receptor location.

Applicable Noise Codes and Impact Criteria

New York 2014 CEQR Technical Manual Noise Standards

The New York City Department of Environmental Protection (DEP) has set external noise exposure standards. These standards are shown on the following page in **Table I-1**. Noise Exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable. The standards are based on maintaining an interior noise level for the worst-case hour L_{10} of less than or equal to 45 dBA. Attenuation requirements are shown on the following page in **Table I-2**.

Table I-1: Noise Exposure Guidelines for Use in City Environmental Impact Review

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

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

Notes:

(i) In addition, any new activity would not increase the ambient noise level by 3 dBA or more;

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

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

[3] One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

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

Table I-2: Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Noise level with proposed development	70<L_{10}≤73	73<L_{10}≤76	76<L_{10}≤78	78<L_{10}≤80	80<L_{10}
Attenuation	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	36 + (L_{10} - 80)[B] dB(A)

Note: [A] The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and 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.

[B] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.

Source: New York City Department of Environmental Protection / 2014 *CEQR Technical Manual*

IV. NOISE PREDICTION METHODOLOGY

Proportional Modeling

Proportional modeling was used to determine No-Action and With-Action noise levels at the receptor locations, which are discussed in more detail below. Proportional modeling is one of the techniques recommended in the *2014 CEQR Technical Manual* for mobile source analysis. Using this technique, the prediction of future noise levels, where traffic is the dominant noise source, is based on a calculation using measured Existing noise levels and predicted changes in traffic volumes to determine No-Action and With-Action noise levels. Vehicular traffic volumes, which are counted during the noise recording, are converted into Passenger Car Equivalent (PCE) values, for which one medium-duty truck (having a gross weight between 9,900 and 26,400 pounds) is assumed to generate the noise equivalent of 13 cars, and one heavy-duty truck (having a gross weight of more than 26,400 pounds) is assumed to generate the noise equivalent of 47 cars, and one bus (vehicles designed to carry more than nine passengers) is assumed to generate the noise equivalent of 18 cars. Future noise levels are calculated using the following equation:

FNA NL =10 log (NA PCE/E PCE) + E NL

where:

FNA NL = Future No-Action Noise Level
NA PCE = No-Action PCEs
E PCE = Existing PCEs
E NL = Existing Noise Level

Sound levels are measured in decibels and therefore increase logarithmically with sound source strength. In this case, the sound source is traffic volumes measured in PCEs. For example, assume that traffic is the dominant noise source at a particular location. If the existing traffic volume on a street is 100 PCE and if the future traffic volume were increased by 50 PCE to a total of 150 PCE, the noise level would increase by 1.8 dBA. Similarly, if the future traffic were to increase by 100 PCE, or doubled to a total of 200 PCE, the noise level would increase by 3.0 dBA.

Analyses for the Proposed Actions were conducted for three typical time periods: the weekday AM peak hour (8 AM to 9 AM), the midday peak hour (12 PM to 1 PM), and the weekday PM peak hour (5 PM to 6 PM). These time periods are the hours when the maximum traffic generation is expected and, therefore, the hours when future conditions with the Proposed Actions are most likely to result in maximum noise impacts for the receptor locations.

For the purpose of this analysis, during the noise recording, vehicles were counted and classified. To calculate the 2024 No-Action PCE values at the rezoning area, an annual background growth rate of 0.50 percent for years 1 through 5, and 0.25 percent for year six, was applied to the counted PCE values.[1] To calculate the 2024 With-Action PCE values, a trip generation was prepared based on the proposed number of incremental dwelling units (115 DUs) and the incremental local retail use (approximately 22,143 gsf) generated by the 2024 With-Action development, utilizing existing modal split data for the census tract within which the rezoning area is located.[2] The total incremental vehicles generated per hour were estimated at 20 for the AM peak hour, 46 for the midday peak hour, and 37 for the PM peak hour. For the purposes of trip assignment it was conservatively assumed that all project-generated trips would be analyzed along all three adjacent thoroughfares: 35th Avenue, 12th Street, and 36th Avenue.

[1] Calculation according to Table 16-4 in the *CEQR Technical Manual.*
[2] Based on T128. Means of Transportation to Work, Queens Census Tract 85, 2011-15 Five Year ACS.

V. EXISTING CONDITIONS

According to the RWCDS, the Applicant-owned Proposed Development Site (Block 331, Lot 27) and two additional Projected Development Sites (Block 331, Lots 38 and 50) are expected to be redeveloped under the With-Action conditions; all other sites located within the proposed rezoning area are not expected to be redeveloped. The Applicant-owned Proposed Development Site at 11-14 35th Avenue is located on the northeastern corner of the block, with approximately 92 feet of frontage along 35th Avenue to the north and approximately 275 feet of frontage along 12th Avenue to the east (refer to **Figure I-1**). The approximately 24,589 sf lot contains a single-story, approximately 10,320 gsf warehouse which currently stores cranes and other construction-related equipment for the United Crane and Rigging Corporation. The approximately 57,904 sf proposed rezoning area comprises the eastern half of Queens Block 331, fronting 12th Street between 35th and 36th Avenues. In addition to the Applicant-owned proposed development site on Lot 27 detailed above, the proposed rezoning area encompasses all of Lot 50, as well as the eastern portions of Lots 8 and 38 on Block 331 (refer to **Figure I-1**).

Lot 38 (Projected Development Site 2), located immediately south of the Applicant-owned Proposed Development Site at 35-30 12th Street, contains a single-story, approximately 2,189 gsf building housing Bravo One Auto Body Repair. The majority of Lot 38 is located within the proposed rezoning area. Lot 50 (Projected Development Site 3) is on the southeast corner of Queens Block 331 at 35-38 12th Street, with frontage along 12th Street and 36th Avenue. Lot 50 contains two single-story buildings totaling approximately 2,542 gsf which house America's Auto Repair (refer to **Figure I-1**).

Selection of Noise Receptor Locations

As discussed above, traffic along 12th Street, 35th Avenue, and 36th Avenue is the dominant source of noise in the vicinity of the rezoning area. Therefore, the noise receptor locations were selected based upon the assumption that the future developments within the rezoning area would be built to their respective lot lines. The receptor locations are shown in **Figure I-1** and described below:

- Receptor Location 1 – Future northern frontage of Applicant-owned Proposed Development Site (35th Avenue); approximate midpoint of frontage (approximately 50 feet west of 12th Street).

- Receptor Location 2 – Future eastern frontages of Applicant-owned Proposed Development Site and Projected Development Site 2 (12th Street); approximate midpoint of frontage (approximately 295 feet south of 35th Avenue).

- Receptor Location 3 – Future southern frontage of Projected Development Site 3 (36th Avenue); approximate midpoint of frontage (approximately 50 feet west of 12th Street).

Noise Monitoring

At all three receptor locations, 20-minute spot measurements of existing noise levels were performed for each of three noise analysis time periods - weekday AM peak hour (8:00 AM to 9:00 AM), weekday midday peak hour (12:00 PM to 1:00 PM), and weekday PM peak hour (5:00 PM to 6:00 PM). Noise monitoring was performed on Wednesday, November 2, 2016, and a follow up monitoring was performed on March 29, 2017. The weather was clear and in the low-60s °F on November 2, 2016, while it was cloudy and in the mid-40s °F on March 29, 2017.

Equipment Used During Noise Monitoring

The instrumentation used for the measurements was a Brüel & Kjær Type 4189 ½-inch microphone connected to a Brüel & Kjær Model 2250 Type 1 (as defined by the American National Standards Institute) sound level meter. This assembly was mounted at a height of 5 feet above the ground surface on a tripod and at least six feet away from any sound-reflecting surfaces to avoid major interference with source sound level that is being measured. The meter was calibrated before and after readings with a Brüel & Kjær Type 4231 sound-level calibrator using the appropriate adaptor. Measurements at each location were made on the A-scale (dBA). The data were digitally recorded by the sound level meter and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_1, L_{10}, L_{50}, and L_{90}. A windscreen was used during all sound measurements except for calibration. Only traffic-related noise was measured; noise from other sources (e.g., emergency sirens, aircraft flyovers, etc.) was excluded from the measured noise levels. Weather conditions were noted to ensure a true reading as follows: wind speed under 12 mph; relative humidity under 90 percent; and temperature above 14°F and below 122°F (pursuant to ANSI Standard S1.13-2005).

Existing Noise Levels at Noise Receptor Locations

Measured Noise Levels

Table I-3: Existing Noise Levels (in dBA) at Receptor Locations

#[1]	Noise Receptor Location	Time	L_{max}	L_{min}	L_{eq}	L_1	L_{10}[2]	L_{50}	L_{90}	CEQR Noise Exposure Category
1	35th Avenue	AM	81.14	52.05	64.31	75.93	**66.62**	58.28	54.14	**Marginally Acceptable**
		MD	85.81	49.68	63.92	74.91	65.66	58.34	53.62	
		PM	86.09	48.41	60.35	69.41	62.29	56.04	51.26	
2	12th Street	AM	84.75	59.23	65.50	72.76	**67.63**	63.17	60.69	**Marginally Acceptable**
		MD	78.58	50.85	61.43	70.48	65.13	57.84	53.37	
		PM	89.72	49.13	65.04	75.79	66.69	56.06	51.77	
3	36th Avenue	AM	81.95	52.83	65.15	76.41	67.91	59.70	55.38	**Marginally Acceptable**
		MD	87.31	51.55	66.76	78.44	**69.30**	60.84	55.64	
		PM	91.69	51.21	66.93	79.79	67.78	59.87	55.51	

Notes: Field measurements were performed by Philip Habib & Associates on Wednesday, November 2, 2016 and Wednesday, March 29, 2017.
[1] Refer to **Figure I-1** for noise monitoring receptor locations.
[2] Highest L_{10} value at each receptor location indicated in **bold**.

Noise monitoring results for receptor locations 1, 2, and 3 are shown in **Table I-3**. Traffic was the dominant noise source and the values shown reflect the level of vehicular activity on the respective thoroughfares adjacent to the rezoning area. Vehicular traffic volumes were counted during the noise recording for each peak period and converted into hourly PCE values. Existing noise levels at all three receptor locations were all within the Marginally Acceptable CEQR Noise Exposure category. The highest noise levels were observed during the midday peak period at Receptor Location 3 (36th Avenue), exhibiting an L_{10} of 69.3 dBA.

VI. THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

In the 2024 future without the Proposed Actions (the No-Action condition), no zoning changes are anticipated in the proposed rezoning area. As such, the eastern half of Queens Block 331 would retain its existing R5 zoning designation. No commercial or industrial/manufacturing floor area is allowed in the R5 district. As such, under RWCDS No-Action conditions, no changes are anticipated in the proposed rezoning area, and the area would continue to be occupied by warehouses, light industrial/manufacturing buildings, and auto body repair shops in the future without the Proposed Actions.

Using the noise prediction methodology previously described in Section III above, future noise levels in the No-Action condition were calculated for the three analysis periods for the 2024 Build Year. **Table I-4** shows the measured Existing noise levels and calculated future No-Action condition noise levels at the receptor locations.

Table I-4: Future No-Action Noise Levels (in dBA)

Noise Receptor Location	Time	Existing L_{eq}	2024 No-Action L_{eq}	Change	2024 No-Action L_{10}	CEQR Noise Exposure Category
1	AM	64.31	64.34	0.03	**66.65**	**Marginally Acceptable**
	MD	63.92	63.97	0.05	65.71	
	PM	60.35	60.48	0.13	62.42	
2	AM	65.50	65.57	0.07	**67.70**	**Marginally Acceptable**
	MD	61.43	61.55	0.12	65.25	
	PM	65.04	65.11	0.07	66.76	
3	AM	65.15	65.20	0.05	67.96	**Marginally Acceptable**
	MD	66.76	66.97	0.21	**69.51**	
	PM	66.93	67.02	0.09	67.87	

Notes: Highest L_{10} value at each receptor location indicated in **bold**.

Comparing future No-Action noise levels with Existing noise levels, the increases in L_{eq} noise levels would range from 0.03 dBA to 0.21 dBA for all analysis periods. According to *2014 CEQR Technical Manual* guidelines, increases of less than 3.0 dBA would be barely perceptible. The projected L_{10} noise levels at Receptor Location 1 would range from 62.42 to 66.65 dBA, projected L_{10} noise levels at Receptor Location 2 would range from 65.25 to 67.70 dBA, and projected L_{10} noise levels at Receptor Location 3 would range from 67.87 to 69.51 dBA. As under existing conditions, No-Action L_{10} noise levels would fall into the Marginally Acceptable CEQR Noise Exposure category at all receptor locations in all analysis periods.

VII. THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

Using the noise prediction methodology previously described in Section III, the noise levels in the future with the Proposed Actions were calculated for the three peak analysis periods in the 2024 Build Year. **Table I-5** presents noise levels in the future with the Proposed Actions at Receptor Locations 1, 2, and 3 in 2024.

Comparing the future With-Action noise levels with No-Action noise levels, increases in L_{eq} noise level would range from 0.11 dBA to 0.96 dBA for all peak hours. Increases of this magnitude during the AM, midday and PM peak hours would not be perceptible as they are less than 3.0 dBA. Based upon *CEQR* impact criteria, as the With-Action noise levels would experience changes of less than 3.0 dBA during all peak hours, the Proposed Actions would not result in a significant adverse noise impact.

Figure I-1
Noise Monitoring Locations

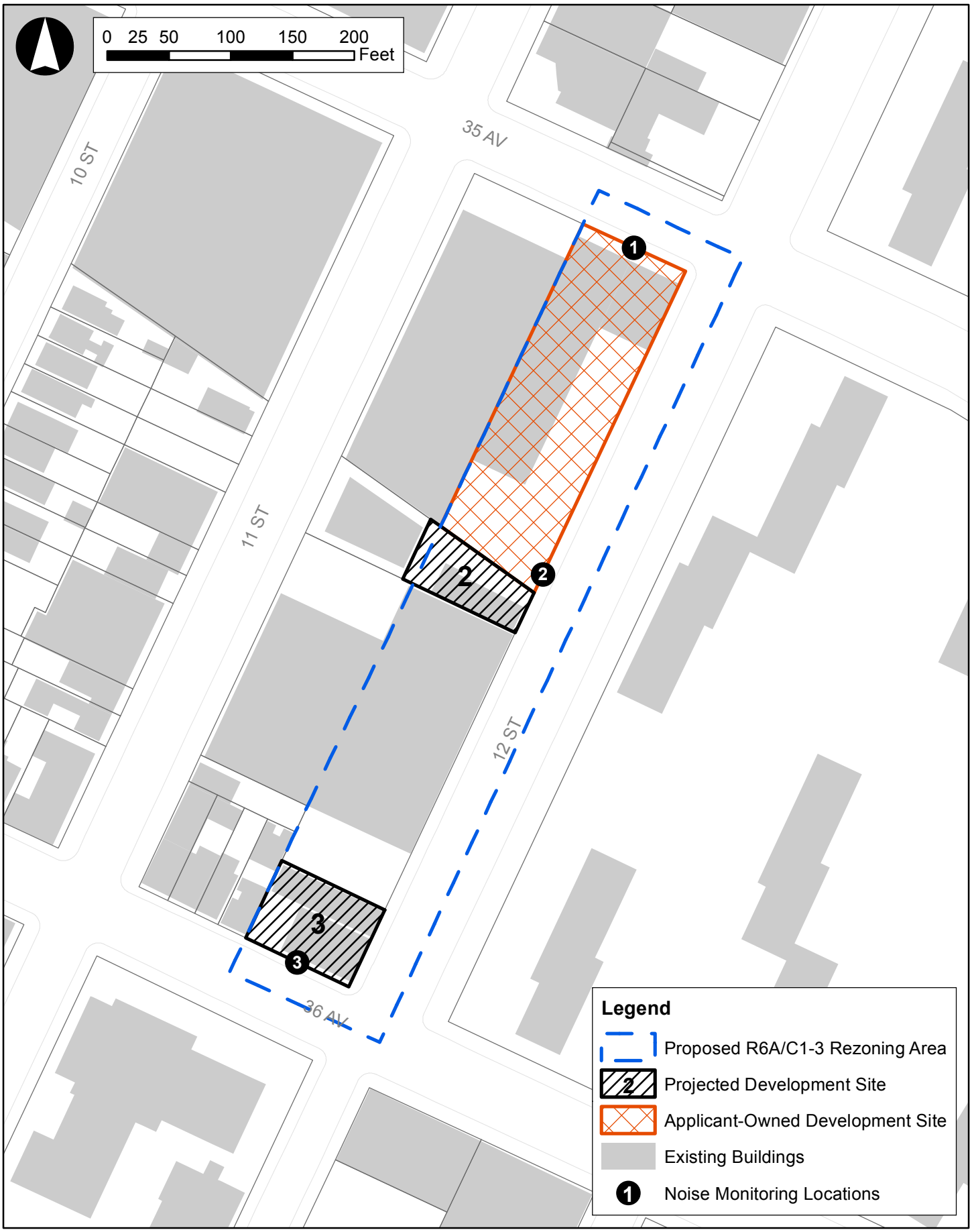


Table I-5: Future With-Action Noise Levels (in dBA)

Noise Receptor Location	Time	No-Action L_{eq}	2024 With-Action L_{eq}	Change	2024 With-Action L_{10}	CEQR Noise Exposure Category
1	AM	64.34	64.48	0.14	**66.79**	Marginally Acceptable
	MD	63.97	64.39	0.42	66.13	
	PM	60.48	61.37	0.88	63.31	
2	AM	65.57	66.04	0.46	**68.90**	Marginally Acceptable
	MD	61.55	62.51	0.96	65.69	
	PM	65.11	65.59	0.48	68.42	
3	AM	65.20	65.31	0.11	68.34	Marginally Unacceptable (I)
	MD	66.97	67.11	0.14	70.13	
	PM	67.02	67.39	0.37	**70.40**	

Notes: Highest L_{10} value at each receptor location indicated in **bold**.

As shown in **Table I-5**, the maximum projected With-Action L_{10} noise level along the rezoning area's northern boundary (Receptor Location 1, 35th Avenue) would be 66.79 dBA and would remain in the Marginally Acceptable CEQR Noise Exposure category, as under No-Action condition. The maximum projected With-Action L_{10} noise level along the rezoning area's eastern boundary (Receptor Location 2, 12th Street) would be 68.90 dBA and would remain in the Marginally Acceptable CEQR Noise Exposure category, as under No-Action conditions. The maximum projected With-Action L_{10} noise level along the rezoning area's southern boundary (Receptor Location 3, 36th Avenue) would be 70.40 dBA and would now fall into the Marginally Unacceptable (I) CEQR Noise Exposure category.

VIII. ATTENUATION REQUIREMENTS

As shown in **Table I-2**, the 2014 *CEQR Technical Manual* has set noise attenuation requirements for buildings based on exterior noise levels. Recommended noise attenuation values for buildings are designed to maintain a maximum interior noise level of 45 dBA or lower for residential and community facility uses and 50 dBA or lower for retail and office uses, and are determined based on exterior L_{10} noise levels. Results of the building attenuation analysis are summarized in **Table I-6** and **Figure I-2.**

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Typically, a building façade is composed of the wall, windows, and any vents or louvers for HVAC systems in various ratios of area. Since the proposed buildings would most likely be of masonry construction, which typically provides a high level of sound attenuation, the attenuation requirements for HUD or *CEQR* purposes apply primarily to the windows, but may also represent a composite window/wall attenuation value. Window/Wall attenuation can be described in terms of sound transmission class (STC), transmission loss (TL), and outdoor-indoor transmission class (OITC). Although these terms are sometimes used interchangeably, they are unique from each other. Transmission loss refers to how many decibels of sound a façade (wall) or façade accessory (window or door) can stop at a given frequency. The TL for a given construction material varies with the individual frequencies of the noise.

To simplify the noise attenuation properties of a wall, the STC rating was developed. It is a single number that describes the sound isolation performance of a given material for the range of test frequencies between 125 and 4,000 Hz. These frequencies sufficiently cover the range of human speech. Higher STC values reflect greater efficiencies to block airborne sound. HUD uses the STC when identifying the required sound attenuation for a façade.

Noise Attenuation Requirements

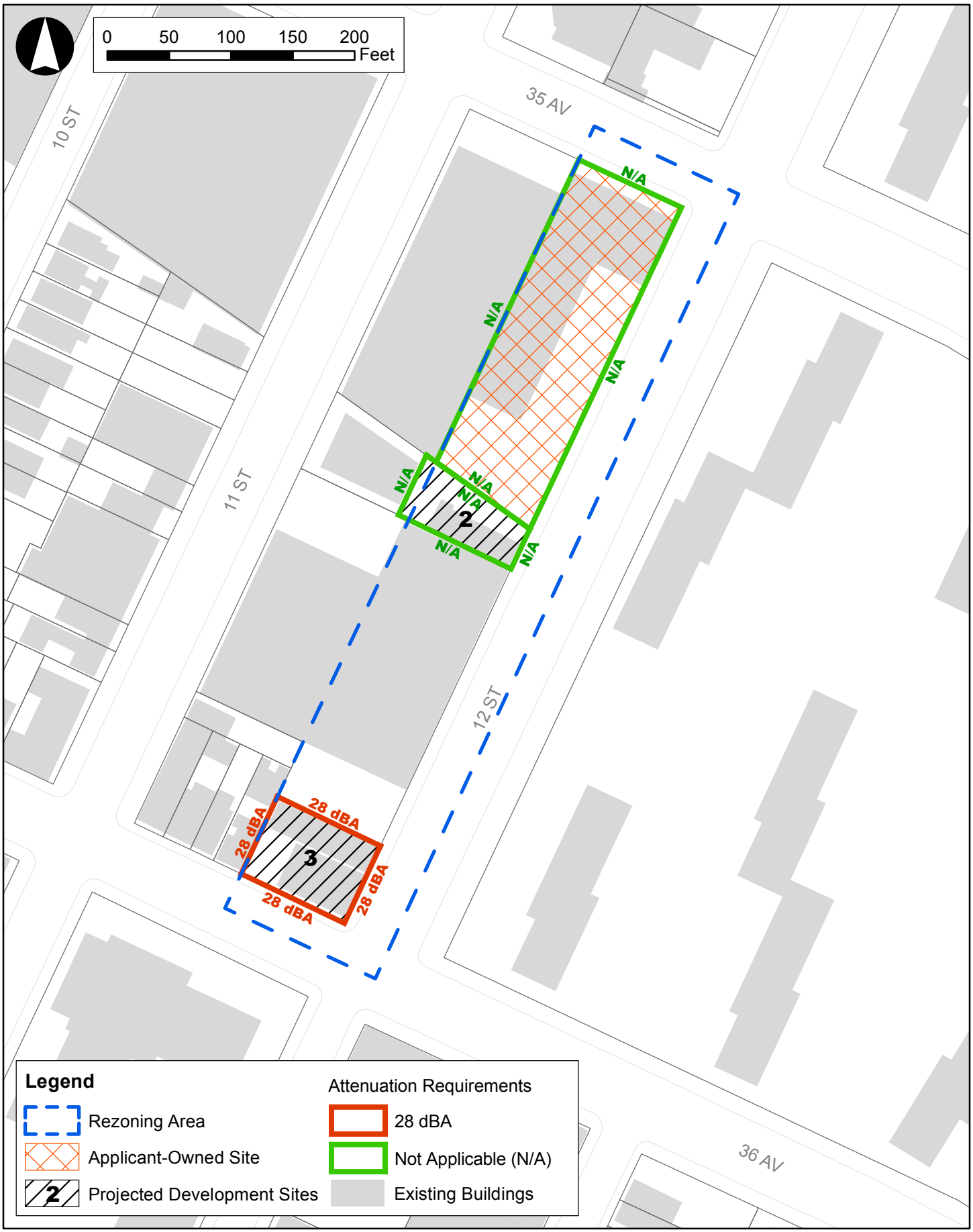


Table I-6: Required Attenuation Values for the Projected Developments within Rezoning Area

Site	Frontage	Associated Receptor Location	Maximum With-Action L_{10}	CEQR Noise Exposure Category	Required Attenuation (OITC)[1]
Applicant-Owned Proposed Development Site (Block 331, Lot 27)	Northern (35th Avenue)	1	66.79	Marginally Acceptable	N/A[2]
	Southern	2	68.90	Marginally Acceptable	
	Eastern (12th Street)				
	Western	N/A	N/A	N/A	
Projected Development Site #2 (Block 331, Lot 14)	Northern	2	68.90	Marginally Acceptable	N/A
	Southern				
	Eastern (12th Street)				
	Western	N/A	N/A	N/A	
Projected Development Site #3 (Block 331, Lot 50)	Northern	2	68.90	Marginally Acceptable	28 dBA
	Southern (36th Avenue)	3	70.40	Marginally Unacceptable (I)	
	Eastern (12th Street)	2	68.90	Marginally Acceptable	
	Western	N/A	N/A	N/A	

Notes: [1]The above attenuation values are for residential dwellings; commercial uses would be 5 dBA less.
[2] N/A = Not Applicable; no additional noise attenuation measures are required beyond standard construction practices. All the above categories require a closed window situation and hence an alternate means of ventilation.

The OITC is similar to the STC, except that it is weighted more towards the lower frequencies associated with aircraft, rail, and truck traffic. The OITC classification is defined by the American Society of Testing and Materials (ASTM E1332-90 (Reapproved 2003)) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise. NYCDEP uses the OITC when identifying the required sound attenuation for a façade.

Applicant-Owned Proposed Development Site (Lot 27)

As maximum With-Action L_{10} noise levels at Receptor Locations 1 and 2 would be less than 70 dBA, no special noise attenuation measures beyond standard construction practices would be required for residential/community facility uses on any of the proposed project's frontages in order to achieve the required residential interior noise level of 45 dBA or lower (refer to **Figure I-2**). Likewise, any future commercial uses would also not require any special noise attenuation measures beyond standard construction practices on any of the proposed project's frontages in order to achieve the required commercial interior noise level of 50 dBA or lower.

Projected Development Site 2 (Lot 38)

As maximum With-Action L_{10} noise levels at Receptor Location 2 would be less than 70 dBA, no special noise attenuation measures beyond standard construction practices would be required for residential/community facility uses on any frontages of Projected Development Site 2 in order to achieve the required residential interior noise level of 45 dBA or lower (refer to **Figure I-2**). Likewise, any future commercial uses would also not require any special noise attenuation measures beyond standard construction practices on any frontages of Projected Development Site 2 in order to achieve the required commercial interior noise level of 50 dBA or lower.

Projected Development Site 3 (Lot 50)

As maximum With-Action L_{10} noise levels at Receptor Location 3 would be 70.39 dBA, a minimum 28 dBA of composite window/wall attenuation would be required for residential/community facility uses on all building facades of Projected Development Site 3[3], in order to achieve the required residential interior noise level of 45 dBA or lower (refer to **Figure I-2**). Future commercial uses on Projected Development Site 3's would be required to provide an attenuation rating of 5 dBA less than the residential requirement.

(E)-Designation

The composite window/wall noise attenuations described above would be required through the assignment of an (E)-Designation (E-480) for noise to Projected Development Site 3 (Lot 50) in conjunction with the proposed rezoning. With the implementation of this composite window/wall noise attenuation, no significant adverse noise impacts would occur as a result of the Proposed Actions.

For building facades requiring 28 dBA of attenuation, the text of the (E)-Designation (E-480) is as follows:

> **Block 331, Lot 50 (Projected Development Site 3):**
>
> **In order to ensure an acceptable interior noise environment, future residential and/or commercial uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on all building's facades in order to maintain an interior noise level of 45 dBA. The minimum required composite window/wall attenuation for future commercial uses would be 5 dBA less than that for residential uses. In order 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, central air conditioning.**

VIII. Other Noise Concerns

Mechanical Equipment

The Proposed Actions would not include any unenclosed mechanical equipment for building ventilation purposes, and would not include any active outdoor recreational space that could result in stationary source noise impacts to the surrounding area. All mechanical equipment would be located either inside the building or would be enclosed on the roof of the structures, and should be designed to meet all applicable noise regulations and requirements. Therefore, the Proposed Actions would not result in any significant increase in ambient noise levels in the vicinity of the Applicant-owned Proposed Development Site, the two additional Projected Development Sites, the proposed rezoning area, or the surrounding study area.

Train Noise

An initial train noise impact screening analysis would be warranted if a new receptor would be located within 1,500 feet of existing rail activity and have a direct line of sight to that activity. As the rezoning area is not within 1,500 of an existing rail line nor does the site have a direct line of sight to a rail activity, no initial train noise impact screening analysis is warranted.

[3] Per DCP guidance, the neighboring 100 feet of any façade immediately adjacent to a different façade that requires a higher level of attenuation will require the same level of attenuation as that façade.

Aircraft Noise

An initial aircraft noise impact screening analysis would be warranted if the new receptor would be located within one mile of an existing flight path, or cause aircraft to fly through existing or new flight paths over or within one mile of a receptor. Since the rezoning area is not within one mile of an existing flight path, no initial aircraft noise impact screening analysis is warranted.

Appendix 1

Reasonable Worst-Case Development Scenario (RWCDS) Memorandum

Philip Habib & Associates
Engineers and Planners • 102 Madison Avenue • New York, NY 10016 • 212 929 5656 • 212 929 5605 (fax)

MEMORANDUM

TO: New York City Department of City Planning
Environmental Assessment and Review Division

FROM: Philip Habib & Associates on behalf of Ravi Management, LLC

DATE: Revised April 2, 2018

RE: **Reasonable Worst Case Development Scenario for the 12th Street Rezoning Project ID #P2015Q0578 (PHA #1678)**

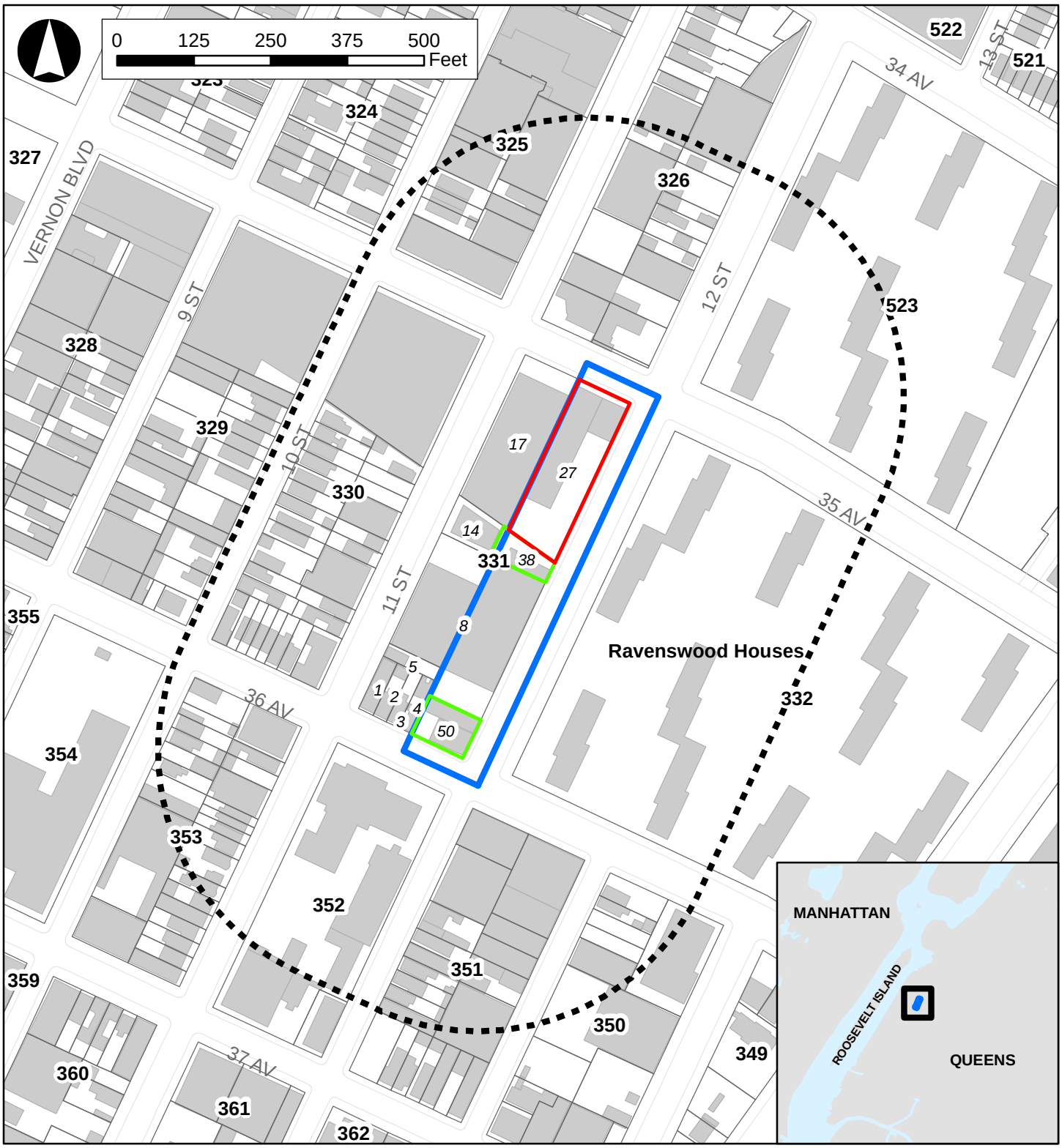
I. PROJECT DESCRIPTION

Ravi Management, LLC (the "Applicant") is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1 (the "proposed development site") (refer to **Figure 1a**, "Project Location Map"). The discretionary actions include: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 (the "proposed rezoning area") from an R5 district to an R6A district with a C1-3 commercial overlay (refer to **Figure 2**, "Zoning Map"); and, (ii) a zoning text amendment to designate the proposed rezoning area a Mandatory Inclusionary Housing (MIH) Area. Collectively, the zoning map amendment and the zoning text amendment are the "Proposed Actions" for the purposes of the environmental analysis.

As shown in **Figure 1b**, "Tax Map," the proposed rezoning area consists of the eastern half of Queens Block 331, including Lot 27 (the proposed development site), Lot 50, and the eastern portions of Lots 8 and 38. In total, the proposed rezoning area comprises approximately 57,904 square feet (sf) of lot area bounded by 35th Avenue to the north, 12th Street to the east, 36th Avenue to the south, and, to the west, a line approximately 92.6 feet west of, and parallel to, 12th Street.

The 24,589 sf Applicant-owned proposed development site on Lot 27 contains a single-story, approximately 10,320 sf warehouse which currently stores cranes and other construction-related equipment (refer to **Figure 3**, "Land Use Map"). The proposed development site is currently in an R5 zoning district which permits Use Groups 1-4, and as such, the existing warehouse on the site is a nonconforming use. In the future with the Proposed Actions under the reasonable worst-case development scenario (RWCDS) detailed below, the Applicant would demolish the existing warehouse and construct a new eight-story (up to 85 feet tall), approximately 92,946 gross square foot (gsf) (approximately 88,520 zoning square foot [zsf]) mixed-use residential and commercial building on the site, with a floor area ratio (FAR) of 3.6. It is anticipated that the proposed building would contain 77,196 gsf (73,650 zsf) of residential space with 82 dwelling units (DUs). Thirty percent of the residential floor area (27 units) would be affordable units pursuant to the MIH

Figure 1a
Project Location



Source: New York City Department of City Planning (PLUTO 2016), DoITT

Legend

- Applicant-owned Proposed Development Site
- Proposed Rezoning Area
- Projected Development Site
- Building Footprint
- 400-Foot Radius
- 331 Block
- 27 Lot

12th Street Rezoning RWCDS Memo

Figure 1b

Tax Map - Block 331

Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of ground-floor retail space and up to 77 surface and underground accessory parking spaces.[1]

A. Actions Necessary to Facilitate the Proposal

The Applicant is seeking two New York City Planning Commission (CPC) zoning changes: a zoning map amendment and a zoning text amendment. Both proposed zoning changes are discretionary actions; the zoning map amendment and zoning text amendment are subject to the Uniform Land Use Review Procedure (ULURP). The Proposed Actions are also subject to environmental review under the City Environmental Quality Review Act (CEQR).

Zoning Map Amendment

The zoning map amendment would rezone the eastern half (92.6 feet west of 12th Street, as shown in **Figure 1b**) of Queens Block 331, fronting 12th Street between 35th and 36th Avenues, from an R5 zoning district to an R6A zoning district with a C1-3 commercial overlay (refer to **Figure 2**). The proposed rezoning area includes all of Lots 27 and 50, and the eastern sections of Lots 8 and 38, totaling approximately 57,904 sf of lot area. The area contains light industrial/manufacturing uses, including the warehouse on the proposed development site, as well as auto repair uses.

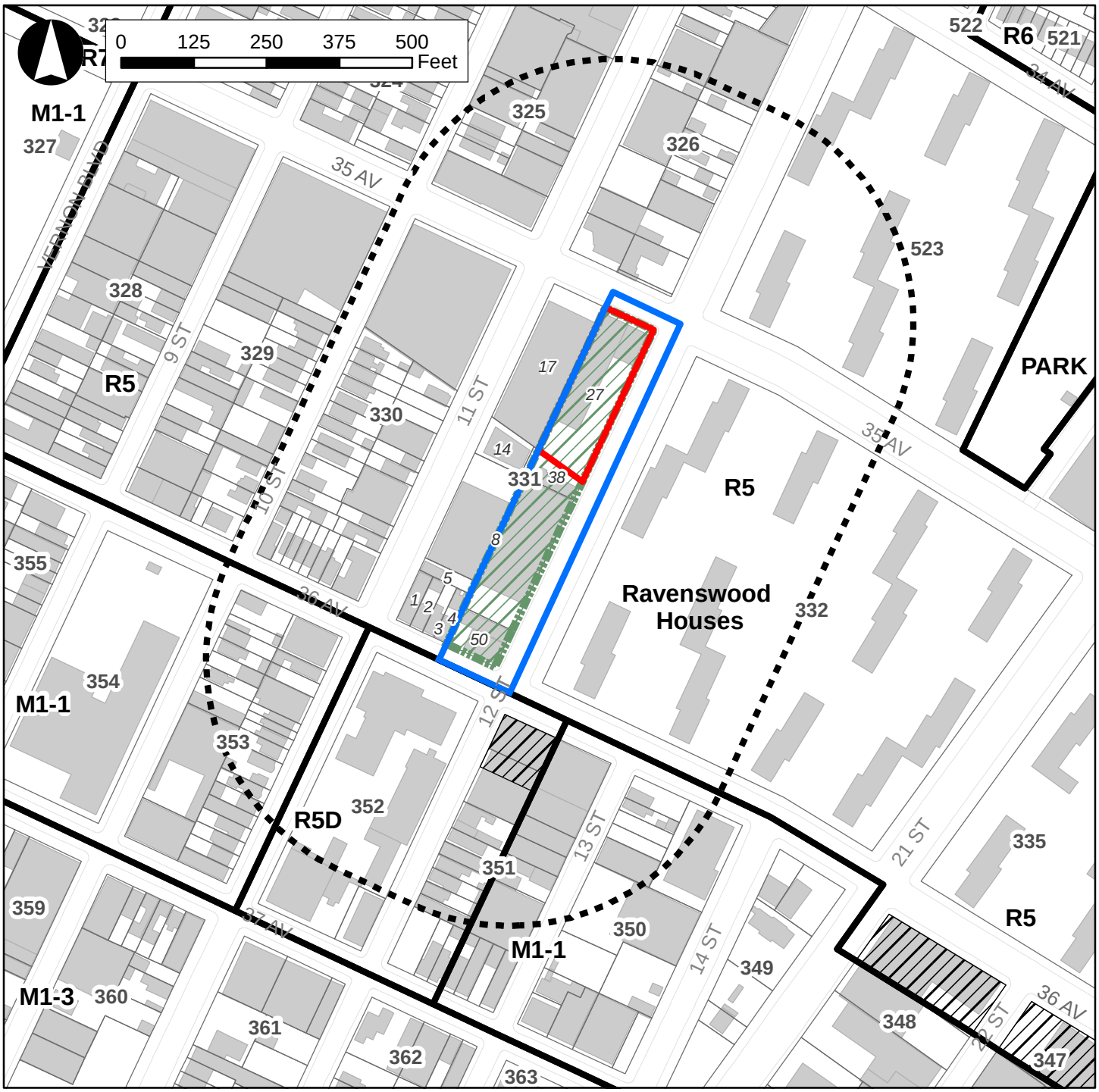
R6A zoning districts allow a maximum residential FAR of 3.0, more than twice the existing R5 district's allowance of 1.25 residential FAR in the proposed rezoning area. Additionally, R6A districts permit a maximum building height of 75 feet with a Qualifying Ground Floor and mandate Quality Housing bulk regulations, in contrast to R5 districts which permit a maximum building height of 40 feet and do not require Quality Housing bulk regulations. (As discussed below, utilization of MIH would increase the permitted FAR and building heights within the proposed rezoning area.)

C1-3 districts are commercial overlays mapped within residential districts along streets that serve local retail needs. Typical retail uses include neighborhood grocery stores, restaurants and beauty parlors. In mixed buildings, commercial uses are limited to the first and second floors and must always be located below the residential use. The maximum commercial FAR is 2.0 in C1-3 overlays mapped within R6A zoning districts, and 1.0 for C1-3 overlays mapped within R5 zoning districts.

Zoning Text Amendment

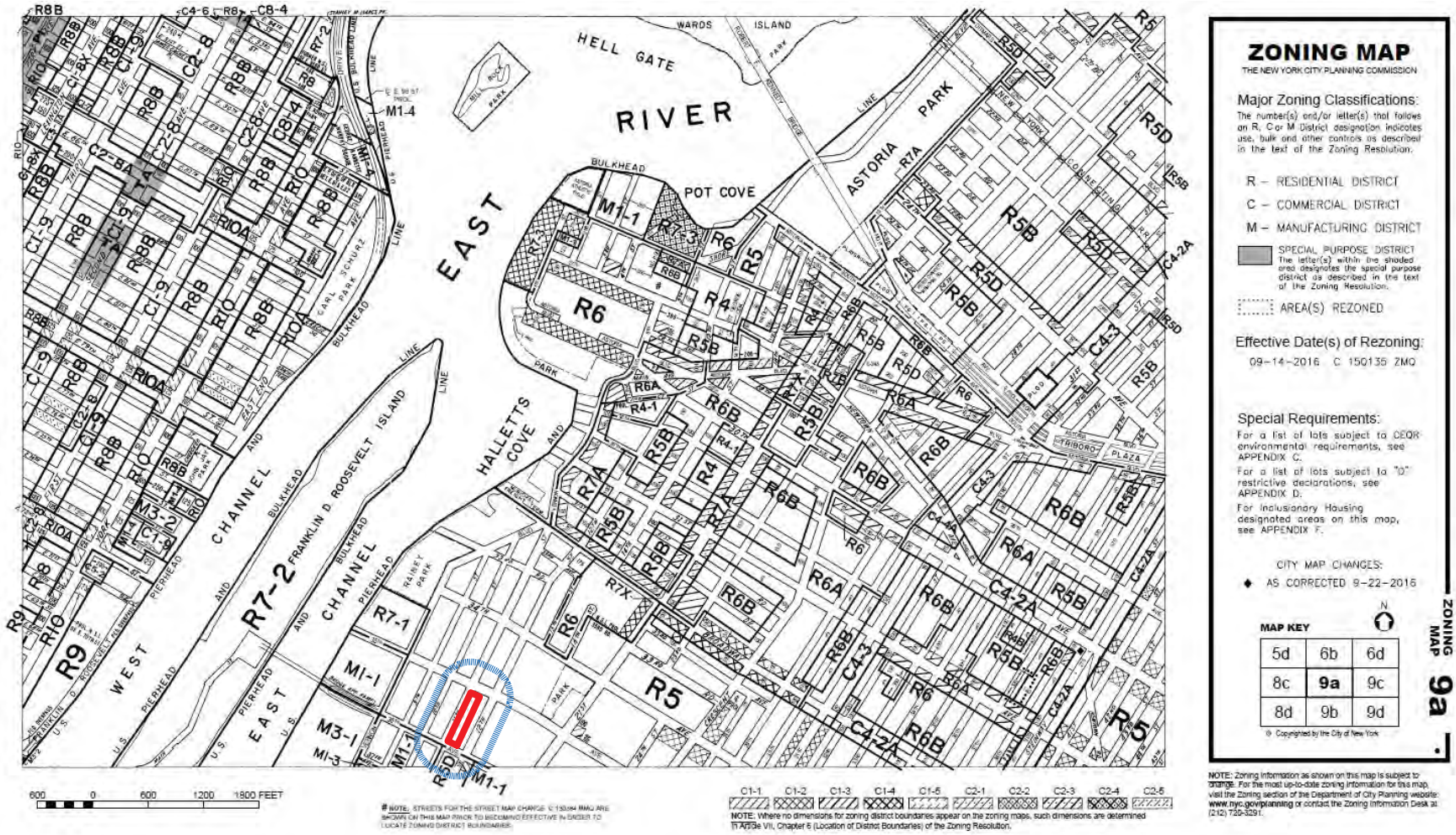
The Applicant is proposing to map the proposed rezoning area as a Mandatory Inclusionary Housing (MIH) Area by creating a new map for Queens Community District 1 in Appendix F of the New York City Zoning Resolution. An MIH Area requires affordable housing to be provided equivalent to either 25 or 30 percent of the residential floor area developed. The MIH Area sets a new maximum permitted residential FAR which supersedes the FAR permitted by the underlying zoning district. With both the designation of the proposed rezoning area as an MIH Area and its rezoning to an R6A/C1-3 zoning district, the maximum permitted FAR would be 3.6 and the maximum permitted building height would be 85 feet. Mapping of the MIH Area would facilitate development of approximately 27 affordable housing units on the proposed development site as the Applicant would provide affordable housing equivalent to 30 percent of the residential zsf developed at 80 percent Area Median Income (AMI). Additionally, as detailed below, the reasonable worst-case development scenario (RWCDS) also assumes that two other sites in the proposed rezoning area would likely be redeveloped with residential and retail uses under future conditions with the Proposed Actions, and would also utilize the additional FAR allowed under the MIH Program.

[1] As detailed below, the reasonable worst-case development scenario assumes the proposed development site would be built out to the maximum With-Action permitted FAR of 3.6. For conservative analysis purposes, this assumption is higher than shown in the Applicant's architectural drawings in the Land Use Application, which assume a built FAR of 3.54.



Legend

- Proposed Development Site
- Proposed R6A Rezoning Area
- Proposed C1-3 Commercial Overlay
- R5 Existing Zoning District
- Existing C1-3 Commercial Overlay
- 400-Foot Radius
- Building Footprint
- 331 Block
- 27 Lot



Proposed Rezoning Area

400-Foot Radius

B. Proposed Development Site, Proposed Rezoning Area, and Surrounding Area

Applicant-Owned Proposed Development Site

The Applicant-owned proposed development site at 11-14 35th Avenue (Queens Block 331, Lot 27) is located on the northeastern corner of the block, with approximately 92 feet of frontage along 35th Avenue to the north and approximately 275 feet of frontage along 12th Avenue to the east (refer to **Figure 1**). The approximately 24,589 sf lot contains a single-story, approximately 10,320 gsf warehouse which currently stores cranes and other construction-related equipment (refer to **Figure 4**, "Existing Conditions Photos"). The site has an existing FAR of 0.42, and its existing warehouse use is nonconforming with the underlying R5 zoning for the site.

Table 1: Proposed Rezoning Area – Existing Conditions on Block 331

Lot	Total Lot Area SF	Proposed Rezoning Area		Address	Zoning	Land Use	Building SF	Built FAR
		Lot Area SF	% of Total Lot Area					
8	41,600	23,167	56%	3541-49 11th Street / 35-40 12th Street	R5	Industrial/ Manufacturing (nonconforming)	40,000	0.96
27	24,589	24,589	100%	11-14 35th Avenue		Warehouse (nonconforming)	10,320	0.42
38	4,500	4,113	91%	35-30 12th Street		Auto Repair (nonconforming)	2,189	0.49
50	6,035	6,035	100%	35-58 12th Street		Auto Repair (nonconforming)	2,542	0.42
		57,904 Proposed Rezoning Area Total SF						

Notes: The Applicant-owned proposed development site is highlighted.
Sources: NYC DCP 2016 PLUTO Data; PHA Site Visits (November 2016).

Proposed Rezoning Area

The zoning map amendment would rezone the eastern portion of Queens Block 331 from an R5 zoning district to an R6A zoning district with a C1-3 commercial overlay (refer to **Figure 2**). The approximately 57,904 sf proposed rezoning area comprises the eastern half of Queens Block 331, fronting 12th Street between 35th and 36th Avenues. In addition to the Applicant-owned proposed development site on Lot 27 detailed above, the proposed rezoning area encompasses all of Lot 50, as well as the eastern portions of Lots 8 and 38 on Block 331 (refer to **Table 1**). None of the existing uses in the proposed rezoning area are permitted in the underlying R5 zoning district.

As shown in **Figure 4**, Lot 8 is an approximately 41,600 sf through-lot located in the middle of Block 331 with frontages along 11th and 12th Streets. Lot 8 contains two industrial/manufacturing buildings totaling approximately 40,000 sf (0.96 FAR) housing the All City Switchboard Corp. (switchgear and switchboard manufacturing) and Superior Selected Stone (wholesale). Approximately 23,167 sf of Lot 8 (56 percent of the lot) is located within the proposed rezoning area (refer to **Figure 1**).

Lot 38, located immediately south of the proposed development site at 35-30 12th Street, contains a single-story, approximately 2,189 sf building housing Bravo One Auto Body Repair (0.49 FAR) (refer to **Figure 4**). As shown in **Figure 1**, the majority of Lot 38 is located within the proposed rezoning area and the "25 Foot Rule" applies to the site. As outlined in Zoning Resolution Section 77-11, the "25 Foot Rule" applies to a zoning lot split between two or more zoning districts that permit different uses when the width of one

district on the zoning lot measures 25 feet or less at every point (as would occur on Lot 38 in the future with the Proposed Actions). Therefore, upon approval of the Proposed Actions, the use and bulk regulations of the C1-3 commercial overlay, which would encompass 91 percent of the lot, could be applied to the entirety of Lot 38.

As shown in **Figure 1**, Lot 50 is on the southeast corner of Queens Block 331 at 35-38 12th Street, with frontage along 12th Street and 36th Avenue. Lot 50 contains two single-story buildings totaling approximately 2,542 sf (0.42 FAR) which house America's Auto Repair (refer to **Figure 4**).

Surrounding Area and Context

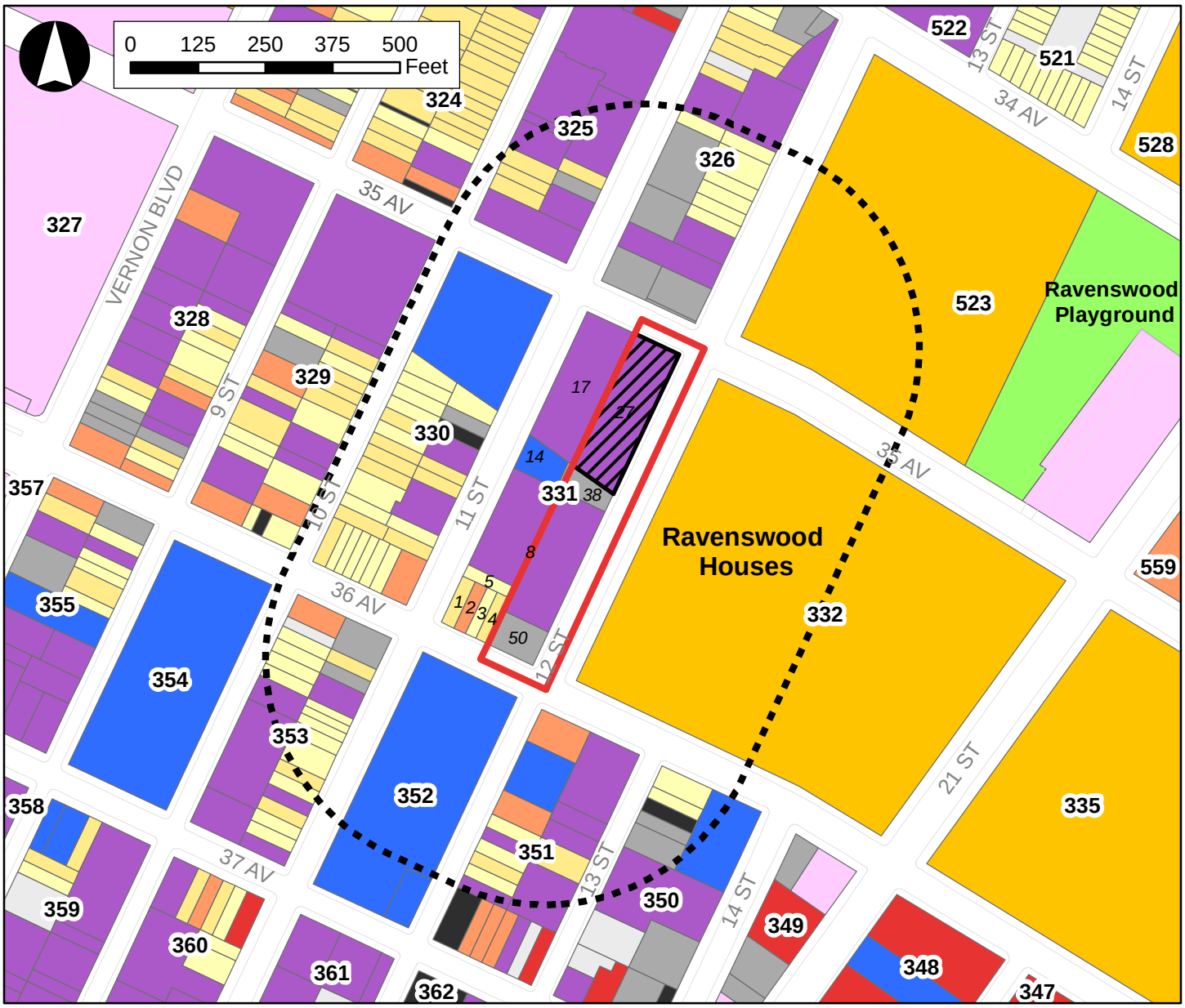
The proposed rezoning area is located in the Ravenswood neighborhood of Queens (between Long Island City and Astoria). As shown in **Figure 3**, the area within an approximate 400-foot radius of the proposed rezoning area is developed with a mix of residential, light industrial, institutional, and commercial uses. The remainder of Block 331 contains low-rise residential and mixed-use buildings along 36th Avenue and a three-story institutional building accommodating the Kingdom Hall of Jehovah's Witnesses at 35-27 11th Street.

Immediately east of the proposed rezoning area across 12th Street are the Ravenswood Houses, a New York City Housing Authority (NYCHA) public housing complex situated on 38 acres containing six- and seven-story apartment buildings surrounded by open space (refer to **Figures 3 and 4**). North of the proposed rezoning area are several light industrial uses such as Lemode Plumbing & Heating at 34-55 11th Street and Drillco Equipment Co., Inc. at 10-05 35th Avenue, along with a number of private parking facilities and 'vacant/for lease' properties. Institutions within 400-feet of the proposed rezoning area include St. Rita's Roman Catholic Church and Rectory at 36-36 12th Street, the Department of Corrections and Community Services' (DOCCS) Corcraft Distribution Center at 10-06 35th Avenue, and the Hour Children Supportive Housing complex which comprises the entire block to the south of the proposed rezoning area (Block 352). The remainder of the surrounding 400-foot area contains low-density residential buildings, most of which range from one- to three-stories, averaging approximately three residential units per building.

It should be noted that the Ravenswood Generating Station is located along the East River Waterfront on Vernon Boulevard to the west and southwest of the proposed rezoning area. South of 38th Avenue, the power plant has four tall stacks, all of which are approximately 0.5-miles to the southwest of the proposed rezoning area, and can be seen in the backgrounds of Photos 2, 3, and 5 in **Figure 4**.

The streets immediately surrounding Block 331 (35th Avenue, 12th Street, 36th Avenue, and 11th Street) are all wide streets with two-way traffic. The Roosevelt Island Bridge approach is four blocks to the west of the proposed rezoning area, at Vernon Boulevard and 36th Avenue. There are no subway stations or bus lines within 400-feet of the proposed rezoning area. The closest subway stations to the area are the Queensbridge-21st Street station (F train) approximately 0.5-miles to the south, and the 35th Avenue station (elevated N & Q trains) approximately 0.6-miles to the southeast. The Q102 and Q103 buses run north-south along Vernon Boulevard to the west of the 400-foot study area, with stops at the intersections of 35th Avenue (Q103) and 36th Avenue (Q102 and Q103). Additionally, the Q69 bus runs north-south along 21st Street to the east of the 400-foot study area with stops at the intersections of 35th and 36th Avenues.

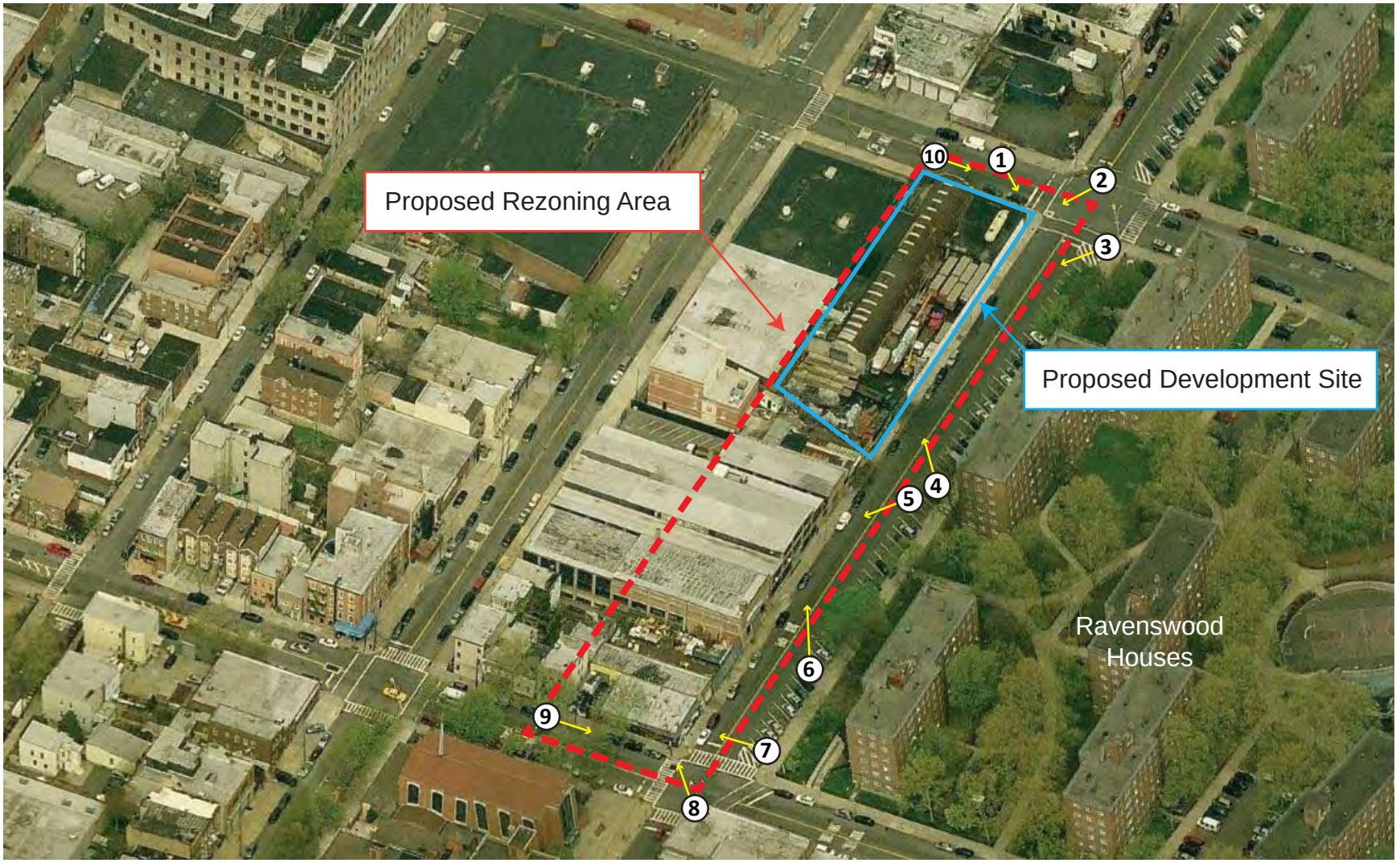
As shown in **Figure 2**, the area within 400-feet of the proposed rezoning area north of 36th Avenue is currently zoned R5, a zoning designation which has been unchanged since 1961. As discussed above, many of the existing light industrial/manufacturing buildings within this R5 district can be characterized as nonconforming uses. An M1-1 zoning district lies directly to the south and west of the proposed rezoning area. In 2010, all of Block 352 and the western half of Block 351 to the south of the proposed rezoning area were rezoned from M1-1 to R5D to help facilitate new residential development ("Hour Children Rezoning"). The rezoning made way for 12 dwelling units at 36-11 12th Street dedicated to supportive



Legend

- Proposed Development Site
- Proposed Rezoning Area
- 400-Foot Radius
- One and Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commercial/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities and Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data
- **331** Block
- *27* Lot

Source: New York City Department of City Planning (PLUTO 2016), DoITT



*Aerial view of the proposed rezoning area and surrounding neighborhood from the south, courtesy of Bing Maps.

(1) → Photo Location

Photo 1: View southeast across 35th Avenue at the northern edge of the proposed rezoning area and proposed development site

Photo 2: View southwest of the proposed development site from the intersection at 35th Avenue and 12th Street

**All photos taken on March 28, 2018*

Photo 3: View southwest across 12th Street at the eastern edge of the proposed rezoning area and proposed development site

Photo 4: View north across 12th Street at the proposed rezoning area and proposed development site

**All photos taken on March 28, 2018*

Photo 5: View southwest across 12th Street at the eastern edge of the proposed rezoning area

Photo 6: View north along 12th Street at the proposed rezoning area and proposed development site in the background

**All photos taken on March 28, 2018*

Photo 7: View of the proposed rezoning area west from the intersection of 36th Avenue and 12th Street

Photo 8: View of the proposed rezoning area northwest from the intersection of 36th Avenue and 12th Street

**All photos taken on March 28, 2018*

Photo 9: View east from 36th Avenue along the southern edge of the proposed rezoning area

Photo 10: View east along 35th Avenue at the northern edge of the proposed rezoning area and proposed development site

**All photos taken on March 28, 2018*

housing for formerly incarcerated women and their children. Similarly, in the surrounding area beyond 400-feet of the proposed rezoning area, there has been a trend towards rezoning manufacturing districts as well as residential districts containing nonconforming uses to mixed-use districts to facilitate residential and commercial growth, such as along Vernon Boulevard and the East River waterfront at Hallett's Point and Astoria Cove. These rezonings have been in response to declining industrial/manufacturing demand in the area, and the subsequent influx of hotel construction in manufacturing districts during the past decade, particularly in the blocks south of 36th Avenue. These rezonings include a R7-1 district that had replaced a portion of a nearby R5 district in 2006. Since this rezoning, the R7-1 district, located approximately a quarter-mile northwest of the proposed development site, has seen the approval of a new 17-story, 298,535 zsf residential building that would include 336 DUs.

C. Description of the Proposed Development

The Applicant owns the proposed development site at 11-14 35th Avenue (Queens Block 331, Lot 27). With approval of the Proposed Actions, the Applicant intends to redevelop the site with an eight-story (85-feet tall), approximately 87,033 zsf mixed-use residential and commercial building. The proposed building would include 74 residential units (totaling approximately 72,787 zsf), of which 30 percent of the residential zoning floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 14,246 zsf of qualifying ground-floor retail space (with a floor height of approximately 15 feet) and 71 surface and underground accessory parking spaces (refer to **Table 2** below). As detailed below, the Applicant's proposed development for Lot 27 would have a built FAR of 3.547, which is less than the maximum permitted FAR of 3.6 for the site in the future with the Proposed Actions. As such, the proposed project is not considered the reasonable worst-case development scenario (RWCDS) for the site in the future with the Proposed Actions.

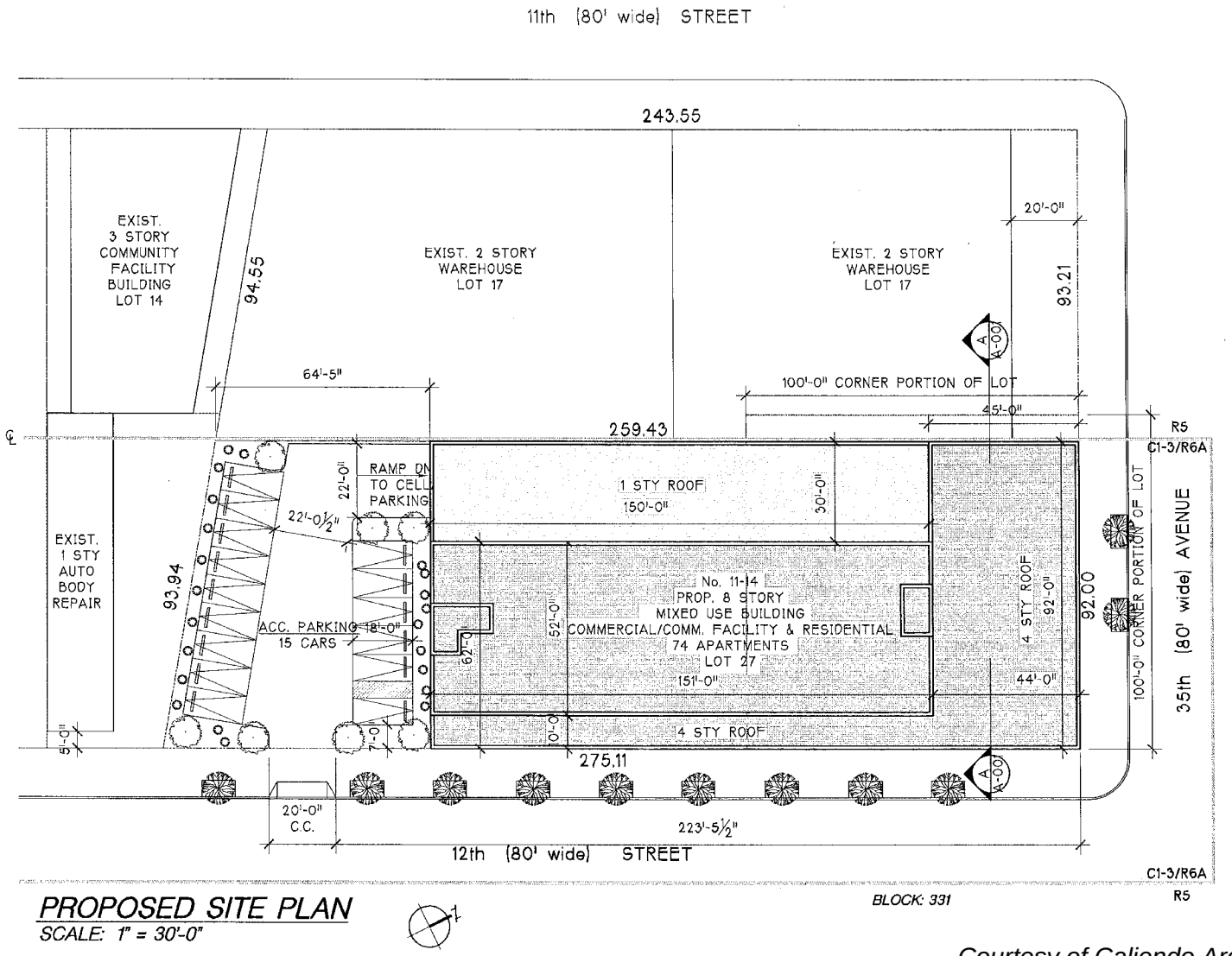
Table 2: Proposed Development on Block 331, Lot 27 (Applicant-Owned Development Site)

Lot Area SF	Existing Zoning & Max. FAR	Proposed Zoning & Max. FAR	Proposed Residential		Proposed Commercial SF [2]	Proposed Parking Spaces	Proposed Bldg SF	Proposed Bldg FAR
			SF [2]	DUs [3]				
24,589	R5: 1.25 FAR	R6A/C1-3: 3.6 FAR [1]	72,787 zsf	74 (27 aff)	14,246 zsf	71 [4]	87,033 zsf	3.54

Notes:
[1] The proposed maximum allowable FAR in the proposed rezoning area increases from 3.0 to 3.6 FAR when utilizing the MIH Program.
[2] Square footages are from the Applicant's architectural drawings, courtesy of Gerald J. Caliendo, as submitted in the Land Use Application.
[3] Thirty percent of the residential floor area would be affordable units pursuant to the MIH Program.
[4] As the site is located within a Designated Transit Zone, parking would be provided for 50 percent of the market-rate units, in addition to up to 47 parking spaces for the proposed ground-floor retail space (conservatively assuming one space per 300 sf).

As discussed above, the maximum FAR permitted under the MIH Program set forth in Section 23-154 of the Zoning Resolution requires provision of either (i) affordable housing in an amount equivalent to at least 25 percent of the residential floor area within the development, priced at or below 60 percent AMI (Option 1); or (ii) affordable housing in an amount equivalent to at least 30 percent of the residential floor area within the development, priced at or below 80 percent AMI (Option 2). As indicated above, the Applicant proposes to utilize Option 2 of the MIH Program in the proposed development on Lot 27, providing affordable housing equivalent to 30 percent of the residential floor area, at 80 percent AMI.
As shown in **Figure 5a**, "Site Plan," the proposed building on Lot 27 would have approximately 92 feet of frontage along 35th Avenue and approximately 196 feet of frontage along 12th Street. An accessory at-grade parking lot with 15 unenclosed parking spaces would be located at the rear of the building on 12th Street, utilizing an existing 20-foot curb cut, and would provide access to an underground parking garage in the building's cellar, which would accommodate 56 accessory parking spaces for the building. It is anticipated that the main residential entrance to the proposed building would be adjacent to the parking lot, with a

For Illustratrive Purposes Only



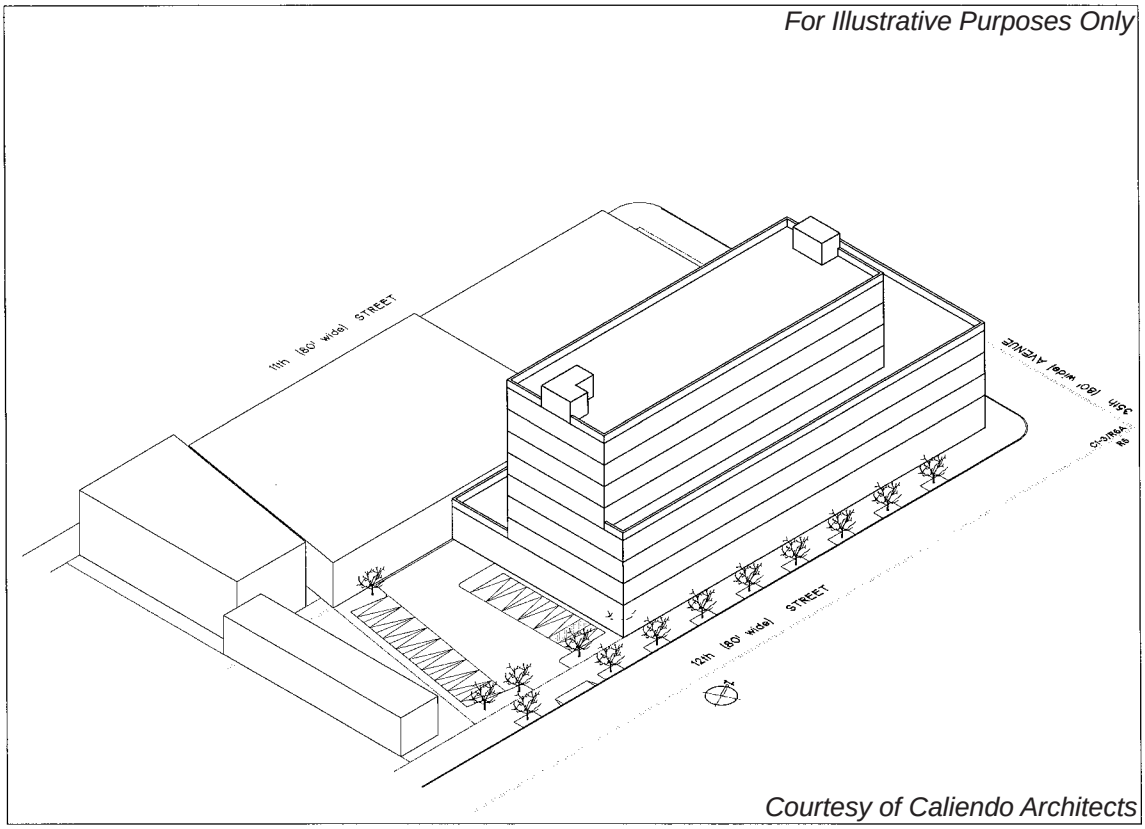
PROPOSED SITE PLAN

SCALE: 1" = 30'-0"

Courtesy of Caliendo Architects

Conceptual With-Action Renderings

For Illustrative Purposes Only



Courtesy of Caliendo Architects

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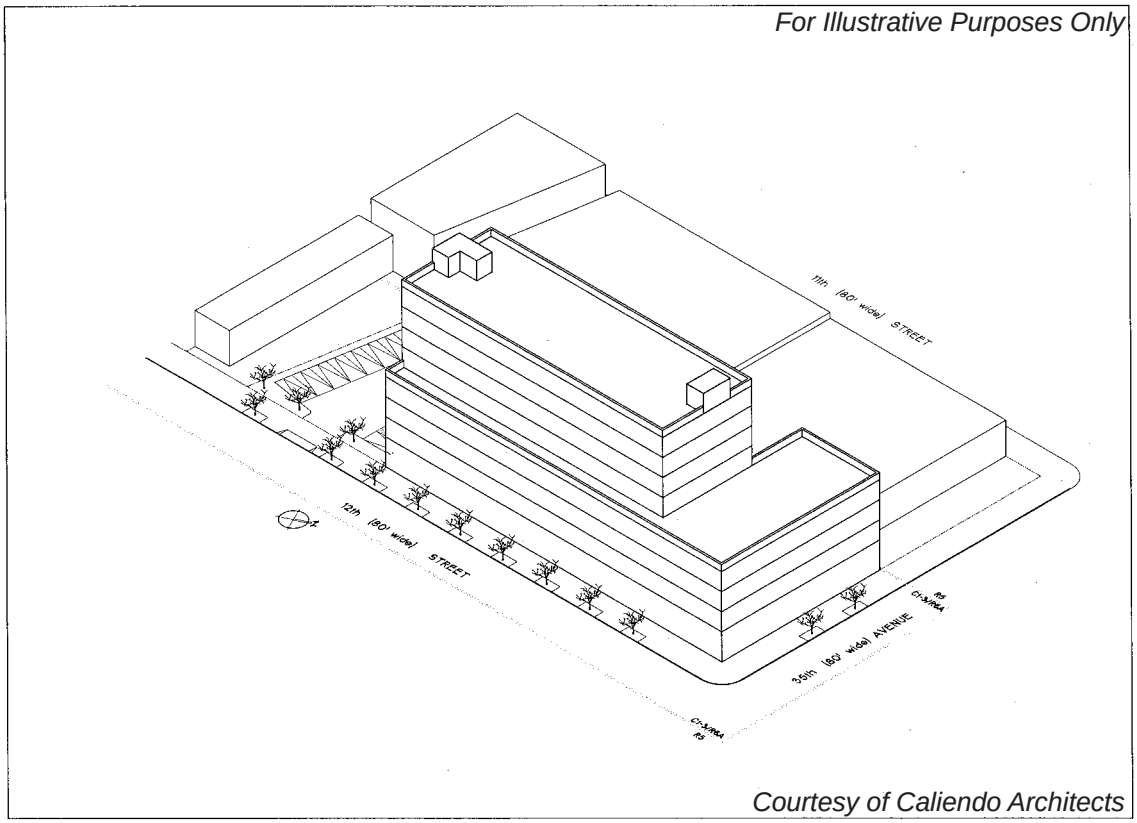

Courtesy of Caliendo Architects

secondary residential entrance on 35th Avenue. Retail entrances would be located on 35th Avenue and 12th Street. As shown in **Figure 5b**, "Conceptual Development Massings," the base of the proposed building would rise 45 feet (four stories) before setting back 10 feet from 12th Street and 44 feet from 35th Avenue. The proposed building would reach a maximum height of 85 feet (eight stories), as permitted when utilizing the MIH Program.

II. BUILD YEAR

It is expected that the proposed development would be constructed over an approximately 24-month period, with completion and occupancy expected to occur by the end of December 2020. Additionally, two projected development sites have been identified in the proposed rezoning area that are likely to be developed as a result of the Proposed Actions (Lots 38 and 50 on Block 331). However, as described below, no formal redevelopment plans exist for the sites. Nonetheless, the sites meet the CEQR soft site criteria and, as such, it is anticipated that they would be redeveloped by 2024. This Build Year reflects a reasonable estimate of the time needed for developers to demolish the existing structures on Lots 38 and 50, design the projects, obtain design approvals, and construct the projects (approximately five years). Accordingly, the EAS will use 2024 as the Build Year for analysis of future conditions consistent with *CEQR Technical Manual* guidance.[2]

III. PURPOSE AND NEED FOR THE PROPOSED ACTIONS

The proposed zoning map amendment to rezone the eastern half of Queens Block 331 from R5 to R6A/C1-3, combined with the proposed text amendment, would increase the permitted FAR in the proposed rezoning area from 1.25 to 3.6, allowing for the development of more residential and commercial space. The proposed zoning text amendment, which would designate the proposed rezoning area as an MIH Area, would require the Applicant to construct affordable DUs on the proposed development site in order to take advantage of the additional FAR provided through the MIH Program. As detailed below, the RWCDS also assumes that other sites in the proposed rezoning area would be redeveloped with residential and local retail uses under future conditions, and would also utilize the additional FAR under MIH. Therefore, the Proposed Actions would create new affordable housing in the proposed rezoning area, helping to address affordable housing goals set forth by the City in *Housing New York: A Five-Borough, Ten-Year Plan*.

The proposed rezoning would be in keeping with recent trends in the surrounding area. In 2010, all of Block 352 and the western half of Block 351 immediately south of the proposed rezoning area were rezoned from M1-1 to R5D to help facilitate new residential development ("Hour Children Rezoning"). Additionally, the trends along nearby Vernon Boulevard and the East River waterfront (i.e. Hallett's Point and Astoria Cove) have been towards rezoning manufacturing districts to mixed-use districts to facilitate residential and commercial growth. With the mapping of a C1-3 commercial overlay, the Proposed Actions would also allow the proposed rezoning area to accommodate new ground-floor commercial uses, activating the streetscapes along 35th Avenue, 12th Street, and 36th Avenue.

IV. PROPOSED REASONABLE WORST-CASE DEVELOPMENT SCENARIO (RWCDS)

As described above, the Applicant proposes to rezone the eastern half of Queens Block 331 from an R5 district to an R6A district with a C1-3 commercial overlay, and designate the area as a MIH Area. The

[2] New York City Mayor's Office of Environmental Coordination, *City Environmental Quality Review Technical Manual* (2014).

Proposed Actions would affect five tax lots (Lots 27 and 50, and the eastern portions of Lots 8 and 38 as shown in **Figure 1b**), permitting a maximum of up to 3.6 FAR and a maximum building height of 85 feet when utilizing the MIH Program (refer to **Table 3** below).

A. Identification of Development Sites

According to the *2014 CEQR Technical Manual*, the following factors, commonly referred to as "soft site criteria," are generally considered when evaluating whether some amount of development would likely be constructed by the Build Year as a result of Proposed Actions:

- The uses and bulk allowed: Buildings built to substantially less than the maximum allowable FAR under the existing zoning are considered "soft" enough such that there would likely be sufficient incentive to develop in the future, depending on other factors specific to the area (i.e. the amount and type of recent as-of-right development in the area, recent real estate trends, site-specific conditions that make development difficult, and issues relating to site control or site assemblage that may affect redevelopment potential); and
- Size of the development site: Lots must be large enough to be considered "soft." Generally, lots with a small lot size are not considered likely to be redeveloped, even if they are currently built to substantially less than the maximum allowable FAR. A small lot is often defined for this purpose as 5,000 sf or less, but the lot size criteria is dependent on neighborhood-specific trends, and common development sizes in the study area should be examined prior to establishing this criteria.

However, the following uses and types of buildings that meet the soft site criteria are typically excluded from development scenarios because they are unlikely to be redeveloped as a result of Proposed Actions:

- Full block and newly constructed buildings with utility uses, as these uses are often difficult to relocate;
- Lots whose location or irregular shape would preclude or greatly limit future as-of-right development. Generally, development on irregular lots does not produce marketable floor space.
- Long-standing institutional uses with no known development plans; or
- Residential buildings with six or more units constructed before 1974. These buildings are likely to be rent-stabilized and difficult to legally demolish due to tenant re-location requirements.

Projected Development Sites

To produce a reasonable, conservative estimate of future growth, the lots in the proposed rezoning area have been divided into two categories: projected development sites and other sites. The projected development sites are considered likely to be developed within the five-year analysis period for the Proposed Actions (i.e. by 2024), while the other sites are unlikely to be developed in the future with the Proposed Actions. In addition to the Applicant-owned development site, which would be developed in the future with the Proposed Actions as detailed above, there are two other projected development sites in the proposed rezoning area: Lot 38 at 35-30 12th Street, and Lot 50 on the southeastern corner of Block 331 (35-58 12th Street). These properties are not owned or controlled by the Applicant.

As shown in **Figure 1b** and detailed in **Table 3**, Lot 38 is a 4,500 sf lot which contains an existing, single-story auto repair building with an FAR of 0.49, well below 50 percent of the maximum allowable 3.4 FAR in the future with the Proposed Actions (see Note 3 in **Table 3** regarding the lot's split zoning). As such, it is expected that Lot 38 would be redeveloped with a mixed-use residential and commercial building under RWCDS With-Action conditions.

Lot 50 is a standard, rectangular-shaped lot with more than 5,000 sf of lot area, conditions expected to result in as-of-right development. Lot 50 currently contains two auto repair buildings with an existing built FAR of 0.42, well below 50 percent of the maximum allowable 3.6 FAR in the future with the Proposed Actions. As such, it is expected that this site would be redeveloped with a mixed-use residential and commercial building under RWCDS With-Action conditions.

Table 3: Proposed Rezoning Area Development Sites

Block	Lot	Lot Area SF	Existing Land Use	Existing Max. FAR	Built FAR	Proposed Max. FAR	Anticipated Development Site?
331	8	41,600 [1]	Industrial/Manufacturing (nonconforming)	1.25	0.96	1.25 / 3.6 (2.56) [1]	No
	27	24,589	Warehouse (nonconforming)	1.25	0.42	3.6	Proposed
	38	4,500 [2]	Auto Repair (nonconforming)	1.25	0.49	1.25 / 3.6 (3.4) [2]	Projected
	50	6,035	Auto Repair (nonconforming)	1.25	0.42	3.6	Projected

Notes: The Applicant-owned proposed development site is highlighted.
[1] Approximately 23,166 sf of Lot 8 (approximately 56 percent of the lot) would be included in the proposed rezoning area (refer to **Figure 1b**).
[2] Approximately 4,113 sf of Lot 38 (approximately 91 percent of the lot) would be included in the proposed rezoning area. Therefore, it is expected that any future development would conform to the split zoning on the site.

Other Sites

Lot 8 currently contains two active, nonconforming industrial/manufacturing buildings with an existing FAR of 0.96. These buildings accommodate unique services which are unlikely to move (switchgear and switchboard manufacturing and stone importing wholesalers). Additionally, Lot 8 is encumbered by a New York City Industrial Development Agency (IDA) lease, signed December 2001, which runs through July 1, 2026 (refer to Appendix). The IDA program provides companies with access to triple tax-exempt bond financing and/or tax benefits to acquire or create capital assets in order to encourage economic development, assist in the retention of existing jobs, and create and attract new jobs. After the first 10 years of the IDA lease on Lot 8 (after 2011), there is no penalty for terminating operations or selling the site. However, as the property has a significant Payment in Lieu of Taxes (PILOT) with a full benefit amount that runs through June 2024 and a phased-out benefit running through 2026, it is unlikely that the site would be redeveloped by the 2024 Build Year, and as such, is not considered a RWCDS development site.

V. FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION)

In the future without the Proposed Actions (the No-Action scenario), no zoning changes are anticipated in the proposed rezoning area. As such, the eastern half of Queens Block 331 would retain its existing R5 zoning designation. The R5 zoning district permits a built residential FAR of 1.25. No commercial or industrial/manufacturing floor area is allowed in the R5 district.

Under RWCDS No-Action conditions, no changes are anticipated in the proposed rezoning area. In the future without the Proposed Actions, the area would continue to be occupied by warehouses, light industrial/manufacturing buildings, and auto body repair shops (refer to **Table 1** above).

No-Action Conditions within 400 Feet of the Proposed Rezoning Area

There are no known projected anticipated to be completed within 400 feet of the proposed rezoning area in the future without the Proposed Actions. Additionally, there are no anticipated changes to zoning within 400 feet of the proposed rezoning area under No-Action conditions.

VI. FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION)

In the future with the Proposed Actions (the With-Action scenario), the proposed zoning map amendment and zoning text amendment would be implemented in the proposed rezoning area. As such, the proposed rezoning area would be remapped as an R6A zoning district with a C1-3 commercial overlay, and would be designated as an MIH Area. Under With-Action conditions, the maximum allowable FAR in the proposed rezoning area would increase to 3.6 when fully utilizing the additional FAR under the MIH Program.

In the future with the Proposed Actions, the Applicant-owned proposed development site would be redeveloped in accordance with the proposed R6A zoning district, C1-3 commercial overlay, and MIH Area. As detailed above in the "Description of the Proposed Development," the Applicant intends to redevelop the site with a single, mixed-use residential and commercial building with an FAR of 3.54. As this is less than the maximum permitted FAR of 3.6 in the future with the Proposed Actions, it is not considered the RWCDS for the site. As detailed in **Table 4**, under the With-Action RWCDS, the Applicant-owned proposed development site could be redeveloped to the maximum permitted FAR of 3.6, with an 85-foot tall, approximately 92,946 gsf (88,520 zsf) mixed-use residential and commercial building, consisting of a total of approximately 82 residential DUs, of which 27 would be affordable units, and approximately 15,750 gsf (15,000 zsf) of qualifying ground-floor retail space with a floor height of approximately 15 feet. As discussed above, the maximum FAR permitted under the MIH Program set forth in ZR Section 23-154 requires provision of either (i) affordable housing in an amount equivalent to at least 25 percent of the residential floor area within the development, priced at or below 60 percent AMI (Option 1); or (ii) affordable housing in an amount equivalent to at least 30 percent of the residential floor area within the development, priced at or below 80 percent AMI (Option 2). As indicated above, the Applicant proposes to utilize Option 2 of the MIH Program in the proposed development on Lot 27, providing affordable housing equivalent to 30 percent of the residential floor area, at 80 percent AMI.[3]

R6A zoning districts require parking spaces for a minimum of 50 percent of market-rate DUs. As the proposed rezoning area is located in a Designated Transit Zone, no parking spaces are required for affordable DUs.[4] Additionally, for conservative analysis purposes, it is assumed that the ground-floor retail spaces would require one parking space per 300 sf. Therefore, it is anticipated that the Proposed Actions would result in a total of up to 77 surface and underground accessory parking spaces (27 accessory residential spaces and up to 50 accessory commercial spaces) on Lot 27.

Under With-Action conditions, Lot 38, immediately south of the Applicant-owned site, is also expected to be redeveloped. As detailed above, 91 percent of Lot 38 would be included in the proposed rezoning area. Therefore, it is expected that the site would be redeveloped in accordance with its split zoning (R5 and R6A/C1-3 with MIH). As shown in **Table 4**, under RWCDS With-Action conditions, Lot 38 would be redeveloped to the maximum permitted FAR of 3.4 and, in the R6A portion of the site, a building height of 85 feet. Under this scenario, Lot 38 would be redeveloped with an approximately 16,065 gsf (not including parking area) (15,300 zsf) mixed-use residential and commercial building, consisting of approximately 14 DUs, of which five would be affordable units, and approximately 2,591 gsf (2,468 zsf) of ground-floor

[3] The RWCDS assumes a built FAR of 3.6, resulting in numbers that are higher than shown in the Applicant's architectural drawings which assume a built FAR of 3.54.
[4] As illustrated in Zoning Resolution Appendix I: Transit Zone, "Transit Zone Map 4."

retail space. Additionally, the RWCDS With-Action development on Lot 38 would require up to 13 accessory parking spaces (five accessory residential spaces and up to eight accessory commercial spaces), which are expected to be waived pursuant to ZR Section 25-261: Waiver of Requirements for Small Number of Spaces for Developments or Enlargements (up to five spaces in R6A districts) and ZR Section 36-232: Waiver of Requirements for Spaces Below Minimum Number in Districts with Very Low Parking Requirements (such as C1-3 overlays).

Table 4: With-Action Scenario – Projected Development Sites on Block 331

Lot	Lot Area (sf)	FAR [1]	Residential		Commercial SF [2]	Total Mixed-Use Building SF	Parking Spaces [4]	Max. Building Height [6]
			SF [2]	DUs [3]				
27	24,589	3.6	73,520 zsf (77,196 gsf)	21 (27 affordable)	15,000 zsf (15,750 gsf)	88,520 zsf (92,946 gsf)	77	85
38	4,500	3.4 [5]	12,832 zsf (13,473 gsf)	14 (5 affordable)	2,468 zsf (2,591 gsf)	15,300 zsf (16,065 gsf)	0	85 (in R6A)
50	6,035	3.6	18,105 zsf (19,010 gsf)	20 (7 affordable)	3,621 zsf (3,802 gsf)	21,726 zsf (22,812 gsf)	0	85
Total RWCDS With-Action Increment on Block 331:			**104,457 zsf (109,680 gsf)**	**116 (39 affordable)**	**21,089 zsf (22,143 gsf)**	**125,546 zsf (131,823 gsf)**	**77**	**-**

Notes: The Applicant-owned proposed development site is highlighted.
[1] The proposed maximum allowable FAR in the proposed rezoning area increases from 3.0 to 3.6 FAR when utilizing the MIH Program.
[2] The estimate of maximum residential and commercial GSF is based on a standard rate of residential and commercial ZSF plus five percent. Total GSF does not include below-grade parking.
[3] Thirty percent of the residential floor area would be affordable units pursuant to the MIH Program. The estimates of RWCDS DUs are based on standard average unit sizes of approximately 1,000 gsf per market-rate unit and 850 gsf per affordable unit.
[4] As the proposed rezoning area is located within a Designated Transit Zone, parking would be provided for 50 percent of the market-rate units, in addition to up to 50 parking spaces for ground-floor retail space (conservatively assuming one space per 300 sf).
[5] Approximately 4,113 sf of Lot 38 (approximately 91 percent of the lot) would be included in the proposed rezoning area. Therefore, it is expected that any future development would conform to the split zoning on the site.
[6] A maximum building height of 85 feet is permitted with a qualifying ground-floor.

As discussed above, it is also expected that Lot 50 in the proposed rezoning area would be redeveloped in the future with the Proposed Actions, in accordance with the proposed R6A zoning district, C1-3 commercial overlay, and MIH Area. As shown in **Table 4**, under RWCDS With-Action conditions, Lot 50 would be redeveloped to the maximum permitted FAR of 3.6 and building height of 85 feet. Under this scenario, Lot 50 would be redeveloped with an approximately 22,812 gsf (not including parking area) (21,726 zsf) mixed-use residential and commercial building, consisting of approximately 20 DUs, of which seven would be affordable units, and approximately 3,802 gsf (3,621 zsf) of ground-floor retail space. Additionally, the RWCDS With-Action development on Lot 50 would require up to 19 accessory parking spaces (seven accessory residential spaces and up to 12 accessory commercial spaces), which are expected to be waived pursuant to ZR Sections 25-261 and 36-232.

As shown in **Table 4**, the With-Action RWCDS development would result in a net increment of approximately 109,680 gsf (104,457 zsf) of residential space and approximately 22,143 gsf (21,089 zsf) of commercial space on Block 331. The Proposed Actions would result in a net increment of 116 DUs on the projected development sites, of which 39 would be affordable units pursuant to the MIH Program.
As detailed above, the remaining lot (Lot 8) in the proposed rezoning area is unlikely to be redeveloped in the future with the Proposed Actions. Lot 8 is encumbered by an IDA lease, has significant PILOT benefits running beyond the 2024 build year, and contains two active industrial/manufacturing buildings which accommodate unique services unlikely to move in the future with the Proposed Actions. Therefore, Lot 8 is expected to remain unchanged in the future with the Proposed Actions.

VIII. DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

Based on the RWCDS No-Action and With-Action conditions detailed above, the net incremental changes in development that would occur as a result of the Proposed Actions in the proposed rezoning area are identified below.

Table 5: Comparison of Existing Conditions, No-Action Conditions, and With-Action Conditions on the Projected Development Sites (Block 331, Lots 27 & 50)

	Existing Condition	No-Action Condition	With-Action Condition	Increment
LAND USE				
Residential	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type of residential structure	-	-	Multi-Family Mixed-Use	+ Multi-Family Mixed-Use
No. of dwelling units	0 DUs	0 DUs	116 DUs	+ 116 DUs
No. of low- to moderate-income units	0 DUs	0 DUs	39 DUs	+ 39 DUs
Gross floor area (sf)	0 sf	0 sf	104,457 zsf (109,680 gsf)	+104,457 zsf + (109,680 gsf)
Commercial	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Type of use	-	-	Ground-Floor Retail	+ Ground-Floor Retail
Gross floor area (sf)	0 sf	0 sf	21,089 zsf (22,143 gsf)	+ 21,089 zsf (22,143 gsf)
Manufacturing/Industrial	☒ YES NO	☒ YES NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use	Warehouse & Auto Repair	Warehouse & Auto Repair	-	- Warehouse & Auto Repair
Gross floor area (sf)	15,051 sf	15,051 sf	0 sf	- 15,051 sf
Open storage area (sf)	20,007 sf	20,007 sf	0 sf	- 20,007 sf
If any unenclosed activities, specify:	Crane & Construction Storage (Lot 27); Auto Storage/Repair (Lots 38 & 50)	Crane & Construction Storage (Lot 27); Auto Storage/Repair (Lots 38 & 50)	-	- Crane, Construction, and Auto Storage/ Repair
Community Facility	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type	-	-	-	-
Gross floor area (sf)	-	-	-	-
Vacant Land	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	-	-	-	-
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	-	-	-	-
PARKING				
Garages	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces	-	-	-	-
No. of accessory spaces	-	-	62 spaces	+ 62 spaces
Lots	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES NO	
If "yes," specify the following:				
No. of public spaces	-	-	-	-
No. of accessory spaces	-	-	15 spaces	+ 15 spaces

ZONING				
Zoning classification	R5	R5	R6A/C1-3	-
Maximum amount of floor area that can be developed	1.25	1.25	3.6 (when utilizing MIH)	+ 2.35
Predominant land use and zoning classifications within the land use study area(s) or a 400 ft. radius of proposed project	Residential; Commercial; Institutional; Parking Facilities; Industrial/ Manufacturing	Residential; Commercial; Institutional; Parking Facilities; Industrial/ Manufacturing	Residential; Commercial; Institutional; Parking Facilities; Industrial/ Manufacturing	-

Appendix 2

New York Landmarks Preservation Commission (LPC) Environmental Review Letter

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / PRE-CEQR-Q
Project: 12th Street Rezoning
Date received: 11/17/2017

Comments: as indicated below. Properties that are individually LPC designated or in LPC historic districts require permits from the LPC Preservation department. Properties that are S/NR listed or S/NR eligible require consultation with SHPO if there are State or Federal permits or funding required as part of the action.

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 11-14 35 AVENUE, BBL: 4003310027
2) ADDRESS: 35-30 12 STREET, BBL: 4003310038
3) ADDRESS: 3541-49 11 STREET, BBL: 4003310008
4) ADDRESS: 35-58 12 STREET, BBL: 4003310050

Comments:

Gina Santucci 11/20/2017

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 32933_FSO_DNP_11202017.doc

Appendix 3

Waterfront Revitalization Program (WRP)
Consistency Assessment Form (CAF)

FOR INTERNAL USE ONLY	WRP No. _____
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)* which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: Ravi Management, LLC

Name of Applicant Representative: Steven Sinacori

Address: 666 Fifth Avenue, 20th Floor, New York, NY 10103

Telephone: (212) 822-2212 Email: steven.sinacori@akerman.com

Project site owner (if different than above): _____

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

Ravi Management, LLC is seeking two discretionary actions in order to facilitate the redevelopment of 11-14 35th Street (Block 331, Lot 27) in the Ravenswood neighborhood of Queens Community District 1. The discretionary actions include: (i) a zoning map amendment to rezone the eastern half of Queens Block 331 from an R5 district to an R6A district with a C1-3 commercial overlay; and, (ii) a zoning text amendment to designate the proposed rezoning area a Mandatory Inclusionary Housing (MIH) Area. In the RWCDS future with the Proposed Actions, the Applicant would demolish the existing warehouse on Lot 27 and construct a new eight-story building (85-foot tall), approximately 92,946 gsf (approximately 88,520 zsf) mixed-use residential and commercial building on the site, with an FAR of 3.6. It is anticipated that the proposed building would contain 77,196 gsf (73,520 zsf) of residential space with 82 dwelling units (DUs). 30 percent of the residential floor area (27 units) would be affordable units pursuant to the MIH Program. The proposed development would also include approximately 15,750 gsf (15,000 zsf) of ground-floor retail space and up to 77 parking spaces.

Two other sites in the proposed rezoning area are also expected to be redeveloped with mixed-use buildings in the 2024 future with the Proposed Actions: Lots 38 and 50. It is therefore anticipated that the Proposed Actions would result in a net increase of approximately 109,680 gsf (104,457 zsf) of residential space with 116 DUs (39 affordable) and approximately 22,143 gsf (21,089 zsf) of commercial space in the proposed rezoning area by 2024. Absent the Proposed Actions, no changes are expected to occur in the proposed rezoning area.

2. Purpose of activity

The Proposed Actions would increase the permitted FAR in the proposed rezoning area from 1.25 to 3.6, allowing for the development of more residential and commercial space. The proposed zoning text amendment, which would designate the proposed rezoning area as an MIH Area, would require the Applicant to construct affordable DUs on the proposed development site in order to take advantage of the additional FAR provided through the MIH Program. As detailed below, the RWCDS also assumes that other sites in the proposed rezoning area would be redeveloped with residential and local retail uses under future conditions, and would also utilize the additional FAR under MIH. Therefore, the Proposed Actions would create new affordable housing in the proposed rezoning area, helping to address affordable housing goals set forth by the City in Housing New York: A Five-Borough, Ten-Year Plan.

The proposed rezoning would be in keeping with recent trends in the surrounding area. In 2010, all of Block 352 and the western half of Block 351 immediately south of the proposed rezoning area were rezoned from M1-1 to R5D to help facilitate new residential development ("Hour Children Rezoning"). Additionally, the trends along nearby Vernon Boulevard and the East River waterfront (i.e. Hallett's Point and Astoria Cove) have been towards rezoning manufacturing districts to mixed-use districts to facilitate residential and commercial growth. With the mapping of a C1-3 commercial overlay, the Proposed Actions would also allow the proposed rezoning area to accommodate new ground-floor commercial uses, activating the streetscapes along 35th Avenue, 12th Street, and 36th Avenue.

C. PROJECT LOCATION

Borough: Queens Tax Block/Lot(s): Block 331, Lots 8, 27, 38, 50

Street Address: 11-14 35th Ave; 35-30 12th St; 3541-49 11th St; 35-58 12th St;

Name of water body (if located on the waterfront): N/A

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

- ☐ City Map Amendment
- ☑ Zoning Map Amendment
- ☑ Zoning Text Amendment
- ☐ Site Selection – Public Facility
- ☐ Housing Plan & Project
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____
- ☐ Zoning Certification
- ☐ Zoning Authorizations
- ☐ Acquisition – Real Property
- ☐ Disposition – Real Property
- ☐ Other, explain: _____
- ☐ Concession
- ☐ UDAAP
- ☐ Revocable Consent
- ☐ Franchise

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- ☐ Legislation
- ☐ Rulemaking
- ☐ Construction of Public Facilities
- ☐ 384 (b) (4) Approval
- ☐ Other, explain: _____
- ☐ Funding for Construction, specify: _____
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☐ Permits, specify: _____

State Actions/Approvals/Funding

- ☐ State permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

- ☐ Federal permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a Joint Application for Permits? ☐ Yes ☑ No

E. LOCATION QUESTIONS

1.	Does the project require a waterfront site?	☐ Yes	☑ No
2.	Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters?	☐ Yes	☑ No
3.	Is the project located on publicly owned land or receiving public assistance?	☐ Yes	☑ No
4.	Is the project located within a FEMA 1% annual chance floodplain? *(6.2)*	☐ Yes	☑ No
5.	Is the project located within a FEMA 0.2% annual chance floodplain? *(6.2)*	☑ Yes	☐ No
6.	Is the project located adjacent to or within a special area designation? *See Maps – Part III of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).*	☐ Yes	☑ No

- ☐ Significant Maritime and Industrial Area (SMIA) (*2.1*)
- ☐ Special Natural Waterfront Area (SNWA) (*4.1*)
- ☐ Priority Martine Activity Zone (PMAZ) (*3.5*)
- ☐ Recognized Ecological Complex (REC) (*4.4*)
- ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (*2.2, 4.2*)

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder *or* Not Applicable (N/A). *For more information about consistency review process and determination, see* ***Part I*** *of the NYC Waterfront Revitalization Program. When assessing each policy, review the full policy language, including all sub-policies, contained within* ***Part II*** *of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).*

For those policies checked Promote *or* Hinder, *provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.*

		Promote	Hinder	N/A
1	**Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**	☑	☐	☐
1.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☑	☐	☐
1.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☐	☐	☑
1.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☑	☐	☐
1.4	In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☑
1.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☐	☐	☑

		Promote	Hinder	N/A
2	**Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.**	☐	☐	☑
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	☐	☐	☑
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	☐	☐	☑
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	☐	☐	☑
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	☐	☐	☑
3	**Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.**	☐	☐	☑
3.1.	Support and encourage in-water recreational activities in suitable locations.	☐	☐	☑
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	☐	☐	☑
3.3	Minimize conflicts between recreational boating and commercial ship operations.	☐	☐	☑
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	☐	☐	☑
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	☐	☐	☑
4	**Protect and restore the quality and function of ecological systems within the New York City coastal area.**	☐	☐	☑
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	☐	☐	☑
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	☐	☐	☑
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	☐	☐	☑
4.5	Protect and restore tidal and freshwater wetlands.	☐	☐	☑
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	☐	☐	☑
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	☐	☐	☑
4.8	Maintain and protect living aquatic resources.	☐	☐	☑

		Promote	Hinder	N/A
5	**Protect and improve water quality in the New York City coastal area.**	☐	☐	☑
5.1	Manage direct or indirect discharges to waterbodies.	☐	☐	☑
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	☐	☐	☑
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	☐	☐	☑
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	☐	☐	☑
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	☐	☐	☑
6	**Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.**	☑	☐	☐
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	☑	☐	☐
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in *New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the city's Coastal Zone.	☑	☐	☐
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	☐	☐	☑
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	☐	☐	☑
7	**Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**	☑	☐	☐
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	☑	☐	☐
7.2	Prevent and remediate discharge of petroleum products.	☐	☐	☑
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	☐	☐	☑
8	**Provide public access to, from, and along New York City's coastal waters.**	☐	☐	☑
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	☐	☐	☑
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	☐	☐	☑
8.3	Provide visual access to the waterfront where physically practical.	☐	☐	☑
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	☐	☐	☑

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	☐	☐	☑
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	☐	☐	☑
9	**Protect scenic resources that contribute to the visual quality of the New York City coastal area.**	☐	☐	☑
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	☐	☐	☑
9.2	Protect and enhance scenic values associated with natural resources.	☐	☐	☑
10	**Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.**	☐	☐	☑
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	☐	☐	☑
10.2	Protect and preserve archaeological resources and artifacts.	☐	☐	☑

G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: Steven Sinacori

Address: 666 Fifth Avenue, 20th Floor, New York, NY 10103

Telephone: 212-822-2212 Email: steven.sinacori@akerman.com

Applicant/Agent's Signature: _____

Date: _____

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the NYS Department of State Office of Planning and Development and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning
Waterfront and Open Space Division
120 Broadway, 31st Floor
New York, New York 10271
212-720-3525
wrp@planning.nyc.gov
www.nyc.gov/wrp

New York State Department of State
Office of Planning and Development
Suite 1010
One Commerce Place, 99 Washington Avenue
Albany, New York 12231-0001
(518) 474-6000
www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☐ Copy of original signed NYC Consistency Assessment Form
- ☐ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☐ Environmental Review documents
- ☐ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.

Appendix 4

Phase 1 Environmental Site Assessment (ESA) Executive Summary

Phase I
Environmental Site Assessment

11-14 35th Avenue
Long Island City, NY 11106
Block 331, Lot 27

Fleming-Lee Shue Project Number: 10240-001

3/30/2017

Prepared For:

Ravi Management
80 Cuttermill Road, Suite 411
Great Neck, NY 11021

Prepared By:

Fleming Lee Shue

158 West 29th Street, 9th Fl.
New York, NY 10001
Phone: 212-675-3225
Fax: 212-675-3224

1.0 EXECUTIVE SUMMARY

Fleming-Lee Shue, Inc. (FLS) has performed a Phase I Environmental Site Assessment (ESA) for Ravi Management (User) for the property located at 11-14 35th Avenue, Long Island City, New York (the Site).

The Site consists of a rectangular shaped lot that is approximately 10,320 square feet in area. The legal definition of the Site is Tax Block 331, Lot 27, and it is located on the south side of 35th Avenue between 11th Street and 12th Street in the Long Island City neighborhood in the Borough of Queens, New York City. The Site is developed with two connected one-story commercial warehouse buildings in the northwest area of the Site and a paved storage yard/parking lot to the south and east for staging of construction materials and supplies. Figure 1 presents a Site Location Map and Figure 2 presents a Site Plan. Photographs of the Site and the surrounding properties are included in Appendix A. This report was prepared in conformance with the American Society for Testing and Materials Standard Practice for Environmental Site Assessment Process (ASTM E 1527-13) as well as the United States Environmental Protection Agency (EPA) All Appropriate Inquiry (AAI) requirements (November 2005).

1.1 Historic Site Use

The Site is currently occupied by United Crane & Rigging Services Inc. and used as a warehouse/storage yard for crane rigging and construction materials as well as maintenance and repairs of the crane/construction equipment and trucks. The Site was developed with the existing buildings between 1936 and 1947 and has been used for commercial purposes since development, including an import/export facility, transportation facility, warehouse and construction yard. Historical records including City Directories and Sanborn maps indicate the Site was used as an import and export facility from 1947 to 1976. Sanborn maps identify the Site as a transportation facility from 1980 to 2006 and City Directory list the occupant as Unique Truckers, Riggers and Millrights from 1976 to 2000 and R&R Scaffolding and United Crane and Rigging Services from 2000 to 2013. New York City Department of Building records indicate that the building is currently occupied and classified as a warehouse.

1.2 Historic Neighborhood Use

The historical uses of the surrounding properties are mixed commercial, residential and light industrial use with a large residential apartment complex containing several buildings located to the east and northeast of the Site, commercial units at the properties to the south along 12th Street, commercial and residential to the north, and mixed commercial uses to the west. City Directory records indicate historic commercial uses at the surrounding properties included medical services, banks, schools, churches, warehouses, automotive sales and repair, food retail and electrical contractors. According to Sanborn maps, the property located at 35-27 11th Street, immediately to the southwest of the Site, is identified as a filling station from 1936 to 1991. Between 1991

and 2006, it is listed as an auto repair shop. Currently, the property is observed to be used as a religious institution. The property located at 11-02 11th Street, directly adjacent and west of the Site is listed as a machine shop from 1970 to 1993. By 2000, the building was occupied by Hobart Corp, who currently occupy the building today, operating as an appliance repair warehouse. The property immediately adjacent to the south of the Site is listed as an auto repair from 1980 to 2006 and is currently occupied by Bravo One Auto Body. The property at 34-60 12th Street, immediately adjacent across 35th Avenue, is listed as various auto shops from 1967 to 2000 and is currently occupied by a deli.

Additional historical uses at properties in the vicinity of the Site include filling station, auto body shop, car wash auto repair shop, metal fabricating and art spray enameling, and manufacturing.

1.3 Summary of Findings, Opinions and Conclusions

The following is a summary of the Phase I ESA findings, opinions and conclusions. The following *recognized environmental conditions* (RECs) were identified at the site:

- **Historic Auto and Equipment Repair Operations at the Site –** The Site was historically used as an import and export facility and transportation and construction facilities that likely performed automobile and construction equipment repairs. General materials associated with these operations include lubricants, metals, solvents, petroleum fuels, and diesel fuel, among others. These historic uses of the Site may have impacted the environmental quality of the Site including soil, groundwater and soil vapor.

- **Historic and Current Auto and Industrial Operations at Surrounding Properties -** Historical and current operations related to auto repairs, filling stations, and industrial uses were identified at immediately adjoining properties and in the vicinity of the Site. These operations of multiple gas and service stations and machine shops adjacent to the Site could have adversely impacted the quality of the Site including soil, groundwater, and soil vapor.

The following additional potential environmental issues were noted although not included within the scope of work defined in ASTM E 1527-13 (See Section 2.3):

- **Potential Mold -** FLS observed water damage while inspecting the ceiling, floors and walls in the building. Water damage and staining indicates the potential for mold growth.

FLS recommends the following for the property:

- A Phase II ESA including soil, groundwater and soil vapor sampling should be performed to determine if any of the above-identified RECs have adversely

impacted the environmental quality of the Site and/or may result in potential exposure risks for future occupants.

- Mold could pose a health risk to building occupants and should be remediated appropriately based on potential exposure to building occupants.