ENVIRONMENTAL ASSESSMENT STATEMENT (EAS)
AND
SUPPLEMENTAL STUDIES TO THE EAS

44-01 Northern Boulevard Zoning Map & Text Amendment

44-01 Northern Boulevard
Queens, NY

Prepared for:
44-01 Northern Boulevard, LLC
3333 Boston Road
Bronx, NY 10469

Prepared by:
AECOM USA, Inc.
125 Broad Street
New York, NY 10004

AECOM Project No. 60507780

May 2019

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

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

Part I: GENERAL INFORMATION

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

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

2. *Project Name* 44-01 Northern Boulevard Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
19DCP108Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
190124ZMQ N190125ZRQ	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT 44-01 Northern Boulevard, LLC		
NAME OF LEAD AGENCY CONTACT PERSON Olga Abinader, Acting Director			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Jaclyn Calcagno		
ADDRESS 120 Broadway			ADDRESS Akerman LLP, 666 Fifth Avenue, 20th Floor		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10103
TELEPHONE 212-720-3493	EMAIL OABINAD@planning.nyc.gov		TELEPHONE 212-880-3800	EMAIL jaclyn.calcagno@akerman.com	

5. *Project Description*

The Applicant, 44-01 Northern Boulevard, LLC, is seeking a zoning map amendment to rezone Block 704, Lots 1, 12 and 42 in the Astoria neighborhood of Queens (the "rezoning area" or "affected area") from an M1-1 zoning district to a split-lot R7X/C2-4 and R6B/C2-4 district. The proposed rezoning would facilitate the Applicant's proposed development of a new mixed-use residential and commercial building that would replace the existing auto-related use on Lots 1, 12 and 42. The proposed 4- to 10-story building would contain 339,850 gsf (252,530 zsf) of residential space (315 DUs) and 61,400 gsf (51,400 zsf) of commercial space.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 1	STREET ADDRESS 36-01 37th Avenue
TAX BLOCK(S) AND LOT(S) Block 704, Lots 1, 12 and 42		ZIP CODE 11101

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The rezoning area is generally bound by 44th Street to the west, Northern Boulevard to the south, 45th Street to the east and 34th Avenue to the north.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-1 | ZONING SECTIONAL MAP NUMBER 9b

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

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

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

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

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

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

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

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

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): Approx. 63,400 (rezoning area) Waterbody area (sq. ft) and type: N/A

Roads, buildings, and other paved surfaces (sq. ft.): Approx. 63,400 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)

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 401,250

NUMBER OF BUILDINGS: 1 GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 401,250

HEIGHT OF EACH BUILDING (ft.): 118 NUMBER OF STORIES OF EACH BUILDING: 4 -10

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:

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

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: +/- 63,400 sq. ft. (width x length) VOLUME OF DISTURBANCE: TBD cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: +/- 63,400 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.)	339,850	61,400		
Type (*e.g.,* retail, office, school)	315 units	Retail/Office		

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 819 NUMBER OF ADDITIONAL WORKERS: 184

Provide a brief explanation of how these numbers were determined: Employee population estimate based on industry standard rates used in certified EAS/EIS documents.

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): 2021

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 20

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO	IF MULTIPLE PHASES, HOW MANY?
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:	

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

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

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?	☒	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		

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

	YES	NO
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 27,451		
○ 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): 43,058,995 Million BTUs (MTUS)		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☒
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☒	☐
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☒
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☐	☒
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		

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

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
Donald E. Ehrenbeck, AICP, P.P./AECOM	5/15/19

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: Acting Director, Environmental Assessment and Review Division	LEAD AGENCY: Department of City Planning, acting on behalf of the City Planning Commission
NAME: Olga Abinader	DATE: May 17, 2019
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, 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 the EAS, which finds that 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 Materials, Air Quality, and Noise
An (E) designation (E-537) related to hazardous materials, air quality and noise has been assigned to site(s) affected by the proposed actions. Refer to "Determination of Significance Appendix: (E) Designation" for a list of these sites and all applicable (E) designation requirements. With the (E) designation measures in place, the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality and noise .

Land Use, Zoning, and Public Policy
An analysis of land use, zoning, and public policy is included in this EAS. The proposed action, a zoning map amendment from M1-1 to R7X/C2-4 with a zoning text amendment to map a Mandatory Inclusionary Housing designated area would facilitate the development of a mixed-use 11-story building with approximately 244 dwelling units, ground-floor retail, and parking on the Proposed Development Site, Block 704 Lots 1, 12, and 42, 44-01 Northern Boulevard. The analysis considered the full buildout of the proposed development site, which includes all lots in the rezoning area. The analysis concludes that the proposed actions would not result in any significant adverse land use, zoning, or public policy impacts to the project site or the surrounding study area.

Transportation
A detailed analysis of transportation for traffic and pedestrians is included in this EAS. A significant adverse impact related to transportation for traffic or pedestrians would result when the proposed project would impose a condition where levels of service deteriorate to levels classified as unacceptable by the 2014 CEQR Technical Manual. The analysis shows that the future with the action would not result in more than 50 vehicle trips per intersection, or a condition of less than 90 square feet per pedestrian. The analyses conclude that the proposed actions would not result in significant adverse impacts related to vehicular or pedestrian traffic.

TITLE Acting Director, Environmental Assessment and Review Division	LEAD AGENCY Department of City Planning
NAME Olga Abinader	DATE May 17, 2019
SIGNATURE Olga Abinader	

TITLE Chair, Department of City Planning	
NAME Marisa Lago	DATE May 20, 2019
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AECOM Environment

44-01 Northern Boulevard Zoning Map & Text Amendment

Supplemental Studies to the Environmental Assessment Statement

May 2019

Proposed Development Site:

44-01 Northern Boulevard
Queens, NY, 11101

Prepared for:

44-01 Northern Boulevard, LLC
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1.0 PROPOSED ACTION

The Applicant, 44-01 Northern Boulevard, LLC, is seeking a zoning map amendment (the "Proposed Action") to rezone Queens Block 704, Lots 1, 12 and 42 (the "Project Area") from an M1-1 zoning district to a split-lot R7X/C2-4 and R6B/C2-4 district. The Project Area and Development Site are synonymous for the purposes of this EAS, as the tax lots subject to rezoning are limited to lots those three lots controlled by the Applicant on Block 704; therefore the term Project Area shall be used to identify the site of the Applicant's proposed development, as well as the area which is subject to rezoning.

The proposed action would facilitate the construction of a new 4- to 10-story mixed-use residential and commercial building that would replace existing auto-related uses on the Development Site. Residential uses are not permitted within an M1-1 zoning district. On the R7X portion of the zoning lot with the C2-4 commercial overlay, the proposed building would contain approximately 225,690 zoning square feet of residential floor area (approximately 5.2 FAR) and 34,490 square feet of commercial floor area (approximately .8 FAR). On the R6B portion of the zoning lot, the proposed building would contain approximately 42,415 square feet of residential floor area (approximately 2.12 FAR) and 1,515 square feet of commercial floor area located within the portion of the zoning lot with a C2-4 commercial overlay.

1.1 Project Location

The Project Area is located in the Astoria neighborhood of Queens Community District 1, and consists of three tax lots fronting Northern Boulevard, 44th Street and 45th Street. The Project Area consists of Block 704, Lots 1, 12 and 42 and is bound by 34th Avenue to the north, 44th Street to the west, 45th Street to the east, and Northern Boulevard to the south. Block 704 is located within R6B/C2-4 and M1-1 zoning districts, but the Project Area falls exclusively within the M1-1 zoning district. The Project Area is approximately 63,396 sf in size (**Figures 1 and 2**).

The parcels proposed for rezoning are Block 704, Lots 1, 12 and 42. The assemblage is improved with three commercial buildings, one of which is vacant. Photographs and a key map are provided in **Figures 3 and 4**.

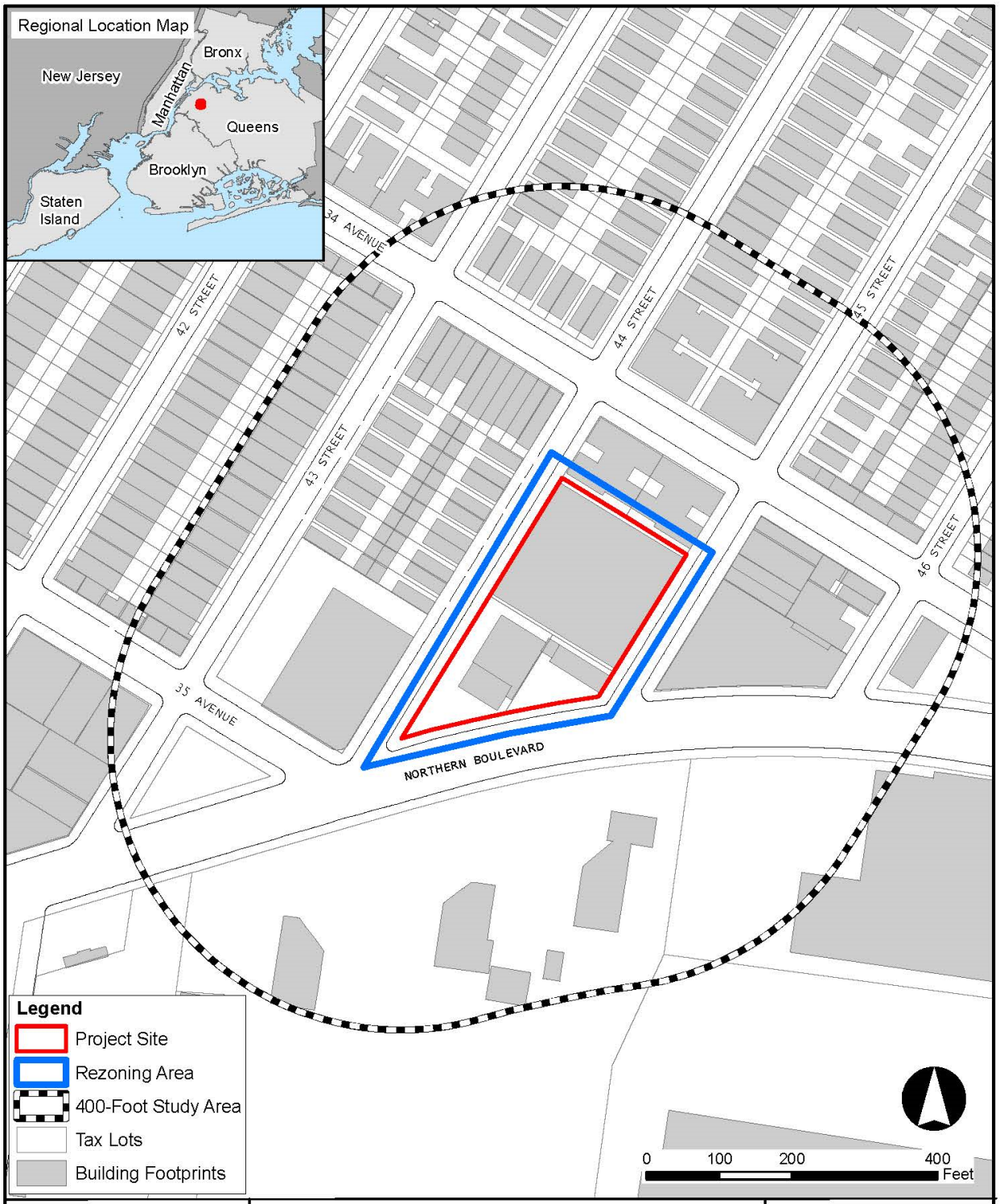
This EAS studies the potential for individual and cumulative environmental impacts related to the proposed action occurring in a study area of approximately 400 feet around the rezoning area. This study area is generally bound by the midblock point between 42nd and 43rd Streets to the west, a point 400 feet beyond Northern Boulevard to the south, the midblock point between 46th and 47th Streets to the east and by the quarter-block point between 34th Avenue and Broadway to the north.

1.2 Proposed Development

The proposed rezoning would facilitate the construction of a new 4-story to 10-story mixed-use building that would contain 339,850 gsf (252,530 zsf) of residential space (337 dwelling units) and 61,400 gsf (51,400 zsf) of commercial space, as well as 175 parking spaces.

1.3 Purpose and Need

The Project Area is located within an M1-1 zoning district, which permits UG 6 commercial uses as-of-right, but prohibits residential uses and limits the commercial FAR to 1.0. These zoning restrictions directly prevent the Applicant from pursuing the construction of the mixed-use residential and retail structure, as the M1-1 zoning designation lacks the requisite FAR capacity and flexibility in use, to facilitate the construction of such a development. Residential uses are not permitted within an M1-1 zoning district. The proposed R7X/C2-4 district on a portion of the block would permit the Applicant to develop residential



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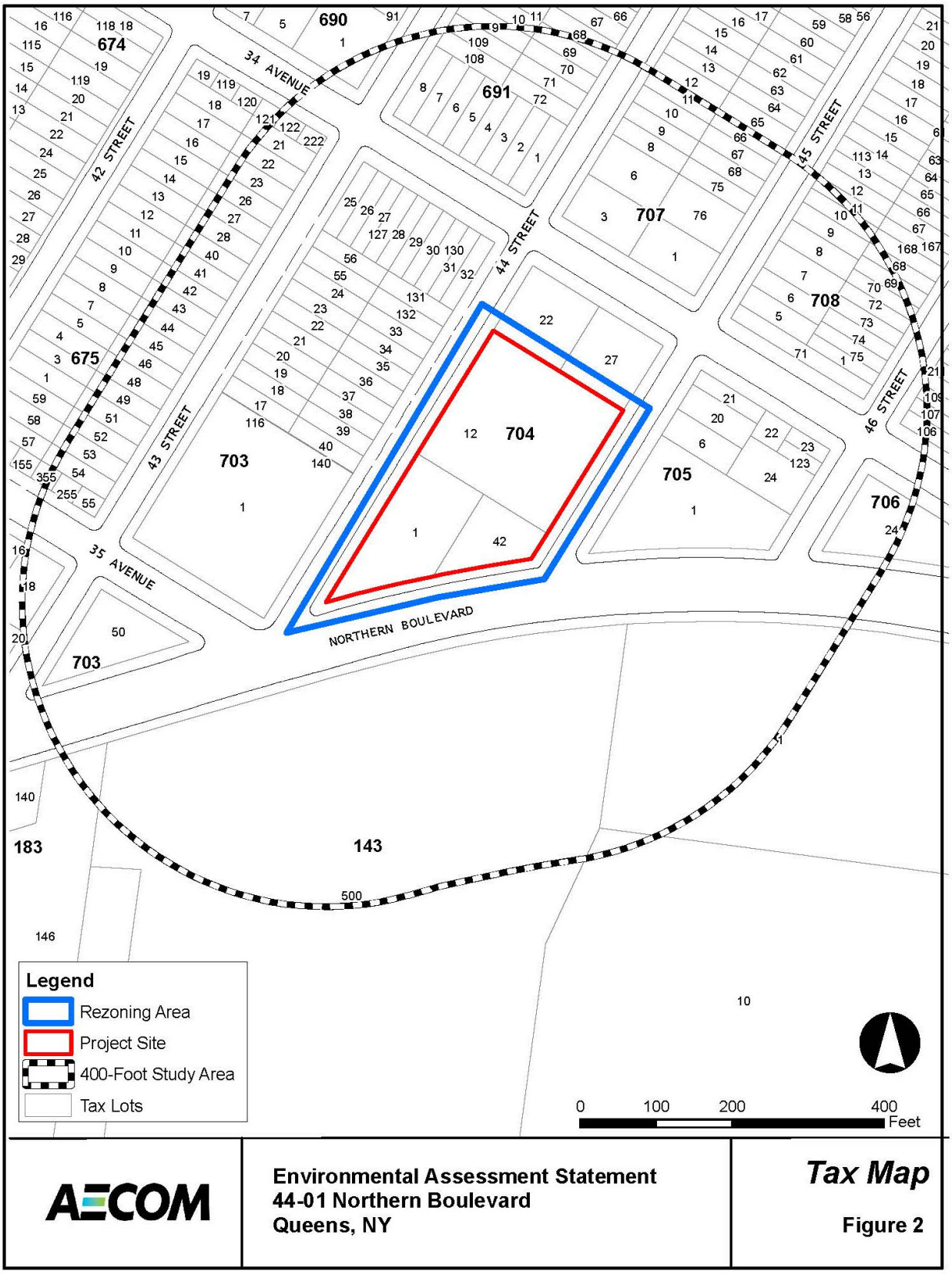
Project Site Location
Figure 1



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Tax Map

Figure 2

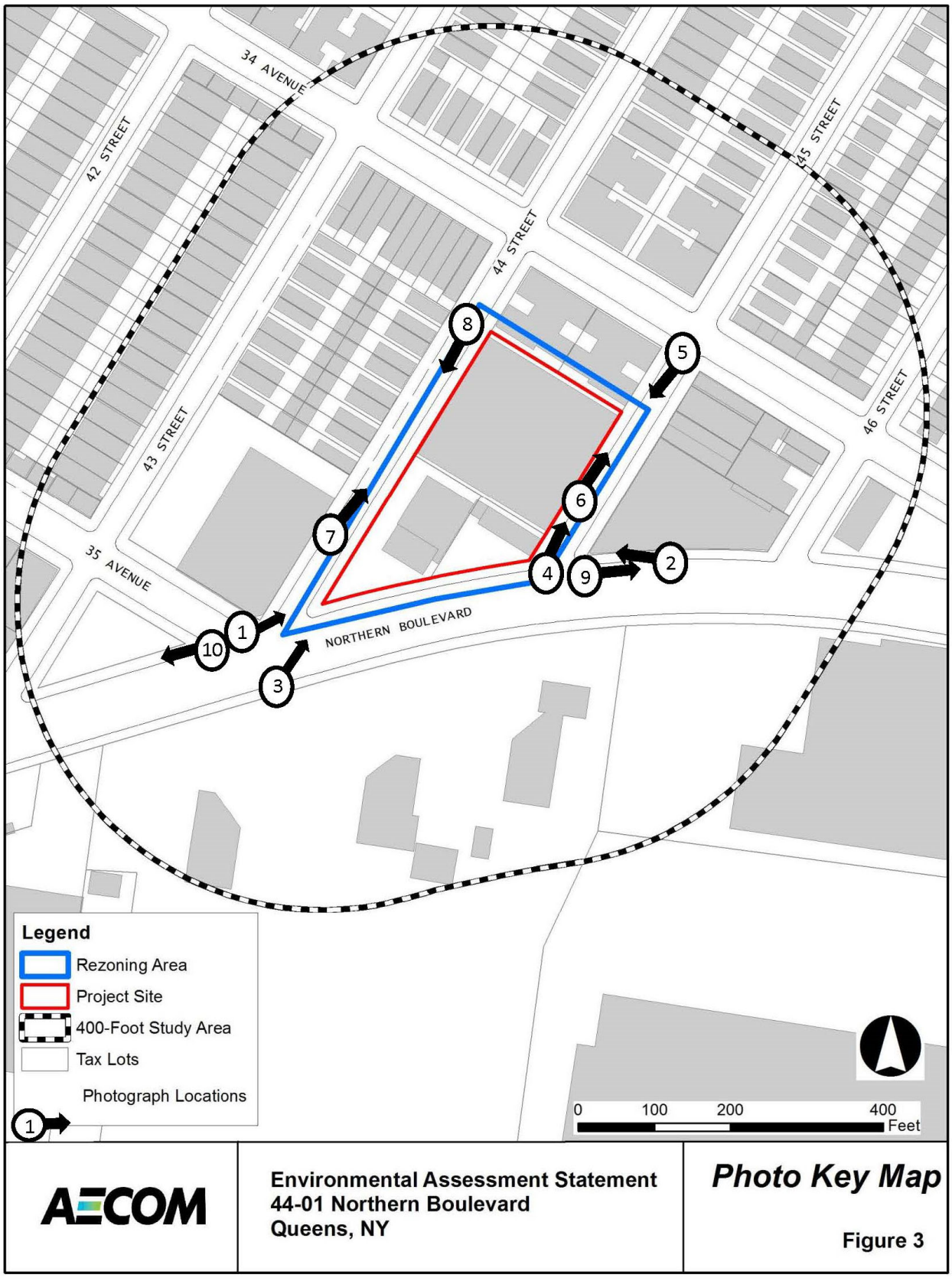

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Photo Key Map

Figure 3

Figure 4 Photographs of the Site and Surrounding Area



Photo 1: View of project site from 35th Avenue/44thStreet/Northern Boulevard intersection looking northeast.



Photo 2: View of project site from Northern Boulevard, between 45th and 46th Streets looking northwest.



Photo 3: View of project site from intersection of Northern Boulevard and 44th Street looking northeast.



Photo 4: View along 45th Street from intersection of Northern Boulevard looking north, project site on left.



Photo 5: View of project site from midblock of 45th Street looking southwest.



Photo 6: View of project site from intersection of 45th Street and Northern Boulevard looking north.



Photo 7: View of project site from intersection of 44thStreet and Northern Boulevard looking north.



Photo 8: View along 44th Street from midblock looking south, project site on left.



Photo 9: View along Northern Boulevard looking east from 45th Street intersection.



Photo 10: View along Northern Boulevard looking west from 35th Avenue/44thStreet/ Northern Boulevard intersection.

use above ground-floor commercial uses that would allow for a maximum FAR of 6.0 for the residential use (pursuant to the Mandatory Inclusionary Housing Program) and 2.0 for the commercial use. The proposed R6B/C2-4 district on the remaining portion of the block would allow the Applicant to develop residential use above ground-floor commercial uses which would allow a maximum FAR of 2.2 for the residential use (pursuant to the Mandatory Inclusionary Housing Program) and 2.0 for the commercial use.

The proposed action would be consistent with recent rezonings and neighborhood trends that allow for denser development. These include the Dutch Kills rezoning, adopted in 2008, which was adjacent to the project area as well as the Astoria Rezoning, which was adopted in 2010, and located about a half mile to the north of the project area.

The proposed building will provide much needed high-quality housing as well as shopping and employment opportunities in this Astoria neighborhood, which has access to a range of public transportation options and has seen a marked increase in demand for affordable housing.

1.4 Required Approvals

The proposed zoning map amendment is a discretionary public action, which is subject to the City Environmental Quality Review (CEQR) as an Unlisted Action. Through CEQR, agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment. The proposed zoning map and text amendment are also discretionary public actions which are subject to public comment under the Uniform Land Use Review Procedure (ULURP). The ULURP process was established to assure adequate opportunity for public review of proposed actions. ULURP dictates that every project be presented at four levels: the Community Board; the Borough President; the City Planning Commission; and, in some cases the City Council. The procedures mandate time limits for each stage to ensure a maximum review period of seven months.

1.5 Analysis Framework (Reasonable Worst Case Development Scenario)

Existing Conditions

The Project Area consists of three contiguous tax lots (Block 704, Lots 1, 12, and 42) that are proposed to be developed as a split-lot zoning lot with a combined area of 63,369 sf. Existing conditions within the proposed rezoning area are as follows:

> **Block 704, Lot 1** is an approximately 17,423 sf improved with two buildings, built in 1973, one with two stories, the other with one story; these buildings front on Northern Boulevard and have a built FAR of 0.06.
>
> **Block 704, Lot 12** is an approximately 38,000 sf lot fronting 44th Street with a built FAR of 0.95; it is improved with a one-story, 36,000 square foot UG 16 commercial building.
>
> **Block 704, Lot 42** is an approximately 7,977 sf lot which fronts Northern Boulevard and is improved with a vacant one-story, 3,600 square foot, formerly commercial building. It has a built FAR of 0.45.

Future No-Action Scenario

The Project Area is located in the Astoria neighborhood of Queens, which is densely developed. With the exception of some minor building rehabilitation, no significant new construction or vacant lots were

observed within 600 feet of the Development Site. Therefore it is assumed that existing conditions would continue in the Future No-Action Scenario.

Future With-Action Scenario

Under the Future With-Action Scenario, the Proposed Actions would amend the zoning map to change the existing M1-1 zoning to a split lot R7X/C2-4 and R6B/C2-4 zoning districts, which would facilitate the Applicant's proposal to construct a new mixed-use building that would be permitted in the proposed zoning districts.

However, in order to present a conservative assessment, the Future With-Action Scenario assumes that the Development Site would be constructed to the maximum allowable floor area under ZQA/MIH regulations for the proposed R7X/C2-4 and R6B/C2-4 split lot zoning assuming the 20 percent affordable housing option. The 20 percent affordable housing option is more conservative to assume for analyses sections such as socioeconomic. The more conservative affordable housing option was used for the analysis of each section. This results in a Future With-Action Scenario that differs slightly from the Applicant's proposal.

Under ZQA in an R7X/C2-4 district, an FAR of 6.0 is permitted, and with basic ZQA modifications, an overall building height of 145 feet is allowed to accommodate the permitted FAR. In an R6B/C2-4 district, an FAR of 2.2 is permitted, and with basic ZQA modifications, an overall building height of 50 feet is permitted. It is also assumed that the residential development would be built in conformance with the MIH standards that are part of the *Housing New York* plan. Under this proposal, the Applicant has chosen to allocate 25 percent of the total floor area to residents with incomes averaging 60 percent of the area median income (AMI). However, for a conservative analysis, the Future With-Action Scenario assumes that 30 percent of the residential floor area would be allocated as affordable housing.

Under the Future With-Action Scenario, it is assumed that Block 704, Lots 1, 12 and 42 would be developed as a split-lot zoning lot with a combined area of 63,369 sf; the R7X portion of the zoning lot would be 43,369 sf in size (68 percent) and the R6B portion would be 20,000 sf in size (32 percent). The R7X portion of the zoning lot would be developed to the maximum FAR of 6.0 permitted by the R7X/C2-4 district, pursuant to ZQA/MIH; while the R6B portion would be developed to the maximum FAR of 2.2, pursuant to ZQA/MIH. The resulting weighted FAR is 4.8.

More specifically, the R7X/C2-4 portion of the building would be developed to a residential FAR of 5.0 and a commercial FAR of 1.0. The R6B/C2-4 portion of the building would be developed to a residential FAR of 1.5 and a commercial FAR of 0.7. Thus the proposed development would include a total of 61,400 gsf of ground-floor local retail use and 339,859 gsf of residential floor area. Estimating 850 sf per dwelling unit, it is assumed that approximately 337 residential units would be constructed on-site.[1] Under the 20 percent MIH option, the proposed rezoning would result in the creation of approximately 67 units affordable to families with incomes averaging 80 percent of the AMI. It is assumed that approximately 186 parking spaces would be provided in the Future With-Action Scenario, 135 spaces for the residential use and 51 spaces for the commercial use.[2]

[1] Of the 339,850 gsf of residential floor area, 53,396 gsf would be cellar space and would not be used for dwelling units. Assuming an average dwelling unit size of 850 sf, the remaining 286,454 gsf of residential floor area would result in the development of 337 dwelling units.

[2] The number of parking spaces was estimated based on the following assumptions: (1) parking is required for 50 percent of the 236 market-rate residential units; (2) no parking spaces are required for the affordable units given that the Project Area is located in the transit zone; (3) one parking space would be provided for every 1,000 sf of commercial floor area.

It is assumed that the proposed rezoning would generate approximately 876 residents and a net increment of 131 workers.[3]

[3]The estimate of incremental workers takes into account existing/ no action uses and is based on the following industry-standard rates: one employee per 250 sf of office, one employee per 1,000 sf of auto-related and industrial uses, three employees per 1,000 sf of retail/ supermarket/ restaurant uses, one employee per 25 dwelling units, and one employee per 50 parking spaces. The number of existing workers for the Development Site has been estimated at 70, while the future number of employees has been estimated at 201.

2.0 ENVIRONMENTAL REVIEW

The following technical sections are provided as supplemental assessments to the Environmental Assessment Statement ("EAS") Short Form. Part II: Technical Analyses of the EAS forms a series of technical thresholds for each analysis area in the respective chapter of the *CEQR Technical Manual*. If the proposed project was demonstrated not to meet or exceed the threshold, the 'NO' box in that section was checked; thus additional analyses were not needed. If the proposed project was expected to meet or exceed the threshold, or if this was not able to be determined, the 'YES' box was checked on the EAS Short Form, resulting in a preliminary analysis to determine whether further analyses were needed. For those technical sections, the relevant chapter of the *CEQR Technical Manual* was consulted for guidance on providing additional analyses (and supporting information, if needed) to determine whether detailed analysis was needed.

A 'YES' answer was provided in the following technical analyses areas on the EAS Short Form:

- Land Use, Zoning and Public Policy
- Socioeconomic Conditions
- Community Facilities
- Open Space
- Shadows
- Historic and Cultural Resources
- Urban Design and Visual Resources
- Hazardous Materials
- Transportation
- Air Quality
- Noise
- Neighborhood Character
- Construction

In the following technical sections, where a preliminary or more detailed assessment was provided, the discussion is generally divided into Existing Conditions, the Future No-Action Conditions (the Future Without the Proposed Action), and the Future With-Action Conditions (the Future With the Proposed Action).

2.1 LAND USE, ZONING AND PUBLIC POLICY

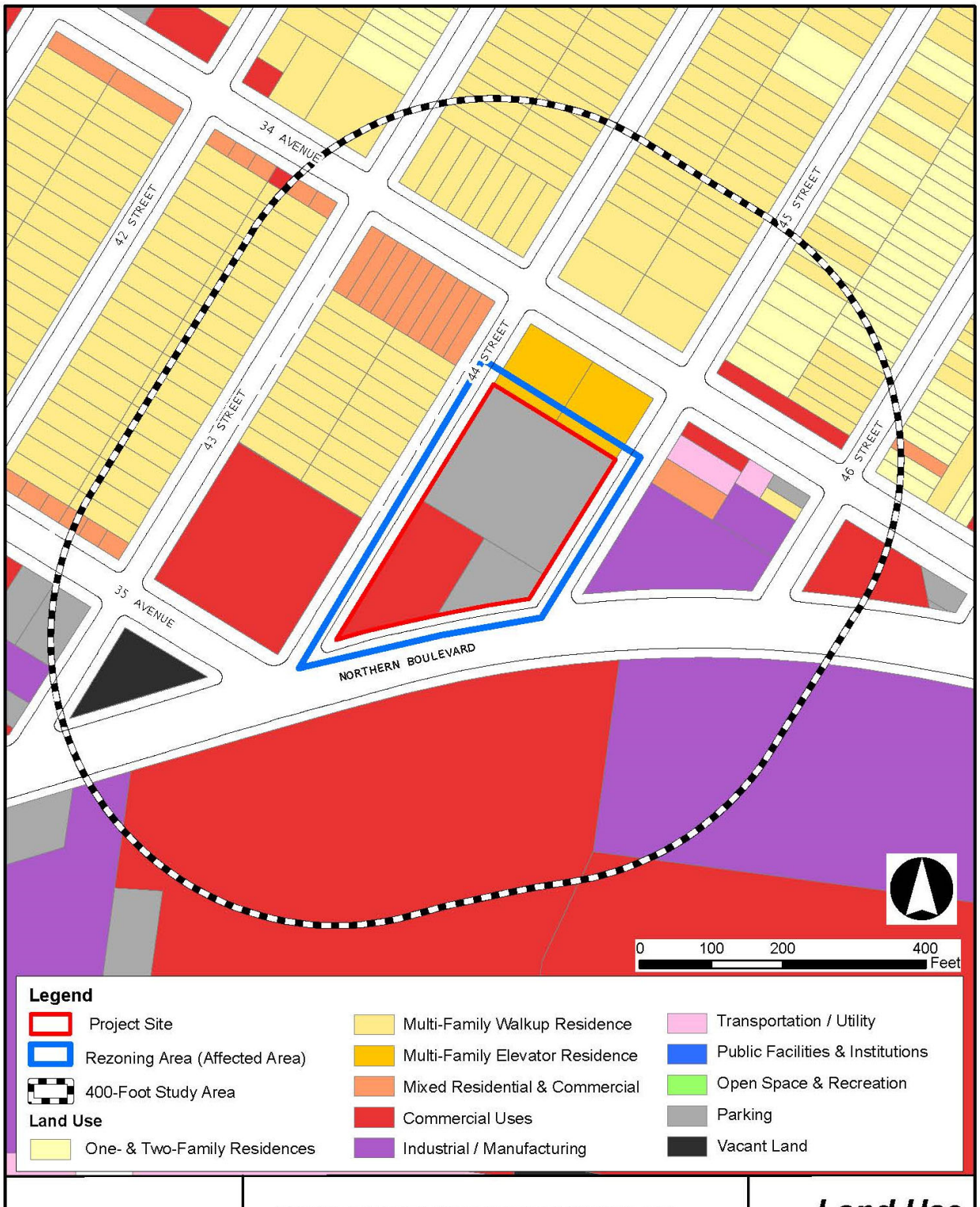
The *CEQR Technical Manual* recommends procedures for analysis of land use, zoning and public policy to ascertain the impacts of a project on the surrounding area. Land use, zoning and public policy are described in detail below.

2.1.1 Land Use

Existing Conditions

Existing land use patterns of city blocks within approximately 400 feet of the Project Area are presented in **Figure 5**. The *CEQR Technical Manual* suggests that a land use, zoning and public policy study area should extend 400 feet from the site of the proposed action. This study area is generally bound by the midblock point between 42nd and 43rd Streets to the west, a point 400 feet beyond Northern Boulevard to the south, the midblock point between 46th and 47th Streets to the east and by the quarter-block point between 34th Avenue and Broadway to the north. The Project Area is located in the Astoria neighborhood of Queens. General land use in the area is primarily residential, industrial/manufacturing, commercial, and mixed residential and commercial.

A field survey was conducted to determine the existing land use patterns and neighborhood characteristics of each project site and study area. Land use in the area immediately surrounding the Project Area is a mix of multi-family walkups and elevator residential buildings, and commercial uses. The commercial uses are mainly



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Land Use

Figure 5

automobile-related along Northern Boulevard with some local retail businesses along 34th Avenue. The prevailing built form of the area is a mix of two-to four-story residential buildings north and west of the Project Area and single-story, auto-related commercial buildings to the south along Northern Boulevard. On 34th Avenue there are two six-story residential buildings.

The Project Area consists of three contiguous tax lots (Block 704, Lots 1, 12, and 42). Block 704, Lot 1 is an approximately 17,423 sf lot fronting Northern Boulevard that is improved with two buildings, one with two stories, and the other with one story. Lot 12 is an approximately 38,000 sf lot fronting 44th Street improved with a one-story, UG 16 commercial building. Lot 42 is an approximately 7,977 sf lot which fronts Northern Boulevard and is improved with a vacant one-story, former commercial building.

The mix of land uses observed in the project study area generally reflects the distribution of land use observed throughout Queens Community District (CD) 1, which is summarized below in **Table 1**. The most prominent land use within Queens CD 1 is multi-family residences, followed by public facilities and institutions, and one- and two-family residential uses.

Table 1
Land Use Distribution for Queens Community District 1 (2017)

LAND USE	PERCENT OF TOTAL
Residential Uses	
1-2 Family	16.4
Multi-Family	23.4
Mixed Residential/Commercial	5.0
Subtotal of Residential Uses	*44.8*
Non-Residential Uses	
Commercial / Office	6.6
Industrial	9.3
Transportation & Utility	7.5
Public Facilities & Institutions	19.2
Open Space/Recreation	7.1
Parking Facilities	3.0
Vacant Land	2.2
Miscellaneous	0.4
Subtotal of Non-Residential Uses	*55.3*
TOTAL	**100.0**

Source: *Community District Profiles, New York City Department of City Planning.*
Note: Percentages may not add up to 100.0 percent due to rounding.

Future No-Action Conditions

The Project Area is located in the Astoria neighborhood of Queens, which is densely developed. With the exception of some minor building rehabilitation, no significant new construction or vacant lots were observed within 400 feet of the Development Site.

Future With-Action Conditions

Under the Future With-Action scenario it is assumed that the Development Site (Block704, Lots 1, 12 and 42) would be developed with a total of 401,250 gsf of floor area (303,930 zsf). Of that 401,250 gsf, approximately 339,850 (252,530 zsf) would be utilized as UG 2 residential floor area, and the remaining 61,400 gsf (51,400 zsf) would be developed as UG6 local retail floor area.

Recent years have seen the development of an economically diverse, mixed-use community in Astoria. The proposed action would support the area's mixed-use character by creating opportunities for new businesses and jobs. Therefore, the proposed action is not expected to have any adverse impact on surrounding land use.

2.1.2 Zoning

The *New York City Zoning Resolution* dictates the use, density and bulk of developments within New York City. Additionally, the Zoning Resolution provides required and permitted accessory parking regulations. The City has three basic zoning district classifications – residential (R), commercial (C), and manufacturing (M). These classifications are further divided into low, medium, and high-density districts.

Existing Conditions

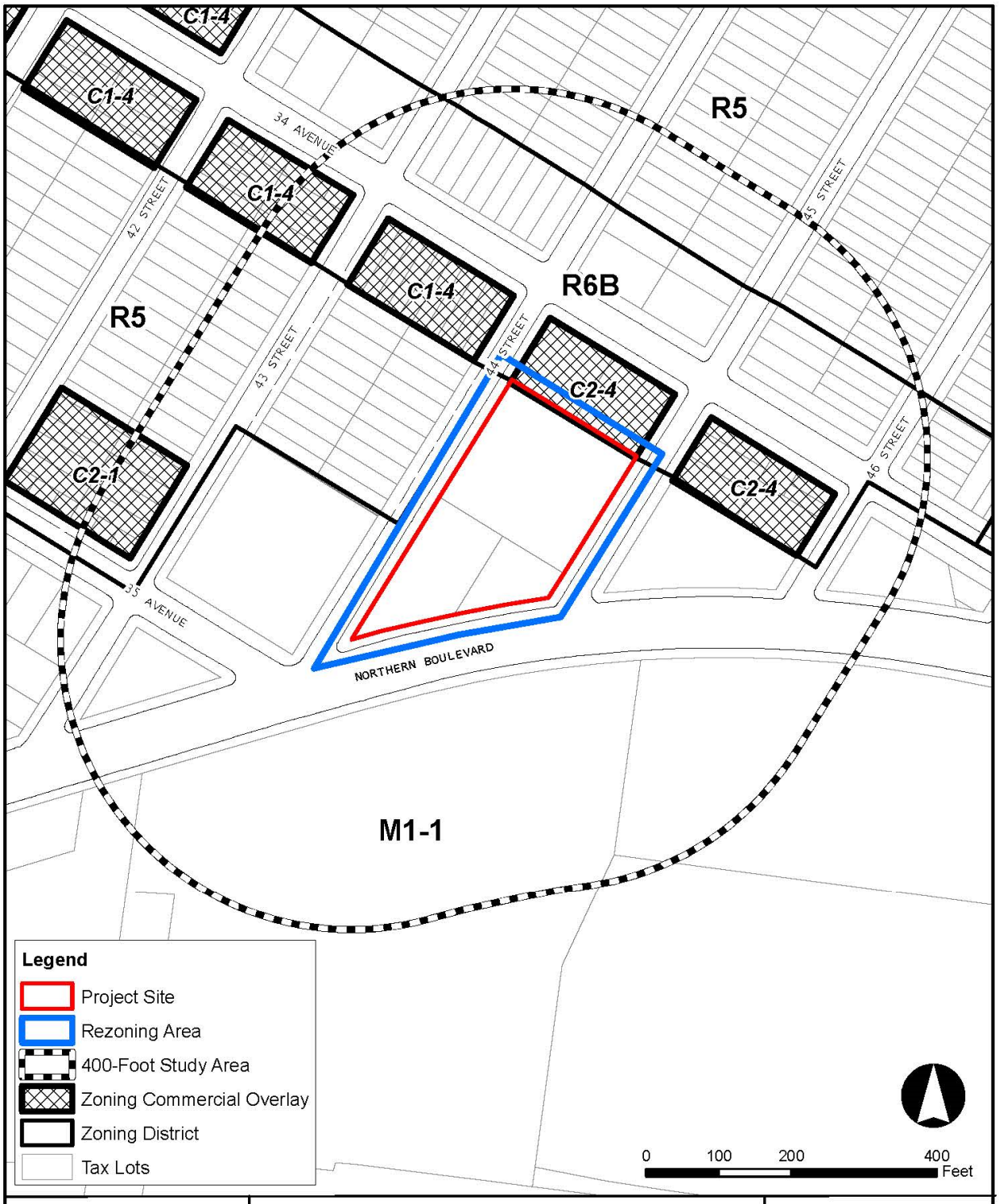
Zoning designations within and around the study area are depicted in **Figure 6**, while **Table 2** summarizes use, floor area and parking requirements for the zoning districts in the study area.

The rezoning area is located within an M1-1 zoning district to the north of Northern Boulevard. This M1-1 zoning district is generally mapped along Northern Boulevard between 41st and 58th Streets. The M1 district is a light-performance and low-density manufacturing zoning district in which Use Groups 4 to 14, 16 and 17 are allowed. Light industries typically found in such zoning districts include woodworking shops, auto shops and wholesale service and storage facilities. Offices and most retail uses are also permitted, as are certain community facilities as-of-right or by special permit. M1 districts permit an FAR for manufacturing and commercial uses of up to 1.0, and an FAR for community facilities up to a 2.4.

Located immediately to the north of the Project Area, an R6B district is zoned on the northern and southern sides of 34th Avenue, with commercial overlays mapped along the south side of 34th Avenue (C1-4 west of 44th Street, C2-4 east of 44th Street). R6B districts often contain traditional row-houses and attempts to preserve the scale and harmonious streetscape of neighborhoods. The FAR of 2.0 and the mandatory Quality Housing regulations also accommodate apartment buildings at a similar four- to five-story scale. The base height of a new building before setback must be between 30 and 40 feet, with a maximum height of 50 feet. The C1-4 and C2-4 overlay districts allow a wide range of uses, including neighborhood grocery stores, restaurants, beauty parlors, funeral homes and local repair shops. The maximum commercial FAR is 2.0 when mapped within R6 through R10 zoning districts.

To the west of the Project Area is an R5 zoning district with a C2-1 commercial overlay in the northwest quadrant of the intersection of 43rd Street and 35th Avenue. The C2-1 overlay district is similar to the C1-4 and C2-4 overlay districts described above in terms of permitted uses and FAR.

Located to the south of the project site are Amtrak's Sunnyside Yard and other industrial activity which are zoned M1-1.



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Zoning

Figure 6

Table 2
Summary of Zoning Regulations

Zoning District	Type and Use Group (UG)	Floor Area Ratio (FAR)	Parking (Required Spaces)
M1-1	Light Manufacturing UGs 4-14, 16, 17	1.0 FAR – Manufacturing 1.0 FAR – Commercial 2.4 FAR – Community Facility	Varies by Use
R5	Residential UGs 1-4	1.25 FAR for Residential 2.0 FAR for Community Facility	85 percent of dwelling units
R6B	Residential UGs 1-4	2.0 – 2.2 FAR for Residential 2.0 FAR for Community Facility	50 percent of dwelling units
C1-4	Commercial Overlay UGs 1-9 & 14	2.0 FAR – Commercial	Generally Not Required
C2-4	Commercial Overlay UGs 1-9 & 14	2.0 FAR – Commercial	Varies by Use

***Source**: Zoning Handbook, New York City Department of City Planning, January 2011.*

Future No-Action Conditions

In the future without the proposed action, zoning changes are not expected to occur on the project site or within the surrounding study area. No authorizations, certifications or other approvals would be sought from the CPC relating to the project site. Because the Applicant may not construct new residential square footage on the project site without the proposed zoning map and text amendments, it is assumed that the No-Action Scenario would remain consistent with existing conditions.

No rezoning actions are presently being contemplated by the NYC Department of City Planning (DCP), nor have any BSA variance applications been identified for the study area by the project build year of 2021.

Future With-Action Conditions

Under the With-Action scenario, the proposed action would amend the zoning map to change the existing M1-1 district to a split lot R7X/C2-4 and R6B/C2-4 zoning district. Block 704, Lots 1, 12 and 42 would be developed as a split-lot zoning lot with a combined area of 63,369 sf; the R7X portion of the zoning lot would be 43,369 sf in size (68%) and the R6B portion would be 20,000 sf in size (32%). The R7X/C2-4 portion of the zoning lot would be developed to the maximum FAR of 6.0; while the R6B portion would be developed to the maximum FAR of 2.2; resulting in a weighted FAR of 4.8. The Applicant is also proposing a zoning text amendment to map an Inclusionary Housing designated area over the rezoning area. In order to present a conservative assessment, the With-Action scenario assumes that the Development Site would be constructed to the maximum floor area allowable under ZQA/MIH regulations, assuming the 20 percent affordable housing option.

Absent the proposed action, the Applicant would be unable to construct the proposed development under the existing floor area and lot coverage requirements of an M1-1 district. The zoning change would facilitate the development of a new mixed-use development with affordable housing units that could be developed within the Project Area, and an improved retail floor space which would serve as a resource for the broader Astoria community to expand and support the growing residential development within the community.

Therefore the proposed action would not have a significant impact on the extent of conformity with the current zoning in the surrounding area, and would not adversely affect the viability of conforming uses on nearby properties. Accordingly, significant adverse impacts to zoning are not anticipated and further zoning analysis is not warranted.

2.1.3 Public Policy

The project site is not part of, or subject to, an Urban Renewal Plan (URP), adopted community 197-a Plan, Solid Waste Management Plan, Business Improvement District (BID), Industrial Business Zone (IBZ), or the New York City Landmarks Law. The proposed action is also not a large publically sponsored project, and as such, consistency with the City's PlaNYC 2030 for sustainability is not warranted.

Waterfront Revitalization Program

Actions that are located within the designated boundaries of New York City's Coastal Management Zone are subject to an assessment for consistency with the City's Local Waterfront Revitalization Program (LWRP). The LWRP includes policy objectives that prioritize the development of water-dependent and water-enhancing uses on Coastal Management Zone properties mandate public access to the waterfront within certain zoning districts, offer construction guidelines for flood zones, and address the maintenance of water quality. Since the rezoning area is not located in the Coastal Management Zone, a consistency review is not warranted for the proposed action.

2.2 SOCIOECONOMIC CONDITIONS

A socioeconomic assessment under CEQR should be conducted if a project may be reasonably expected to create socioeconomic changes within the area affected by the project that would not be expected to occur without the project. The following circumstances would typically require a more detailed socioeconomic assessment:

- The project would result in a net increase of 200 or more new residential units.
- The project would directly displace residential population to the extent that the socioeconomic character of the neighborhood would be substantially altered. Displacement of less than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood.
- The project would directly displace more than 100 employees.
- The project would directly displace a business that is unusually important because its products or services are uniquely dependent on its location; based on its type or location, it is the subject of other regulations or publicly adopted plans aimed at its preservation; or it serves a population uniquely dependent on its services in its present location.
- The project would result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood. Such a project may lead to indirect displacement. Typically, projects that are small to moderate in size would not have significant socioeconomic effects unless they are likely to generate socioeconomic conditions that are very different from existing conditions in the area. Residential development of 200 units or less or commercial development of 200,000 square feet or less would typically not result in significant socioeconomic impacts.

- The project would add to, or create, a retail concentration that may draw a substantial amount of sales from existing businesses within the study area to the extent that certain categories of business close and vacancies in the area increase, thus resulting in a potential for disinvestment on local retail streets. Projects resulting in less than 200,000 square feet of retail on a single development site would not typically result in socioeconomic impacts. If the proposed development is located on multiple sites located across a project area, a preliminary analysis is likely only warranted for retail developments in excess of 200,000 square feet that are considered of regional-serving (not the type of retail that primarily serves the local population).

- If the project is expected to affect conditions within a specific industry. For example, a citywide regulatory change that would adversely affect the economic and operational conditions of certain types of businesses or processes may affect socioeconomic conditions in a neighborhood in two ways: (1) if a substantial number of residents or workers depend on the goods or services provided by the affected businesses; or (2) if it would result in the loss or substantial diminishment of a particularly important product or service within the City.

Under the proposed action, the rezoning has the potential to introduce approximately 337 residential units and an increment of 131 workers.[4] While the proposed action would not displace any residents, it would result in the displacement of one existing business located on Lots 1 and 12.[5] Based on MapPLUTO™ data compiled by the New York City Department of City Planning and desktop research, Lots 1 and 12 contain automotive-related buildings associated with Major World Motors, and employ an estimated 70 people.[6] Therefore, as the proposed action would result in the displacement of less than 100 workers, the potential effects of business displacement would not be enough to alter the socioeconomic character of a neighborhood.

The proposed action would not result in the direct displacement businesses that are unusually important. Numerous additional automotive-related uses are located in the study area and elsewhere throughout Queens and the City. The proposed action has the potential to result in the generation of approximately 61,400 gsf of commercial space, which is sufficiently below the 200,000 square foot threshold for further indirect business displacement study. As such, indirect business displacement would not occur. The proposed action also would not affect conditions in any specific industries, as the proposed action does not involve a citywide regulatory change that would adversely affect the economic and operational conditions of any types of businesses or processes. Therefore, further analysis of direct displacement is not warranted.

Furthermore, no significant adverse impacts resulting from indirect residential displacement are expected. The proposed rezoning, which has the potential to result in approximately 337 residential units and an incremental approximately 61,400 square feet of local retail floor area, is not expected to introduce a trend or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of the neighborhood would change.

As noted in the *CEQR Technical Manual*, the objective of the indirect residential displacement analysis is to determine whether the proposed action may introduce a trend or accelerate a trend of changing

[4]The estimate of incremental workers takes into account existing/ no action uses and is based on the following industry-standard rates: one employee per 250 sf of office, one employee per 1,000 sf of auto-related and industrial uses, three employees per 1,000 sf of retail/ supermarket/ restaurant uses, one employee per 25 dwelling units, and one employee per 50 parking spaces. The number of existing workers for the Development Site has been estimated at 70, while the future number of employees has been estimated at 201.
[5] The Lot 48 portion of the Development Site contains a vacant, former commercial building.
[6] Based on the floor area information provided in the MapPLUTO™ GIS database, estimated existing worker populations for Lots 1 and 12 are 34 and 36, respectively.

socioeconomic conditions that may potentially displace a population of renters living in units not protected by rent stabilization, rent control or other governmental regulations restricting rent. As noted below in **Section 2.3**, "Open Space," in the future No-Action condition the surrounding area (one-half mile of the project site) would contain approximately 32,217 residents in the 2021 analysis year, according to projections based on U.S. Census data. The addition of 337 residential units is estimated to generate approximately 876 new residents to this area, resulting in a future With-Action population of 33,093, which represents a population change of approximately 2.7 percent.

Section 322.1 of Chapter 5 of the *CEQR Technical Manual* indicates that if a Proposed Action is expected to result in a study area population increase of less than 5 percent, further analysis is not warranted to assess the potential for indirect residential displacement and the proposed increase in population is not expected to affect real estate market conditions. Therefore, the Proposed Action would not result in potential impacts related to socioeconomic character and further assessment is not required.

2.3 COMMUNITY FACILITIES AND SERVICES

The *CEQR Technical Manual* defines community facilities and services as public or publicly funded schools, hospitals, libraries, day care centers and police and fire services. A community facilities analysis examines a proposed action's potential effect on the provision of services by those community facilities. Direct effects occur when a particular action physically alters or displaces a community facility; indirect effects result from increases in population, which creates additional demand on service delivery. The proposed action would not result in physical alteration or displacement of any community facilities, therefore no directs effect to existing community facilities are expected as a result of the proposed action.

However, the *CEQR Technical Manual* provides thresholds for analyses of indirect effects on certain types of community facilities (124 dwelling units for elementary/intermediate schools, 1,068 dwelling units for high schools; 139 affordable dwelling units for child care facilities and 622 dwelling units for libraries). Based on these thresholds, the addition of 337 dwelling units – of which 101 would be classified as affordable – does not require detailed analyses of high schools, publicly funded day care centers, or libraries. Hospitals and police and fire protection typically do not require analysis unless there is an introduction of a sizeable new neighborhood. Further analysis of the impacts of the proposed rezoning on public elementary and intermediate schools in this area is warranted because the total number of dwelling units is greater than the 124-unit threshold.

Public Schools

Existing Conditions

Elementary and intermediate schools are located in geographically defined school districts, each divided into subdistricts for capital planning purposes. The proposed rezoning area falls within Community School District (CSD) 30, as shown in **Figure 7**. The *CEQR Technical Manual* states that the study area for the analysis of elementary and intermediate schools should be the subdistrict in which the project is located.

Tables 3 and 4 show the elementary and middle/intermediate schools within the study area, consisting of those elementary and middle/intermediate schools within CSD 30, Subdistrict 2. As of the 2016-2017 school year, the schools within the study area have an average utilization level of approximately 102 percent for elementary level schools with a shortfall of approximately 116 elementary school seats, and an average utilization level of approximately 85 percent for middle/intermediate level schools with



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Public Schools in Vicinity of the Proposed Rezoning Area

Figure 7

Table 3
Public Elementary Schools within CSD 30,
Subdistrict 2: Enrollment, Capacity and Utilization

Map Key No.	Facility Name	Facility Address	CSD/ Subdistrict	Enrollment	Target Capacity	Available Seats	Utilization (Percent)
1	PS 11-Q*	54-25 Skillman Avenue	30/2	570	515	-55	111%
2	PS 11 - PS 339 - Q*	39-07 57th Street	30/2	285	275	-10	104%
3	PS 70 - Q	30-45 42 Street	30/2	931	1268	337	73%
4	PS 150 - Q*	40-01 43 Avenue	30/2	859	878	19	98%
5	PS 150 -Q PS 150 Annex - Q*	41-12 44th Street	30/2	186	193	7	96%
6	PS 151 - Q	50-05 31 Avenue	30/2	419	467	48	90%
7	PS 152 - Q	33-52 62 Street	30/2	1205	998	-207	121%
8	P.S. 166 - Q	33-09 35 Avenue	30/2	1159	1094	-65	106%
			Total	**5,910**	**5,794**	**-116**	**102%**

Source: NYC Department of Education, *Enrollment/Capacity/Utilization Report 2016-2017 School Year*
***** P.S. component of P.S./I.S. schools

Table 4
Public Intermediate Schools within CSD 30,
Subdistrict 2: Enrollment, Capacity and Utilization

Map Key No.	Facility Name	Facility Address	CSD / Subdistrict	Enrollment	Target Capacity	Available Seats	Utilization (Percent)
1	PS 11-Q*	54-25 Skillman Avenue	30/2	98	89	-9	110%
2	PS 11 - PS 339 - Q*	39-07 57th Street	30/2	49	47	-10	104%
4	PS 150 - Q*	40-01 43 Avenue	30/2	76	78	2	97%
5	PS 150 -Q* PS 150 Annex - Q	41-12 44th Street	30/2	17	17	0	100%
9	IS 10 - Q	45-11 31 Avenue	30/2	754	1047	293	72%
10	Baccalaureate School For Global Ed-Q	34-12 36th Avenue	30/2	219	167	-52	131%
			Total	**1,231**	1,445	**214**	**85%**

Source: NYC Department of Education, *Enrollment/Capacity/Utilization Report 2016-2017 School Year*
***** I.S. component of P.S./I.S. schools

approximately 214 available intermediate school seats. As these figures demonstrate, public elementary schools within the subdistrict are operating slightly above capacity while intermediate schools are operating well below capacity.

Future No-Action Condition

In the future without the proposed action, it is assumed that the existing uses in the rezoning area would operate under their present conditions. According to the latest projections made available by the New York City Department of Education (DOE) and the estimated percentages of enrollment by zone, elementary and intermediate school enrollment in CSD 30, Subdistrict 2 is expected to total 6,573 and 1,131 students respectively in 2021-2022.[7] With the addition of an assumed increase in students based on housing projections for CSD 30, Subdistrict 2, these totals increase to 7,682 elementary students and 2,024 intermediate students.[8] Therefore, under the Future No-Action Condition, it is projected that public elementary schools within CSD 30, Subdistrict 2 would operate at 133 percent utilization, and public intermediate schools would operate at 140 percent utilization.

Future With-Action Condition

As stated in the *CEQR Technical Manual*, for the purposes of CEQR analysis, a Future With-Action base utilization rate of 100 percent is the utilization threshold for overcrowding. As such, according to CEQR, a significant adverse impact may result; warranting consideration of potential mitigation, if the proposed action would result in both of the following conditions:

- A collective utilization rate of the elementary and/or intermediate schools in the sub-district study area that is equal to or greater than 100 percent in the Future With-Action Condition; and

- An increase of five percent or more in the collective utilization rate between the Future No-Action and Future With-Action conditions.

Under the proposed action, an additional 337 dwelling units are expected to be developed on the projected development sites by 2021. This would generate 54 elementary and 13 intermediate school students by the 2021 analysis year, as shown in **Tables 5, 6, and 7.**

Table 5
Public School Students Generated by the Proposed Rezoning

	Project-Generated DUs	P.S. Students	I.S. Students	Total P.S./I.S. Students
CSD 30 Subdistrict 2	337	54	13	67

[7] *Enrollment Projections 2016 to 2025: New York City Public Schools* by Statistical Forecasting
[8] *Housing by School District 2016*, provided by the Department of City Planning (March 2018)

Table 6
Projected Public Elementary School Enrollment,
Capacity and Utilization in 2021 with the Proposed Action

Future No-Action Projected Enrollment 2021	Students Generated by Proposed Action	Total Projected Enrollment 2021	Capacity	Seats Available	Utilization	Change in Utilization from No-Action
7,682	54	7,736	5,794	-1,942	134%	1.64%

Table 7
Projected Public Intermediate School Enrollment,
Capacity and Utilization in 2023 with the Proposed Action

Future No-Action Projected Enrollment 2021	Students Generated by Proposed Action	Total Projected Enrollment 2021	Capacity	Seats Available	Utilization	Change in Utilization from No-Action
2,024	13	2,037	1,445	-592	141%	2.84%

In the future with the proposed action, elementary schools in the study area are projected to have an average utilization level of approximately 134 percent. The addition of approximately 54 elementary school-aged students to the area would increase the utilization rate by approximately 1.6 percent. The collective utilization rate for the elementary schools in the study area would continue to be over 100 percent under the Future With-Action Condition, and the increase in the collective utilization rate would be less than five percent.

In the future with the proposed action, intermediate schools in the study area are projected to have an average utilization level of approximately 141 percent[9]. The addition of approximately 13 intermediate school-aged students to the area would increase the utilization rate by approximately 2.8 percent. The collective utilization rate for the intermediate schools in the study area would continue to be over 100 percent under the Future With-Action Condition, and the increase in the collective utilization rate would be less than five percent.

Therefore, the proposed action is not expected to result in significant adverse impacts to elementary or middle/intermediate schools in the study area and further assessment of educational facilities is not warranted.

2.4 OPEN SPACE

Open space is defined as publicly or privately owned land that is publicly accessible and operates, functions, or is available for leisure, play, or sport, or set aside for the protection and/or enhancement of the natural environment. According to the *CEQR Technical Manual*, an analysis of open space is conducted to determine whether or not a proposed project would have a direct impact resulting from the elimination or alteration of open space and/or indirect impacts resulting from overtaxing available open space. An open space analysis focuses

[9] http://www.nycsca.org/Community/Overview/CapitalPlanManagementReportsData/Pages/EnrollmentCapacityUtilization

on officially designated existing or planned public open space. An open space assessment may be necessary if a project potentially has a direct or indirect effect on open space.

As a planning goal, a ratio of 2.5 acres per 1,000 residents represents an area well-served by open spaces, and is used as an optimal benchmark for residential populations in large-scale plans and proposals. Ideally, this would comprise 0.50 acres of passive space and 2.0 acres of active open space per 1,000 residents. The *CEQR Technical Manual* generally recommends a comparison to the median ratio for community districts in New York City, which is 1.5 acres of open space per 1,000 residents. A ratio of 0.15 acres of passive open space per 1,000 workers represents a reasonable amount of open space.

For the majority of new projects in New York City located in areas that are neither "underserved" or "well-served" area for open space, an open space assessment is generally conducted if the proposed project would generate more than 200 residents or 500 employees. The proposed action is located in an area that is not classified as "underserved" or "well-served." The proposed action would potentially add up to approximately 876 residents in 337 units (based on an average of 2.6 persons per unit[10]), as well as net increment of approximately 131 employees[11] to the neighborhood who would work in the mixed-use building. As the estimated number of incremental workers is well below 500, the proposed action does not trigger a nonresidential (or worker) open space analysis. As the proposed action is expected to introduce a residential population that exceeds the CEQR preliminary screening threshold level of 200 residents, a preliminary residential open space analysis is warranted.

2.4.1 Preliminary Open Space Assessment

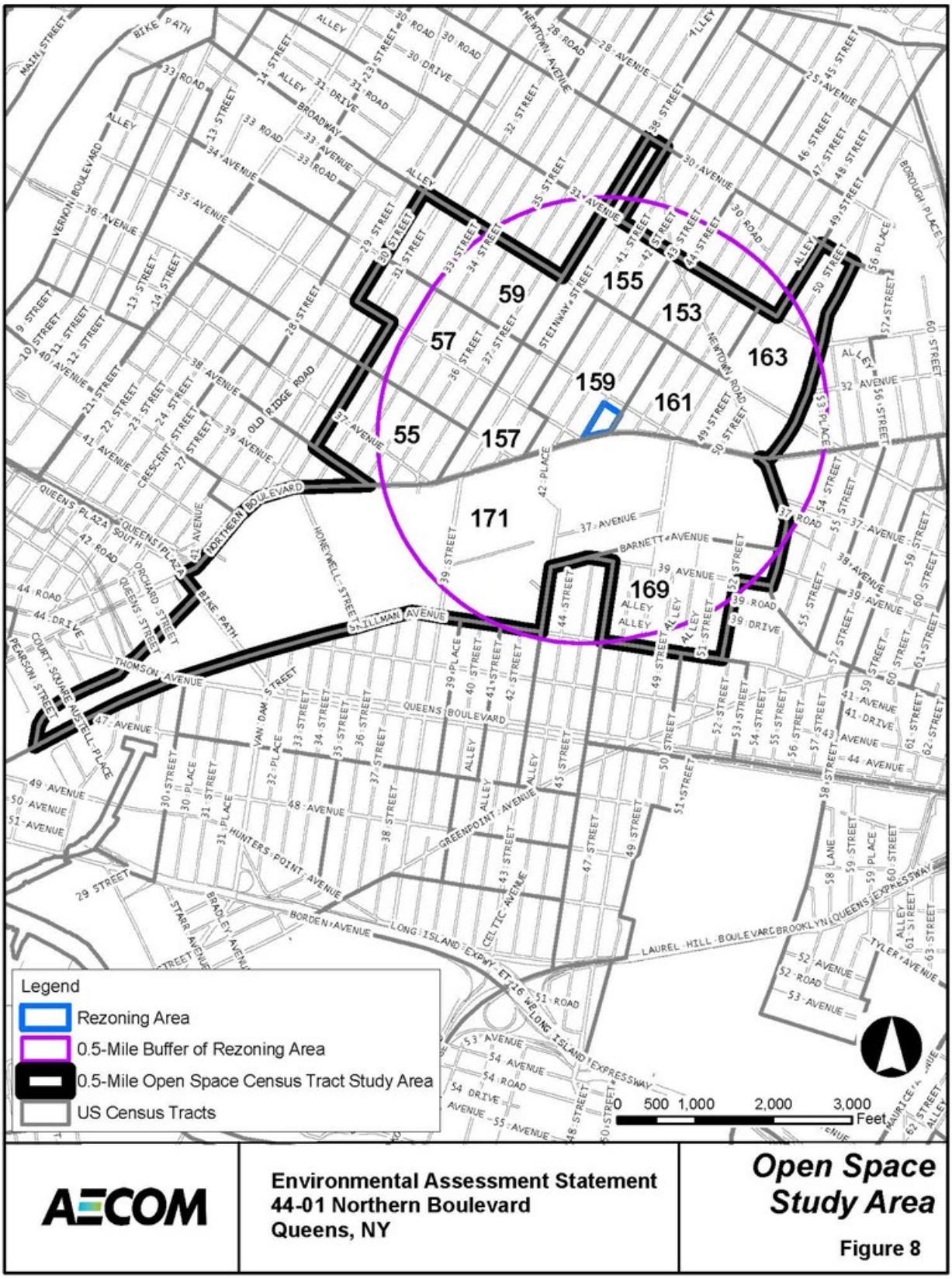
The open space study area includes all U.S. Census Tracts that have 50 percent or more of the tract within a half-mile radius of the project site, as shown in **Figure 8**, consisting of the following Census Tracts shown in **Table 8**. The rezoning area is located within Brooklyn Census Tract 159.

Existing Conditions

According to U.S. Census population data that was compiled by the New York City Department of City Planning, there were a total of 31,423 residents in the study area in 2016, as shown in **Table 8**. Assuming a standard background growth rate of 0.5 percent per year, the 2018 population is estimated to be approximately 31,367 residents. The study area contains a total of approximately eight open space resources, as shown in **Table 9** and depicted in **Figure 9**. Seven of these resources are accessible to the public on a constant and regular basis and as such, have been factored into the quantitative open space assessment (i.e., the open space ratio calculation). The additional open space resource located within the study area (Map ID A in **Table 9**), Sunnyside Gardens Park, provides another 1.97 acres of open space, but has not been included in the quantitative assessment due to its limited access.[12]

In accordance with CEQR methodology, the assessment of open space resources in the study area focuses on the calculated open space ratio (OSR), or the ratio of the acres of open space per 1,000 persons. The existing OSR in the study area is approximately 0.125 acres per 1,000 residents, substantially below the City's target OSR of 1.50 acres per 1,000 residents.

[10] Based on the average household size for Census Tracts 159 (2.16 persons/household) and 161 (3.04 persons/household)
[11] The estimate of incremental workers takes into account existing/ no action uses and is based on the following industry-standard rates: one employee per 250 sf of office, one employee per 1,000 sf of auto-related and industrial uses, three employees per 1,000 sf of retail/ supermarket/ restaurant uses, one employee per 25 dwelling units, and one employee per 50 parking spaces. The number of existing workers for the Development Site has been estimated at 70, while the future number of employees has been estimated at 201.
[12] Sunnyside Gardens Park membership is limited to residents that live within the Sunnyside Gardens zones. As per 2014 zone map available on the park's website (see http://sunnysidegardenspark.org/ZoneMap) this area is generally bounded by Barnett Avenue to the north, Woodside Avenue to the east, 43rd Street to the west, and Skillman Avenue to the south; and also includes portions of four additional blocks located between Skillman Avenue and Queens Boulevard, and 46th and 48th Streets.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Legend
Rezoning Area
0.5-Mile Buffer of Rezoning Area
0.5-Mile Open Space Census Tract Study Area
US Census Tracts
0 500 1,000 2,000 3,000
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Figure 8

Table 8
Census Tracts and Population in the Study Area

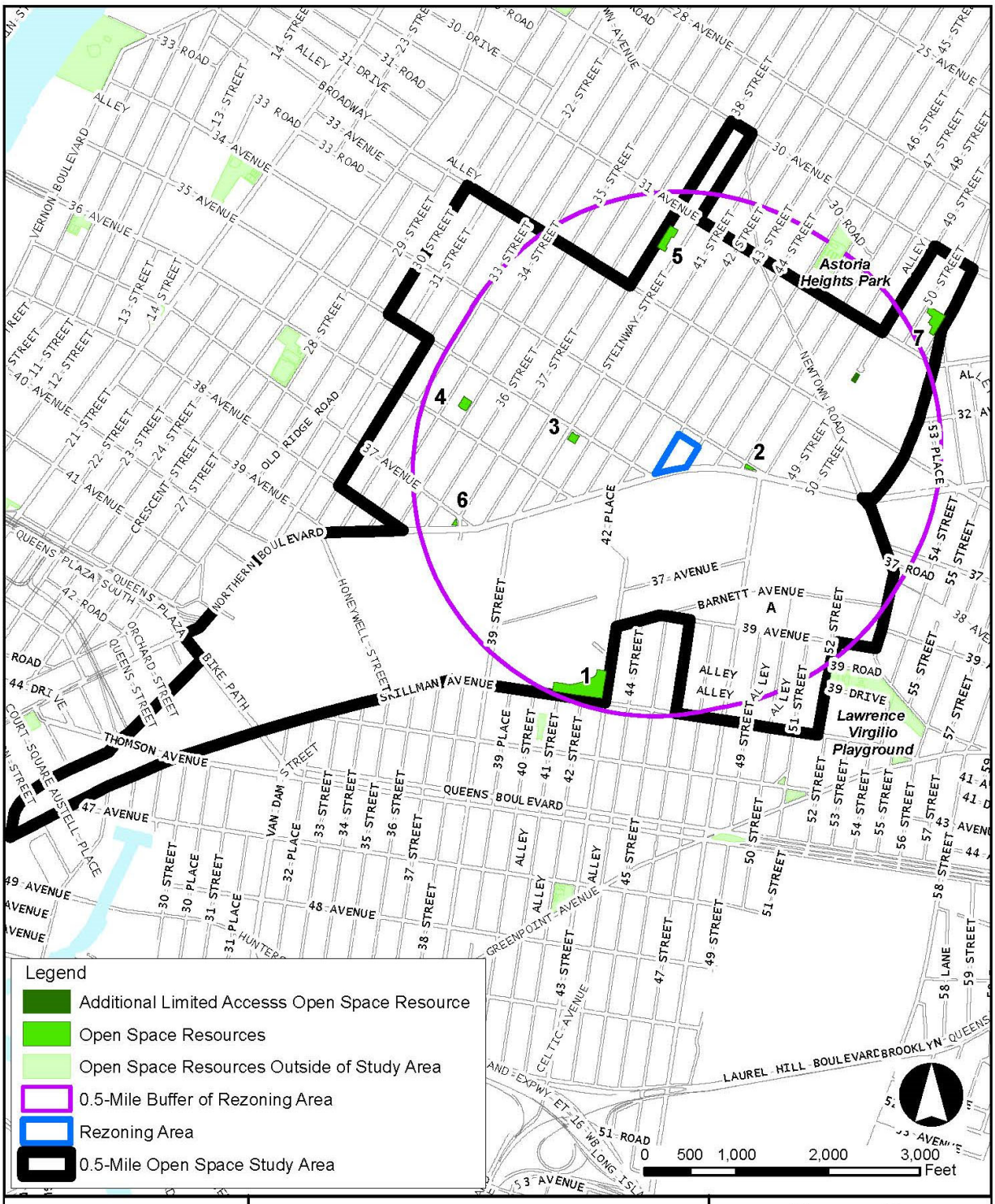
Census Tract	2016 Population	Existing Population (2018 Estimated)
55	933	942
57	4,084	4,125
59	4,315	4,358
153	2,029	2,049
155	2,499	2,524
157	1,508	1,523
159	3,932	3,971
161	2,556	2,582
163	3,788	3,826
169	5,779	5,837
171	0	0
Total	**31,423**	**31,637**

Source: U.S. Census Bureau, 2016 ACS data provided by NYC Dept. of City Planning.
Notes: Shaded row indicates census tract of the projected development site.

Table 9
Open Space Resources in the Study Area

Map-ID	Open Space Name	Location	Acreage		
			Total	Passive	Active
1	Torsney and Lou Lodati Playgrounds	Skillman Ave & 43 St	2.05	1.64	0.41
2	Dwyer Square	Northern Blvd, 34 Ave, 47 St	0.07	0.07	0.00
3	Playground Thirty Five XXXV	Steinway St & 35 Ave	0.22	0.18	0.04
4	A.R.R.O.W. Field House	35 St, 35 Ave, 36 Ave	0.30	0.21	0.09
5	Sean's Place	38 St, 31 Ave, Broadway	0.58	0.46	0.12
6	Triangular Seating Area	Northern Blvd, 37 Ave, 37 St	0.05	0.00	0.05
7	PS 151 Playground (Schoolyards to Playgrounds)	31 Ave, Hobart St, 50 St	0.68	0.68	0.00
		TOTAL	**3.95**	**3.24**	**0.70**
Additional Limited-Access Resource Not Included in Quantitative Assessment					
A	Sunnyside Gardens Park	Barnett Ave., 39th Ave., 50th St.	1.97		

Sources: NYC Department of City Planning; NYC Department of Information Technology and Telecommunications (DoITT) GIS data; New York City Department of Parks and Recreation.



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Open Space Resources

Figure 9

While the additional 1.97 acres of open space provided by Sunnyside Gardens Park is limited to members only (restricted based on location of residence), this well-kept and well-utilized resource helps to offset the existing shortfall of open space. Also of note, additional resources are located within (or just beyond) one-half mile of the affected area. However, as they lie outside of the residential open space census tract study area, they were not factored into open space ratio calculation. Such proximate resources include the 2.20-acre Astoria Heights Park located between 31st Avenue, 30th Road, 45th and 46th Streets; and the 3.01-acre Lawrence Virgilio Playground, situated on the eastern side of 52nd Street between 39th Road and 39th Drive.

Future No-Action Conditions

In the future without the proposed action, the project site is not expected to undergo any changes or development. By 2021, it is expected that the population in the surrounding area would continue to grow by approximately 0.5 percent a year, representing a standard background growth rate. Thus the approximately 31,637 residents in the study area in 2018 would grow to approximately 32,217 residents by 2021 under the Future No-Action Condition. Therefore, the existing OSR of 0.125 acres of open space per 1,000 residents calculated for the open space study area is expected to be reduced to approximately 0.123 acres of open space per 1,000 residents under the Future No-Action Condition, assuming that no additional open space resources are added to the area.

Future With-Action Conditions

Preliminary screening procedures from the *CEQR Technical Manual* indicate that impacts may occur if a project reduces the OSR by more than five percent. In areas that are lacking in open space resources, a reduction as small as one percent may be considered significant. Under the Future With-Action Condition, there would be an increase of up to 876 new residents, thereby increasing the study area population from approximately 32,217 residents under the Future No-Action Condition to 33,093 residents under the Future With-Action Condition. The resulting OSR would decrease from 0.123 acres per 1,000 residents under the Future No-Action Condition to 0.119 acres of open space per 1,000 persons under the Future With-Action Condition, a decrease of approximately 3.3 percent. The reduction in OSR related to the proposed action would be less than five percent. Therefore, no significant adverse impacts to open space resources as a result of the proposed action are expected and no further analysis is warranted.

Conclusion

As presented above, the study area is currently underserved by open space. In the Future No-Action scenario, the OSR would decrease slightly as a result of residential population growth without an increase in public open space. In the Future With-Action Condition, the study area would experience a slight decline in OSR over the No-Action Condition due to the additional residents expected as a result of the proposed action.

As noted in the Existing Conditions discussion, a number of additional resources are located outside of the open space census tract study area, but within (or just beyond) one-half mile of the rezoning area. These resources, which include the 2.20-acre Astoria Heights Park and the 3.01-acre Lawrence Virgilio Playground, would help to reduce the shortage of open space that is expected to continue in the Future With-Action Condition. Furthermore, while it is not publicly-accessible open space, the 1.97-acre Sunnyside Gardens Park would also help to fill the study area's open space deficit.

The projected decrease in OSR between the Future No-Action and Future With-Action Conditions is approximately 3.3 percent. In accordance with *CEQR Technical Manual* guidance, as the projected reduction is less than five percent, a significant adverse open space impact to open space resources is not expected. Accordingly, the proposed action does not warrant further analysis or the development of mitigation measures.

2.5 SHADOWS

The *CEQR Technical Manual* defines a shadow as the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space or feature. An incremental shadow is the additional or new shadow that a building or other built structure resulting from a proposed project would cast on a sunlight-sensitive resource during the year. The sunlight-sensitive resources of concern are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity, including public open space, architectural resources and natural resources. Shadows can have impacts on publicly accessible open spaces or natural features by adversely affecting their use and important landscaping and vegetation. In general, increases in shadow coverage make parks feel darker and colder, affecting the experience of park patrons. Shadows can also have impacts on historic resources whose features are sunlight-sensitive, such as stained-glass windows, by obscuring the features or details, which make the resources significant.

Shadows also vary according to time of day and season. Shadows cast during the morning and evening, when the sun is low in the sky, are longer, while midday shadows are shorter in length. Shadows in winter, when the sun arcs low across the southern sky, are also longer throughout the day than at corresponding times in spring and fall seasons. In summer, the high arc of the sun casts shorter shadows than at any other time of year, and early and late shadows during the summer are cast towards the south than shadows cast in early and late winter months.

The *CEQR Technical Manual* states that a shadow assessment considers projects that result in new shadows long enough to reach a sunlight-sensitive resource. Therefore, a shadow assessment is warranted only if the project would either result in: (a) 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. However, a project located adjacent to or across the street from a sunlight-sensitive open space resource (which is not a designated New York City Landmark or listed on the State/National Registers of Historic Places, or eligible for these programs) may not require a detailed shadow assessment if the project's height increase is ten feet or less.

Sunlight-sensitive resources of concern are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity, including public open space, architectural resources and natural resources. In general, shadows on city streets and sidewalks or on other buildings are not considered significant. Some open spaces also contain facilities that are not sensitive to sunlight. These are usually paved such as handball or basketball courts, contain no seating areas and no vegetation, no unusual or historic plantings, or contain only unusual or historic plantings that are shade tolerant. These types of facilities do not need to be analyzed for shadow impacts. Additionally, it is generally not necessary to assess resources located to the south of projected development sites, as shadows cast by the action-generated development would not be cast in the direction of these resources. Furthermore, shadows occurring within one and one-half hour of sunrise or sunset generally are not considered significant in accordance with the *CEQR Technical Manual*.

The proposed action could result in the construction of a new mixed-use residential and commercial building that is up to 145 feet tall (on the proposed R7X portion of the Development Site) and up to 50 feet tall (on the proposed R6B portion of the Development Site). Consequently, further shadow screening assessments were performed.

2.5.1 Preliminary Shadow Screening Assessment

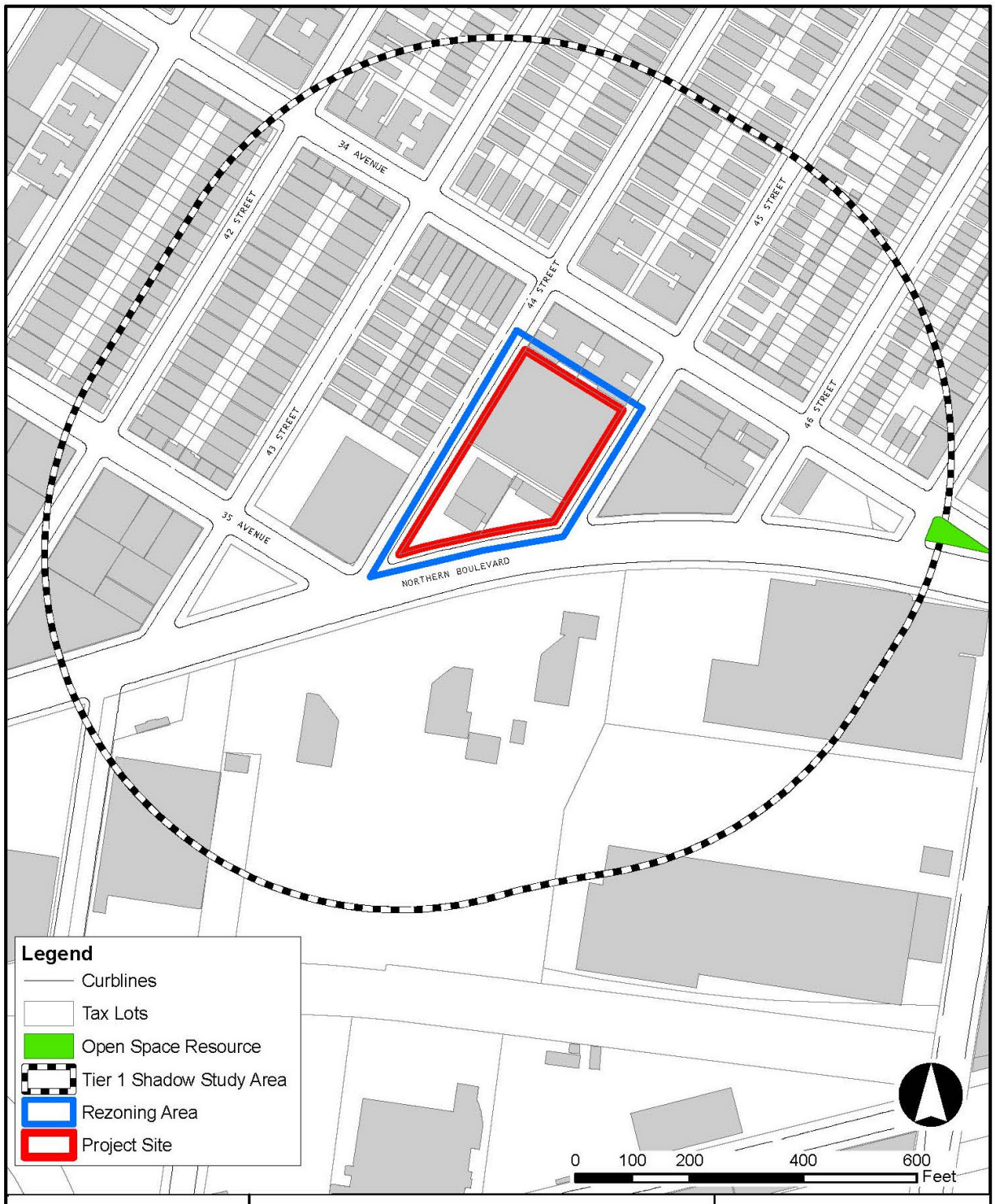
The shadow assessment begins with a preliminary screening assessment to ascertain whether a project's shadow may reach any sunlight-sensitive resources at any time of the year. If the screening assessment

does not eliminate this possibility, a detailed shadow analysis is generally warranted in order to determine the extent and duration of the net incremental shadow resulting from the project. The effects of shadows on a sunlight-sensitive resource are site-specific; therefore, as noted in the *CEQR Technical Manual*, the screening assessment and subsequent shadow assessment (if necessary) was performed for the new structure to be built on the project site.

Tier 1 Screening Assessment

The first step in the preliminary shadow screening assessment is a Tier 1 Screening Assessment. A base map is developed that illustrates the proposed site location in relationship to any sunlight-sensitive resources. The longest shadow study area is then determined, which encompasses the site of the proposed project and a perimeter around the site's boundary with a radius equal to the longest shadow that could be cast by the proposed structure, which is 4.3 times the height of the structure that occurs on December 21st, the winter solstice. To find the longest shadow length, the maximum height of the structure (including any rooftop mechanical equipment) is multiplied by the factor of 4.3.

Following *CEQR Technical Manual* methodology, the maximum shadow radius for the proposed R7X portion of the Development Site is 623.5 feet while the maximum radius for the proposed R6B portion is 215 feet. These two buffers were merged into a single buffer, thus delineating the Tier 1 shadow study area. As shown in **Figure 10**, the results of the Tier 1 screening assessment show that one potential sunlight-sensitive resource is partially located within the Tier 1 maximum shadow analysis area. This potential resource is Dwyer Square, an approximate 0.07-acre Greenstreet with a few trees and benches located east of 47th Street between Northern Boulevard and 34th Avenue. However, upon closer examination, it has been determined that the sunlight-sensitive features of the open space – the few benches – lie immediately east of the shadow buffer. The area of the Greenstreet within the Tier 1 shadow screening radius consists of only paved space, with no plants or benches. No historic resources have been identified within the Tier 1 shadow study area. Therefore, as no sunlight-sensitive resources are situated within the study area, further shadow analyses are not warranted for the proposed action. Accordingly, the proposed action would not result in a significant shadow adverse shadow impact.



AECOM

Environmental Assessment Statement
44-01 Northern Boulevard
Queens, NY

Shadow Analysis: Tier 1 Screening

Figure 10

2.6 HISTORIC AND CULTURAL RESOURCES

An assessment of historic and cultural resources is usually necessary for projects that are located in close proximity to historic or landmark structures or districts, or for projects that require in-ground disturbance, unless such disturbance occurs in an area that has been formerly excavated.

The term "historic resources" defines districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, architectural and archaeological importance. In assessing both historic and cultural resources, the findings of the appropriate city, state, and federal agencies are consulted. Historic resources include: the New York City Landmarks Preservation Commission (LPC)-designated landmarks, interior landmarks, scenic landmarks, and historic districts; locations being considered for landmark status by the LPC; properties/districts listed on, or formally determined eligible for, inclusion on the State and/or National Register (S/NR) of Historic Places; locations recommended by the New York State Board for Listings on the State and/or National Register of Historic Places and National Historic Landmarks.

2.6.1 Architectural Resources

According to *CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by the proposed action and in the area surrounding identified development sites. The historic resources study area is therefore defined as the proposed rezoning area plus a 400-foot radius around the proposed action area.

No properties within the rezoning area are designated local or S/NR historic resources or properties, nor are they part of any designated historic district.

In order to determine whether the projected development has the potential to affect nearby off-site historic or architectural resources, the study area was screened for historic and architectural resources. No historic or architectural resources were identified within the 400-foot study area. Therefore, no significant adverse impacts on historic or architectural resources are expected as a result of the proposed action, and further assessment is not warranted.

2.6.2 Archaeological Resources

Unlike the architectural evaluation of a study area that extends beyond the footprint of a project's block and lot lines, the analysis of potential and/or projected impacts to archaeological resources is controlled by the actual footprint of the limits of soil disturbance. Archeological resources are physical remains, usually subsurface, of the prehistoric and historic periods such as burials, foundations, artifacts, wells and privies. The *CEQR Technical Manual* recommends a detailed evaluation of a project's potential effect on the archeological resources if it would potentially result in an in-ground disturbance to an area not previously excavated.

The rezoning area has not been recently disturbed and no recent or distant cultural or archaeological significance have been attached to this area. Further, utilizing the NYS Office of Parks, Recreation and Historic Preservation's "Cultural Resource Information System" (CRIS) mapper, the rezoning area does not fall within an archaeologically sensitive area. Based on both current and historic photoreconnaissance of the rezoning area, there is little potential for impact to any known or unknown resource due to development. The LPC was contacted for their initial review of the project's potential to impact on-site or nearby historic and cultural resources, and a response was received on December 6, 2017 (see **Appendix A**). The LPC has indicated that no cultural resource, architectural or archaeological significance is associated with the rezoning area. Therefore, significant adverse impacts to archaeological resources are

not expected as a result of the proposed action, and further analysis is not warranted.

2.7 URBAN DESIGN AND VISUAL RESOURCES

According to the *CEQR Technical Manual*, urban design is the totality of components that may affect a pedestrian's experience of public space. Elements that play an important role in the pedestrian's experience include streets, buildings, visual resources, open space, and natural features, as well as wind as it relates to channelization and downwash pressure from tall buildings.

The *CEQR Technical Manual* notes an urban design assessment considers whether and how a project may change the experience of a pedestrian in the project area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment. In general, an assessment of urban design is needed when the project may have effects on one or more of the elements that contribute to the pedestrian experience (e.g., streets, buildings, visual resources, open space, natural features, wind, etc.). An urban design analysis is not warranted if a proposed project would be constructed within existing zoning envelops, and would not result in physical changes beyond the bulk and form permitted "as-of-right" with the zoning district.

As the proposed action would result in the construction a new building that is not allowed "as-of-right" per existing zoning, a preliminary analysis was conducted.

2.7.1 Preliminary Analysis

As stated in the *CEQR Technical Manual*, the study area for urban design is the area where the project may influence land use patterns and the built environment, and is generally consistent with the study area used for the land use analysis (i.e., 400 feet around the project site). For visual resources, existing publicly accessible view corridors within the study area should be identified. The purpose of the preliminary assessment is to determine whether any physical changes proposed by a project may raise the potential to significantly and adversely affect elements of urban design, which would warrant the need for a detailed urban design and visual resources assessment.

Existing Conditions

The study area is located in the Astoria neighborhood of Queens. Ground-level photographs of the Development Site and the immediate surrounding area are provided in previously presented Figure 4. The prevailing built form of the area is a mix of two-to four-story residential buildings north and west of the Project Area and single-story, auto-related commercial buildings to the south along Northern Boulevard. On 34th Avenue there are two six-story residential buildings, each containing 96 units.

As noted previously, a mix of uses characterizes the area; including single-, two-family and multi-family residential, retail stores, light manufacturing, one-story commercial uses, and parking facilities. With the exception of the buildings along Northern Boulevard, most buildings within the study area are arranged regular (parallel) with respect to their lot placement and directly abut the sidewalk to create a continuous commercial and walking experience.

The topography throughout the project area is generally flat. The streetscape along Northern Boulevard is uneven – however a wide and continuous sidewalk is present on both 44th and 45th Streets, with well-kept wide sidewalks and isolated street trees. However, no notable streetscape elements (e.g. benches) are located within the study area.

The street hierarchy of the study area includes several different functional classifications. Northern Boulevard is classified as a Principal Arterial Roadway under the Surface Transportation Program, while 44th and 45th Streets are classified as local roads.

The Development Site consists of three contiguous tax lots (Block 704, Lots 1, 12, and 42). Block 704, Lot 1 is an approximately 17,423 sf lot fronting Northern Boulevard that is improved with two buildings, one with two stories, and the other with one story. Lot 12 is an approximately 38,000 sf lot fronting 44th Street improved with a one-story, UG 16 commercial building. Lot 42 is an approximately 7,977 sf lot which fronts Northern Boulevard and is improved with a vacant one-story, former commercial building.

Future No-Action Condition

Under the Future No-Action Condition, no significant changes to the area's urban character are anticipated.

Future With-Action Condition

According to the *CEQR Technical Manual*, if a preliminary assessment determines that changes to the pedestrian environment are sufficiently significant to require greater explanation and further study, then a detailed urban design and visual resources analysis is appropriate. Detailed analyses are generally appropriate for all area-wide rezoning applications that include an increase in permitted floor area or changes in height and setback requirements, general large scale developments, or projects that would result in substantial changes to the built environment of a historic district, or components of an historic building that contribute to the resource's historic significance. Conditions that merit consideration for further analysis of visual resources include when the project partially or totally blocks a view corridor or a natural or built rare or defining visual resource. Further conditions that merit consideration are when the project changes urban design features so that the context of a natural or built visual resource is altered, such as if a project alters the street grid so that the approach to the resource changes, or if a project changes the scale of surrounding buildings so that the context changes.

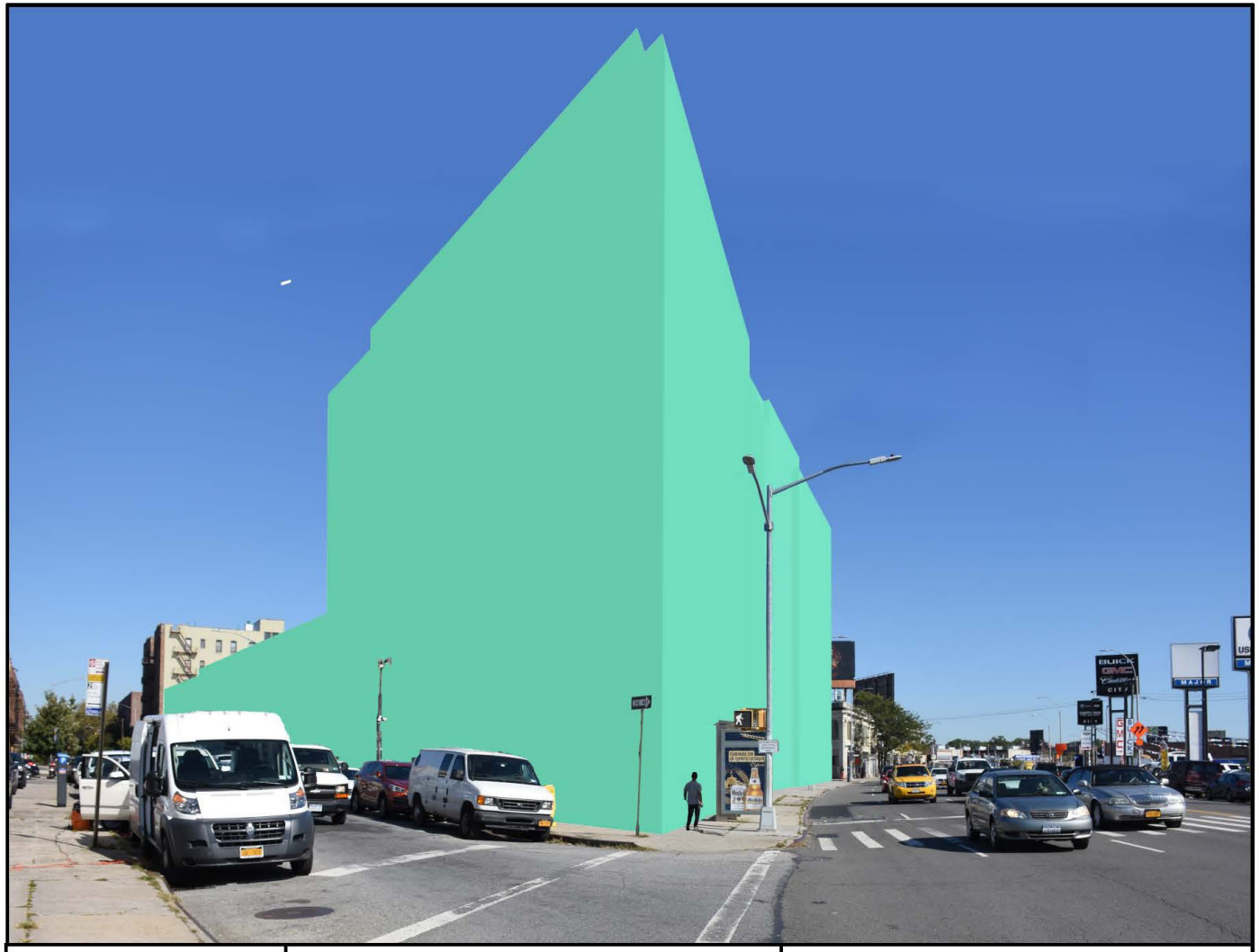
Under the Future With-Action Scenario, it is assumed that Block 704, Lots 1, 12 and 42 would be developed as a split-lot zoning lot with a combined area of 63,369 sf; the R7X portion of the zoning lot would be 43,369 sf in size (68.4%) and the R6B portion would be 20,000 sf in size (31.6%). The R7X portion of the zoning lot would be developed to the maximum FAR of 6.0 permitted by the R7X/C2-4 district, pursuant to ZQA/MIH; while the R6B portion would be developed to the maximum FAR of 2.2, pursuant to ZQA/MIH. The resulting weighted FAR is 4.8.

Estimating 850 sf per dwelling unit, it is assumed 337 residential units would be constructed on-site. Under the 20 percent MIH option, the proposed rezoning would result in the creation of approximately 67 units affordable to families with incomes averaging 80 percent of the AMI. It is assumed that approximately 186 parking spaces would be provided in the Future With-Action Scenario, 135 spaces for the residential use and 51 spaces for the commercial use. A three-dimensional representation of an approximate building envelope allowed under a reasonable worst case development scenario for the proposed development site is overlaid on a photograph of the street under existing conditions in **Figures 11 and 12**. The maximum height of the building envelope pictured is 145 feet.

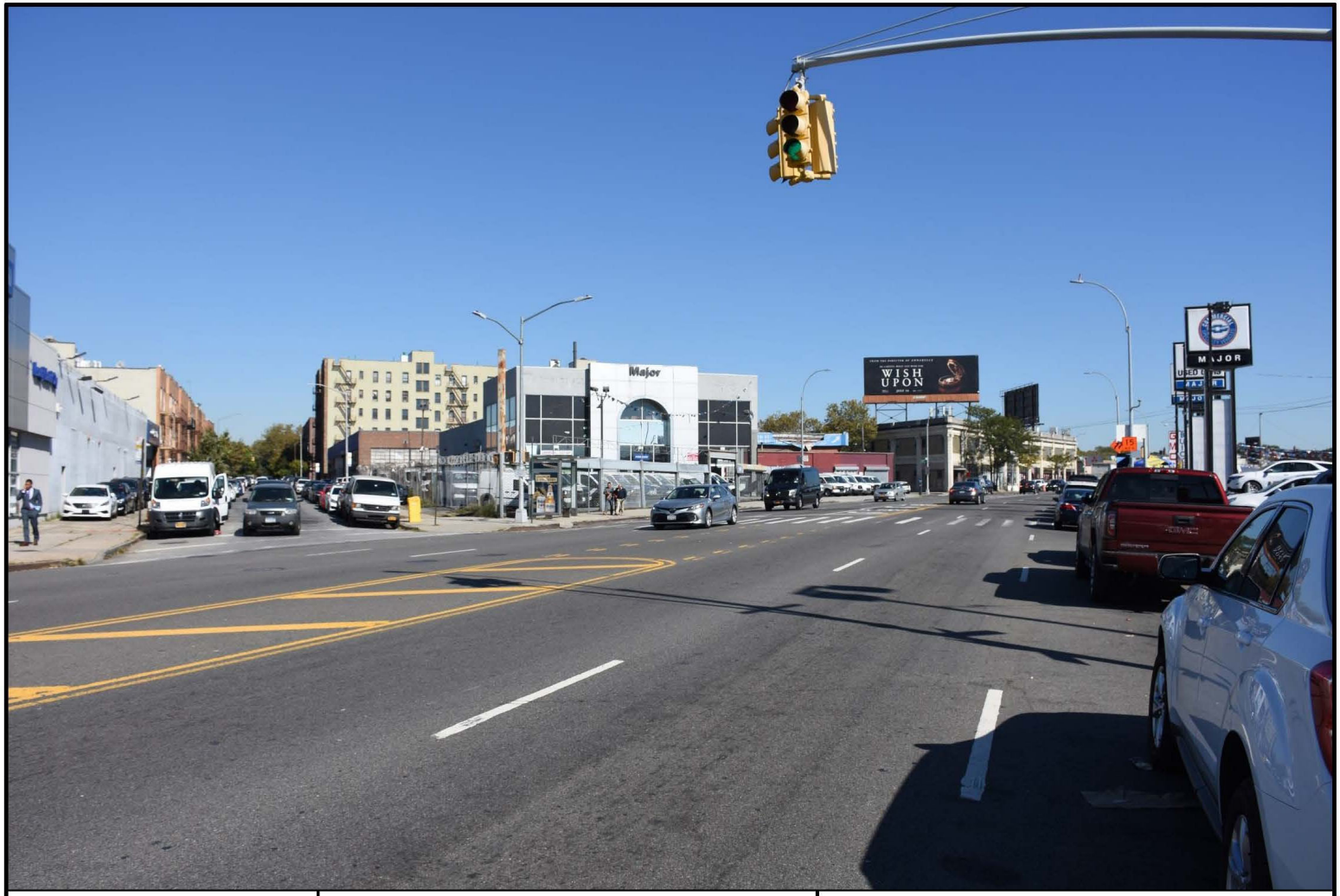
The proposed development would be constructed on an existing block and would not alter street orientation or street patterns in the study area. The proposed building would have a footprint comparable in size to other more recently constructed residential and mixed-use buildings in the general area.



AECOM	**Environmental Assessment Statement** **44-01 Northern Blvd** **Queens, NY**	**View 1 of Proposed Development Site –No Action** **Figure 11A**



AECOM	Environmental Assessment Statement 44-01 North Blvd Queens, NY	View 2 of Proposed Development Site – With Action Figure 11B



AECOM	**Environmental Assessment Statement** **44-01 Northern Blvd** **Queens, NY**	**View 1 of Proposed Development Site –No Action** **Figure 12A**



AECOM	Environmental Assessment Statement 44-01 North Blvd Queens, NY	View 2 of Proposed Development Site – With Action Figure 12B

The number of stories that could be permitted under the proposed rezoning will vary based on the street frontage and zoning district. A building could have a 6- to 10 -story streetwall and maximum height of 145 feet along Northern Boulevard and 45th Street in the R7X zoning district; for the R6B portion of the Site on 45th Street, the proposed rezoning could permit a 5-story maximum height and a 4-story base height.

The proposed development also would improve the streetscape in the study area, and thus the pedestrian experience, particularly along Northern Boulevard, by replacing an underutilized site with a new mixed-use building with commercial space on the ground floor and street trees around the development site. The commercial ground floor and new street trees would provide visual interest at the street level and would enliven this portion of the study area from the pedestrian perspective.

Overall, the proposed development would be compatible with the urban design character of the study area and would not adversely affect the pedestrian experience.

2.8 HAZARDOUS MATERIALS

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 (VOCs and SVOCs), methane, polychlorinated biphenyls (PCBs), 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) action would increase pathways to their exposure; or c) an action would introduce new activities or processes using hazardous materials.

The Development Site is currently utilized as a commercial moving vehicle surface parking lot and has been for nearly 20 years. This lot would be demolished as part of the proposed project. As the lot proposed for development is located in a M1-1 district and sits among properties currently engaged in industrial and manufacturing uses, a further review of the proposed development site's potential for hazardous material contamination was conducted via a Phase I Environmental Site Assessment.

2.8.1 Summary of Phase I ESA

In April 2016, AEI Consultants performed a Phase I Environmental Site Assessment (Phase I ESA) at the proposed development site (**Appendix B**). The purpose of the Phase I ESA is to identify the presence of Recognized Environmental Conditions (RECs) that may be associated with the subject property, as defined by American Society of Testing Engineers (ASTM) E-1527-13. The Phase I ESA was conducted in general accordance with the scope and limitations of the ASTM International Standard E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and the "due diligence" regulations of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and Section 9601 (35)(b) of the Superfund Amendments and Reauthorization Act.

The assessment revealed the following evidence of recognized environmental conditions in connection with the property:

- Based on a review of historical sources, the subject property was formerly occupied by manufacturing operations. These operations involved spray painting and paint storage. It is likely that operations may have involved the use of various petroleum products as well as solvent containing materials. Based on a review of Sanborn maps, manufacturing and painting operations were conducted within the central and western portions of the current subject building with the eastern portions used for shipping, storage, and administrative

(office) purposes. The only conduit to the subsurface noted was a floor drain within the southeastern corner of the of the subject property building. Additionally, manufacturing processes took place during a time of little to no regulatory oversight. Based on the length of time manufacturing operations were conducted onsite (approximately 23 years) without regulatory oversight and the likely use of solvents and additional unspecified hazardous materials. The Phase I ESA is unable to rule out possible adverse impacts to the subsurface as a result of these former operations.

- According to the regulatory database, one 5,000 gallon No. 2 fuel oil AST is registered to the subject property. However, based on documentation provided by a key site manager this tank was actually a 5,000 gallon No. 2 fuel oil UST which was located within the central portion of the LIC Hyundai tenant space. The tank was reportedly tested in 1990; however, testing results were not provided for review. According to information provided, the tank was closed in place on February 9, 2004. A Certificated of Abandonment which stated that the UST was abandoned (by filling it with foam)(and that all work was done in accordance with New York State abandonment procedures for No. 2 fuel oil was issued. However, it should be noted that soil or groundwater samples are not ordinarily required to achieve closure of heating oil tanks unless there is visual evidence or a leak. As such, it does not appear that sampling was conducted as information indicating visual evidence of a leak was not documented. It is assumed that the UST was initially installed in 1947 and as such would have been in the ground for approximately 57 years. Although a leak was not documented during closure operations, the Phase I ESA is unable to rule out that past releases may have occurred from this tank and as such, the lack of sampling represent a significant environmental concern.

In addition, the Phase I ESA uncovered other environmental considerations that warrant discussion, but do not qualify as RECs as defined by the ASTM Standard Practice E1527-13. These include, but are not limed to, de Minimis conditions and/or environmental considerations such as the presence of ACMs, LBP, radon, mold, and lead in drinking water, which can affect the liabilities and financial obligations of the client, the health and safety of site occupants, and the value and marketability of the subject property.

- The subject property is currently utilized for auto repair operations, which have taken place since 1996. Typical materials utilized during these observations were observed within the subject building including used oils stored in ASTs, anti-freeze, and solvents used in association with self-contained parts cleaning stations. The subject property was identified in the regulatory database as a RCRA SQG facility. No violations were documented in association with this listing, which noted several chlorinated solvent wastes.

- Due to the age of the building, there is a potential that lead-based paint (LBP) is present. During the site inspection, peeling paint was observed on a rusted metal section of the ceiling (less than 10 square feet). Based on the potential presence of LBP, the Phase I ESA recommends that the property owner implement an O&M Plan which stipulates that the assessment, repair and maintenance of damaged painted surfaces be performed to protect the health and safety of the building occupants. Local regulations may apply to LBP in association with building demolition/ renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 C.F.R. 1910.1025 and 1926.62.

- Due to the age of the subject property building, there is a potential that asbestos-containing materials (ACMs) are present. All observed suspect ACMs at the subject property were in good condition at the time of the site reconnaissance and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Based on the potential presence of ACMs, the Phase I ESA recommends the implementation of an O&M Plan which stipulates that the repair and maintenance of damaged materials should be performed to protect the health and safety of the building occupants. In the event that building renovation or demolition activities are planned, a thorough asbestos survey to identify asbestos-containing building materials is required in accordance with the EPA NESHAP 40 C.F.R. Part 61 prior to demolition or renovation activities that may disturb suspect ACMs.

2.8.2 Conclusions

The Phase I ESA recommended that a subsurface investigation of the property be undertaken to address concerns related to historical property use and a closed in place UST (closed without sampling).

2.8.3 Proposed (E) Designation

To avoid any potential impacts associated with hazardous materials, the following (E) designation (E-537) for hazardous materials will be placed on Block 704, Lots 1, 12 and 42:

Task 1 – Sampling Protocol
The applicant submits to OER, for review and approval, a Phase 1 of the site along with a soil and groundwater testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented.

If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2 – Remediation Determination and Protocol
A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

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

An OER-approved construction-related health and safety plan would be implemented during evacuation and construction and 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.

All demolition work would be conducted in accordance with applicable requirements for disturbance, handling and disposal of suspect lead-paint and asbestos-containing materials. In addition to the requirements for lead-based paint and asbestos, requirements for petroleum tanks and/or spills would need to be followed, should any be identified.

With this (E) designation in place, significant adverse impacts related to hazardous materials are not expected, and no further analysis is warranted. Therefore, the proposed actions would not result in significant adverse impacts related to hazardous materials.

2.9 TRANSPORTATION

According to the *CEQR Technical Manual*, interrelationships between the key technical areas of the transportation system – traffic, transit, pedestrians, and parking – should be taken into account in any assessment, and the individual technical areas should be separately assessed to determine whether a project has the potential to adversely and significantly affect a specific area of the transportation system. The *CEQR Technical Manual* states that if an analysis is warranted, a preliminary trip generation assessment should be prepared to determine whether a quantified analysis of any technical areas of the transportation system is necessary. Except in unusual circumstances, a further quantified analysis would typically not be needed for a technical area if the proposed development would result in fewer than the following increments:

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

The *CEQR Technical Manual* also states that if the threshold for traffic is surpassed, a parking assessment may also be warranted. This chapter assesses the potential for project–generated vehicle, transit, and pedestrian trips to affect the local transportation network in the study area for the Myrtle Avenue Rezoning, as well as an assessment of transportation safety in the study area.

2.9.1 Traffic

The preliminary screening thresholds in the *CEQR Technical Manual* suggest that any project which generates 50 or more peak hour incremental vehicle trips through a single intersection in any given peak hour is likely to warrant a detailed traffic operations analysis. Conversely, projects that are anticipated to generate fewer than 50 peak hour incremental vehicle trips through a single intersection generally do not warrant detailed traffic assessments, and potential traffic impacts are not expected.

Estimated Trip Generation Characteristics

In order to determine the number of trips generated by the proposed Action, trip generation estimates were prepared for each of the land uses proposed as part of the zoning amendment, namely residential and local retail uses. Under the proposed Action, there would be approximately 337 new dwelling units and approximately 61,400 square feet of new local retail space. The trip generation estimates were prepared using the following sources:

- *CEQR Technical Manual*

- ACS 2015 journey-to-work census data for tracts 55, 57, 59, 153, 155, 157, 159, 161 and 171
- East New York Rezoning Transportation Planning Factors and Travel Demand Forecast Memorandum

Figure 13 illustrates the census tracts, while **Tables 10 and 11** show the estimated person-trips and vehicle-trips, respectively, for the proposed Action during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, as well as key transportation planning assumptions. As shown in **Table 11**, the proposed Action is estimated to generate vehicle trips as follows:

- Weekday AM peak hour: 7 vehicle trips (-17 inbound and 24 outbound)
- Weekday midday peak hour: 79 vehicle trips (39 inbound and 39 outbound)
- Weekday PM peak hour: 46 vehicle trips (30 inbound and 16 outbound)
- Saturday midday peak hour: 42 vehicle trips (24 inbound and 18 outbound)

Based on the vehicle trip generation estimates shown in **Table 11**, the Proposed Action is projected to generate over 50 total peak hour incremental vehicle trips during the weekday midday peak hour. A Level 2 screening was therefore performed to determine if more than 50 vehicular trips would be generated at any intersection.

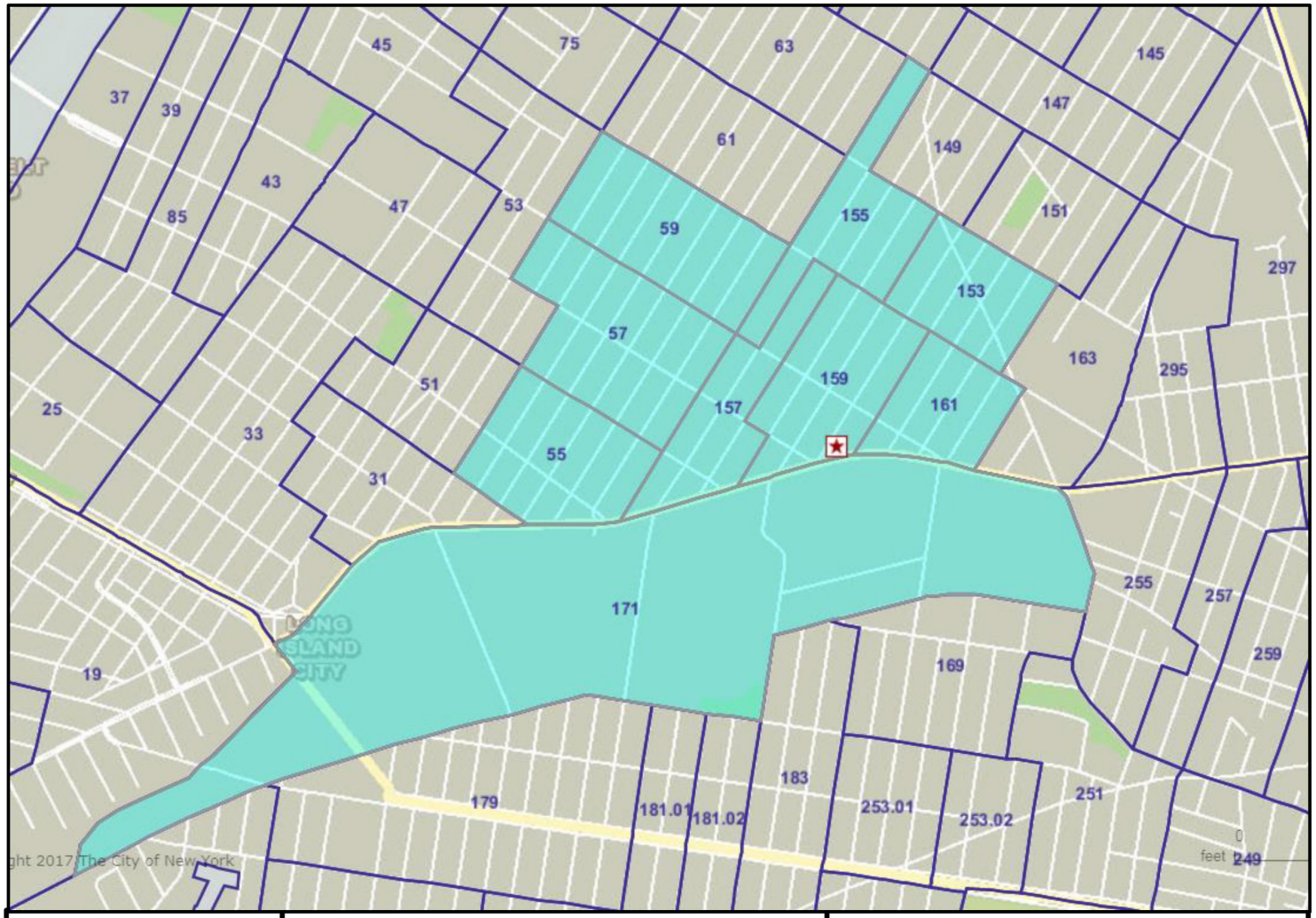
The Level 2 screening analysis was based on the above trip generation estimates and trip distribution patterns from the 2015 ACS Journey to Work census data for the residential component, and 2006-2010 Reverse Journey-to-Work census data for local retail, for Census Tracts 55, 57, 59, 153, 155, 157, 159, 161 and 171. Based on the trip generation and trip distribution estimates, traffic assignments were prepared for the weekday midday peak hour, since the highest vehicle trip generation was projected to occur during this peak hour.

As documented in the Transportation Planning Assumptions Memorandum prepared for this project (November 29, 2017 and Revised May 22, 2018), no intersection is projected to experience 50 or more vehicular trips. Therefore, in accordance with the *CEQR Technical Manual,* no detailed traffic analysis is warranted.

2.9.2 Transit

The nearest subway stations to the site are the Steinway Street station and the 46th Street station both serving the E, M and R subway lines. Several bus lines also serve the area, including the Q66 which runs in both directions along Northern Boulevard; the Q101 route which runs along Steinway Street; and the Q104 bus route which runs along Broadway. **Figure 14** shows the public transportation services in the area. The LIRR Woodside station is located approximately one mile south-east of the site.

The preliminary screening threshold provided in the *CEQR Technical Manual* – where potential impacts may occur and further assessments may be warranted – is 200 transit trips for either subway or public bus riders in a given peak hour. Any number of transit trips below this screening threshold would generally not warrant a detailed transit analysis.



Legend

Project Site

Trip Generation Census Tracts

44-01 Northern Boulevard Rezoning
Environmental Assessment
Long Island City, Queens
Census Tracts
Figure 13

Table 10
Estimated Person-Trip Generation Characteristics

Land Use	Size (sq. ft.)	No. of Units	Weekday Daily Person-Trip Rate	Saturday Person-Trip Rate	Temporal Distribution (%)				Estimated Person-Trip Generation Characteristics			
					Weekday AM	Weekday MD	Weekday PM	Saturday MD	Weekday AM	Weekday MD	Weekday PM	Saturday MD
Residential	286,454	337	8.075 per dwelling unit	9.6 per dwelling unit	10.0%	5.0%	11.0%	8.0%	272	136	299	259
Local Retail	61,400	0	205 per 1000 sf	240 per 1000 sf	3.0%	19.0%	10.0%	10.0%	378	2,392	1,259	1,474
Auto Repair Shop	-46,476	0	19.42 per 1000 sf	19.42 per 1000 sf	13.2%	11.0%	14.2%	10.7%	-119	-99	-128	-97
TOTALS =	**301,378**	**337**						**TOTAL PERSON-TRIPS =**	**531**	**2,428**	**1,430**	**1,636**

Residential trip rates and temporal distribution from *2014 CEQR Technical Manual Table 16-2.*

Local Retail trip rates and temporal distribution from *2014 CEQR Technical Manual Table 16-2.*

Auto Repair Shop trip rates and temporal distribution from *East New York Transportation Planning Factors and Travel Demand Forecast Memorandum*

Table 11
Estimated Vehicle-Trip Generation Characteristics

Land Use	Size (sq. ft.)	No. of Units	Estimated Vehicle-Trip Generation Characteristics											
			Weekday AM			Weekday MD			Weekday PM			Saturday MD		
			Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Residential	286,454	337	46	10	36	24	12	12	49	31	17	42	21	21
Local Retail	61,400	0	22	11	11	134	67	67	70	35	35	59	33	27
Pass-by Trip Reduction =			*6*	*3*	*3*	*33*	*17*	*17*	*17*	*9*	*9*	*15*	*7*	*7*
Net New Trips =			17	8	8	100	50	50	52	26	26	44	25	19
Auto Repair Shop	-46,476	0	-56	-36	-20	-46	-23	-23	-54	-27	-27	-44	-22	-22
TOTALS =	**301,378**	**337**	**7**	**-17**	**24**	**79**	**39**	**39**	**46**	**30**	**16**	**42**	**24**	**18**

Residential Mode splits and auto occupancy (1.2) based on Journey to Work data from **ACS 2015** Census for Tracts 55, 57, 59, 153, 155, 157, 159, 161 and 171.
Residential taxi occupancy (1.30) based on *East New York Transportation Planning Factors and Travel Demand Forecast Memorandum*
Local retail mode splits for Weekday and Weekend based on mode splits provided by NYCDCP. Auto and taxi occupancy rates based on *East New York Transportation Planning Factors and Travel Demand Forecast Memorandum*
Local Retail in/out directional distribution (AM: 50/50; MD: 50/50; PM: 50/50; Sat: 55/45) based on *East New York Transportation Planning Factors and Travel Demand Forecast Memorandum.*
Truck trip rates and temporal distribution based on *2014 CEQR Technical Manual, Table 16-2*.
Auto Repair Mode splits and auto occupancy (1.08) based on Reverse Journey to Work data from **2006-2010 ACS** Data for Tracts 55, 57, 59, 153, 155, 157, 159, 161 and 171.
Auto Repair taxi occupancy (1.30) based on *East New York Transportation Planning Factors and Travel Demand Forecast Memorandum*
Auto Repair in/out directional distribution (AM: 65/35; MD: 50/50; PM: 50/50; Sat: 50/50 based on *East New York Transportation Planning Factors and Travel Demand Forecast Memorandum*
Linked Trip/Pass by Trip Reduction credit of 25% based on *CEQR Technical Manual*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35 AVENUE
34 AVENUE
36 AVENUE
37 AVENUE
NORTHERN BOULEVARD
STEINWAY STREET
BROADWAY
NEWTOWN ROAD
ALLEY
Site
Q101
Q66
Q104
M
R
E train stops at Steinway Street Station during late nights and under special conditions only
0 245 490 980 Feet
Legend
Project Site
Subway Station
M line
R line
E line
F line
Bus Stop (with Route ID)
Parcel
44-01 Northern Boulevard Rezoning
Environmental Assessment
Long Island City, Queens
Public Transportation
Figure 14

Table 12 shows the estimated number of subway and bus person trips projected to be generated by the proposed Action. Less than 200 subway trips are projected to be generated during the weekday AM peak hour (165 trips) and during the weekday midday peak hour (159 trips). More than 200 subway trips are expected to be generated during the weekday PM (216 trips) and Saturday midday peak hours (250 trips). However, with two subway stations (Steinway Street station and 46th Street station) located in close proximity to the site, neither station is expected to experience more than 200 trips during the peak hours. Therefore, in accordance with the *CEQR Technical Manual,* no significant impact on the subway system is anticipated, and no detailed analysis of subway elements is required.

As shown in **Table 12,** the proposed action would generate negative 18 (-18) bus trips during the weekday AM peak hour; 46 bus trips during the weekday midday peak hour; 7 bus trips during the weekday PM peak hour; and 36 bus trips during the Saturday midday peak hour. With multiple bus routes serving the site, including the Q66, Q 101 and Q104 bus routes, no single bus route is expected to experience more than 50 trips, in any direction. Therefore, in accordance with the *CEQR Technical Manual*, no detailed analysis of bus transit is required.

2.9.3 Pedestrians

Pedestrian Trip Generation

The *CEQR Technical Manual* indicates that a detailed pedestrian analysis be performed for projects that are likely to generate 200 or more incremental pedestrian trips during any peak hour on any one pedestrian element (i.e., a crosswalk, street corner, or sidewalk). As shown in **Table 13**, Proposed Action would generate more than 200 new pedestrian during the weekday AM (373 trips), weekday midday (1,660 trips), weekday PM (991 trips) and Saturday midday (1,181 trips) peak hours. These new pedestrian trips include bus riders who walk from the nearby bus stops to the site; subway riders who walk from the subway stations to the site; and employees who live in the neighborhood and walk to the site.

Because the Proposed Action is projected to generate a significantly higher number of trips during the weekday midday peak hour than during the Saturday midday peak hour – and because conflicting traffic volumes are also higher during the weekday midday peak hour than during the Saturday midday peak hour – the weekday midday peak hour is assumed to represent a reasonable worst-case scenario for midday hours and the Saturday midday peak hour was eliminated from further detailed analysis. Therefore, detailed pedestrian analyses focused on operations during the weekday AM, midday, and PM peak hours under existing conditions, Future No-Action conditions, and Future With-Action conditions.

Based on the trip generation estimates shown in **Table 13** and the trip distribution estimates, by mode (described in a later section below), pedestrians were assigned through the study intersections for the weekday midday peak hour, which is the time period with the highest number of site-generated pedestrian trips, for purposes of identifying potential study intersections. As documented in the TPA memorandum, nine intersections were identified for detailed pedestrian analysis.

Table 12
Estimated Subway and Bus Trip Generation

Land Use	Size (sq. ft.)	No. of Units	Estimated Subway & Railroad Trip Generation Characteristics												Estimated Bus Trip Generation Characteristics											
			Weekday AM			Weekday MD			Weekday PM			Saturday MD			Weekday AM			Weekday MD			Weekday PM			Saturday MD		
			Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Residential	286,454	337	185	37	148	93	47	45	204	132	71	176	100	76	7	1	5	3	2	2	7	5	3	6	4	3
Local Retail	61,400	0	15	8	8	96	48	48	50	25	25	103	57	46	11	6	6	72	36	36	38	19	19	59	32	27
Pass-by Trip Reduction =			*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net New Trips =			15	8	8	96	48	48	50	25	25	103	57	46	11	6	6	72	36	36	38	19	19	59	32	27
Auto Repair Shop	-46,476	0	-35	-23	-12	-29	-15	-15	-38	-19	-19	-29	-14	-14	-35	-23	-12	-29	-15	-15	-38	-19	-19	-29	-14	-14
TOTALS =	**301,378**	**337**	**165**	**22**	**143**	**159**	**80**	**78**	**216**	**138**	**77**	**250**	**143**	**108**	**-18**	**-16**	**-1**	**46**	**23**	**23**	**7**	**5**	**2**	**36**	**22**	**15**

Table 13
Estimated Pedestrian-Trip Generation Characteristics

Land Use	Total Estimated Transit and Pedestrian Trip Generation Characteristics											
	Weekday AM			Weekday MD			Weekday PM			Saturday MD		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Residential	221	44	176	110	56	54	243	158	85	210	120	90
Local Retail	336	168	168	2,128	1,064	1,064	1,120	560	560	1,356	746	610
Pass-by Trip Reduction =	*77*	*39*	*39*	*490*	*245*	*245*	*258*	*129*	*129*	*298*	*149*	*149*
Net New Trips =	259	129	129	1,638	819	819	862	431	431	1,057	596	461
Auto Repair Shop	-106	-69	-37	-88	-44	-44	-114	-57	-57	-86	-43	-43
TOTALS =	**373**	**104**	**269**	**1,660**	**831**	**829**	**991**	**532**	**459**	**1,181**	**673**	**508**

Pedestrian Study Intersections

The following nine intersections, as shown in **Figure 15** were identified as the key pedestrian study locations based on their proximity to the proposed rezoning site and the likelihood that they will experience increased concentrations of more than 200 pedestrian trips on any one pedestrian element as a result of the Proposed Action:

- 34th Avenue/Steinway Street
- 34th Avenue/41st Street
- 34th Avenue/42nd Street
- 34th Avenue/43rd Street
- 34th Avenue/44th Street
- 34th Avenue/45th Street
- Northern Boulevard/44th Street
- Northern Boulevard/45th Street
- Northern Boulevard/46th Street

The incremental pedestrian volumes generated on other pedestrian elements beyond these nine intersections during the weekday AM, midday, and PM peak hours are likely to be dispersed to low levels, well below the 200-trip threshold for detailed pedestrian analysis.

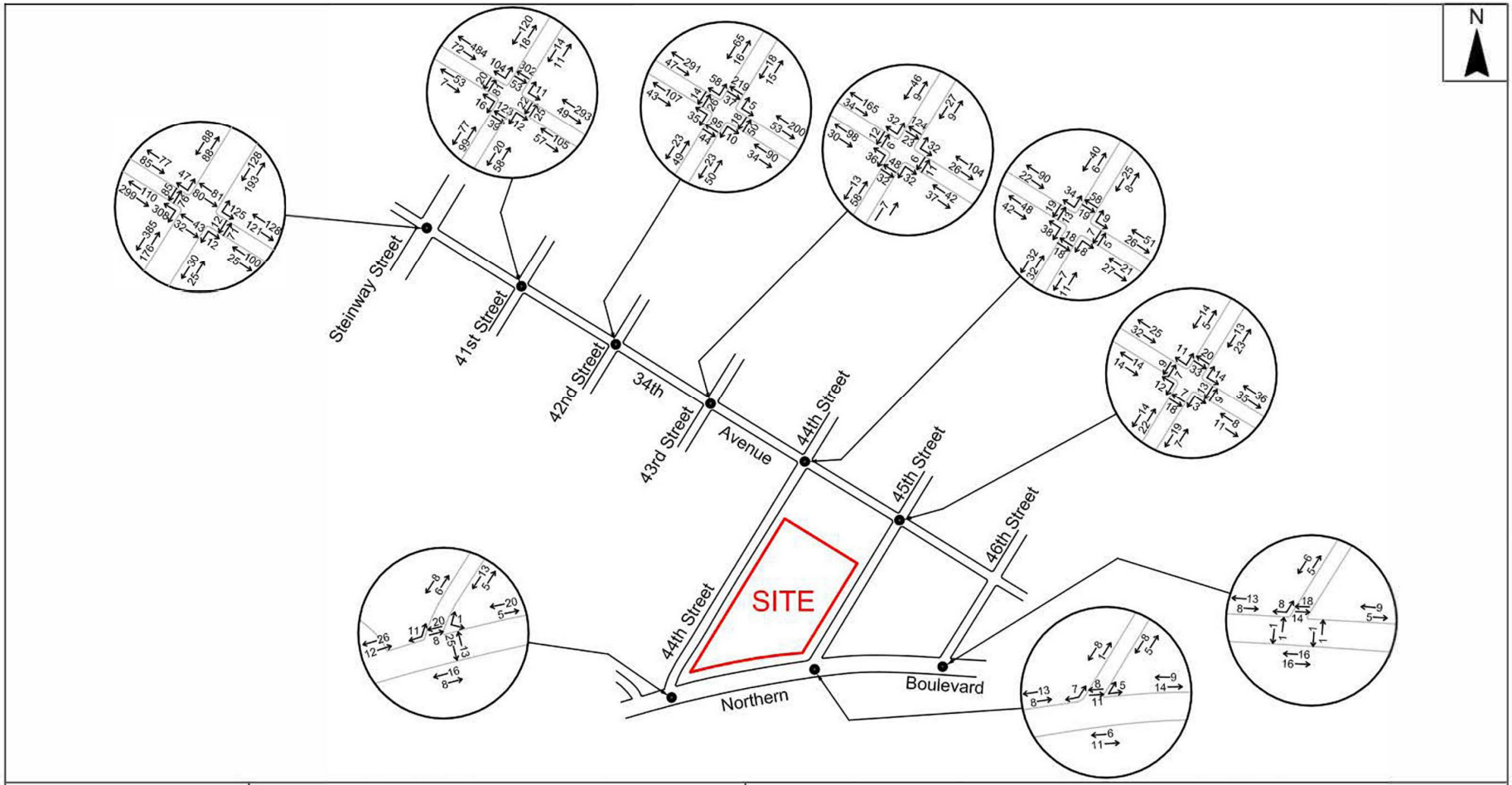
Data Collection

Field counts of pedestrian volumes at all crosswalks, corners, and sidewalks at all nine pedestrian study intersections were conducted using Miovision cameras on Wednesday June 20, 2018 during the weekday AM (7:00 to 9:00 AM), Midday (12:00 to 2:00 PM) and PM (4:00 to 6:00 PM) peak periods. In addition, two intersections were counted on a second weekday (June 21, 2018) to validate the counts on the first day. The data collection effort included counts of the numbers of pedestrians using crosswalks, corners, and sidewalks, as well as counts of the volumes of vehicles making conflicting turning movements through the crosswalks. In addition, the physical characteristics of all pedestrian elements were inventoried in the field. This inventory specifically included:

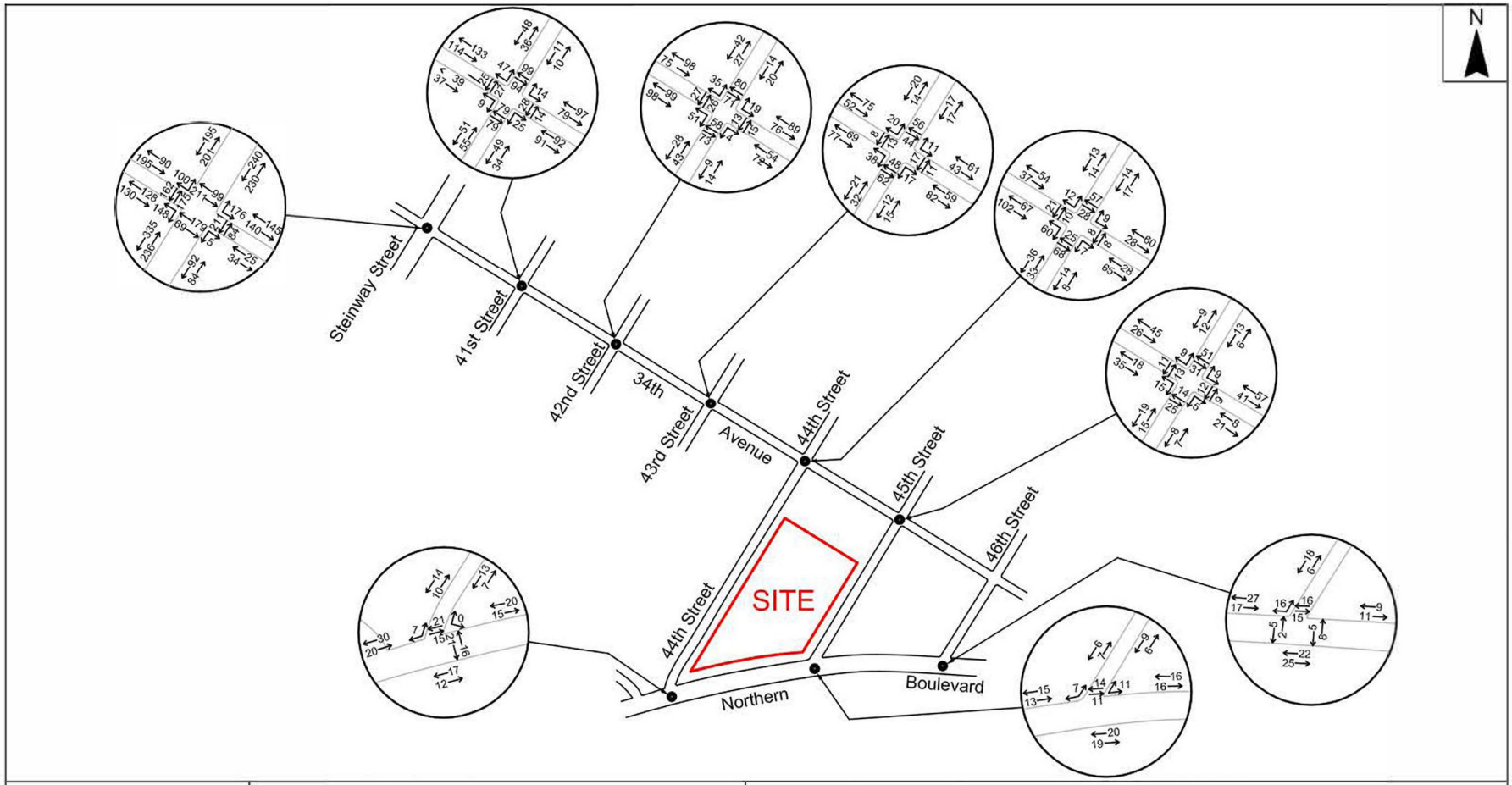
- Crosswalk locations, widths, and lengths;
- Sidewalk locations and widths;
- Curb return radii; and
- Locations and dimensions of street accessories along the sidewalks and on corners (which constitute obstacles to the unimpeded flow of pedestrians).

Existing pedestrian volumes at the study intersections are shown in **Figures 16 through 18** for the weekday AM, midday and PM peak hours, respectively.

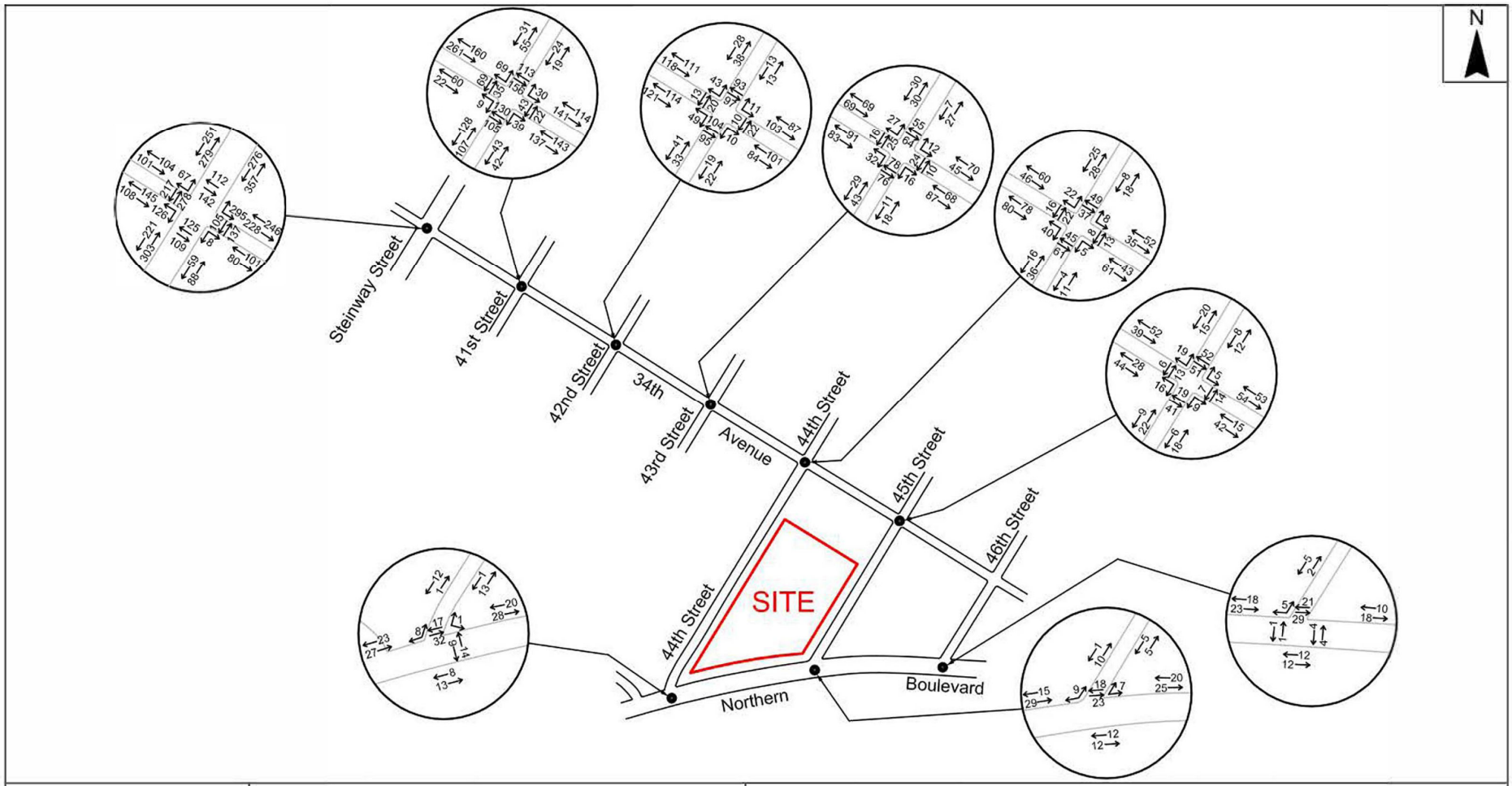

N
Steinway St
37 STREET
38 STREET
35 AVENUE
STEINWAY STREET
41 STREET
42 STREET
43 STREET
ALLEY
ALLEY
ALLEY
ALLEY
Site
34 AVENUE
44 STREET
45 STREET
46 STREET
47 STREET
48 STREET
49 STREET
50 STREET
BROADWAY
46 St
NEWTOWN ROAD
ALLEY
36 AVENUE
NORTHERN BOULEVARD
42 PLACE
48 STREET
0 195 390 780
Feet
Legend
Project Site
Study Intersection
Subway Station
Bus Stop (with Route ID)
Park
Parcel
44-01 Northern Boulevard Rezoning
Environmental Assessment
Long Island City, Queens
Proposed Pedestrian Study
Intersections Figure 15



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2018 Existing Conditions Pedestrian Volumes Weekday AM Peak Hour Figure 16



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2018 Existing Conditions Pedestrian Volumes Weekday Midday Peak Hour Figure 17



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2018 Existing Conditions Pedestrian Volumes Weekday PM Peak Hour Figure 18

Pedestrian Analysis Methodology

The analysis of pedestrian flow involves quantifying the comfort level for pedestrians walking along the sidewalks, waiting to cross the street at intersection corners, and crossing intersection crosswalks. The LOS is calculated using the physical and operational parameters at the intersection including the pedestrian flow rates, the lengths and widths (i.e., area) of the crosswalks, the effective widths of the sidewalks, the area of each street corner, conflicting vehicular traffic volumes that turn through the crosswalk, and the signal timing at the intersection. Crosswalk, street corner, and sidewalk operations will be analyzed using the methodologies described in the *CEQR Technical Manual* and will be conducted using NYCDOT's pedestrian analysis Excel spreadsheet.

The crosswalk and street corner LOS methodologies are based on pedestrian density, as expressed in units of "square feet of space per pedestrian" (square feet/ped), during the peak 15-minute period of the peak hour. The LOS ranges for crosswalks and street corners are as shown below in **Table 14**.

Table 14
LOS Criteria for Crosswalks and Street Corners

LOS	Square Feet of Space per Pedestrian (feet^2/ped)
A	> 60
B	> 40 to 60
C	> 24 to 40
D	> 15 to 24
E	> 8 to 15
F	≤ 8

Source: Adapted from 2014 CEQR Technical Manual, Table 16-10.

The LOS methodology for sidewalks is also based on pedestrian density, as expressed in units of "square feet of space per pedestrian" (feet^2/ped), during the peak 15-minute period of the peak hour. The LOS ranges for sidewalks under platoon flow conditions are as shown below in **Table 15.**

Table 15
LOS Criteria for Sidewalks under Platoon Flow Conditions

LOS	Square Feet of Space per Pedestrian (feet^2/ped)
A	> 530
B	> 90 to 530
C	> 40 to 90
D	> 23 to 40
E	> 11 to 23
F	≤ 11

Source: Adapted from 2014 *CEQR Technical Manual*, Table 16-9.

The results of the pedestrian crosswalk, sidewalk and corner LOS analysis under 2018 Existing Conditions are shown in **Tables 16, 17 and 18,** respectively**.** As shown in the tables, all crosswalks, sidewalks and corners operate at LOS "B" or better under Existing conditions.

Table 16
2018 Existing Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
34th Avenue/Steinway Street	Weekday AM	North	43.6	14.4	280.4	A
		East	40.0	15.8	396.8	A
		South	43.6	15.6	666.6	A
		West	39.6	16.2	293.3	A
	Weekday Midday	North	43.6	14.4	211.1	A
		East	40.0	15.8	86.3	A
		South	43.6	15.6	260.1	A
		West	39.6	16.2	74.9	A
	Weekday PM	North	43.6	14.4	262.5	A
		East	40.0	15.8	102.4	A
		South	43.6	15.6	316.3	A
		West	39.6	16.2	53.2	B
34th Avenue/41st Street	Weekday AM	North	29.8	13.1	97.0	A
		East	40.8	11.6	272.4	A
		South	29.6	15.2	262.4	A
		West	39.8	12.8	151.1	A
	Weekday Midday	North	29.8	13.1	180.5	A
		East	40.8	11.6	335.8	A
		South	29.6	15.2	276.6	A
		West	39.8	12.8	277.2	A
	Weekday PM	North	29.8	13.1	134.7	A
		East	40.8	11.6	225.4	A
		South	29.6	15.2	200.4	A
		West	39.8	12.8	154.7	A
34th Avenue/42nd Street	Weekday AM	North	29.0	12.9	134.7	A
		East	39.2	11.3	204.2	A
		South	29.3	12.2	218.6	A
		West	39.3	12.6	338.9	A
	Weekday Midday	North	29.0	12.9	260.6	A
		East	39.2	11.3	491.9	A
		South	29.3	12.2	233.0	A
		West	39.3	12.6	220.0	A
	Weekday PM	North	29.0	12.9	174.1	A
		East	39.2	11.3	344.9	A
		South	29.3	12.2	174.8	A
		West	39.3	12.6	532.3	A

Table 16
2018 Existing Conditions Pedestrian Crosswalk Analyses (cont'd)

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
34th Avenue/43rd Street	Weekday AM	North	29.0	9.8	182.9	A
		East	39.2	11.1	837.9	A
		South	29.6	11.1	342.0	A
		West	40.4	11.0	511.5	A
	Weekday Midday	North	29.0	9.8	241.5	A
		East	39.2	11.1	388.3	A
		South	29.6	11.1	336.4	A
		West	40.4	11.0	477.9	A
	Weekday PM	North	29.0	9.8	168.6	A
		East	39.2	11.1	414.9	A
		South	29.6	11.1	228.2	A
		West	40.4	11.0	267.2	A
34th Avenue/44th Street	Weekday AM	North	29.4	13.8	556.6	A
		East	39.3	11.0	985.8	A
		South	27.4	11.6	776.4	A
		West	39.3	11.0	404.5	A
	Weekday Midday	North	29.4	13.8	360.7	A
		East	39.3	11.0	675.7	A
		South	27.4	11.6	346.9	A
		West	39.3	11.0	455.5	A
	Weekday PM	North	29.4	13.8	459.0	A
		East	39.3	11.0	534.1	A
		South	27.4	11.6	344.1	A
		West	39.3	11.0	348.4	A
34th Avenue/45th Street	Weekday AM	North	29.4	12.9	637.9	A
		East	39.6	10.3	515.0	A
		South	29.6	14.3	1134.4	A
		West	39.0	11.6	945.9	A
	Weekday Midday	North	29.4	12.9	388.7	A
		East	39.6	10.3	529.7	A
		South	29.6	14.3	976.7	A
		West	39.0	11.6	480.5	A
	Weekday PM	North	29.4	12.9	298.5	A
		East	39.6	10.3	533.6	A
		South	29.6	14.3	524.0	A
		West	39.0	11.6	741.6	A

Table 16
2018 Existing Conditions Pedestrian Crosswalk Analyses (cont'd)

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
Northern Boulevard/44th Street	Weekday AM	North	41.6	10.0	749.1	A
		East	70.8	19.3	374.4	A
	Weekday Midday	North	41.6	10.0	852.5	A
		East	70.8	19.3	460.7	A
	Weekday PM	North	41.6	10.0	632.1	A
		East	70.8	19.3	645.8	A
Northern Boulevard/45th Street	Weekday AM	North	39.6	12.3	3876.0	A
	Weekday Midday	North	39.6	12.3	2520.7	A
	Weekday PM	North	39.6	12.3	1762.9	A
Northern Boulevard/46th Street	Weekday AM	North	32.6	17.8	1726.4	A
		East	73.0	14.4	2355.6	A
		West	70.5	10.6	2988.3	A
	Weekday Midday	North	32.6	17.8	1759.5	A
		East	73.0	14.4	448.7	A
		West	70.5	10.6	1054.5	A
	Weekday PM	North	32.6	17.8	782.4	A
		East	73.0	14.4	864.1	A
		West	70.5	10.6	1833.7	A

Table 17
2018 Existing Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/Steinway Street	Weekday AM	NE	N-S	318.9	B
			E-W	221.6	B
		SE	N-S	964.9	A
			E-W	519.9	B
		SW	N-S	100.4	B
			E-W	253.2	B
		NW	N-S	452.2	B
			E-W	672.0	A
	Weekday Midday	NE	N-S	248.1	B
			E-W	223.2	B
		SE	N-S	344.5	B
			E-W	1250.9	A
		SW	N-S	105.8	B
			E-W	355.8	B
		NW	N-S	257.9	B
			E-W	431.0	B
	Weekday PM	NE	N-S	161.6	B
			E-W	127.6	B
		SE	N-S	418.3	B
			E-W	468.6	B
		SW	N-S	108.8	B
			E-W	334.9	B
		NW	N-S	212.8	B
			E-W	576.5	A
34th Avenue/41st Street	Weekday AM	NE	N-S	3449.9	A
			E-W	416.8	B
		SE	N-S	1021.5	A
			E-W	194.8	B
		SW	N-S	345.5	B
			E-W	1505.5	A
		NW	N-S	320.5	B
			E-W	192.6	B

Table 17
2018 Existing Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/41st Street (cont'd)	Weekday Midday	NE	N-S	2489.1	A
			E-W	849.6	A
		SE	N-S	1099.4	A
			E-W	192.7	B
		SW	N-S	541.2	A
			E-W	884.2	A
		NW	N-S	452.5	B
			E-W	449.7	B
	Weekday PM	NE	N-S	1641.1	A
			E-W	552.3	A
		SE	N-S	1224.7	A
			E-W	142.5	B
		SW	N-S	249.9	B
			E-W	1061.3	A
		NW	N-S	578.6	A
			E-W	263.7	B
34th Avenue/42nd Street	Weekday AM	NE	N-S	1820.3	A
			E-W	413.0	B
		SE	N-S	818.1	A
			E-W	655.3	A
		SW	N-S	765.9	A
			E-W	604.4	A
		NW	N-S	378.3	B
			E-W	266.1	B
	Weekday Midday	NE	N-S	1864.9	A
			E-W	648.7	A
		SE	N-S	1906.4	A
			E-W	811.0	A
		SW	N-S	535.2	A
			E-W	447.6	B
		NW	N-S	370.1	B
			E-W	507.7	B

Table 17
2018 Existing Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/42nd Street (cont'd)	Weekday PM	NE	N-S	3508.3	A
			E-W	469.5	B
		SE	N-S	1069.4	A
			E-W	612.2	A
		SW	N-S	704.9	A
			E-W	454.5	B
		NW	N-S	422.1	B
			E-W	351.2	B
34th Avenue/43rd Street	Weekday AM	NE	N-S	2379.0	A
			E-W	909.7	A
		SE	N-S	1755.0	A
			E-W	1284.2	A
		SW	N-S	783.0	A
			E-W	731.0	A
		NW	N-S	1083.9	A
			E-W	569.8	A
	Weekday Midday	NE	N-S	2053.9	A
			E-W	1121.9	A
		SE	N-S	1680.0	A
			E-W	841.0	A
		SW	N-S	928.0	A
			E-W	750.5	A
		NW	N-S	1448.5	A
			E-W	765.3	A
	Weekday PM	NE	N-S	2557.7	A
			E-W	904.9	A
		SE	N-S	1843.4	A
			E-W	671.5	A
		SW	N-S	742.5	A
			E-W	551.9	A
		NW	N-S	1036.8	A
			E-W	704.3	A

Table 17
2018 Existing Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/44th Street	Weekday AM	NE	N-S	1570.9	A
			E-W	1391.1	A
		SE	N-S	1717.2	A
			E-W	2311.9	A
		SW	N-S	961.8	A
			E-W	960.5	A
		NW	N-S	1096.9	A
			E-W	918.0	A
	Weekday Midday	NE	N-S	1567.7	A
			E-W	783.5	A
		SE	N-S	1431.0	A
			E-W	1256.8	A
		SW	N-S	844.6	A
			E-W	593.0	A
		NW	N-S	1518.4	A
			E-W	861.5	A
	Weekday PM	NE	N-S	2056.1	A
			E-W	1217.0	A
		SE	N-S	2480.4	A
			E-W	1237.7	A
		SW	N-S	1168.0	A
			E-W	634.3	A
		NW	N-S	966.9	A
			E-W	824.4	A
34th Avenue/45th Street	Weekday AM	NE	N-S	1326.0	A
			E-W	1538.6	A
		SE	N-S	2421.7	A
			E-W	4244.4	A
		SW	N-S	1989.0	A
			E-W	3182.1	A
		NW	N-S	2529.5	A
			E-W	1688.2	A

Table 17
2018 Existing Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/45th Street (cont'd)	Weekday Midday	NE	N-S	1546.1	A
			E-W	1009.8	A
		SE	N-S	4121.3	A
			E-W	2927.2	A
		SW	N-S	1755.0	A
			E-W	2622.6	A
		NW	N-S	2654.7	A
			E-W	1104.3	A
	Weekday PM	NE	N-S	1872.7	A
			E-W	756.7	A
		SE	N-S	2051.1	A
			E-W	1613.4	A
		SW	N-S	1273.3	A
			E-W	1584.0	A
		NW	N-S	1592.8	A
			E-W	926.9	A
Northern Boulevard/44th Street	Weekday AM	NE	N-S	1458.0	A
			E-W	1036.8	A
		SE	E-W	1692.0	A
		NW	N-S	3780.0	A
			E-W	2291.9	A
	Weekday Midday	NE	N-S	1530.9	A
			E-W	1073.8	A
		SE	E-W	2730.5	A
		NW	N-S	2381.4	A
			E-W	1714.6	A
	Weekday PM	NE	N-S	2048.1	A
			E-W	850.5	A
		SE	E-W	2465.5	A
		NW	N-S	4477.8	A
			E-W	1714.6	A
Northern Boulevard/45th Street	Weekday AM	NE	N-S	5346.0	A
			E-W	1636.9	A
		SE	E-W	4069.1	A
		NW	N-S	4824.0	A
			E-W	3125.3	A

Table 17
2018 Existing Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
Northern Boulevard/45th Street (cont'd)	Weekday Midday	NE	N-S	5287.7	A
			E-W	1876.8	A
		SE	E-W	2355.2	A
		NW	N-S	2791.4	A
			E-W	2567.3	A
	Weekday PM	NE	N-S	7490.9	A
			E-W	1414.3	A
		SE	E-W	3213.0	A
		NW	N-S	1826.2	A
			E-W	1472.6	A
Northern Boulevard/46th Street	Weekday AM	NE	E-W	4179.6	A
		SE	E-W	1469.8	A
		NW	N-S	6872.7	A
			E-W	2534.9	A
	Weekday Midday	NE	E-W	3946.3	A
		SE	E-W	1123.9	A
		NW	N-S	2587.5	A
			E-W	1187.0	A
	Weekday PM	NE	E-W	2916.0	A
		SE	E-W	1628.1	A
		NW	N-S	8485.7	A
			E-W	1396.3	A

Table 18
2018 Existing Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet^2/ped	LOS
34th Avenue/Steinway Street	Weekday AM	Northwest	635.2	A
		Northeast	530.1	A
		Southwest	398.5	A
		Southeast	779.6	A
	Weekday Midday	Northwest	315.3	A
		Northeast	289.0	A
		Southwest	276.0	A
		Southeast	298.3	A
	Weekday PM	Northwest	306.7	A
		Northeast	282.1	A
		Southwest	246.9	A
		Southeast	341.9	A
34th Avenue/41st Street	Weekday AM	Northwest	303.6	A
		Northeast	427.4	A
		Southwest	479.9	A
		Southeast	682.3	A
	Weekday Midday	Northwest	584.8	A
		Northeast	710.8	A
		Southwest	614.6	A
		Southeast	704.5	A
	Weekday PM	Northwest	390.6	A
		Northeast	498.2	A
		Southwest	428.3	A
		Southeast	515.0	A
34th Avenue/42nd Street	Weekday AM	Northwest	289.6	A
		Northeast	501.2	A
		Southwest	774.9	A
		Southeast	761.2	A
	Weekday Midday	Northwest	400.2	A
		Northeast	882.2	A
		Southwest	607.4	A
		Southeast	995.1	A
	Weekday PM	Northwest	380.6	A
		Northeast	671.3	A
		Southwest	680.5	A
		Southeast	734.5	A

Table 18
2018 Existing Conditions Pedestrian Corner Analyses (cont'd)

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet^2/ped	LOS
34th Avenue/43rd Street	Weekday AM	Northwest	771.5	A
		Northeast	1510.8	A
		Southwest	973.0	A
		Southeast	1349.2	A
	Weekday Midday	Northwest	973.5	A
		Northeast	1564.6	A
		Southwest	1030.2	A
		Southeast	1149.5	A
	Weekday PM	Northwest	679.9	A
		Northeast	1307.9	A
		Southwest	735.4	A
		Southeast	878.1	A
34th Avenue/44th Street	Weekday AM	Northwest	985.2	A
		Northeast	1641.4	A
		Southwest	1491.2	A
		Southeast	2496.8	A
	Weekday Midday	Northwest	900.1	A
		Northeast	1191.3	A
		Southwest	928.2	A
		Southeast	1339.2	A
	Weekday PM	Northwest	866.8	A
		Northeast	1387.7	A
		Southwest	986.6	A
		Southeast	1276.2	A
34th Avenue/45tht Street	Weekday AM	Northwest	2043.6	A
		Northeast	1706.0	A
		Southwest	2684.4	A
		Southeast	2410.7	A
	Weekday Midday	Northwest	1324.4	A
		Northeast	1232.8	A
		Southwest	1893.1	A
		Southeast	2160.9	A
	Weekday PM	Northwest	1108.3	A
		Northeast	1132.2	A
		Southwest	1485.9	A
		Southeast	1378.2	A

Table 18
2018 Existing Conditions Pedestrian Corner Analyses (cont'd)

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet^2/ped	LOS
Northern Boulevard/44th Street	Weekday AM	Northeast	731.1	A
	Weekday Midday	Northeast	895.5	A
	Weekday PM	Northeast	848.8	A
Northern Boulevard/46th Street	Weekday AM	Northwest	2513.4	A
		Northeast	2671.6	A
	Weekday Midday	Northwest	1643.1	A
		Northeast	1646.2	A
	Weekday PM	Northwest	1380.4	A
		Northeast	1162.1	A

Future No-Action Condition

Pedestrian activity in the study area was projected for the Future No-Action Condition and the Future With-Action Condition. To establish Future No-Action pedestrian volumes, the 2018 baseline traffic volumes were increased by applying a compounded background growth rate of 1.0075 percent in accordance with the growth recommendations for "Long Island City" in the *CEQR Technical Manual*[14].

The Queens Office of DCP, as well as NYCDOT and the local community board were all contacted for information on other No-Action projects. No other No-Action projects were identified. Therefore, the Future No-Action pedestrian volumes comprised of the Existing volumes plus the background growth.

Figures 19 through 21 show the Future No-Action pedestrian volumes during the AM, midday and PM peak hours, respectively. The crosswalk, sidewalk and corner LOS analyses at the study intersections were repeated using the projected Future No-Action Condition pedestrian volumes. The results of the pedestrian crosswalk and sidewalk LOS analysis in the Future No-Action condition are shown in **Tables 19, 20, and 21**, respectively**.** As shown in the tables, all crosswalks, sidewalks and corners are projected to operate at LOS "B" or better under the Future No-Action condition.

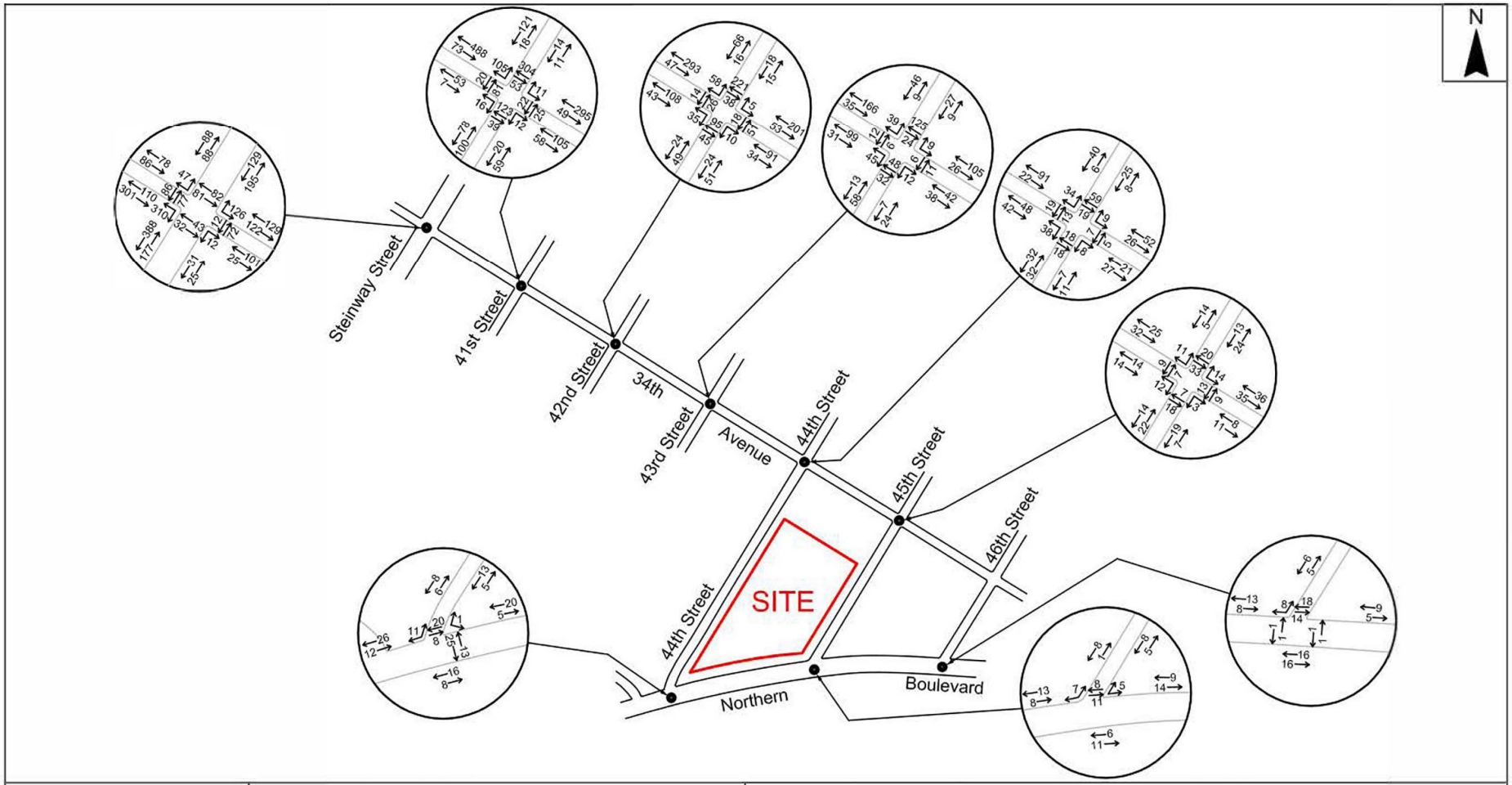
Future With-Action Condition

Trip Generation

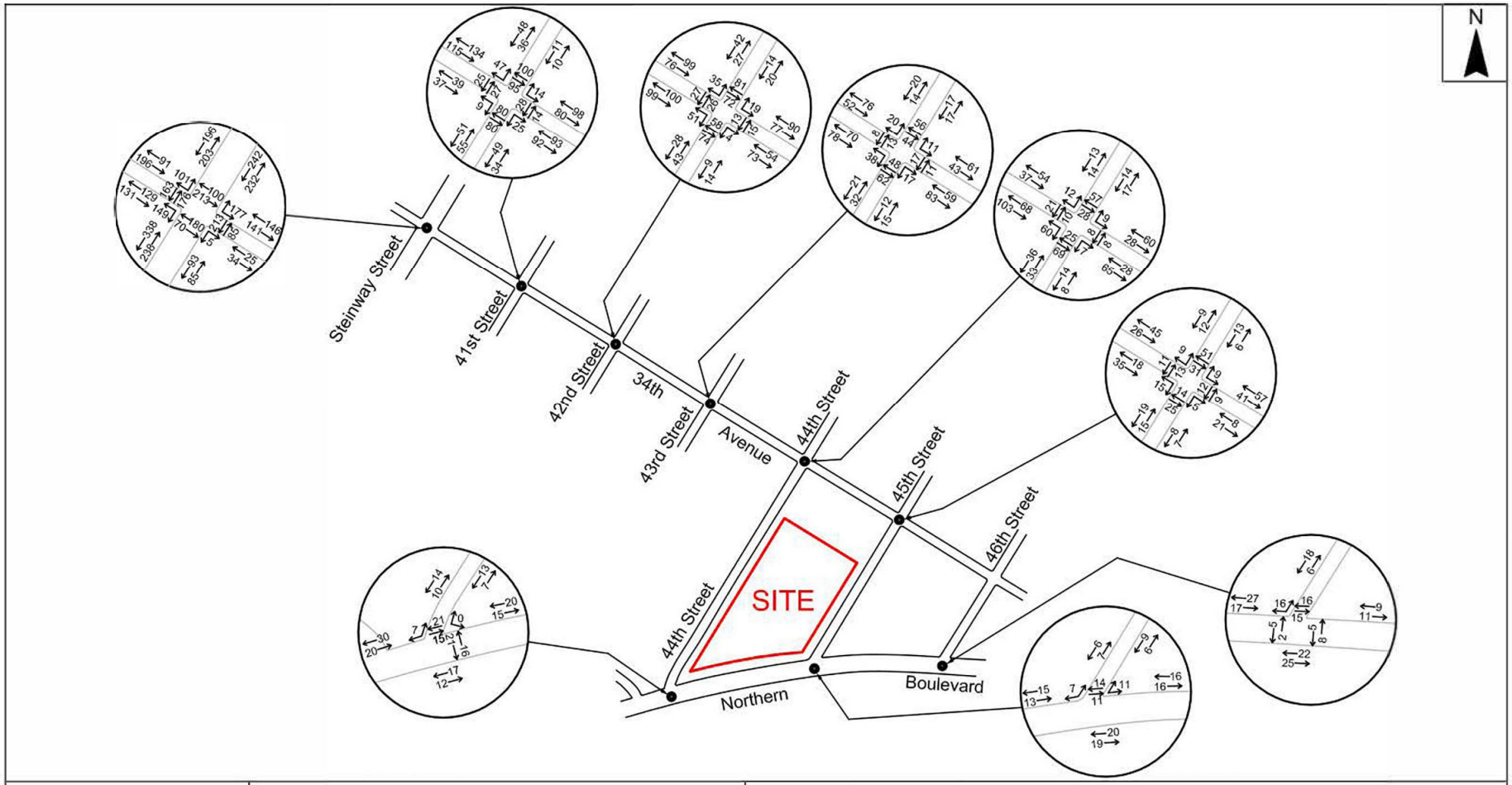
As shown above in Table 8, Proposed Action would generate 373 trips during the weekday AM peak hour; 1,660 trips during the weekday midday peak hour; 991 trips during the weekday PM peak hour; and 1,181 trips during the Saturday midday peak hour. These new pedestrian trips include bus riders who walk from the nearby bus stops to the site; subway riders who walk from the subway stations to the site; and employees who live in the neighborhood and walk to the site.

Because the proposed Action is projected to generate a significantly higher number of trips during the weekday midday peak hour than during the Saturday midday peak hour—and because conflicting traffic volumes are also higher during the weekday midday peak hour than during the Saturday midday peak hour—the weekday midday peak hour is assumed to represent a reasonable worst-case scenario for midday hours and the Saturday midday peak hour was eliminated from further detailed analysis.

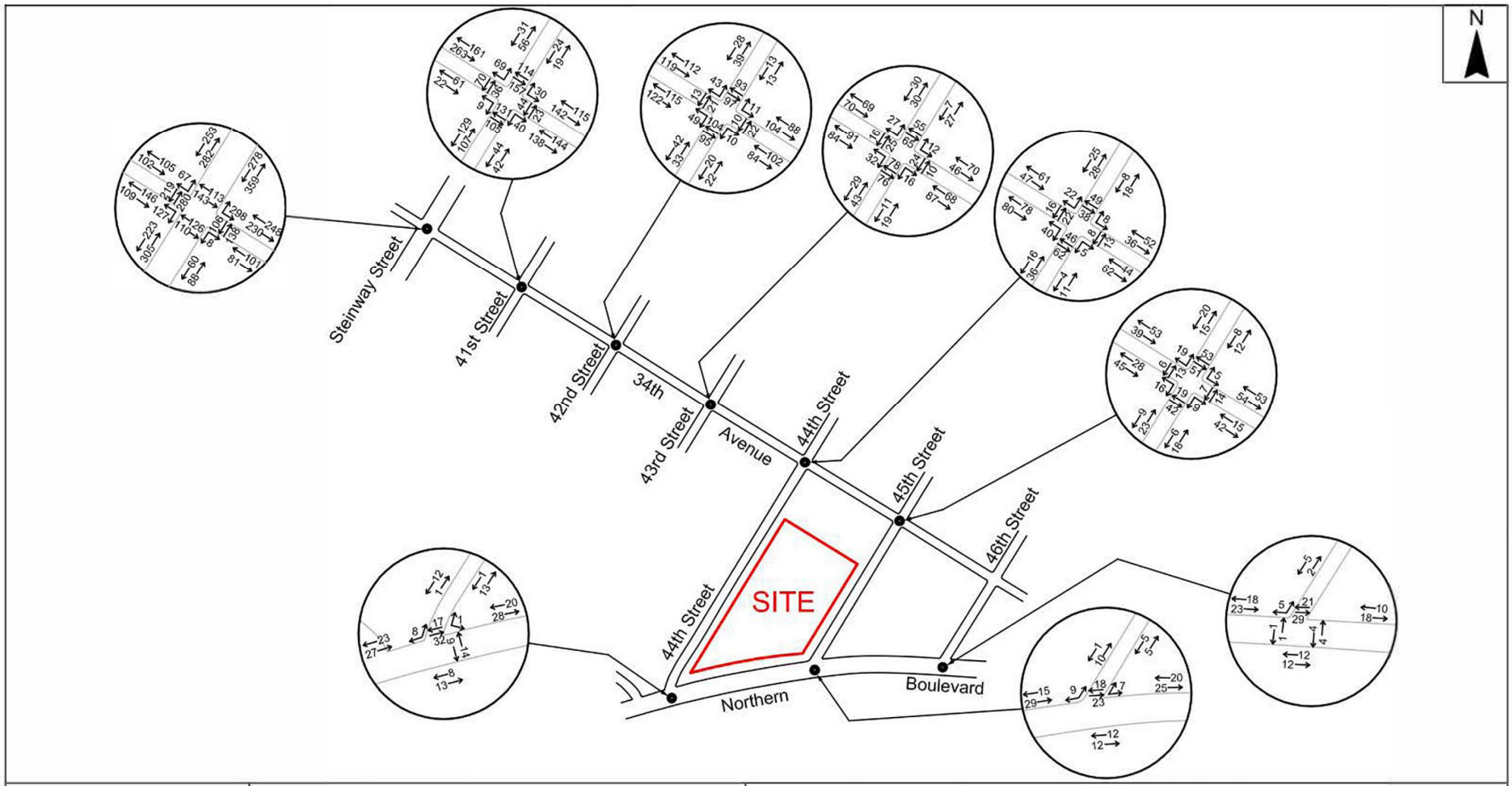
[14] A compounded growth rate of 1.0075% is calculated based on 0.25% annual growth from 2018 to 2021 in accordance with *CEQR Technical Manual* guidelines.



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2021 No-Action Conditions Pedestrian Volumes Weekday AM Peak Hour Figure 19



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2021 No-Action Conditions Pedestrian Volumes Weekday Midday Peak Hour Figure 20



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2021 No-Action Conditions Pedestrian Volumes Weekday PM Peak Hour Figure 21

Table 19
2021 Future No-Action Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
34th Avenue/Steinway Street	Weekday AM	North	43.6	14.4	276.9	A
		East	40.0	15.8	391.6	A
		South	43.6	15.6	666.6	A
		West	39.6	16.2	289.6	A
	Weekday Midday	North	43.6	14.4	209.0	A
		East	40.0	15.8	85.4	A
		South	43.6	15.6	258.0	A
		West	39.6	16.2	74.5	A
	Weekday PM	North	43.6	14.4	260.4	A
		East	40.0	15.8	101.5	A
		South	43.6	15.6	313.6	A
		West	39.6	16.2	52.7	B
34th Avenue/41st Street	Weekday AM	North	29.8	13.1	96.5	A
		East	40.8	11.6	272.4	A
		South	29.6	15.2	262.4	A
		West	39.8	12.8	151.1	A
	Weekday Midday	North	29.8	13.1	178.6	A
		East	40.8	11.6	335.8	A
		South	29.6	15.2	273.1	A
		West	39.8	12.8	277.2	A
	Weekday PM	North	29.8	13.1	133.7	A
		East	40.8	11.6	218.6	A
		South	29.6	15.2	199.6	A
		West	39.8	12.8	151.9	A
34th Avenue/42nd Street	Weekday AM	North	29.0	12.9	133.0	A
		East	39.2	11.3	201.1	A
		South	29.3	12.2	217.0	A
		West	39.3	12.6	338.9	A
	Weekday Midday	North	29.0	12.9	257.2	A
		East	39.2	11.3	491.9	A
		South	29.3	12.2	231.5	A
		West	39.3	12.6	220.0	A
	Weekday PM	North	29.0	12.9	174.1	A
		East	39.2	11.3	344.9	A
		South	29.3	12.2	174.8	A
		West	39.3	12.6	517.7	A

Table 19
2021 Future No-Action Conditions Pedestrian Crosswalk Analyses (cont'd)

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
34th Avenue/43rd Street	Weekday AM	North	29.0	9.8	180.0	A
		East	39.2	11.1	837.9	A
		South	29.6	11.1	342.0	A
		West	40.4	11.0	511.5	A
	Weekday Midday	North	29.0	9.8	241.5	A
		East	39.2	11.1	388.3	A
		South	29.6	11.1	336.4	A
		West	40.4	11.0	477.9	A
	Weekday PM	North	29.0	9.8	167.2	A
		East	39.2	11.1	414.9	A
		South	29.6	11.1	228.2	A
		West	40.4	11.0	266.8	A
34th Avenue/44th Street	Weekday AM	North	29.4	13.8	549.9	A
		East	39.3	11.0	985.8	A
		South	27.4	11.6	776.4	A
		West	39.3	11.0	404.5	A
	Weekday Midday	North	29.4	13.8	360.7	A
		East	39.3	11.0	675.7	A
		South	27.4	11.6	343.5	A
		West	39.3	11.0	455.5	A
	Weekday PM	North	29.4	13.8	453.3	A
		East	39.3	11.0	534.1	A
		South	27.4	11.6	337.8	A
		West	39.3	11.0	348.4	A
34th Avenue/45th Street	Weekday AM	North	29.4	12.9	637.9	A
		East	39.6	10.3	515.0	A
		South	29.6	14.3	1134.4	A
		West	39.0	11.6	945.9	A
	Weekday Midday	North	29.4	12.9	388.7	A
		East	39.6	10.3	529.7	A
		South	29.6	14.3	976.7	A
		West	39.0	11.6	480.5	A
	Weekday PM	North	29.4	12.9	295.5	A
		East	39.6	10.3	533.6	A
		South	29.6	14.3	515.4	A
		West	39.0	11.6	741.6	A

Table 19
2021 Future No-Action Conditions Pedestrian Crosswalk Analyses (cont'd)

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
Northern Boulevard/44th Street	Weekday AM	North	41.6	10.0	749.1	A
		East	70.8	19.3	374.0	A
	Weekday Midday	North	41.6	10.0	852.5	A
		East	70.8	19.3	460.2	A
	Weekday PM	North	41.6	10.0	632.1	A
		East	70.8	19.3	645.1	A
Northern Boulevard/45th Street	Weekday AM	North	39.6	12.3	3012.2	A
	Weekday Midday	North	39.6	12.3	2520.0	A
	Weekday PM	North	39.6	12.3	1762.4	A
Northern Boulevard/46th Street	Weekday AM	North	32.6	17.8	1726.4	A
		East	73.0	14.4	2353.0	A
		West	70.5	10.6	2988.3	A
	Weekday Midday	North	32.6	17.8	1759.5	A
		East	73.0	14.4	448.7	A
		West	70.5	10.6	1054.5	A
	Weekday PM	North	32.6	17.8	782.4	A
		East	73.0	14.4	864.1	A
		West	70.5	10.6	1833.7	A

Table 20
2021 Future No-Action Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet²/ped	LOS
34th Avenue/Steinway Street	Weekday AM	NE	N-S	315.9	B
			E-W	219.8	B
		SE	N-S	947.7	A
			E-W	515.8	B
		SW	N-S	99.7	B
			E-W	252.0	B
		NW	N-S	452.2	B
			E-W	663.8	A
	Weekday Midday	NE	N-S	246.0	B
			E-W	221.6	B
		SE	N-S	340.7	B
			E-W	1250.9	A
		SW	N-S	104.9	B
			E-W	353.1	B
		NW	N-S	256.0	B
			E-W	428.0	B
	Weekday PM	NE	N-S	160.6	B
			E-W	126.5	B
		SE	N-S	415.4	B
			E-W	466.0	B
		SW	N-S	108.0	B
			E-W	332.3	B
		NW	N-S	210.8	B
			E-W	570.9	A
34th Avenue/41st Street	Weekday AM	NE	N-S	3449.9	A
			E-W	414.4	B
		SE	N-S	1008.6	A
			E-W	193.6	B
		SW	N-S	341.6	B
			E-W	1505.5	A
		NW	N-S	318.2	B
			E-W	190.9	B

Table 20
2021 Future No-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet²/ped	LOS
34th Avenue/41st Street (cont'd)	Weekday Midday	NE	N-S	2489.1	A
			E-W	840.1	A
		SE	N-S	1099.4	A
			E-W	190.6	B
		SW	N-S	541.2	A
			E-W	884.2	A
		NW	N-S	452.5	B
			E-W	446.0	B
	Weekday PM	NE	N-S	1641.1	A
			E-W	548.0	A
		SE	N-S	1210.5	A
			E-W	141.4	B
		SW	N-S	248.8	B
			E-W	1048.5	A
		NW	N-S	572.0	A
			E-W	261.9	B
34th Avenue/42nd Street	Weekday AM	NE	N-S	1820.3	A
			E-W	411.4	B
		SE	N-S	796.3	A
			E-W	650.0	A
		SW	N-S	765.9	A
			E-W	600.4	A
		NW	N-S	373.7	B
			E-W	264.5	B
	Weekday Midday	NE	N-S	1864.9	A
			E-W	641.0	A
		SE	N-S	1906.4	A
			E-W	804.6	A
		SW	N-S	535.2	A
			E-W	443.1	B
		NW	N-S	370.1	B
			E-W	501.9	B

Table 20
2021 Future No-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet²/ped	LOS
34th Avenue/42nd Street (cont'd)	Weekday PM	NE	N-S	3508.3	A
			E-W	464.6	B
		SE	N-S	1044.0	A
			E-W	608.9	A
		SW	N-S	695.5	A
			E-W	450.6	B
		NW	N-S	415.8	B
			E-W	348.1	B
34th Avenue/43rd Street	Weekday AM	NE	N-S	2379.0	A
			E-W	902.7	A
		SE	N-S	1698.4	A
			E-W	1268.2	A
		SW	N-S	783.0	A
			E-W	719.7	A
		NW	N-S	1083.9	A
			E-W	564.1	A
	Weekday Midday	NE	N-S	2053.9	A
			E-W	1121.9	A
		SE	N-S	1680.0	A
			E-W	835.1	A
		SW	N-S	928.0	A
			E-W	740.3	A
		NW	N-S	1448.5	A
			E-W	759.3	A
	Weekday PM	NE	N-S	2557.7	A
			E-W	897.1	A
		SE	N-S	1782.0	A
			E-W	671.5	A
		SW	N-S	742.5	A
			E-W	548.7	A
		NW	N-S	1036.8	A
			E-W	699.2	A

Table 20
2021 Future No-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet²/ped	LOS
34th Avenue/44th Street	Weekday AM	NE	N-S	1570.9	A
			E-W	1373.2	A
		SE	N-S	1717.2	A
			E-W	2311.9	A
		SW	N-S	961.8	A
			E-W	960.5	A
		NW	N-S	1096.9	A
			E-W	909.8	A
	Weekday Midday	NE	N-S	1567.7	A
			E-W	783.5	A
		SE	N-S	1431.0	A
			E-W	1256.8	A
		SW	N-S	844.6	A
			E-W	586.1	A
		NW	N-S	1518.4	A
			E-W	861.5	A
	Weekday PM	NE	N-S	2056.1	A
			E-W	1203.2	A
		SE	N-S	2480.4	A
			E-W	1214.4	A
		SW	N-S	1168.0	A
			E-W	634.3	A
		NW	N-S	966.9	A
			E-W	809.2	A
34th Avenue/45th Street	Weekday AM	NE	N-S	1290.1	A
			E-W	1538.6	A
		SE	N-S	2421.7	A
			E-W	4244.7	A
		SW	N-S	1989.0	A
			E-W	3182.1	A
		NW	N-S	2529.5	A
			E-W	1688.2	A

Table 20
2021 Future No-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet²/ped	LOS
34th Avenue/45th Street (cont'd)	Weekday Midday	NE	N-S	1546.1	A
			E-W	1009.8	A
		SE	N-S	4121.3	A
			E-W	2927.2	A
		SW	N-S	1755.0	A
			E-W	2622.6	A
		NW	N-S	2654.7	A
			E-W	1104.3	A
	Weekday PM	NE	N-S	1872.7	A
			E-W	756.7	A
		SE	N-S	2051.1	A
			E-W	1613.4	A
		SW	N-S	1273.3	A
			E-W	1584.0	A
		NW	N-S	1592.8	A
			E-W	916.8	A
Northern Boulevard/44th Street	Weekday AM	NE	N-S	1458.0	A
			E-W	1036.8	A
		SE	E-W	1692.0	A
		NW	N-S	3780.0	A
			E-W	2353.8	A
	Weekday Midday	NE	N-S	1530.9	A
			E-W	1073.8	A
		SE	E-W	2730.5	A
		NW	N-S	2381.4	A
			E-W	1714.6	A
	Weekday PM	NE	N-S	2048.1	A
			E-W	850.5	A
		SE	E-W	2465.5	A
		NW	N-S	4477.8	A
			E-W	1714.6	A
Northern Boulevard/45th Street	Weekday AM	NE	N-S	6214.1	A
			E-W	1636.9	A
		SE	E-W	4069.1	A
		NW	N-S	4824.0	A
			E-W	3155.6	A

Table 20
2021 Future No-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet²/ped	LOS
Northern Boulevard/45th Street (cont'd)	Weekday Midday	NE	N-S	5287.7	A
			E-W	1876.8	A
		SE	E-W	2355.2	A
		NW	N-S	2791.4	A
			E-W	2567.3	A
	Weekday PM	NE	N-S	7490.9	A
			E-W	1414.3	A
		SE	E-W	3213.0	A
		NW	N-S	1826.2	A
			E-W	1506.1	A
Northern Boulevard/46th Street	Weekday AM	NE	E-W	4179.6	A
		SE	E-W	1469.8	A
		NW	N-S	6872.7	A
			E-W	2534.9	A
	Weekday Midday	NE	E-W	3946.3	A
		SE	E-W	1123.9	A
		NW	N-S	2587.5	A
			E-W	1187.0	A
	Weekday PM	NE	E-W	2916.0	A
		SE	E-W	1628.1	A
		NW	N-S	8485.7	A
			E-W	1396.3	A

Table 21
2021 Future No-Action Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet²/ped	LOS
34th Avenue/Steinway Street	Weekday AM	Northwest	628.3	A
		Northeast	524.2	A
		Southwest	395.5	A
		Southeast	773.7	A
	Weekday Midday	Northwest	312.8	A
		Northeast	286.4	A
		Southwest	274.1	A
		Southeast	295.5	A
	Weekday PM	Northwest	304.4	A
		Northeast	279.5	A
		Southwest	244.8	A
		Southeast	339.0	A
34th Avenue/41st Street	Weekday AM	Northwest	302.1	A
		Northeast	425.5	A
		Southwest	479.9	A
		Southeast	682.3	A
	Weekday Midday	Northwest	581.1	A
		Northeast	705.4	A
		Southwest	609.6	A
		Southeast	698.8	A
	Weekday PM	Northwest	387.2	A
		Northeast	492.4	A
		Southwest	424.4	A
		Southeast	508.2	A
34th Avenue/42nd Street	Weekday AM	Northwest	287.0	A
		Northeast	494.9	A
		Southwest	771.2	A
		Southeast	754.1	A
	Weekday Midday	Northwest	397.5	A
		Northeast	874.1	A
		Southwest	605.6	A
		Southeast	990.2	A
	Weekday PM	Northwest	379.4	A
		Northeast	671.3	A
		Southwest	678.0	A
		Southeast	734.5	A

Table 21
2021 Future No-Action Conditions Pedestrian Corner Analyses (cont'd)

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet²/ped	LOS
34th Avenue/43rd Street	Weekday AM	Northwest	763.3	A
		Northeast	1491.3	A
		Southwest	973.0	A
		Southeast	1349.2	A
	Weekday Midday	Northwest	973.5	A
		Northeast	1564.6	A
		Southwest	1030.2	A
		Southeast	1149.5	A
	Weekday PM	Northwest	676.1	A
		Northeast	1299.6	A
		Southwest	735.4	A
		Southeast	878.1	A
34th Avenue/44th Street	Weekday AM	Northwest	979.2	A
		Northeast	1627.9	A
		Southwest	1491.2	A
		Southeast	2496.8	A
	Weekday Midday	Northwest	900.1	A
		Northeast	1191.3	A
		Southwest	923.8	A
		Southeast	1329.6	A
	Weekday PM	Northwest	860.9	A
		Northeast	1375.7	A
		Southwest	976.8	A
		Southeast	1258.9	A
34th Avenue/45tht Street	Weekday AM	Northwest	2043.6	A
		Northeast	1706.0	A
		Southwest	2684.4	A
		Southeast	2410.7	A
	Weekday Midday	Northwest	1324.4	A
		Northeast	1232.8	A
		Southwest	1893.1	A
		Southeast	2160.9	A
	Weekday PM	Northwest	1100.3	A
		Northeast	1123.6	A
		Southwest	1470.8	A
		Southeast	1364.2	A

Table 21
2021 Future No-Action Conditions Pedestrian Corner Analyses (cont'd)

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet²/ped	LOS
Northern Boulevard/44th Street	Weekday AM	Northeast	731.1	A
	Weekday Midday	Northeast	895.5	A
	Weekday PM	Northeast	848.8	A
Northern Boulevard/46th Street	Weekday AM	Northwest	2513.4	A
		Northeast	2671.6	A
	Weekday Midday	Northwest	1643.1	A
		Northeast	1646.2	A
	Weekday PM	Northwest	1380.4	A
		Northeast	1162.1	A

Pedestrian Trip Distribution and Trip Assignments

The following assumptions were made for the trip distribution patterns for pedestrians traveling to and from the proposed rezoning sites:

- *Subway trips* – All subway riders were assumed to walk to and from the Steinway Street and 46th Street subway stations. Based on a comment from New York City Transit, the following assumptions were used for assigning subway trips:
    - All trips to/from Manhattan were assigned to the Steinway Street subway station
    - 85 percent of trips to/from Eastern Queens were assigned to the 46th Street subway station
    - 15 percent of trips to/from Eastern Queens were assigned to the 46th Street subway station
    - At the Steinway Street subway station:
        - 75% entries and 90% exits would use stair M2-S2 at the northeast corner
        - 25% entries and 10% exits would use stair S1-M1 at the southwest corner
    - At the 46th Street subway station:
        - 100% southbound trips would use stair S3-P3 at the northwest corner
        - 100% northbound trips would use stair S4-P4 at the southwest corner

- *Bus trips* – The proposed rezoning site is served by the Q66 line, which is routed along Northern Boulevard, Q101 line, which is routed along Steinway Street; and Q104 line, which is routed along Broadway. Bus trips were assigned to and from the site based on the geographic location of each bus route relative to the site and the bus route within the borough, as follows:
    - 40 percent to/from the Q66 Eastbound

- 20 percent to/from the Q66 Westbound
- 15 percent to/from the Q101 Northbound
- 5 percent to/from the Q101 Southbound
- 10 percent to/from the Q104 Eastbound
- 10 percent to/from the Q104 Westbound

- *Walk trips* – Walk trips were assumed to be distributed, as following, based on the location of the site:

  - 52 percent to/from the north
  - 3 percent to/from the south
  - 27 percent to/from the east
  - 18 percent to/from the west

The projected incremental pedestrian volumes associated with the Proposed Action was added to the 2021 Future No-Action pedestrian volumes to arrive at the Future With-Action pedestrian volumes. Future With-Action pedestrian volumes are shown in **Figures 22 through 24** for the AM, Midday and PM peak hours, respectively.

The crosswalk, sidewalk and corner LOS analyses at the study intersections were repeated using the projected Future With-Action Condition pedestrian volumes. The results of the pedestrian crosswalk and sidewalk LOS analysis under the future With-Action condition are shown in **Tables 22, 23, and 24,** respectively**.** As shown, all crosswalks, sidewalks and corners at the study intersections are projected to continue operating at LOS "C" or better, except for the following:

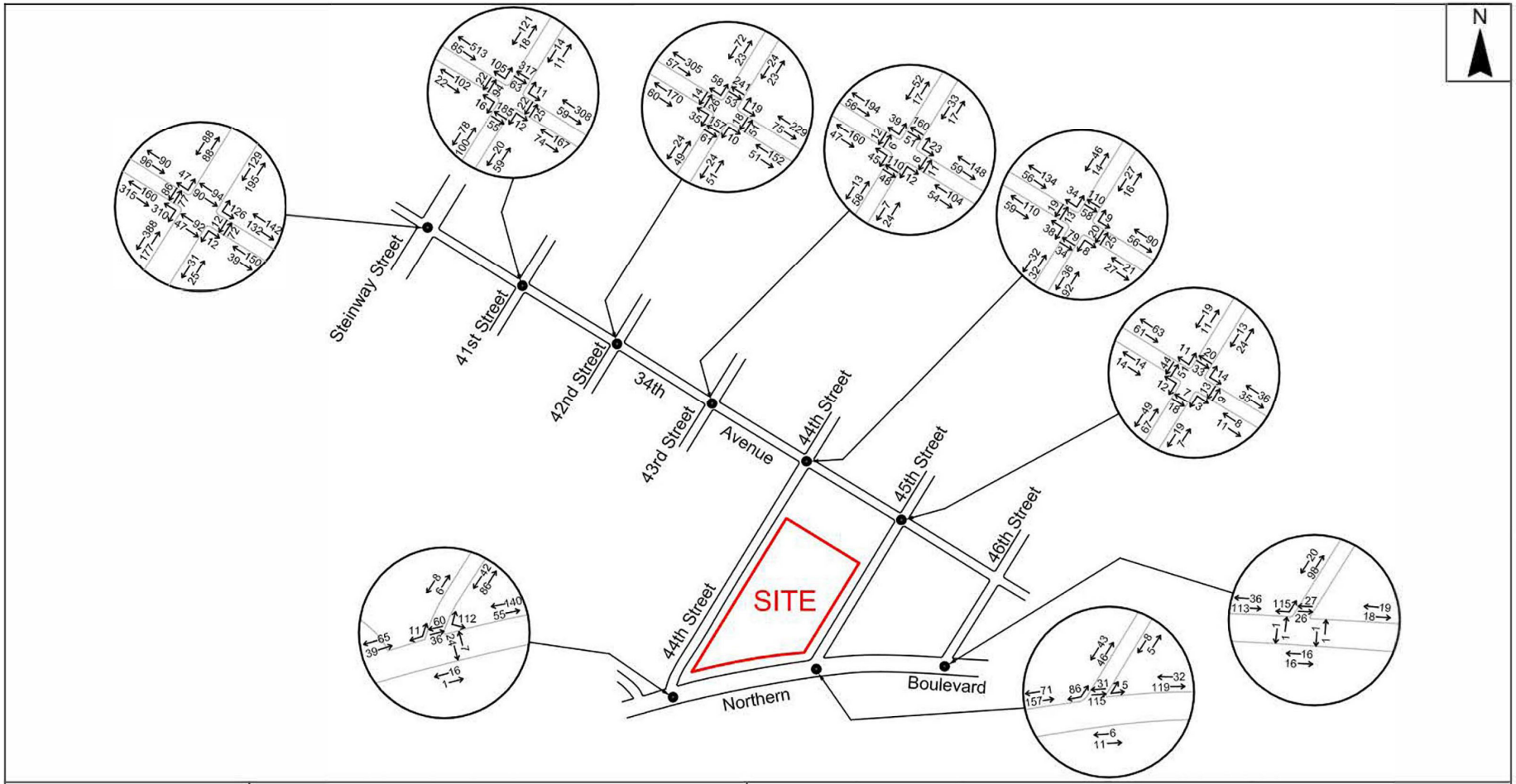
- The west crosswalk at 34th Avenue/45th Street is projected to operate at LOS "D" during the weekday midday peak hour.

- The east-west sidewalk at the north-east corner of Northern Boulevard/44th Street is projected to operate at LOS "D" during the weekday midday peak hour.

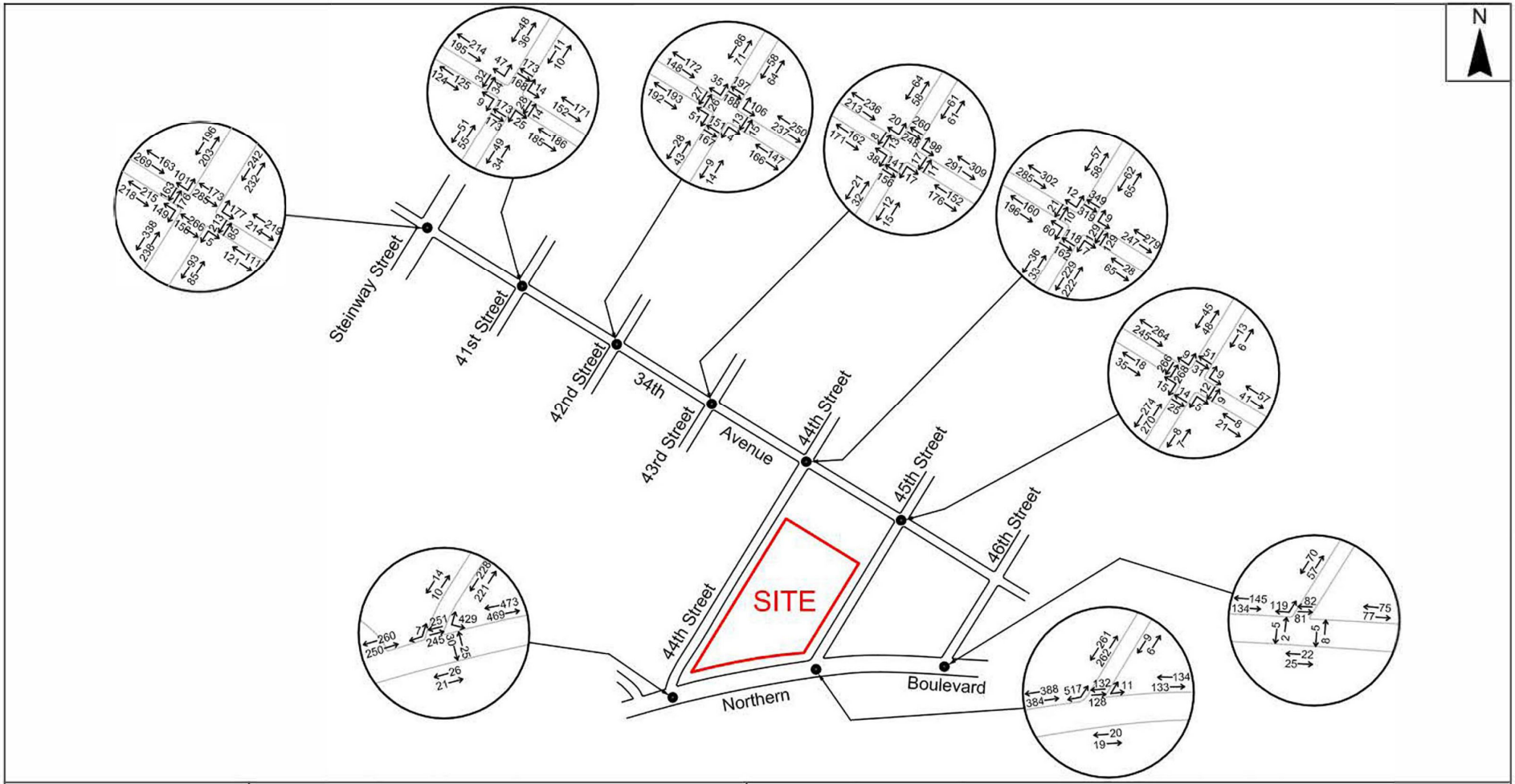
Pedestrian Impact Criteria

The assessment of projected pedestrian impacts is based in part on whether the pedestrian element being analyzed is part of a Central Business District (CBD) and, for sidewalks, whether the pedestrian flow is platooned or not. This area of Queens is not considered a CBD location. To ensure a conservative analysis, platoon flow conditions were assumed because the proposed development can be expected to generate highly platooned pedestrian flows during periods.

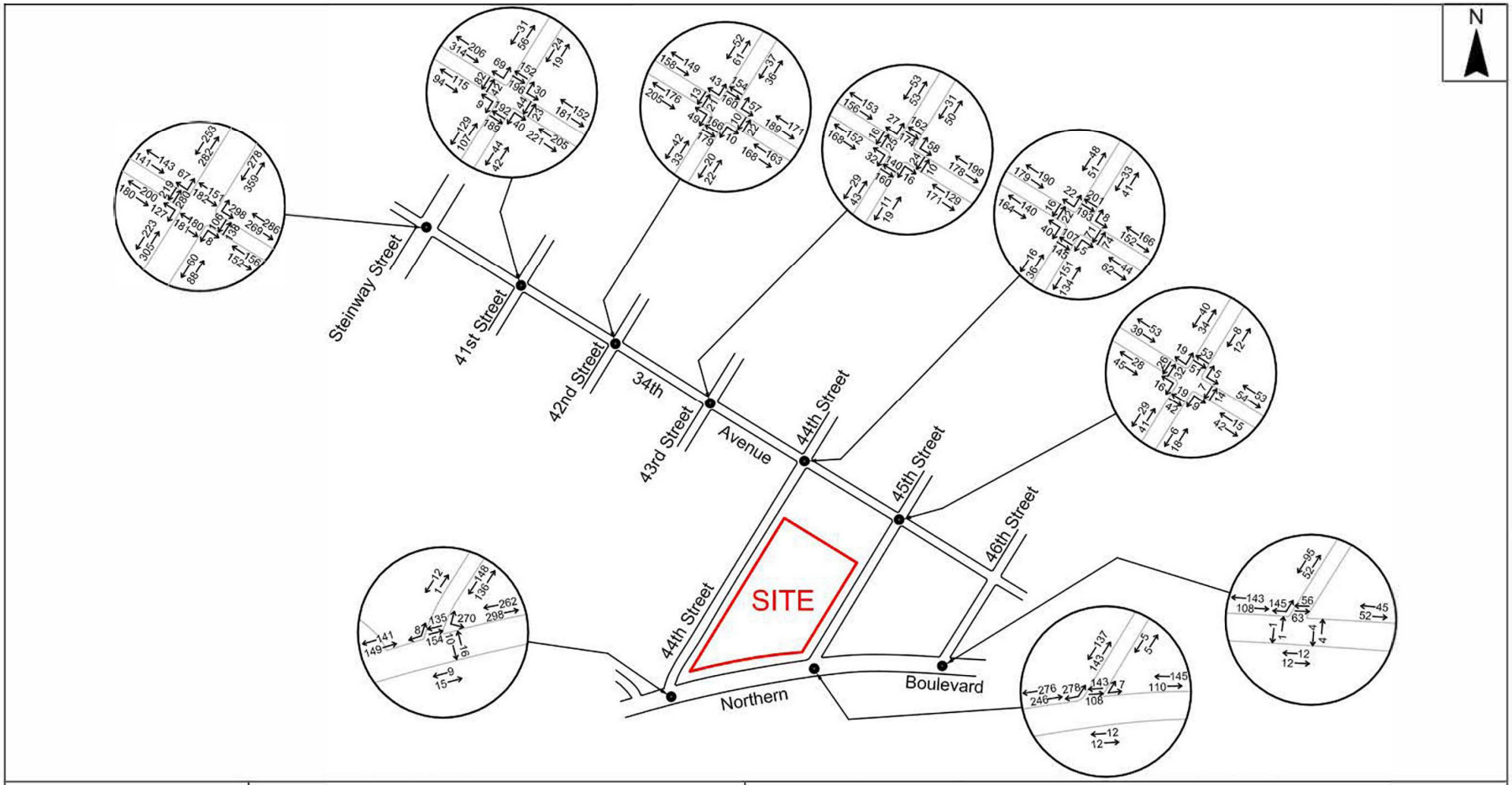
For crosswalks and corners in non-CBD locations: According to the guidelines established in the *CEQR Technical Manual*, average pedestrian space under the Future With-Action Condition deteriorating to LOS "C" or better should generally not be considered a significant impact. If the pedestrian space under the Future With-Action Condition deteriorates to LOS "D" or worse (i.e., less than 24.0 square feet/ped), then the determination of whether the impact is considered significant is based on a sliding scale that varies with the Future No-Action pedestrian space.



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2021 With-Action Conditions Pedestrian Volumes Weekday AM Peak Hour Figure 22



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2021 With-Action Conditions Pedestrian Volumes Weekday Midday Peak Hour Figure 23



AECOM	44-01 Northern Boulevard Rezoning Environmental Assessment Long Island City, Queens	Year 2021 With-Action Conditions Pedestrian Volumes Weekday PM Peak Hour Figure 24

Table 22
2021 Future With-Action Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
34th Avenue/Steinway Street	Weekday AM	North	43.6	14.4	244.9	A
		East	40.0	15.8	391.8	A
		South	43.6	15.6	367.7	A
		West	39.6	16.2	289.6	A
	Weekday Midday	North	43.6	14.4	141.4	A
		East	40.0	15.8	85.2	A
		South	43.6	15.6	150.4	A
		West	39.6	16.2	74.5	A
	Weekday PM	North	43.6	14.4	199.2	A
		East	40.0	15.8	101.5	A
		South	43.6	15.6	203.4	A
		West	39.6	16.2	52.7	B
34th Avenue/41st Street	Weekday AM	North	29.8	13.1	90.1	A
		East	40.8	11.6	272.4	A
		South	29.6	15.2	176.6	A
		West	39.8	12.8	131.1	A
	Weekday Midday	North	29.8	13.1	100.8	A
		East	40.8	11.6	335.8	A
		South	29.6	15.2	124.5	A
		West	39.8	12.8	218.3	A
	Weekday PM	North	29.8	13.1	103.5	A
		East	40.8	11.6	218.6	A
		South	29.6	15.2	122.1	A
		West	39.8	12.8	129.5	A
34th Avenue/42nd Street	Weekday AM	North	29.0	12.9	115.2	A
		East	39.2	11.3	201.1	A
		South	29.3	12.2	138.4	A
		West	39.3	12.6	338.9	A
	Weekday Midday	North	29.0	12.9	100.6	A
		East	39.2	11.3	491.9	A
		South	29.3	12.2	93.0	A
		West	39.3	12.6	220.0	A
	Weekday PM	North	29.0	12.9	104.1	A
		East	39.2	11.3	344.9	A
		South	29.3	12.2	98.8	A
		West	39.3	12.6	517.7	A

Table 22
2021 Future With-Action Conditions Pedestrian Crosswalk Analyses (cont'd)

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
34th Avenue/43rd Street	Weekday AM	North	29.0	9.8	121.7	A
		East	39.2	11.1	837.9	A
		South	29.6	11.1	178.9	A
		West	40.4	11.0	511.5	A
	Weekday Midday	North	29.0	9.8	45.3	B
		East	39.2	11.1	388.3	A
		South	29.6	11.1	122.8	A
		West	40.4	11.0	477.9	A
	Weekday PM	North	29.0	9.8	57.8	B
		East	39.2	11.1	414.9	A
		South	29.6	11.1	115.2	A
		West	40.4	11.0	266.8	A
34th Avenue/44th Street	Weekday AM	North	29.4	13.8	245.9	A
		East	39.3	11.0	97.8	A
		South	27.4	11.6	253.9	A
		West	39.3	11.0	404.5	A
	Weekday Midday	North	29.4	13.8	43.9	B
		East	39.3	11.0	40.2	B
		South	27.4	11.6	106.7	A
		West	39.3	11.0	455.5	A
	Weekday PM	North	29.4	13.8	96.8	A
		East	39.3	11.0	77.6	A
		South	27.4	11.6	142.7	A
		West	39.3	11.0	348.4	A
34th Avenue/45th Street	Weekday AM	North	29.4	12.9	637.9	A
		East	39.6	10.3	515.0	A
		South	29.6	14.3	1134.4	A
		West	39.0	11.6	562.5	A
	Weekday Midday	North	29.4	12.9	388.7	A
		East	39.6	10.3	529.0	A
		South	29.6	14.3	976.7	A
		West	39.0	11.6	19.5	D
	Weekday PM	North	29.4	12.9	295.5	A
		East	39.6	10.3	533.6	A
		South	29.6	14.3	515.4	A
		West	39.0	11.6	38.9	C

Table 22
2021 Future With-Action Conditions Pedestrian Crosswalk Analyses (cont'd)

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	Pedestrian Operations	
					feet^2/ped	LOS
Northern Boulevard/44th Street	Weekday AM	North	41.6	10.0	221.0	A
		East	70.8	19.3	466.8	A
	Weekday Midday	North	41.6	10.0	58.2	B
		East	70.8	19.3	311.1	A
	Weekday PM	North	41.6	10.0	101.5	A
		East	70.8	19.3	572.0	A
Northern Boulevard/45th Street	Weekday AM	North	39.6	12.3	424.4	A
	Weekday Midday	North	39.6	12.3	248.0	A
	Weekday PM	North	39.6	12.3	284.4	A
Northern Boulevard/46th Street	Weekday AM	North	32.6	17.8	1024.5	A
		East	73.0	14.4	2353.0	A
		West	70.5	10.6	2988.3	A
	Weekday Midday	North	32.6	17.8	328.2	A
		East	73.0	14.4	448.7	A
		West	70.5	10.6	1054.5	A
	Weekday PM	North	32.6	17.8	316.3	A
		East	73.0	14.4	864.1	A
		West	70.5	10.6	1833.7	A

Table 23
2021 Future With-Action Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/Steinway Street	Weekday AM	NE	N-S	315.9	B
			E-W	201.4	B
		SE	N-S	947.7	A
			E-W	343.8	B
		SW	N-S	99.7	B
			E-W	218.0	B
		NW	N-S	452.2	B
			E-W	585.2	A
	Weekday Midday	NE	N-S	246.0	B
			E-W	146.8	B
		SE	N-S	340.7	B
			E-W	318.1	B
		SW	N-S	104.9	B
			E-W	211.9	B
		NW	N-S	256.0	B
			E-W	284.3	B
	Weekday PM	NE	N-S	246.0	B
			E-W	146.8	B
		SE	N-S	340.7	B
			E-W	318.1	B
		SW	N-S	104.9	B
			E-W	211.9	B
		NW	N-S	256.0	B
			E-W	284.3	B
34th Avenue/41st Street	Weekday AM	NE	N-S	3449.9	A
			E-W	388.4	B
		SE	N-S	1008.6	A
			E-W	130.8	B
		SW	N-S	341.6	B
			E-W	728.4	A
		NW	N-S	318.2	B
			E-W	179.1	B
	Weekday Midday	NE	N-S	2489.1	A
			E-W	462.9	B
		SE	N-S	1099.4	A
			E-W	94.9	B
		SW	N-S	541.2	A
			E-W	269.8	B
		NW	N-S	452.5	B
			E-W	271.5	B

Table 24
2021 Future With-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/41st Street (cont'd)	Weekday PM	NE	N-S	1641.1	A
			E-W	422.9	B
		SE	N-S	1210.5	A
			E-W	93.5	B
		SW	N-S	248.8	B
			E-W	416.3	B
		NW	N-S	572.0	A
			E-W	213.5	B
34th Avenue/42nd Street	Weekday AM	NE	N-S	1278.1	A
			E-W	343.7	B
		SE	N-S	796.3	A
			E-W	400.2	B
		SW	N-S	755.4	A
			E-W	394.1	B
		NW	N-S	322.6	B
			E-W	248.4	B
	Weekday Midday	NE	N-S	519.7	B
			E-W	219.7	B
		SE	N-S	1906.4	A
			E-W	326.4	B
		SW	N-S	535.2	A
			E-W	228.9	B
		NW	N-S	162.5	B
			E-W	274.4	B
	Weekday PM	NE	N-S	1249.5	A
			E-W	247.7	B
		SE	N-S	1044.0	A
			E-W	342.1	B
		SW	N-S	695.5	A
			E-W	280.3	B
		NW	N-S	246.5	B
			E-W	261.9	B
34th Avenue/43rd Street	Weekday AM	NE	N-S	1712.9	A
			E-W	571.3	A
		SE	N-S	1698.4	A
			E-W	642.1	A
		SW	N-S	783.0	A
			E-W	452.0	B
		NW	N-S	864.0	A
			E-W	453.5	B

Table 25
2021 Future With-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/43rd Street (cont'd)	Weekday Midday	NE	N-S	572.4	A
			E-W	194.3	B
		SE	N-S	1680.0	A
			E-W	361.5	B
		SW	N-S	928.0	A
			E-W	329.0	B
		NW	N-S	403.6	B
			E-W	216.4	B
	Weekday PM	NE	N-S	1073.6	A
			E-W	276.0	B
		SE	N-S	1782.0	A
			E-W	346.9	B
		SW	N-S	742.5	A
			E-W	300.0	B
		NW	N-S	586.8	A
			E-W	314.5	B
34th Avenue/44th Street	Weekday AM	NE	N-S	1205.6	A
			E-W	1373.2	A
		SE	N-S	157.5	B
			E-W	2311.9	A
		SW	N-S	961.8	A
			E-W	511.4	B
		NW	N-S	840.9	A
			E-W	541.1	A
	Weekday Midday	NE	N-S	382.6	B
			E-W	130.9	B
		SE	N-S	69.4	C
			E-W	1256.8	A
		SW	N-S	844.6	A
			E-W	281.4	B
		NW	N-S	356.4	B
			E-W	133.4	B
	Weekday PM	NE	N-S	722.4	A
			E-W	332.9	B
		SE	N-S	130.4	B
			E-W	1214.4	A
		SW	N-S	1168.0	A
			E-W	329.6	B
		NW	N-S	517.6	B
			E-W	236.7	B

Table 26
2021 Future With-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
34th Avenue/45th Street	Weekday AM	NE	N-S	1290.1	A
			E-W	1538.6	A
		SE	N-S	2421.7	A
			E-W	4244.4	A
		SW	N-S	1491.7	A
			E-W	3182.1	A
		NW	N-S	1602.0	A
			E-W	1688.2	A
	Weekday Midday	NE	N-S	1546.1	A
			E-W	1009.8	A
		SE	N-S	4121.3	A
			E-W	2927.2	A
		SW	N-S	109.5	B
			E-W	2622.6	A
		NW	N-S	599.4	A
			E-W	153.9	B
	Weekday PM	NE	N-S	1872.7	A
			E-W	756.7	A
		SE	N-S	2051.1	A
			E-W	1613.4	A
		SW	N-S	131.4	B
			E-W	1562.3	A
		NW	N-S	753.3	A
			E-W	261.9	B
Northern Boulevard/44th Street	Weekday AM	NE	N-S	204.9	B
			E-W	132.7	B
		SE	E-W	2388.7	A
		NW	N-S	3780.0	A
			E-W	837.4	A
	Weekday Midday	NE	N-S	67.8	C
			E-W	39.3	D
		SE	E-W	1684.8	A
		NW	N-S	2381.4	A
			E-W	167.9	B
	Weekday PM	NE	N-S	100.7	B
			E-W	72.6	C
		SE	E-W	2157.3	A
		NW	N-S	4477.8	A
			E-W	295.5	B

Table 27
2021 Future With-Action Conditions Pedestrian Sidewalk Analyses (cont'd)

Intersection	Peak Hour	Sidewalk	Direction	Pedestrian Platoon Operations	
				feet^2/ped	LOS
Northern Boulevard/45th Street	Weekday AM	NE	N-S	6214.1	A
			E-W	249.2	B
		SE	E-W	4069.1	A
		NW	N-S	487.8	B
			E-W	290.6	B
	Weekday Midday	NE	N-S	5287.7	A
			E-W	224.8	B
		SE	E-W	2355.2	A
		NW	N-S	69.0	C
			E-W	92.8	B
	Weekday PM	NE	N-S	7490.9	A
			E-W	249.5	B
		SE	E-W	3213.0	A
		NW	N-S	71.4	C
			E-W	126.8	B
Northern Boulevard/46th Street	Weekday AM	NE	E-W	1721.0	A
		SE	E-W	1469.8	A
		NW	N-S	640.6	A
			E-W	357.2	B
	Weekday MD	NE	E-W	519.2	B
		SE	E-W	1123.9	A
		NW	N-S	488.9	B
			E-W	187.1	B
	Weekday PM	NE	E-W	841.7	A
		SE	E-W	1628.1	A
		NW	N-S	404.0	B
			E-W	228.0	B

Table 28
2021 Future With-Action Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet^2/ped	LOS
34th Avenue/Steinway Street	Weekday AM	Northwest	595.9	A
		Northeast	499.1	A
		Southwest	356.1	A
		Southeast	601.6	A
	Weekday Midday	Northwest	264.7	A
		Northeast	241.6	A
		Southwest	221.1	A
		Southeast	221.7	A
	Weekday PM	Northwest	278.7	A
		Northeast	255.9	A
		Southwest	215.2	A
		Southeast	272.7	A
34th Avenue/41st Street	Weekday AM	Northwest	281.6	A
		Northeast	402.1	A
		Southwest	363.6	A
		Southeast	520.1	A
	Weekday Midday	Northwest	380.7	A
		Northeast	454.6	A
		Southwest	329.5	A
		Southeast	399.9	A
	Weekday PM	Northwest	321.8	A
		Northeast	413.0	A
		Southwest	292.5	A
		Southeast	364.3	A
34th Avenue/42nd Street	Weekday AM	Northwest	258.9	A
		Northeast	414.9	A
		Southwest	573.7	A
		Southeast	557.1	A
	Weekday Midday	Northwest	222.2	A
		Northeast	320.3	A
		Southwest	360.4	A
		Southeast	461.3	A
	Weekday PM	Northwest	256.2	A
		Northeast	400.6	A
		Southwest	446.1	A
		Southeast	465.5	A

Table 24
2021 Future With-Action Conditions Pedestrian Corner Analyses (cont'd)

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet^2/ped	LOS
34th Avenue/43rd Street	Weekday AM	Northwest	577.3	A
		Northeast	994.9	A
		Southwest	654.0	A
		Southeast	819.3	A
	Weekday Midday	Northwest	262.3	A
		Northeast	342.8	A
		Southwest	514.8	A
		Southeast	557.6	A
	Weekday PM	Northwest	312.6	A
		Northeast	498.0	A
		Southwest	461.4	A
		Southeast	525.9	A
34th Avenue/44th Street	Weekday AM	Northwest	599.0	A
		Northeast	522.6	A
		Southwest	869.3	A
		Southeast	567.6	A
	Weekday Midday	Northwest	149.9	A
		Northeast	135.7	A
		Southwest	449.3	A
		Southeast	242.7	A
	Weekday PM	Northwest	287.3	A
		Northeast	282.6	A
		Southwest	567.4	A
		Southeast	383.8	A
34th Avenue/45th Street	Weekday AM	Northwest	1788.7	A
		Northeast	1706.0	A
		Southwest	2284.8	A
		Southeast	2410.7	A
	Weekday Midday	Northwest	186.3	A
		Northeast	1232.8	A
		Southwest	211.0	A
		Southeast	2160.9	A
	Weekday PM	Northwest	309.4	A
		Northeast	1123.6	A
		Southwest	360.0	A
		Southeast	1364.2	A

Table 24
2021 Future With-Action Conditions Pedestrian Corner Analyses (cont'd)

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet^2/ped	LOS
Northern Boulevard/44th Street	Weekday AM	Northeast	137.9	A
	Weekday Midday	Northeast	36.7	C
	Weekday PM	Northeast	62.6	A
Northern Boulevard/46th Street	Weekday AM	Northwest	551.3	A
		Northeast	1684.3	A
	Weekday Midday	Northwest	336.9	A
		Northeast	506.1	A
	Weekday PM	Northwest	286.5	A
		Northeast	525.8	A

For sidewalks with platoon flow in non-CBD locations: According to the guidelines established in the *CEQR Technical Manual*, average pedestrian space under the Future With-Action Condition deteriorating to LOS "C" or better should generally not be considered a significant impact. If the pedestrian space under the Future With-Action Condition deteriorates to LOS "D" or worse (i.e., less than 40.0 square feet/ped), then the determination of whether the impact is considered significant is based on a sliding scale that varies with the Future No-Action pedestrian space.

As shown in **Tables 25 through 27**, under the proposed Future With-Action Condition, all of the pedestrian elements are projected to operate at LOS "C" or better (except for two locations which are projected to operate at LOS "D" as described in the paragraphs above). In accordance with the CEQR *Technical Manual*, no significant pedestrian impacts are projected to occur with the proposed action.

2.9.4 Transportation Safety Assessment

The *CEQR Technical Manual* defines a "high crash location" as any location with 48 or more total reportable and non-reportable crashes, or five or more pedestrian/bicyclist injury crashes, in any consecutive 12 months of the most recent three-year period for which data is available. Crash data compiled by the NYCDOT for the most recent available three-year period (i.e., 2014 to 2016) was reviewed to identify the crash history at each of the study intersections. **Table 28** summarizes the total number of crashes at each of the study intersections by year, as well as the total number of pedestrian and bicycle crashes by year.

As shown in Table 23, the total number of crashes for the three-year period between 2014 to 2016 (inclusive) at each intersection are below the *CEQR* thresholds (i.e., 48 total crashes in any 12 months, or five pedestrian/bicyclist injury crashes, over the most recent three years) Accordingly, the nine (9) intersections are not considered high crash locations. There were also no fatal crashes at any of the study intersections during the 2014 to 2016 period.

Table 29
Comparison of Future No-Action and Future With-Action Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	2021 No-Action		2021 With-Action		Impact?
					feet^2/ped	LOS	feet^2/ped	LOS	
34th Avenue/Steinway Street	Weekday AM	North	43.6	14.4	276.9	A	244.9	A	
		East	40.0	15.8	391.6	A	391.8	A	
		South	43.6	15.6	666.6	A	367.7	A	
		West	39.6	16.2	289.6	A	289.6	A	
	Weekday Midday	North	43.6	14.4	209.0	A	141.4	A	
		East	40.0	15.8	85.4	A	85.2	A	
		South	43.6	15.6	258.0	A	150.4	A	
		West	39.6	16.2	74.5	A	74.5	A	
	Weekday PM	North	43.6	14.4	260.4	A	199.2	A	
		East	40.0	15.8	101.5	A	101.5	A	
		South	43.6	15.6	313.6	A	203.4	A	
		West	39.6	16.2	52.7	B	52.7	B	
34th Avenue/41st Street	Weekday AM	North	29.8	13.1	96.5	A	90.1	A	
		East	40.8	11.6	272.4	A	272.4	A	
		South	29.6	15.2	262.4	A	176.6	A	
		West	39.8	12.8	151.1	A	131.1	A	
	Weekday Midday	North	29.8	13.1	178.6	A	100.8	A	
		East	40.8	11.6	335.8	A	335.8	A	
		South	29.6	15.2	273.1	A	124.5	A	
		West	39.8	12.8	277.2	A	218.3	A	
	Weekday PM	North	29.8	13.1	133.7	A	103.5	A	
		East	40.8	11.6	218.6	A	218.6	A	
		South	29.6	15.2	199.6	A	122.1	A	
		West	39.8	12.8	151.9	A	129.5	A	
34th Avenue/42nd Street	Weekday AM	North	29.0	12.9	133.0	A	115.2	A	
		East	39.2	11.3	201.1	A	201.1	A	
		South	29.3	12.2	217.0	A	138.4	A	
		West	39.3	12.6	338.9	A	338.9	A	
	Weekday Midday	North	29.0	12.9	257.2	A	100.6	A	
		East	39.2	11.3	491.9	A	491.9	A	
		South	29.3	12.2	231.5	A	93.0	A	
		West	39.3	12.6	220.0	A	220.0	A	
	Weekday PM	North	29.0	12.9	174.1	A	104.1	A	
		East	39.2	11.3	344.9	A	344.9	A	
		South	29.3	12.2	174.8	A	98.8	A	
		West	39.3	12.6	517.7	A	517.7	A	

Table 25 (cont'd)

Comparison of Future No-Action and Future With-Action Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	2021 No-Action		2021 With-Action		Impact?
					feet^2/ped	LOS	feet^2/ped	LOS	
34th Avenue/43rd Street	Weekday AM	North	29.0	9.8	180.0	A	121.7	A	
		East	39.2	11.1	837.9	A	837.9	A	
		South	29.6	11.1	342.0	A	178.9	A	
		West	40.4	11.0	511.5	A	511.5	A	
	Weekday Midday	North	29.0	9.8	241.5	A	45.3	B	
		East	39.2	11.1	388.3	A	388.3	A	
		South	29.6	11.1	336.4	A	122.8	A	
		West	40.4	11.0	477.9	A	477.9	A	
	Weekday PM	North	29.0	9.8	167.2	A	57.8	B	
		East	39.2	11.1	414.9	A	414.9	A	
		South	29.6	11.1	228.2	A	115.2	A	
		West	40.4	11.0	266.8	A	266.8	A	
34th Avenue/44th Street	Weekday AM	North	29.4	13.8	549.9	A	245.9	A	
		East	39.3	11.0	985.8	A	97.8	A	
		South	27.4	11.6	776.4	A	253.9	A	
		West	39.3	11.0	404.5	A	404.5	A	
	Weekday Midday	North	29.4	13.8	360.7	A	43.9	B	
		East	39.3	11.0	675.7	A	40.2	B	
		South	27.4	11.6	343.5	A	106.7	A	
		West	39.3	11.0	455.5	A	455.5	A	
	Weekday PM	North	29.4	13.8	453.3	A	96.8	A	
		East	39.3	11.0	534.1	A	77.6	A	
		South	27.4	11.6	337.8	A	142.7	A	
		West	39.3	11.0	348.4	A	348.4	A	
34th Avenue/45th Street	Weekday AM	North	29.4	12.9	637.9	A	637.9	A	
		East	39.6	10.3	515.0	A	515.0	A	
		South	29.6	14.3	1134.4	A	1134.4	A	
		West	39.0	11.6	945.9	A	562.5	A	
	Weekday Midday	North	29.4	12.9	388.7	A	388.7	A	
		East	39.6	10.3	529.7	A	529.0	A	
		South	29.6	14.3	976.7	A	976.7	A	
		West	39.0	11.6	480.5	A	19.5	D	
	Weekday PM	North	29.4	12.9	295.5	A	295.5	A	
		East	39.6	10.3	533.6	A	533.6	A	
		South	29.6	14.3	515.4	A	515.4	A	
		West	39.0	11.6	741.6	A	38.9	C	

Table 25 (cont'd)

Comparison of Future No-Action and Future With-Action Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Approx. Crosswalk Length (Feet)	Approx. Crosswalk Width (Feet)	2021 No-Action		2021 With-Action		Impact?
					feet^2/ped	LOS	feet^2/ped	LOS	
Northern Boulevard/44th Street	Weekday AM	North	41.6	10.0	749.1	A	221.0	A	
		East	70.8	19.3	374.0	A	466.8	A	
	Weekday Midday	North	41.6	10.0	852.5	A	58.2	B	
		East	70.8	19.3	460.2	A	311.1	A	
	Weekday PM	North	41.6	10.0	632.1	A	101.5	A	
		East	70.8	19.3	645.1	A	572.0	A	
Northern Boulevard/45th Street	Weekday AM	North	39.6	12.3	3012.2	A	424.4	A	
	Weekday Midday	North	39.6	12.3	2520.0	A	248.0	A	
	Weekday PM	North	39.6	12.3	1762.4	A	284.4	A	
Northern Boulevard/46th Street	Weekday AM	North	32.6	17.8	1726.4	A	1024.5	A	
		East	73.0	14.4	2353.0	A	2353.0	A	
		West	70.5	10.6	2988.3	A	2988.3	A	
	Weekday Midday	North	32.6	17.8	1759.5	A	328.2	A	
		East	73.0	14.4	448.7	A	448.7	A	
		West	70.5	10.6	1054.5	A	1054.5	A	
	Weekday PM	North	32.6	17.8	782.4	A	316.3	A	
		East	73.0	14.4	864.1	A	864.1	A	
		West	70.5	10.6	1833.7	A	1833.7	A	

Table 30
Comparison of Future No-Action and Future With-Action Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	2021 No-Action		2021 With-Action		Impact?
				feet²/ped	LOS	feet²/ped	LOS	
34th Avenue/ Steinway Street	Weekday AM	NE	N-S	315.9	B	315.9	B	
			E-W	219.8	B	201.4	B	
		SE	N-S	947.7	A	947.7	A	
			E-W	515.8	B	343.8	B	
		SW	N-S	99.7	B	99.7	B	
			E-W	252.0	B	218.0	B	
		NW	N-S	452.2	B	452.2	B	
			E-W	663.8	A	585.2	A	
	Weekday Midday	NE	N-S	246.0	B	246.0	B	
			E-W	221.6	B	146.8	B	
		SE	N-S	340.7	B	340.7	B	
			E-W	1250.9	A	318.1	B	
		SW	N-S	104.9	B	104.9	B	
			E-W	353.1	B	211.9	B	
		NW	N-S	256.0	B	256.0	B	
			E-W	428.0	B	284.3	B	
	Weekday PM	NE	N-S	160.6	B	246.0	B	
			E-W	126.5	B	146.8	B	
		SE	N-S	415.4	B	340.7	B	
			E-W	466.0	B	318.1	B	
		SW	N-S	108.0	B	104.9	B	
			E-W	332.3	B	211.9	B	
		NW	N-S	210.8	B	256.0	B	
			E-W	570.9	A	284.3	B	
34th Avenue/41st Street	Weekday AM	NE	N-S	3449.9	A	3449.9	A	
			E-W	414.4	B	388.4	B	
		SE	N-S	1008.6	A	1008.6	A	
			E-W	193.6	B	130.8	B	
		SW	N-S	341.6	B	341.6	B	
			E-W	1505.5	A	728.4	A	
		NW	N-S	318.2	B	318.2	B	
			E-W	190.9	B	179.1	B	

Table 26 (cont'd)

Comparison of Future No-Action and Future With-Action Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	2021 No-Action		2021 With-Action		Impact?
				feet²/ped	LOS	feet²/ped	LOS	
34th Avenue/41st Street (cont'd)	Weekday Midday	NE	N-S	2489.1	A	2489.1	A	
			E-W	840.1	A	462.9	B	
		SE	N-S	1099.4	A	1099.4	A	
			E-W	190.6	B	94.9	B	
		SW	N-S	541.2	A	541.2	A	
			E-W	884.2	A	269.8	B	
		NW	N-S	452.5	B	452.5	B	
			E-W	446.0	B	271.5	B	
	Weekday PM	NE	N-S	1641.1	A	1641.1	A	
			E-W	548.0	A	422.9	B	
		SE	N-S	1210.5	A	1210.5	A	
			E-W	141.4	B	93.5	B	
		SW	N-S	248.8	B	248.8	B	
			E-W	1048.5	A	416.3	B	
		NW	N-S	572.0	A	572.0	A	
			E-W	261.9	B	213.5	B	
34th Avenue/42nd Street	Weekday AM	NE	N-S	1820.3	A	1278.1	A	
			E-W	411.4	B	343.7	B	
		SE	N-S	796.3	A	796.3	A	
			E-W	650.0	A	400.2	B	
		SW	N-S	765.9	A	755.4	A	
			E-W	600.4	A	394.1	B	
		NW	N-S	373.7	B	322.6	B	
			E-W	264.5	B	248.4	B	
	Weekday Midday	NE	N-S	1864.9	A	519.7	B	
			E-W	641.0	A	219.7	B	
		SE	N-S	1906.4	A	1906.4	A	
			E-W	804.6	A	326.4	B	
		SW	N-S	535.2	A	535.2	A	
			E-W	443.1	B	228.9	B	
		NW	N-S	370.1	B	162.5	B	
			E-W	501.9	B	274.4	B	

Table 26 (cont'd)

Comparison of Future No-Action and Future With-Action Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	2021 No-Action		2021 With-Action		Impact?
				feet²/ped	LOS	feet²/ped	LOS	
34th Avenue/42nd Street (cont'd)	Weekday PM	NE	N-S	3508.3	A	1249.5	A	
			E-W	464.6	B	247.7	B	
		SE	N-S	1044.0	A	1044.0	A	
			E-W	608.9	A	342.1	B	
		SW	N-S	695.5	A	695.5	A	
			E-W	450.6	B	280.3	B	
		NW	N-S	415.8	B	246.5	B	
			E-W	348.1	B	261.9	B	
34th Avenue/43rd Street	Weekday AM	NE	N-S	2379.0	A	1712.9	A	
			E-W	902.7	A	571.3	A	
		SE	N-S	1698.4	A	1698.4	A	
			E-W	1268.2	A	642.1	A	
		SW	N-S	783.0	A	783.0	A	
			E-W	719.7	A	452.0	B	
		NW	N-S	1083.9	A	864.0	A	
			E-W	564.1	A	453.5	B	
	Weekday Midday	NE	N-S	2053.9	A	572.4	A	
			E-W	1121.9	A	194.3	B	
		SE	N-S	1680.0	A	1680.0	A	
			E-W	835.1	A	361.5	B	
		SW	N-S	928.0	A	928.0	A	
			E-W	740.3	A	329.0	B	
		NW	N-S	1448.5	A	403.6	B	
			E-W	759.3	A	216.4	B	
	Weekday PM	NE	N-S	2557.7	A	1073.6	A	
			E-W	897.1	A	276.0	B	
		SE	N-S	1782.0	A	1782.0	A	
			E-W	671.5	A	346.9	B	
		SW	N-S	742.5	A	742.5	A	
			E-W	548.7	A	300.0	B	
		NW	N-S	1036.8	A	586.8	A	
			E-W	699.2	A	314.5	B	

Table 26 (cont'd)

Comparison of Future No-Action and Future With-Action Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	2021 No-Action		2021 With-Action		Impact?
				feet²/ped	LOS	feet²/ped	LOS	
34th Avenue/44th Street	Weekday AM	NE	N-S	1570.9	A	1205.6	A	
			E-W	1373.2	A	1373.2	A	
		SE	N-S	1717.2	A	157.5	B	
			E-W	2311.9	A	2311.9	A	
		SW	N-S	961.8	A	961.8	A	
			E-W	960.5	A	511.4	B	
		NW	N-S	1096.9	A	840.9	A	
			E-W	909.8	A	541.1	A	
	Weekday Midday	NE	N-S	1567.7	A	382.6	B	
			E-W	783.5	A	130.9	B	
		SE	N-S	1431.0	A	69.4	C	
			E-W	1256.8	A	1256.8	A	
		SW	N-S	844.6	A	844.6	A	
			E-W	586.1	A	281.4	B	
		NW	N-S	1518.4	A	356.4	B	
			E-W	861.5	A	133.4	B	
	Weekday PM	NE	N-S	2056.1	A	722.4	A	
			E-W	1203.2	A	332.9	B	
		SE	N-S	2480.4	A	130.4	B	
			E-W	1214.4	A	1214.4	A	
		SW	N-S	1168.0	A	1168.0	A	
			E-W	634.3	A	329.6	B	
		NW	N-S	966.9	A	517.6	B	
			E-W	809.2	A	236.7	B	
34th Avenue/45th Street	Weekday AM	NE	N-S	1290.1	A	1290.1	A	
			E-W	1538.6	A	1538.6	A	
		SE	N-S	2421.7	A	2421.7	A	
			E-W	4244.7	A	4244.4	A	
		SW	N-S	1989.0	A	1491.7	A	
			E-W	3182.1	A	3182.1	A	
		NW	N-S	2529.5	A	1602.0	A	
			E-W	1688.2	A	1688.2	A	

Table 26 (cont'd)

Comparison of Future No-Action and Future With-Action Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	2021 No-Action		2021 With-Action		Impact?
				feet²/ped	LOS	feet²/ped	LOS	
34th Avenue/45th Street (cont'd)	Weekday Midday	NE	N-S	1546.1	A	1546.1	A	
			E-W	1009.8	A	1009.8	A	
		SE	N-S	4121.3	A	4121.3	A	
			E-W	2927.2	A	2927.2	A	
		SW	N-S	1755.0	A	109.5	B	
			E-W	2622.6	A	2622.6	A	
		NW	N-S	2654.7	A	599.4	A	
			E-W	1104.3	A	153.9	B	
	Weekday PM	NE	N-S	1872.7	A	1872.7	A	
			E-W	756.7	A	756.7	A	
		SE	N-S	2051.1	A	2051.1	A	
			E-W	1613.4	A	1613.4	A	
		SW	N-S	1273.3	A	131.4	B	
			E-W	1584.0	A	1562.3	A	
		NW	N-S	1592.8	A	753.3	A	
			E-W	916.8	A	261.9	B	
Northern Boulevard/44th Street	Weekday AM	NE	N-S	1458.0	A	204.9	B	
			E-W	1036.8	A	132.7	B	
		SE	E-W	1692.0	A	2388.7	A	
		NW	N-S	3780.0	A	3780.0	A	
			E-W	2353.8	A	837.4	A	
	Weekday Midday	NE	N-S	1530.9	A	67.8	C	
			E-W	1073.8	A	39.3	D	
		SE	E-W	2730.5	A	1684.8	A	
		NW	N-S	2381.4	A	2381.4	A	
			E-W	1714.6	A	167.9	B	
	Weekday PM	NE	N-S	2048.1	A	100.7	B	
			E-W	850.5	A	72.6	C	
		SE	E-W	2465.5	A	2157.3	A	
		NW	N-S	4477.8	A	4477.8	A	
			E-W	1714.6	A	295.5	B	
Northern Boulevard/45th Street	Weekday AM	NE	N-S	6214.1	A	6214.1	A	
			E-W	1636.9	A	249.2	B	
		SE	E-W	4069.1	A	4069.1	A	
		NW	N-S	4824.0	A	487.8	B	
			E-W	3155.6	A	290.6	B	

Table 26 (cont'd)

Comparison of Future No-Action and Future With-Action Conditions Pedestrian Sidewalk Analyses

Intersection	Peak Hour	Sidewalk	Direction	2021 No-Action		2021 With-Action		Impact?
				feet^2/ped	LOS	feet^2/ped	LOS	
Northern Boulevard/45th Street (cont'd)	Weekday Midday	NE	N-S	5287.7	A	5287.7	A	
			E-W	1876.8	A	224.8	B	
		SE	E-W	2355.2	A	2355.2	A	
		NW	N-S	2791.4	A	69.0	C	
			E-W	2567.3	A	92.8	B	
	Weekday PM	NE	N-S	7490.9	A	7490.9	A	
			E-W	1414.3	A	249.5	B	
		SE	E-W	3213.0	A	3213.0	A	
		NW	N-S	1826.2	A	71.4	C	
			E-W	1506.1	A	126.8	B	
Northern Boulevard/46th Street			E-W	4179.6	A	1721.0	A	
		SE	E-W	1469.8	A	1469.8	A	
		NW	N-S	6872.7	A	640.6	A	
			E-W	2534.9	A	357.2	B	
			E-W	3946.3	A	519.2	B	
		SE	E-W	1123.9	A	1123.9	A	
		NW	N-S	2587.5	A	488.9	B	
			E-W	1187.0	A	187.1	B	
			E-W	2916.0	A	841.7	A	
		SE	E-W	1628.1	A	1628.1	A	
		NW	N-S	8485.7	A	404.0	B	
			E-W	1396.3	A	228.0	B	

Table 31
Comparison of Future No-Action and Future With-Action Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	2021 No-Action		2021 With-Action		Impact?
			feet^2/ped	LOS	feet^2/ped	LOS	
34th Avenue/Steinway Street	Weekday AM	Northwest	628.3	A	595.9	A	
		Northeast	524.2	A	499.1	A	
		Southwest	395.5	A	356.1	A	
		Southeast	773.7	A	601.6	A	
	Weekday Midday	Northwest	312.8	A	264.7	A	
		Northeast	286.4	A	241.6	A	
		Southwest	274.1	A	221.1	A	
		Southeast	295.5	A	221.7	A	
	Weekday PM	Northwest	304.4	A	278.7	A	
		Northeast	279.5	A	255.9	A	
		Southwest	244.8	A	215.2	A	
		Southeast	339.0	A	272.7	A	
34th Avenue/41st Street	Weekday AM	Northwest	302.1	A	281.6	A	
		Northeast	425.5	A	402.1	A	
		Southwest	479.9	A	363.6	A	
		Southeast	682.3	A	520.1	A	
	Weekday Midday	Northwest	581.1	A	380.7	A	
		Northeast	705.4	A	454.6	A	
		Southwest	609.6	A	329.5	A	
		Southeast	698.8	A	399.9	A	
	Weekday PM	Northwest	387.2	A	321.8	A	
		Northeast	492.4	A	413.0	A	
		Southwest	424.4	A	292.5	A	
		Southeast	508.2	A	364.3	A	
34th Avenue/42nd Street	Weekday AM	Northwest	287.0	A	258.9	A	
		Northeast	494.9	A	414.9	A	
		Southwest	771.2	A	573.7	A	
		Southeast	754.1	A	557.1	A	
	Weekday Midday	Northwest	397.5	A	222.2	A	
		Northeast	874.1	A	320.3	A	
		Southwest	605.6	A	360.4	A	
		Southeast	990.2	A	461.3	A	
	Weekday PM	Northwest	379.4	A	256.2	A	
		Northeast	671.3	A	400.6	A	
		Southwest	678.0	A	446.1	A	
		Southeast	734.5	A	465.5	A	

Table 27 (cont'd)
Comparison of Future No-Action and Future With-Action Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	2021 No-Action		2021 With-Action		Impact?
			feet^2/ped	LOS	feet^2/ped	LOS	
34th Avenue/43rd Street	Weekday AM	Northwest	763.3	A	577.3	A	
		Northeast	1491.3	A	994.9	A	
		Southwest	973.0	A	654.0	A	
		Southeast	1349.2	A	819.3	A	
	Weekday Midday	Northwest	973.5	A	262.3	A	
		Northeast	1564.6	A	342.8	A	
		Southwest	1030.2	A	514.8	A	
		Southeast	1149.5	A	557.6	A	
	Weekday PM	Northwest	676.1	A	312.6	A	
		Northeast	1299.6	A	498.0	A	
		Southwest	735.4	A	461.4	A	
		Southeast	878.1	A	525.9	A	
34th Avenue/44th Street	Weekday AM	Northwest	979.2	A	599.0	A	
		Northeast	1627.9	A	522.6	A	
		Southwest	1491.2	A	869.3	A	
		Southeast	2496.8	A	567.6	A	
	Weekday Midday	Northwest	900.1	A	149.9	A	
		Northeast	1191.3	A	135.7	A	
		Southwest	923.8	A	449.3	A	
		Southeast	1329.6	A	242.7	A	
	Weekday PM	Northwest	860.9	A	287.3	A	
		Northeast	1375.7	A	282.6	A	
		Southwest	976.8	A	567.4	A	
		Southeast	1258.9	A	383.8	A	
34th Avenue/45th Street	Weekday AM	Northwest	2043.6	A	1788.7	A	
		Northeast	1706.0	A	1706.0	A	
		Southwest	2684.4	A	2284.8	A	
		Southeast	2410.7	A	2410.7	A	
	Weekday Midday	Northwest	1324.4	A	186.3	A	
		Northeast	1232.8	A	1232.8	A	
		Southwest	1893.1	A	211.0	A	
		Southeast	2160.9	A	2160.9	A	
	Weekday PM	Northwest	1100.3	A	309.4	A	
		Northeast	1123.6	A	1123.6	A	
		Southwest	1470.8	A	360.0	A	
		Southeast	1364.2	A	1364.2	A	

Table 27 (cont'd)
Comparison of Future No-Action and Future With-Action Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	2021 No-Action		2021 With-Action		Impact?
			feet^2/ped	LOS	feet^2/ped	LOS	
Northern Boulevard/44th Street	Weekday AM	Northeast	731.1	A	137.9	A	
	Weekday Midday	Northeast	895.5	A	36.7	C	
	Weekday PM	Northeast	848.8	A	62.6	A	
Northern Boulevard/46th Street	Weekday AM	Northwest	2513.4	A	551.3	A	
		Northeast	2671.6	A	1684.3	A	
	Weekday Midday	Northwest	1643.1	A	336.9	A	
		Northeast	1646.2	A	506.1	A	
	Weekday PM	Northwest	1380.4	A	286.5	A	
		Northeast	1162.1	A	525.8	A	

Table 32
Summary of NYCDOT Crash Data: 2014 to 2016

Intersection	Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Pedestrian/ Bicycle Injury Crashes			Total Crashes (Reportable + Non-Reportable)		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
34th Avenue/Steinway Street	1	1	1	1	2	1	2	3	2	2	4	7
34th Avenue/41st Street	0	0	1	1	0	0	1	0	1	1	0	3
34th Avenue/42nd Street	0	0	0	1	0	0	1	0	0	1	0	2
34th Avenue/43rd Street	0	0	1	0	0	0	0	0	1	0	0	1
34th Avenue/44th Street	0	1	0	0	0	0	0	1	0	1	1	1
34th Avenue/45th Street	0	0	0	0	0	0	0	0	0	0	1	1
Northern Boulevard/44th Street	0	0	1	0	0	0	0	0	1	1	1	3
Northern Boulevard/45th Street	0	0	0	0	0	1	0	0	1	1	0	2
Northern Boulevard/46th Street*	0	0	0	0	0	0	0	0	0	0	0	0
Total =	**1**	**2**	**4**	**3**	**2**	**2**	**4**	**4**	**6**	**7**	**7**	**20**

*=No crashes were reported at these intersection during the three year study period.

Source: New York City Department of Transportation (2014-2016).

2.9.5 Parking

A parking analysis was conducted to determine the extent to which the projected parking demand associated with the applicant's proposed project would be accommodated by the proposed on-site parking supply (i.e., 142 proposed on-site parking spaces). The projected hourly parking demand for each proposed land use – residential and local retail – was estimated throughout the course of a 24-hour period for a typical weekday. This estimate will be based on the sizes and types of land uses proposed for the applicant's site, the associated transportation planning assumptions used in the trip generation estimates, and data from standard reference sources such as the *CEQR Technical Manual*, the Institute of Transportation Engineer's *Parking Generation* manual, and U.S. Census data. The individual hourly parking generation profiles for the two land uses were then aggregated to arrive at the combined total parking accumulation profile under the Future With-Action condition. The parking generation profile for the typical weekday was then compared to the proposed on-site parking supply to estimate the propensity, if any, for possible overflow of parked vehicles onto surrounding public streets.

As shown in **Table 29** the projected total hourly parking demand over the course of a typical weekday is not projected to exceed the proposed on-site parking supply of 142 parking spaces. Therefore, the proposed project on the applicant's site is anticipated to have sufficient on-site parking supply to accommodate projected hourly parking demands throughout the course of a typical weekday. Therefore, no overflows of parked vehicles are projected to occur onto surrounding public streets and no significant parking impacts are anticipated under typical weekday conditions.

2.9.6 "During Construction" Impacts

Because construction of the proposed development is projected to take less than two years, no construction traffic analysis is required in accordance with *CEQR Technical Manual* guidance.

2.10 AIR QUALITY

2. 10.1 Introduction

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

Pollutants of Concern

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

Carbon Monoxide

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

Table 33
Weekday Parking Demand Analysis - With-Action Condition

Time Period			WEEKDAY TEMPORAL DISTRIBUTIONS BY LAND USE						TRIP GENERATION PARAMETERS	WEEKDAY PARKING DEMAND CALCULATIONS								
										Local Retail			Residential			TOTAL		
			Local Retail			Residential			Size =	61,400			337			Demand	Supply	Available Spaces
									Daily person-trip rate (trips/unit size)[4]=	205			8.075					
									Auto mode split (% of total trips)[5] =	11.0%			18.5%					
									Auto occupancy[5] =	2.00			1.20					
									Auto ownership[6] =				0.36					
									Linked-trip reduction[4] =	25.0%								
									Daily vehicle trips =	519			420					
			% Total[1]	% In[1]	% Out[1]	% Total[2]	% In[3]	% Out[3]		IN	OUT	PARK	IN	OUT	PARK			
12:00 AM	to	1:00 AM	**0.0%**	50%	50%	**2.0%**	50%	50%		0	0	0	4	4	121	121	142	21
1:00 AM	to	2:00 AM	**0.0%**	50%	50%	**1.0%**	50%	50%		0	0	0	2	2	121	121	142	21
2:00 AM	to	3:00 AM	**0.0%**	50%	50%	**0.0%**	50%	50%		0	0	0	0	0	121	121	142	21
3:00 AM	to	4:00 AM	**0.0%**	50%	50%	**0.0%**	50%	50%		0	0	0	0	0	121	121	142	21
4:00 AM	to	5:00 AM	**0.0%**	50%	50%	**0.0%**	50%	50%		0	0	0	0	0	121	121	142	21
5:00 AM	to	6:00 AM	**0.0%**	50%	50%	**0.0%**	50%	50%		0	0	0	0	0	121	121	142	21
6:00 AM	to	7:00 AM	**0.0%**	50%	50%	**1.0%**	5%	95%		0	0	0	0	4	118	118	142	24
7:00 AM	to	8:00 AM	**2.0%**	51%	49%	**4.0%**	20%	80%		5	5	0	3	13	107	108	142	34
8:00 AM	to	9:00 AM	**3.0%**	50%	50%	**10.0%**	20%	80%		8	8	0	8	34	82	83	142	59
9:00 AM	to	10:00 AM	**2.0%**	51%	49%	**7.0%**	20%	80%		5	5	0	6	23	65	65	142	77
10:00 AM	to	11:00 AM	**5.0%**	57%	43%	**5.0%**	30%	70%		15	11	4	6	15	56	60	142	82
11:00 AM	to	12:00 PM	**8.0%**	50%	50%	**4.0%**	50%	50%		21	21	4	8	8	56	60	142	82
12:00 PM	to	1:00 PM	**19.0%**	50%	50%	**5.0%**	50%	50%		49	49	4	10	10	56	60	142	82
1:00 PM	to	2:00 PM	**15.0%**	51%	49%	**5.0%**	50%	50%		40	38	6	10	10	56	62	142	80
2:00 PM	to	3:00 PM	**11.0%**	50%	50%	**4.0%**	50%	50%		29	29	6	8	8	56	62	142	80
3:00 PM	to	4:00 PM	**7.0%**	50%	50%	**5.0%**	55%	45%		18	18	6	12	9	58	64	142	78
4:00 PM	to	5:00 PM	**7.0%**	50%	50%	**7.0%**	55%	45%		18	18	6	16	13	61	67	142	75
5:00 PM	to	6:00 PM	**10.0%**	50%	50%	**11.0%**	65%	35%		26	26	6	30	16	75	81	142	61
6:00 PM	to	7:00 PM	**7.0%**	49%	51%	**9.0%**	65%	35%		18	19	5	25	13	86	91	142	51
7:00 PM	to	8:00 PM	**2.0%**	43%	57%	**8.0%**	65%	35%		4	6	3	22	12	97	100	142	42
8:00 PM	to	9:00 PM	**1.0%**	45%	55%	**4.0%**	70%	30%		2	3	3	12	5	103	106	142	36
9:00 PM	to	10:00 PM	**1.0%**	22%	78%	**3.0%**	70%	30%		1	4	0	9	4	108	108	142	34
10:00 PM	to	11:00 PM	**0.0%**	50%	50%	**3.0%**	70%	30%		0	0	0	9	4	113	113	142	29
11:00 PM	to	12:00 AM	**0.0%**	50%	50%	**2.0%**	95%	5%		0	0	0	8	0	121	121	142	21

1) Based on temporal distributions from CEQR Technical Manual and weekday parking demand profile for Supermarket (Land Use Code 850) from Institute of Transportation Engineers Parking Generation, 4th Edition, 2010
2) Based on temporal distributions from *CEQR Technical Manual*, residential temporal distribution from Pushkarev & Zupan, *Urban Space for Pedestrians,*Table 2.6, p. 37 and weekday parking demand profile for Rental Townhouse (Land Use Code 224) from Institute of Transportation Engineers *Parking Generation, 4th Edition*, 2010.
3) Local Retail and Residential person-trip rates based on *CEQR Technical Manual.*
4) Local Retail mode split provided by NYCDCP. Local Retail auto occupancy based on East New York Transportation Planning Factors and Travel Demand Forecast Memorandum. Residential mode split and auto occupancy (1.2) based on census journey-to-work data for tracts 55, 57, 59, 153, 155, 157, 159, 161 and 171.

Particulate Matter

Particulate matter is made up of small solid particles and liquid droplets. PM10 refers to particulate matter with a nominal aerodynamic diameter of 10 micrometers or less, and PM2.5 refers to particulate matter with an aerodynamic diameter of 2.5 micrometers or less. Particulates can enter the body through the respiratory system. Particulates over 10 micrometers in size are generally captured in the nose and throat and are readily expelled from the body. Particles smaller than 10 micrometers, and especially particles smaller than 2.5 micrometers, can reach the air ducts (bronchi) and the air sacs (alveoli) in the lungs. Particulates are associated with increased incidence of respiratory diseases, cardiopulmonary disease, and cancer.

Nitrogen Oxides

When combustion temperatures are extremely high, such as in engines, atmospheric nitrogen gas may combine with oxygen gas to form various oxides of nitrogen. Of these, nitric oxide (NO) and nitrogen dioxide (NO2) are the most significant air pollutants. This group of pollutants is generally referred to as nitrogen oxides or NOX. Nitric oxide is relatively harmless to humans but quickly converts to NO2. Nitrogen dioxide has been found to be a lung irritant and can lead to respiratory illnesses. Nitrogen oxides, along with VOCs, are also precursors to ozone formation.

Sulfur Dioxide

Sulfur Dioxide (SO2) emissions are the main components of the “oxides of sulfur,” a group of highly reactive gases from fossil fuel combustion at power plants, other industrial facilities, industrial processes, and burning of high sulfur containing fuels by locomotives, large ships, and non-road equipment. High concentrations of SO2 will lead to formation of other sulfur oxides. By reducing the SO2 emissions, other forms of sulfur oxides are also expected to decrease. When oxides of sulfur react with other compounds in the atmosphere, small particles that can affect the lungs can be formed. This can lead to respiratory disease and aggravate existing heart disease.

Non-Criteria Pollutants

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

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

Impact Criteria

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

would likely result in a significant adverse air quality impact. In addition, for CO from mobile sources and for PM2.5, the de minimis criteria are also used to determine significance of impacts.

National Ambient Air Quality Standards

The Clean Air Act (CAA) requires the USEPA to set standards on the pollutants that are considered harmful to public health and the environment. The NAAQS were implemented as a result of the CAA, amended in 1990 (see **Table 30**). The NAAQS applies to six principal ("criteria") pollutants: carbon monoxide (CO), nitrogen dioxide (NO2), particulate matter 10 (PM10), particulate matter 2.5 (PM2.5), sulfur dioxide (SO2), and ozone.

Table 34
National and New York State Ambient Air Quality Standards

Pollutant	Averaging Time	Standards
Carbon Monoxide (CO)	1-hour	35 ppm (40,000 µg/m^3)
	8-hour	9 ppm (10,000 µg/m^3)
Nitrogen Dioxide (NO_2)	1-hour	100 ppb (188 µg/m^3)
	annual	53 ppb (100 µg/m^3)
Ozone	8-hour	0.075 ppm
Particular Matter (PM_{10})	24-hour	150 µg/m^3
Particular Matter ($PM_{2.5}$)	24-hour	35 µg/m^3
	annual	12 µg/m^3
Sulfur Dioxide (SO_2)	1-hour	75 ppb (196 µg/m^3)
	3-hour	0.5 ppm (1,300 µg/m^3)

Non-Criteria Pollutant Thresholds

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

The NYSDEC DAR-1 guidance document presents guideline concentrations in micrograms per cubic meter (µg/m3) for the one-hour and annual average time periods for various air toxic compounds.

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

Carbon Monoxide (CO) De Minimis Criteria

New York City has developed de minimis criteria to assess the significance of the increase in CO concentrations that would result from the impact of proposed projects or actions on mobile sources, as set forth in the 2014 CEQR Technical Manual. These criteria set the minimum change in CO concentration that defines a significant environmental impact. Significant increases of CO concentrations in New York City are defined as: (i) an increase

of 0.5 ppm or more in the maximum eight-hour average CO concentration at a location where the predicted No-Action eight-hour concentration is equal to or between 8.0 and 9.0 ppm; or (ii) an increase of more than half the difference between baseline (i.e., No-Action) concentrations and the eight-hour standard, when No-Action concentrations are below 8.0 ppm.

Particulate Matter ($PM_{2.5}$) De Minimis Criteria

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

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood; or
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete receptor location (elevated or ground level).

2.10.2 Mobile Sources

According to the *CEQR Technical Manual*, projects, whether site-specific or generic, may result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic; create any other mobile sources of pollutants (such as diesel trains, helicopters etc.); or add new uses near mobile sources (roadways, garages, parking lots, etc.). Projects requiring further assessment include:

- Projects that would result in placement of operable windows, balconies, air intakes or intake vents generally within 200 feet of an atypical source of vehicular pollutants.

- Projects that would result in the creation of a fully or partially covered roadway, would exacerbate traffic conditions on such a roadway, or would add new uses near such a roadway.

- Projects that would generate peak hour auto traffic or divert existing peak hour traffic of 170 or more auto trips in this area of the City.

- Projects that would generate peak hour heavy-duty diesel vehicle traffic or its equivalent in vehicular emissions resulting from 12 or more heavy-duty diesel vehicles (HDDVs) for paved roads with average daily traffic of fewer than 5,000 vehicles, 19 or more HDDVs for collector roads, 23 or more HDDVs for principal and minor arterials, or 23 or more HDDVs for expressways and limited-access roads.

- Projects that would result in new sensitive uses (e.g., schools or hospitals) adjacent to large existing parking facilities or parking garage exhaust vents.

- Projects that would result in parking facilities or applications requesting the grant of a special permit or authorization for parking facilities; or projects that would result in a sizable number of other mobile sources of pollution (e.g., a heliport or a new railroad terminal).
- Projects that would substantially increase the vehicle miles traveled in a large area.

An assessment of traffic associated with the proposed project was conducted to determine if the proposed action would have potential air quality mobile sources concerns.

As indicated in Section 2.7, "*Transportation*," the Proposed Action would not result in 50 or more incremental vehicle trips. It's unlikely that the number of incremental trips generated by the proposed action at any given intersection would exceed the *CEQR Technical Manual* CO-based screening threshold of 170 vehicles per hour, as well as the $PM_{2.5}$-based screening threshold of 23 or more Heavy Duty Diesel Vehicles (HDDV). Therefore, traffic from the Proposed Action would not result in a significant adverse impact on mobile source air quality and a quantified assessment of on-street mobile source emissions is not warranted.

2. 10.3 Stationary Sources

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

HVAC Systems Analysis

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

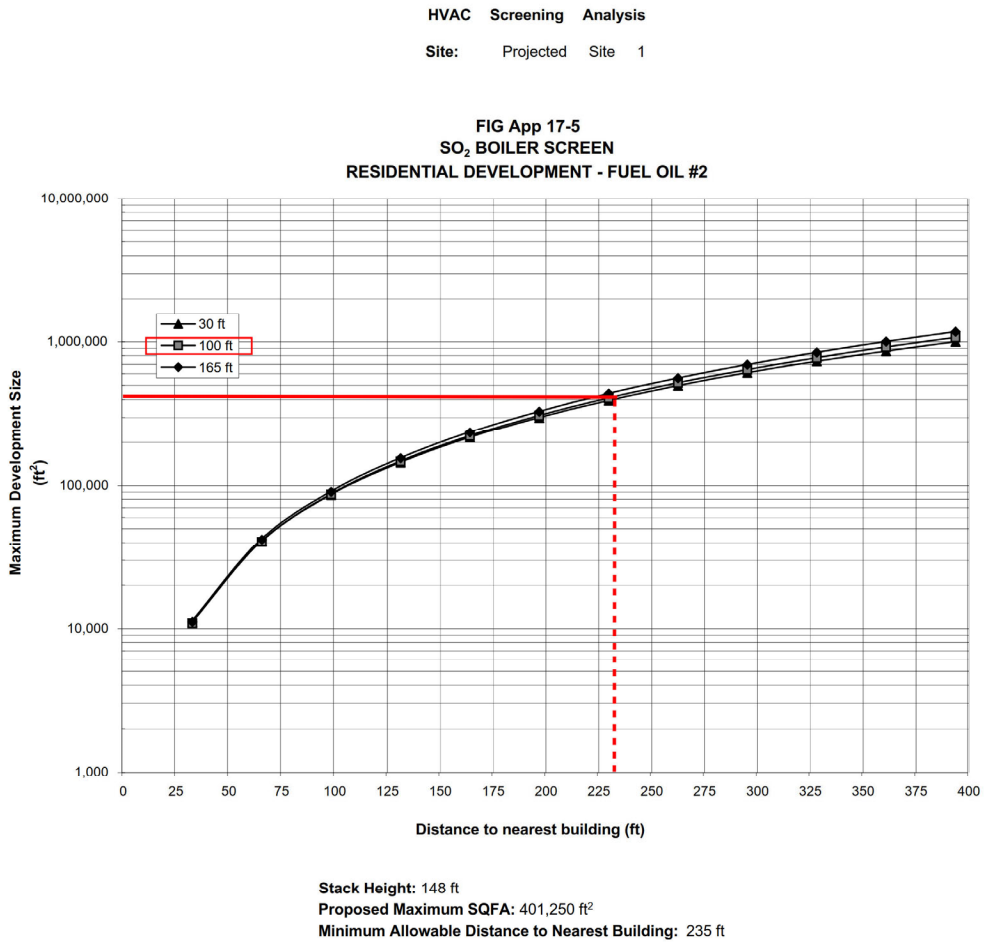
A screening analysis was conducted using the methodology described above to evaluate the potential impacts on existing buildings from emissions from individual as well as cumulative HVAC systems for the proposed project. For conservative purposes, the shortest distance between the source and the receptor assuming the maximum building footprints was used. It was assumed that the exhaust stacks would be located three feet above roof height (per the *CEQR Technical Manual*). The screening analysis was initially performed using the CEQR Technical Manual procedures assuming the use of No. 2 fuel oil. If the screening results failed with the use of No. 2 fuel oil, a second screening procedure was conducted, assuming use of natural gas. The proposed project would result in the development of two Projected Development Sites of varying sizes, summarized in **Table 31**, as below.

Table 35
Reasonable Worst Case Development Scenario Summary

Site No.	Block	Lot	Proposed Zoning	Max Allowable (gsf)	Max Allowable Height (feet)
Projected Site 1	704	1, 12, 42	R7X/C2-4 and R6B/C2-4	339,850	145

As shown in **Figure 24**, the minimum allowable distance to screen out detailed air quality impact analysis for any sensitive receptors with similar or greater height from Projected Site 1 is 235 feet. No residential buildings with a height of 145 feet or above were found in the 235-foot radius of Projected Site 1.

Figure 24 Air Quality Screening Graph - Projected Site 1



Proposed (E) Designation

Based on the findings presented above, the following (E) designation (E-537) is proposed to be assigned to Projected Development Site:

> **Block 704, Lots 1, 12, and 42:** Any new residential/commercial development or enlargement on the above-referenced property must ensure that the HVAC stack is located at the highest tier and at least 148 feet above grade, to avoid any potential significant adverse air quality impacts.

Industrial Source Impacts

Based on the land use and Sanborn maps and an air permit search of NYCDEP and NYSDEC database, an industrial facility with an expired industrial process registration was identified within 400 feet of the rezoning area:

- Koeppel Mazda and Hyundai. Under Permit No. PA1018695, located at 43-01 35th Avenue (Block 703, Lot 1).

However, during the process of obtaining detailed source parameters for the facility through consultation with NYCDEP, it was indicated by NYCDEP that the equipment registered in the expired air permit is no longer in use, instead the facility installed some tailpipe exhaust systems for which NYCDEP requested the owner to register though submitting a permit application. Since NYCDEP has not received permit application for those tailpipe exhaust systems within the facility, an assessment of potential air quality impacts on the sensitive receptors on the project site from the facility is not feasible.

2. 10.4 Conclusion

The air quality analysis demonstrates that the potential pollutant concentrations and/or concentration increment from mobile sources emissions associated with the proposed action would not exceed the NAAQS or the City's *de minimis* thresholds, as the project would not generate enough vehicle trips to cause air quality impacts.

As for the HVAC stationary source emissions, with the adoption of (E) Designation (E-537) for the projected buildings associated with the proposed actions, the Project would not exceed the NAAQS and the City's *de minimis* criteria. One expired industrial source were found within 400-foot radius of the Project Area, however, the equipment registered has been removed, no significant adverse impacts are anticipated from this source on the proposed residential buildings.

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

2.11 NOISE

2.11.1 Introduction

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

In terms of hearing, humans are less sensitive to low frequencies (<250 Hz) than mid-frequencies (500-1,000 Hz). Humans are most sensitive to frequencies in the 1,000 to 5,000 Hz range. Since ambient noise contains many different frequencies all mixed together, measures of human response to noise assign more weight to frequencies in this range. This is known as the A-weighted sound level.

Noise is measured in sound pressure level (SPL), which is converted to a decibel scale. The decibel is a relative measure of the sound level pressure with respect to a standardized reference quantity. Decibels on the A-weighted scale are termed "dB(A)." The A-weighted scale is used for evaluating the effects of noise in the environment because it most closely approximates the response of the human ear. On this scale, the threshold of discomfort is 120 dB(A), and the threshold of pain is about 140 dB(A). **Table 32** shows the range of noise levels for a variety of indoor and outdoor noise levels.

Because the scale is logarithmic, a relative increase of 10 decibels represents a sound pressure level that is 10 times higher. However, humans do not perceive a 10 dB(A) increase as 10 times louder; they perceive it as twice as loud. The following are typical human perceptions of dB(A) relative to changes in noise level:

- 3 dB(A) change is the threshold of change detectable by the human ear;
- 5 dB(A) change is readily noticeable; and
- 10 dB(A) increase is perceived as a doubling of the noise level.

As a change in land use may result in a change in type and intensity of noise perceived by residents, patrons and employees of a neighborhood, the *CEQR Technical Manual* recommends an analysis of the two principal types of noise sources: mobile sources and stationary sources. Both types of noise sources are examined in the following sections.

Mobile Sources

Mobile noise sources are those which move in relation to receptors. The mobile source screening analysis addresses potential noise impacts associated with vehicular traffic generated by the proposed actions.

According to the *CEQR Technical Manual*, if a project would result in the doubling of (or a 100 percent increase above) existing passenger car equivalent (PCE) values, a detailed mobile source analysis is generally performed. As discussed above in Section 2.7, Transportation, the proposed actions are not expected to generate more than 50 peak-hour vehicle trips through any local intersection. Therefore, the proposed actions do not require a detailed mobile source noise study and would not result in a significant, adverse impact with respect to mobile sources of noise.

Stationary Sources

Stationary sources of noise do not move in relation to a noise-sensitive receptor. Typical stationary noise sources of concern for CEQR include machinery or mechanical equipment associated with industrial and manufacturing operations; or building heating, ventilating, and air-conditioning systems. In addition, noise produced by crowds of people within a defined location, such as children in playgrounds or spectators attending concerts or sporting events, and noise produced by concerts or by announcements using amplification systems are considered stationary sources.

Table 36
Sound Pressure Level & Loudness of Typical Noises in Indoor & Outdoor Environments

Noise Level dB(A)	Subjective Impression	Typical Sources		Relative Loudness (Human Response)
		Outdoor	Indoor	
120-130	Uncomfortably Loud	Air raid siren at 50 feet (threshold of pain)	Oxygen torch	32 times as loud
110-120	Uncomfortably Loud	Turbo-fan aircraft at take-off power at 200 feet	Riveting machine Rock band	16 times as loud
100-110	Uncomfortably Loud	Jackhammer at 3 feet		8 times as loud
90-100	Very Loud	Gas lawn mower at 3 feet Subway train at 30 feet Train whistle at crossing Wood chipper shredding trees Chain saw cutting trees at 10 feet	Newspaper press	4 times as loud
80-90	Very Loud	Passing freight train at 30 feet Steamroller at 30 feet Leaf blower at 5 feet Power lawn mower at 5 feet	Food blender Milling machine Garbage disposal Crowd noise at sports event	2 times as loud
70-80	Moderately Loud	NJ Turnpike at 50 feet Truck idling at 30 feet Traffic in downtown urban area	Loud stereo Vacuum cleaner Food blender	Reference loudness (70 dB(A))
60-70	Moderately Loud	Residential air conditioner at 100 feet Gas lawn mower at 100 feet Waves breaking on beach at 65 feet	Cash register Dishwasher Theater lobby Normal speech at 3 feet	2 times as loud
50-60	Quiet	Large transformers at 100 feet Traffic in suburban area	Living room with TV on Classroom Business office Dehumidifier Normal speech at 10 feet	1/4 as loud
40-50	Quiet	Bird calls Trees rustling Crickets Water flowing in brook	Folding clothes Using computer	1/8 as loud
30-40	Very quiet		Walking on carpet Clock ticking in adjacent room	1/16 as loud
20-30	Very quiet		Bedroom at night	1/32 as loud
10-20	Extremely quiet		Broadcast and recording studio	
0-10	Threshold of Hearing			

Sources: *Noise Assessment Guidelines Technical Background*, by Theodore J. Schultz, Bolt Beranek and Newman, Inc., prepared for the US Department of Housing and Urban Development, Office of Research and Technology, Washington, D.C., undated; Sandstone Environmental Associates, Inc.; *Highway Noise Fundamentals*, prepared by the Federal Highway Administration, US Department of Transportation, September 1980; *Handbook of Environmental Acoustics*, by James P. Cowan, Van Nostrand Reinhold, 1994.

The proposed project is not anticipated to include any new principal stationary source noise generators, such as unenclosed cooling or ventilation equipment (other than single-room units), truck loading docks, loudspeaker systems, stationary diesel engines, car washes, or other similar types of uses. The proposed building should include mechanical rooms on the roof to house the mechanical equipment. The design and specifications for the mechanical equipment, such as heating, ventilation, and air conditioning, are not known at this time. However, assuming the developer selects equipment that would be designed to comply with applicable noise regulations and standards (including the standards contained in the revised New York City Noise Control Code), the proposed project would not be expected to generate significant adverse stationary source noise impacts to the surrounding residential neighborhood, and therefore no further analysis is needed.

New Sensitive Receptors

As described previously, Proposed Action would introduce new sensitive receptors; therefore, an evaluation of the effect of existing ambient noise levels from surrounding sources on the proposed site is warranted per the *CEQR Technical Manual*.

Existing Ambient Noise Level

To ensure the noise levels are representative, a noise monitoring program was conducted on June 19, 2018. These measurements were then compared with NYCDEP-established exterior noise exposure guidelines, Table 19-2 in the *CEQR Technical Manual*, to determine appropriate building noise attenuation, if required, for any of proposed buildings to ensure that interior noise levels would be acceptable per Table 19-3 in the *CEQR Technical Manual*.

Noise measurement was conducted for 20 minutes at four locations during peak vehicular travel periods, 7:00-9:00 am, 12:00-2:00 pm, and 4:00-6:00 pm. The weather condition is normal with calm wind and is considered suitable for an ambient noise measurement. A Type 1 sound level meter (Larson Davis LxT) with wind shield was used to conduct the noise monitoring. The meter was placed on a tripod at a height of approximately five feet above the ground, away from any reflective surfaces. The meter was calibrated prior to and following each monitoring session.

Noise measurements were conducted at four locations as shown in **Figure 25**:

- **Location 1:** Midblock of 44th Street between Northern Boulevard and 34th Avenue;
- **Location 2:** Midblock of Northern Boulevard between 44th Street and 45th Street;
- **Location 3:** Midblock of 45th Street between Northern Boulevard and 34th Avenue , opposite side of the Projected Development Site, due to the cars and trucks parking on the sidewalk;
- **Location 4:** Midblock of 34th Avenue between 44th Street and 45th Street.

Tables 33, 34, 35, and 36 summarize the ambient noise levels in terms of various noise metrics measured at four selected locations during three daytime periods. L_{10} is the metric used by NYCDEP in establishing the exterior noise exposure guidelines.

Figure 25 Noise Measurement Locations



Table 37
Noise Levels in dBA at Location 1

Noise Metric	Time Period		
	7:37-7:57 AM	12:18-12:38 PM	4:44-5:04 PM
L_{eq}	59.5	59.8	58.1
L_{max}	87.6	79.0	82.4
L_{10}	60.6	62.5	59.5
L_{50}	55.0	55.8	56.1
L_{90}	52.3	52.9	53.3
L_{min}	48.7	49.7	49.8

Table 38
Noise Levels in dBA at Location 2

Noise Metric	Time Period		
	8:01-8:21 AM	12:41-13:01 PM	5:06-5:26 PM
L_{eq}	72.0	71.0	70.9
L_{max}	90.8	91.3	90.0
L_{10}	**74.8**	**74.3**	**73.4**
L_{50}	70.5	68.1	68.1
L_{90}	57.5	58.5	60.3
L_{min}	51.9	52.5	56.5

Table 39
Noise Levels in dBA at Location 3

Noise Metric	Time Period		
	8:25-8:45 AM	13:04-13:24 PM	5:30-5:50 PM
L_{eq}	65.2	62.4	67.7
L_{max}	93.3	89.5	95.9
L_{10}	**64.7**	**66.3**	**67.7**
L_{50}	59.7	56.4	61.4
L_{90}	55.7	52.2	57.0
L_{min}	52.1	49.7	52.5

Table 40
Noise Levels in dBA at Location 4

Noise Metric	Time Period		
	8:48-9:08 AM	13:27-13:47 PM	5:53-6:13 PM
L_{eq}	63.6	62.4	63.3
L_{max}	83.4	83.4	86.1
L_{10}	**65.1**	**65.0**	**64.8**
L_{50}	59.4	59.0	59.5
L_{90}	57.2	53.8	56.2
L_{min}	55.9	50.8	53.3

Compared to *CEQR Technical Manual* guidelines, existing noise levels measured at Location 2 are "marginally unacceptable". Existing noise levels measured at Locations 1, 3, and 4 are "marginally acceptable". Therefore, 31-dBA window-wall noise attenuation is required for the proposed building's eastern and western façades within 50 feet of Northern Boulevard for residential/commercial use.

Proposed (E) Designation

Based on the findings presented above, the following (E) designation (E-537) is proposed to be assigned to Projected Development Site:

> **Block 704, Lots 1, 12, and 42:** To ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing Northern Boulevard and facades facing 44th Street or 45th Street within 50 feet of Northern Boulevard to maintain an interior noise level not greater than 45 dBA for residential uses and not greater than 50 dBA for commercial uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

2.11.2 Conclusion

The noise assessment concluded that the vehicular traffic generated by the Proposed Actions would not have the potential to produce significant noise level increases at any sensitive receptor locations in the vicinity of the project site. The proposed project would also not generate stationary sound levels that would adversely impact nearby sensitive receptor locations.

The noise assessment demonstrated that the existing sound levels would conservatively likely exceed the CEQR limits and the proposed buildings at Projected Development Site 1 would require noise attenuation measures, set forth by (E) Designation (E-537) to ensure an acceptable exterior to interior noise attenuation is achieved for the Proposed Actions noise condition. Therefore, the proposed project would not result in any significant adverse noise impacts.

2.12 NEIGHBORHOOD CHARACTER

As defined by the *CEQR Technical Manual*, neighborhood character is considered to be an amalgam of the various elements that give a neighborhood its distinct personality. The elements, when applicable, typically include: land use, zoning and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise.

If a project has the potential to result in any significant adverse impacts on any of the above technical areas, a preliminary assessment of neighborhood character may be appropriate. In addition, depending on the project, a combination of moderate changes in several of these technical areas may potentially have a significant effect on neighborhood character. As stated in the *CEQR Technical Manual*, a "moderate" effect is generally defined as an effect considered reasonably close to the significant adverse impact threshold for a particular technical analysis area. When considered together, there are elements that may have the potential to significantly affect neighborhood character. Moderate effects on several elements may affect defining features of a neighborhood and, in turn, a pedestrian's overall experience. If it is determined that two or more categories may have potential "moderate effects" on the environment, CEQR states that the following question should be answered: "Would the proposed project result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character?"

The proposed action would not exceed any of the thresholds in the technical areas listed above, which would typically warrant a detailed assessment of the potential for neighborhood character impacts, and thus significant adverse impacts are not expected. In addition, the proposed action is not expected to result in any notable moderate changes in the noted technical areas, and as such, would not have a significant effect on neighborhood character. An assessment of the potential for moderate changes as a result of the proposed action follows below. A key to the photographs of the site and surrounding project study area were previously shown with photographs of the site and surrounding study area displayed previously at the end of Section 1.

The project site and rezoning area is centered on Northern Boulevard between 44th and 45th Streets in Astoria. The existing land use in the area immediately surrounding the proposed site is a mix of multi-family walkup and elevator residential buildings, and commercial uses. The commercial uses are mainly automobile-related along Northern Boulevard with some local retail businesses along 34th Avenue. The prevailing built form of the area is a mix of two-to four-story residential buildings north and west of the proposed site and single-story, auto-related commercial buildings to the south along Northern Boulevard. On 34th Avenue there are two six-story residential buildings, built to 4.6 FAR and containing ninety-six (96) residential units.

One of the main thoroughfares in the area is Northern Boulevard, which is a wide, busy street in this section of Astoria. The properties south of the proposed site on the south side of Northern Boulevard include a range of large commercial and retail properties. The properties along Northern Boulevard are a mix of similarly commercial establishments and large residential developments. This area is shifting away from the older manufacturing uses toward new mixed-use residential condominium buildings and supportive retail and commercial enterprises.

The Northern Boulevard area between 44th and 45th Streets is generally characterized by one-story auto-sales related uses and other commercial uses south of Northern Boulevard with a more mixed, though primarily residential, character north of Northern Boulevard.

Properties to the north of the proposed site above 34th Avenue consists of multifamily residential housing and one and two family residences.

The proposed site is located within an M1-1 district, which is generally mapped along Northern Boulevard between 41st and 58th Streets. The surrounding area includes a broad range of zoning designations, which

permit an array of commercial uses, as well as dense residential housing development. Immediately to the north of the project site, an R6B district is zoned on the northern and southern sides of 34th Avenue, with commercial overlays mapped along the south side of 34th Avenue (C1-4 west of 44th Street, C2-4 east of 44th Street). To the west of the proposed site is an R5 zoning district with a C2-1 commercial overlay in the northwest quadrant of the intersection of 43rd Street and 35th Avenue. To the south of the project site Amtrak's Sunnyside Yards and other industrial activity is zoned M1-1 and M1-5. The existing land use in the area immediately surrounding the proposed site is a mix of multi-family walkup and elevator residential buildings, and commercial uses.

The proposed action will reinforce the residential transitioning of the area while providing needed commercial uses for residents of the area. Therefore, no significant adverse impacts on neighborhood character are expected as a result of the proposed action, and further assessment is not warranted.

2.13 CONSTRUCTION

Construction, although temporary, can result in disruptive and noticeable effects on a proposed action area. A determination of the significance of construction and the need for mitigation is based on the duration and magnitude of these effects. Construction is typically of greatest importance when it could affect traffic conditions, community noise patterns, air quality conditions and hazardous materials. All analyses were undertaken in accordance with the guidelines contained in the *CEQR Technical Manual*.

The proposed action involves a rezoning in the Astoria section of Queens. The duration of construction is expected to last approximately 20 months, potential impacts would be minimal and, as discussed below, not expected to have any significant adverse impacts. The following is a brief discussion of the effects associated with the construction related activities on traffic, air quality, noise, historical resources and hazardous materials resulting from the construction of the projected development site as described in Section 1.3 above.

2.13.1 Effect of Construction on Traffic

The proposed action would replace existing uses on the development site. During construction, the projected development site would generate trips from workers traveling to and from the construction site, and from the movement of materials and equipment.

The infrastructure of New York City is comprised of physical systems that support the population, including water supply, wastewater, sanitation, energy, roadways, bridges, tunnels, and public transportation. This section covers only the effect of the proposed action on traffic operations. Given typical construction hours of 7:00 AM to 4:00 PM, worker trips would be concentrated in off-peak hours typically before both the AM and PM peak commuter periods. Truck movements typically would be spread throughout the day on weekdays, and would generally occur between the hours of 7:00 AM and 4:30 PM. Traffic generated by construction workers traveling to and from their work site and construction truck traffic would not represent a substantial increment during the area's peak travel periods.

Construction activities may result in short-term disruption of both traffic and pedestrian movements at the development site. This would occur primarily due to the potential temporary loss of curbside lanes from the staging of equipment and the movement of materials to and from the site. Additionally, construction could at times result in the temporary closing of sidewalks adjacent to the site. These conditions would be temporary and short-term in nature and would not lead to significant adverse effects on traffic and transportation conditions.

2.13.2 Effect of Construction on Air Quality

Possible impacts on local air quality during construction include fugitive dust (particulate) emission from land clearing operation and demolition as well as mobile source emissions (hydrocarbons, nitrogen oxide, and carbon monoxide) generated by construction equipment and vehicles.

Fugitive dust emissions from land clearing operations can occur from 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 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 should be of a short-term duration and relatively contained within a proposed site, not significantly impacting nearby buildings or residents. All appropriate fugitive dust control measures – including watering of exposed areas and dust covers for trucks – would be employed during construction of the development sites. Therefore, the fugitive source emissions generated by the proposed action would not be significant.

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 the construction site. As the number of construction-related vehicle trips generated by the proposed action would be relatively small and the emissions from such vehicles as well as construction equipment would occur over a two-year period and be dispersed throughout the area, the mobile source emissions generated by the proposed action would not be significant. Overall, the proposed action would not have the potential to result in significant adverse air quality impacts.

2.13.3 Effect of Construction on Noise

Noise and vibration from construction equipment operation and noise from construction workers' vehicles and delivery vehicles traveling to and from the construction site can affect community noise levels. The level of impact of these noise sources depends on the noise characteristics of the equipment and activities involved the construction schedule, and the location of 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 of the location from the construction site and the types of structures, if any, between the location and the noise source. Noise levels caused by construction activities can vary widely, depending on the phase of construction (e.g. demolition, land clearing and excavation, foundation, erection of structure, construction of exterior walls) and the specific task being undertaken.

Construction noise associated with the proposed action is expected to be similar to noise generated by other residential construction projects in the city. Increased noise level caused by construction activities can be expected to be more significant during early excavation phases of construction and would be of relatively short duration. Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant.

Construction noise is regulated by the *New York City Noise Control Code* and by Environmental Protection Agency noise 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 7:00 AM and 6:00 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. In addition, whenever possible,

appropriate low noise emission level equipment and operational procedures can be utilized to minimize noise and its effect on adjacent uses.

Thus, while there may be short periods of time when noise is greater than the Noise Control Code, these regulations would be followed in such a matter that no significant adverse noise impacts would be expected to result from the proposed action.

2.13.4 Effect of Construction on Hazardous Materials

The proposed action would result in new development in the rezoning area. As such, a hazardous materials assessment was undertaken, as presented Section 2.6 of this EAS. As discussed in the section, although two RECs were identified, an (E)-designation will be put in place to insure that no significant adverse impacts will result.

2.13.5 Conclusion

Construction-related activities are not expected to have any significant adverse impacts on traffic, air quality, noise, or hazardous materials conditions as a result of the proposed action.

Appendix A

Correspondence

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / PRE-CEQR-Q
Project: Northern Boulevard Rezone
Date received: 12/6/2017

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 44-01 NORTHERN BOULEVARD, BBL: 4007040001
2) ADDRESS: 34-20 45 STREET, BBL: 4007040012
3) ADDRESS: 44-33 NORTHERN BOULEVARD, BBL: 4007040042



12/6/2017

SIGNATURE DATE

Gina Santucci, Environmental Review Coordinator

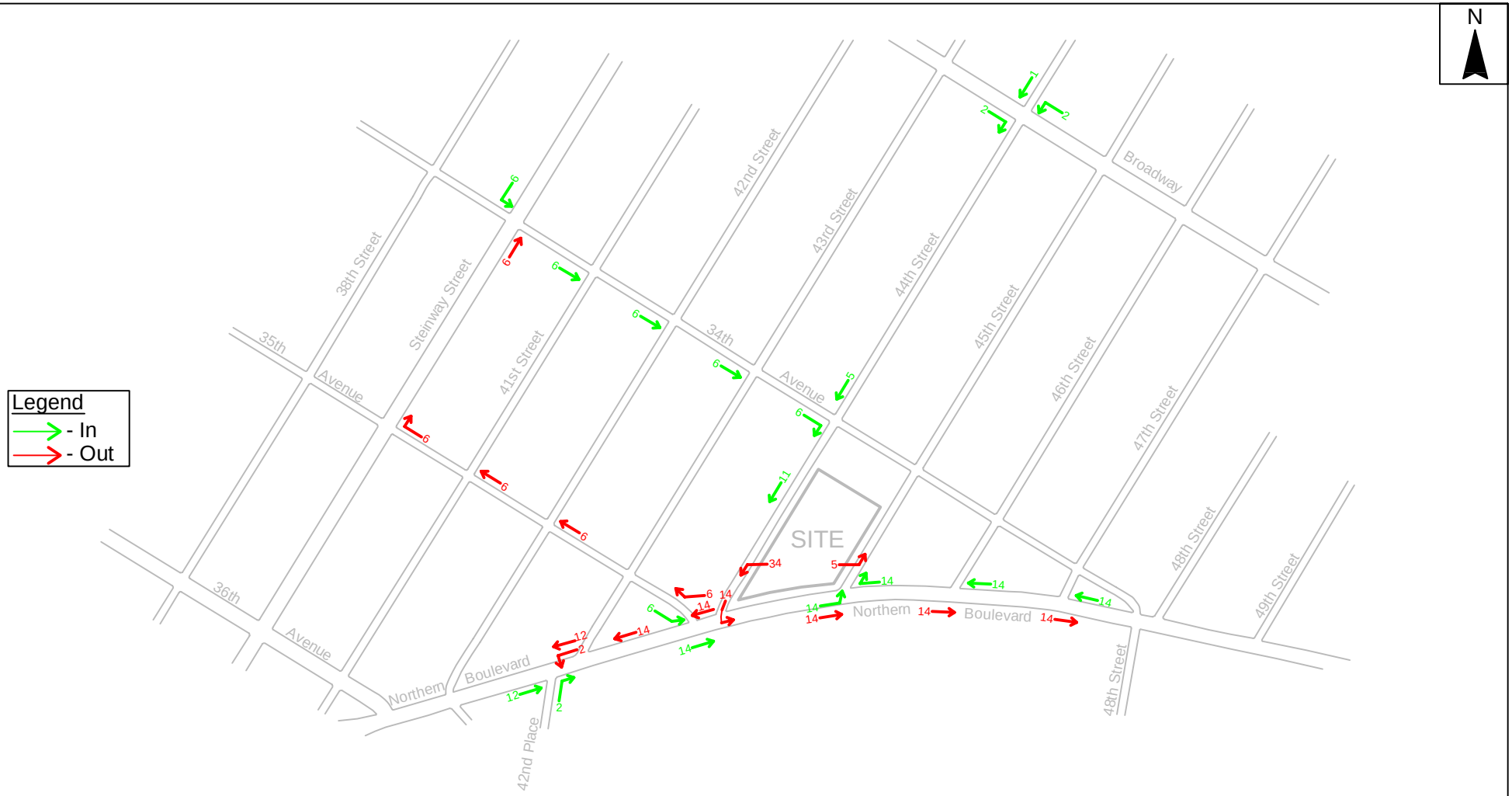
File Name: 32947_FSO_DNP_12062017.doc

Appendix B

Phase I ESA

Appendix C

Vehicle Trip Assignments:
Weekday Midday Peak Hour



AECOM

44-01 Northern Boulevard Rezoning
Environmental Assessment
Long Island City, Queens

Vehicle Trip Assignments:
Weekday Midday Peak Hour
Figure 5

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Determination of Significance Appendix: (E) Designation

To ensure that there would be no significant adverse hazardous materials, air quality, noise impacts associated with the proposed project, an (E) designation (E-537) will be assigned to the projected site as explained below.

Projected Development Site 1:

Block 705, Lots 1, 12, 42

Hazardous Materials

Task 1

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

Task 2

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

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

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

Air Quality

To ensure that there would be no significant adverse air quality impacts associated with the proposed project, an E designation (E-537) will be placed on the Projected Development Site 1 (Block 705, Lots 1, 12, 42) as follows:

Block 705, Lots, 1, 12, 42 (Projected Development Site a) : *Any new residential/commercial development or enlargement on the above-referenced property must ensure that the HVAC stack is located at the highest tier and at least 148 feet above grade, to avoid any potential significant adverse air quality impacts.*

Noise

To ensure that there would be no significant adverse noise impacts associated with the proposed project, an E designation (E-537) will be placed on the Projected Development Site 1 (Block 705, Lots 1, 12, 42) as follows:

Block 705, Lots, 1, 12, 42 (Projected Development Site a) : *To ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on facades facing Northern Boulevard and facades facing 44th Street or 45th Street within 50 feet of Northern Boulevard to maintain an interior noise level not greater than 45 dBA for residential uses and not greater than 50 dBA for commercial uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.*