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ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) AND SUPPLEMENTAL REPORT

69-02 QUEENS BOULEVARD DEVELOPMENT

WOODSIDE, QUEENS, NY

November 27, 2019

LANGAN

NEW YORK CITY ENVIRONMENTAL QUALITY REVIEW
REVISED ENVIRONMENTAL ASSESSMENT STATEMENT*

69-02 QUEENS BOULEVARD DEVELOPMENT

69-02 QUEENS BOULEVARD
BOROUGH OF QUEENS

Prepared For:
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CEQR Number: 18DCP132Q
***27 November 2019**

*The City Council approved (with modifications) the related land use application (ULURP No. C180265ZMQ, C180267ZSQ, N180266ZRQ) on October 31, 2018. Subsequently, the Applicant has revised the Proposed Actions to reinstate Block 2432, Lot 8, into the Development Site and slightly alter the building footprints of the West and East Towers so that the permitted floor area would be utilized. This Revised Negative Declaration dated December 2, 2019 supersedes the Negative Declaration issued on September 5, 2018 and reflects the Revised EAS dated November 27, 2019, which assesses the changes to the application. As described in this Revised EAS Appendix J, the changes would not alter the conclusions of the Revised EAS dated August 31, 2018. Because Lot 8 has been reinstated, it would require an (E) Designation for Hazardous Materials, Air Quality, and Noise. However, the inclusion of the proposed (E) Designation on Lot 8 would not alter the conclusions of the EAS.

LANGAN

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PART I: ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) FULL FORM
(CITY ENVIRONMENTAL QUALITY REVIEW)

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

Please fill out and submit to the appropriate agency (see instructions)

Part I: GENERAL INFORMATION

PROJECT NAME 69-02 Queens Boulevard

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
18DCP132Q	N/A
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable)
180265ZMQ; 180267ZSQ; 180266ZRQ	(*e.g.*, legislative intro, CAPA)

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT 69-02 Queens Blvd Woodside LLC		
NAME OF LEAD AGENCY CONTACT PERSON Robert Dobruskin			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Zachary Kadden		
ADDRESS 120 Broadway – 31st Floor			ADDRESS 825 3rd Avenue, 37th Floor, New York, NY 10022		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10038
TELEPHONE (212) 720-3423	EMAIL rdobrus@planning.nyc.gov		TELEPHONE (646) 747-2235	EMAIL zkadden@madisonrealtycapital.com	

3. *Action Classification and Type*

SEQRA Classification

☒ UNLISTED ☐ TYPE I: Specify Category (see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended):

Action Type (refer to Chapter 2, "Establishing the Analysis Framework" for guidance)

☒ LOCALIZED ACTION, SITE SPECIFIC ☐ LOCALIZED ACTION, SMALL AREA ☐ GENERIC ACTION

4. *Project Description*

The Applicant, 69-02 Queens Blvd Woodside LLC, is requesting three discretionary actions: (i) a zoning map amendment to rezone Lot 1 and parts of Lots 41, 44, and 50 on Block 2432 ("Proposed Rezoning Area") from an M1-1 zoning district to an R7X zoning district with a C2-3 commercial overlay; (ii) a Large-Scale General Development (LSGD) Special Permit to modify height and setback requirements on Lots 9, 21, 41, 44, and 50 on Block 2432 ("Development Site"); and (iii) a zoning text amendment to designate a Mandatory Inclusionary Housing (MIH) area on the entirety of Block 2432 (Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, and 50). The requested discretionary actions ("Proposed Actions") therefore would affect Block 2432, Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, and 50 ("Directly Affected Area"). The Proposed Actions would facilitate the construction of two predominantly residential buildings with a total of approximately 495,343 gross square feet (gsf) of development ("Proposed Development") on the Development Site at 69-02 Queens Boulevard in the Woodside neighborhood of the Borough of Queens, Community District 2. The proposed development would include ground floor retail use; approximately 561 dwelling units on the upper floors, of which approximately 30 percent (169 units) would be permanently affordable pursuant to MIH requirements; and approximately 33,106 gsf of at-grade parking (242 spaces) using stackers accessed via an existing curb cut on 69th Street.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 2	STREET ADDRESS 46-15 69th St.; 46-01 69th St./69-02 – 69-08 Queens Blvd.; 69-20 Queens Blvd.; 46-10 – 46-12 70th St.; 69-39 47th Ave./ 46-16 70th St.; 69-19 – 69-23 47th Ave.
TAX BLOCK(S) AND LOT(S) Block 2432, Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, & 50		ZIP CODE 11377

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Directly Affected Area is bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; and 69th Street to the west. The elevated Long Island Rail Road (LIRR) tracks traverse the southwest corner of Lot 1.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R7X/C2-3 and M1-1	ZONING SECTIONAL MAP NUMBER: 9d

5. *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 Large-Scale General Development Special Permit pursuant to ZR §74-743 to modify 23-662 and 25-251; Appendix F.

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

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

Other City Approvals Subject to CEQR (check all that apply) N/A
☐ 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:

6. *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.): 102,785 sf Waterbody area (sq. ft.) and type: N/A
Roads, buildings, and other paved surfaces (sq. ft.): N/A Other, describe (sq. ft.): N/A

7. *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): 495,343 gsf
NUMBER OF BUILDINGS: 2
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): West Tower: 248,555 gsf, East Tower: 213,682 gsf; Parking garage: 33,106 gsf.
HEIGHT OF EACH BUILDING (ft.): West Tower: 181.5, East Tower 151.5
NUMBER OF STORIES OF EACH BUILDING: West Tower: 17-stories, East Tower: 14-stories; at-grade parking on the ground floor of both towers.

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: 46,307 sf (Lots 9, 21, 41, and 44)
The total square feet not owned or controlled by the applicant: 42,748 sf (Lots 8, 23, 26, 34, 37, 39, and 50); (Lot 1: 13,730 sf, owned by LIRR)

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 disturbance (if known):
AREA OF TEMPORARY DISTURBANCE: (width x length) 65,970 sf VOLUME OF DISTURBANCE: (width x length x depth) Approx. 1,055,500 sf
AREA OF PERMANENT DISTURBANCE: (width x length) Approx. 65,970 sf

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2020
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: Approximately 22 months
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO IF MULTIPLE PHASES, HOW MANY?
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Single phase; approximately 22 months

9. *Predominant Land Use in the Vicinity of the Project* (check all that apply)
☒ RESIDENTIAL ☒ MANUFACTURING ☒ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☐ OTHER, specify:

ATTACHMENT A: PROJECT DESCRIPTION

INTRODUCTION

The Applicant, 69-02 Queens Blvd Woodside LLC, is requesting three discretionary actions: (i) a zoning map amendment to rezone Lot 1 and parts of Lots 41, 44, and 50 on Block 2432 ("Proposed Rezoning Area") from an M1-1 zoning district to an R7X zoning district with a C2-3 commercial overlay; (ii) a Large-Scale General Development (LSGD) Special Permit to modify building height requirements on Lots 9, 21, 41, 44, and 50 on Block 2432 ("Development Site"); and (iii) a zoning text amendment to Appendix F of the New York City Zoning Resolution (ZR) to designate a Mandatory Inclusionary Housing (MIH) area on the entirety of Block 2432 (Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, and 50). The requested discretionary actions ("Proposed Actions") therefore would affect Block 2432, Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, and 50 ("Directly Affected Area") (Figures 1, 2, and 3).

The requested discretionary actions would facilitate the construction of one 17-story (181.5-foot) residential/commercial building and one 14-story (151.5-foot) residential building, totaling approximately 495,343 gross square feet (gsf) (the "Proposed Project") on Lots 9, 21, 41, 44, 50 ("Development Site"). The Proposed Project would comprise a total of approximately 456,330 gsf of mixed-income residential floor area (5.92 FAR), which would include approximately 561 dwelling units, of which approximately 30 percent (169 dwelling units) would be allocated as permanently affordable for residents with incomes averaging at or below 80 percent Area Median Income (AMI) pursuant to Option 2 of the MIH program;[1] approximately 5,907 sf of ground floor retail space and approximately 33,106 gsf of at-grade accessory parking using double stackers that would be accessed via 69th Street (242 parking spaces).

DIRECTLY AFFECTED AREA

The area directly affected by the Proposed Actions includes Block 2432, Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, and 50 (Figure 2). Lot 1 is a railroad right-of-way owned by the Long Island Rail Road (LIRR). Lot 9 is vacant and was previously improved with a one-story building used as a gas station/car wash and an auto repair shop. Lot 21 is occupied by a one-story vacant building. Lots 23, 26, 34, and 37 are currently under construction with a 9-story residential building. Lot 39 contains a single-family home. Lots 41, 44, and 50 are improved with a two-story commercial building, one-story warehouse building, and a two-story community center with surface parking, respectively.

PROPOSED REZONING AREA

The Proposed Rezoning Area comprises Tax Lot 1 and parts of Lots 41, 44, and 50, which are in an M1-1 district (Figures 2 and 4).

[1] For the purpose of this analysis, development contemplated in the With-Action Condition would include 20 percent of the residential floor area (112 dwelling units) as affordable for families with incomes averaging at or below 80 percent AMI.

DEVELOPMENT SITE

The Development Site is at 69-02 Queens Boulevard and comprises Tax Lots 9, 21, 41, 44, and 50[2]; these six tax lots have a total lot area of approximately 71,696 square feet (sf) (Figure 2). The Development Site is bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; elevated LIRR tracks to the southwest; and 69th Street to the west. Lots 9 and 21 comprise the northwestern part of the site. Lots 41, 44, and 50 comprise the southeastern part of the site. Lots 9 and 21 are mapped with an R7X zoning district and a C2-3 commercial overlay; and Lots 41, 44, and 50 are split zoning lots located partially in the R7X/C2-3 zoning district and partially in the M1-1 zoning district. The portion of the Development Site currently mapped with the R7X zoning district is also in an Inclusionary Housing (IH) designated area.

DESCRIPTION OF THE PROPOSED ACTIONS

The Proposed Actions include:

1. A zoning map amendment to rezone part of the Development Site currently zoned M1-1 ("Proposed Rezoning Area") to an R7X zoning district with a C2-3 commercial overlay (Figure 4);

2. A LSGD Special Permit pursuant to the ZR §74-743 to modify building height requirements on the Development Site; and

3. A zoning text amendment to modify ZR Appendix F to establish a MIH area on Block 2432.

PURPOSE AND NEED

The northern part of the Development Site is mapped with an R7X/C2-3 zoning district and includes one vacant lot (Lot 9) and one lot (Lot 21) occupied by a vacant one-story, approximately 3,935-gsf building. The southern part of the Development Site is mapped with an M1-1 zoning district and is improved with a two-story, approximately 2,240-gsf commercial building on Lot 41; a one-story, approximately 10,943-gsf warehouse building on Lot 44; a two-story, and approximately 10,943-gsf community center (Armenian Community Center) and an accessory surface parking lot on Lot 50.

The existing R7X zoning district on the northern part of the Development Site permits development with a maximum FAR of 5.00 for community facility uses. Residential use is permitted under R7X regulations to a maximum FAR of 3.75 (5.00 FAR with an IH bonus). The existing C2-3 commercial overlay on the northern portion of the Development Site permits commercial use at a maximum FAR of 2.00 limited to the first two floors and must be located below a residential use. The existing M1-1 zoning district on the southern part of the Development Site permits development with a maximum FAR of 2.40 for community facility uses (Use Group 4).[3] Commercial uses (Use Groups 5 through 14), and general service and light manufacturing uses (Use Groups 16 and 17) are permitted in M1-1

[2] The Applicant owns Lots 9, 21, 41, and 44.
[3] Community facilities, such as houses of worship, are allowed as-of-right in M1-1 zoning districts; however, hospitals are permitted only by a special permit.

zoning districts at a maximum FAR of 1.00.[4] The existing buildings on the Development Site are underbuilt in terms of permitted building bulk under the current R7X/C2-3 and M1-1 zoning districts. The proposed R7X/C2-3 zoning district, combined with an increase in FAR pursuant to the MIH program, would permit residential uses on the Development Site at a maximum FAR of 6.00.

The LSGD Special Permit would provide the development in the With-Action Condition relief from the maximum height requirement and the maximum number of stories allowed in a single building on the Development Site. The LSGD Special Permit would allow the development in the With-Action Condition to exceed the maximum height limit of 140 feet by approximately 11.5 feet. Additionally, it would allow the development in the With-Action Condition to exceed the maximum number of stories in a single building on the West Tower by three (3) stories. The requested relief—maximum building height and maximum number of stories for the West Tower and maximum building height for the East Tower—will ensure a more rational distribution of floor area, a better site plan, a better relationship among the buildings on the Development Site and the surrounding areas, and maximize both open space and number of dwelling units.

The Proposed Actions would facilitate a development that would align with and support the goals of the New York City Department of City Planning (DCP), the New York City Department of Housing Preservation and Development (HPD), and the New York City Housing Development Corporation (HDC) to provide permanent affordable housing under the MIH program with mixed-income levels. Under the Proposed Actions, the Applicant intends to provide 30 percent of the Proposed Project's total residential floor area (approximately 169 dwelling units) as affordable housing units for residents with incomes averaging at or below 80 percent AMI.[5] The exact affordability levels within the 30 percent allocated floor area would be decided at a later date. The Proposed Actions would create permanent affordable housing opportunities in the Woodside neighborhood of Queens. According to *Housing New York: A Five- Borough, Ten-Year Plan (Housing New York*), the creation and preservation of affordable housing in New York City is necessary to maintain and encourage greater economic diversity within neighborhoods; therefore, the Proposed Actions would support the *Housing New York* plan.

PROPOSED PROJECT

The Proposed Actions would facilitate the construction of one 17-story (181.5-foot) mixed residential/commercial building and one 14-story (151.5-foot) residential building, totaling approximately 495,343 gsf (the "Proposed Project"). The Proposed Project would comprise approximately 456,330 gsf of mixed-income residential area (561 dwelling units), of which approximately 30 percent (169 dwelling units) would be permanently affordable for families with incomes averaging at or below 80 percent AMI pursuant to Option 2 of the MIH program;[6] approximately 5,907 sf of ground floor retail space; and approximately 33,106 gsf of at-grade

[4] Commercial uses, such as retail, offices, hotels, bowling alleys, movie theatres, department stores, and other service establishments, are permitted as-of-right in M1-1 zoning districts. Large commercial establishments, such as amusement parks, are not permitted as-of-right. Semi-industrial uses, such as auto uses, woodworking, and welding shops, are permitted as-of-right in M1-1 zoning districts. Light industrial uses that conform to high performance standard are also permitted.

[5] For purposes of this environmental review, the With-Action Condition contemplates 20 percent of the residential floor area (112 dwelling units) would be allocated as affordable for families with incomes averaging at or below 80 percent AMI.

[6] *Ibid*.

accessory parking (shared by both towers; double stackers) and that would be accessed via an existing curb cut on 69th Street (242 parking spaces)[7] (Figures 5and 6).

The 17-story (181.5-foot) mixed residential/commercial building would front Queens Boulevard ("West Tower") and would include the following:

- Approximately 242,648 gsf of residential area (290 dwelling units) on floors 2 through 17. Approximately 87 dwelling units would be permanently affordable for families with incomes averaging at or below 80 percent AMI; and
- Approximately 5,907 sf of ground floor retail space fronting Queens Boulevard.

The 14-story (151.5-foot) residential building would front 47th Avenue ("East Tower") and would include the following:

- Approximately 213,682 gsf of residential use (271 dwelling units) on floors 1 through 14. Approximately 82 dwelling units would be permanently affordable for families with incomes averaging at or below 80 percent AMI.[8]

SURROUNDING AREA

As shown in Figure 7, the 400-foot radius surrounding the Directly Affected Area ("Study Area") is characterized by a mix of one- and two-family and multifamily walk-up residences to the north and southwest; commercial and industrial uses along Queens Boulevard and 47th Avenue to the southeast; and community facility uses to the south. Lots 23, 26, 34, and 37 on the northeast corner of Block 2432 are currently being developed with a nine-story residential building. A LIRR right-of-way runs adjacent to the Development Site on the southwestern corner of Block 2432 (Lot 1); Queens Boulevard runs east-west along the north side. The block to the southeast of the Development Site is occupied by Saint Mary's Church and includes the church, church rectory, a School for Language & Communication Development (an intermediate school), and SCO Family Services.

The predominant zoning classifications within the Study Area are residential zoning districts R4-1, R4, R5, and R7X. There is a C2-3 commercial overlay along Queens Boulevard and an M1-1 manufacturing zoning district to the south of the Development Site (Figure 4).

The Development Site is served by New York City Transit (NYCT) bus lines that include the Q47 running north-south on 69th Street, the Q60 and X63 running east-west on Queens Boulevard, and the Q18 running three blocks west of the Development Site on 65th Place. The northbound Q47 and eastbound Q60 stop on the northwestern corner of the Development Site. In addition, the LIRR Woodside Station is approximately 0.7 miles to the northwest of the Development Site.

[7] 25 spaces for income restricted units at 15 percent of the total affordable units (169 units) (ZR §25-251 and §36-33); and 196 spaces for market-rate units at 50 percent of the total market-rate units (392 units) (ZR §36-33 and §25-23); and 19 spaces for commercial use at 1 per 300 sf of commercial floor area (ZR §36-21).

[8] For purposes of this environmental review, the With-Action Condition contemplates that 20 percent of the residential floor area in the West Tower (58 dwelling units) and East Tower (54 dwelling units) would be allocated as affordable for families with incomes averaging at or below 80 percent AMI.

69-02 QUEENS BOULEVARD

FIGURE 1
REGIONAL LOCATION MAP



Map Reference: ESRI Basemap

Development Site

WOODSIDE, QUEENS, NY

LANGAN

FIGURE 2

DIRECTLY AFFECTED AREA MAP

69-02 QUEENS BOULEVARD



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Directly Affected Area

Study Area (400-foot radius)

Proposed Rezoning Area

Development Site

WOODSIDE, QUEENS, NY

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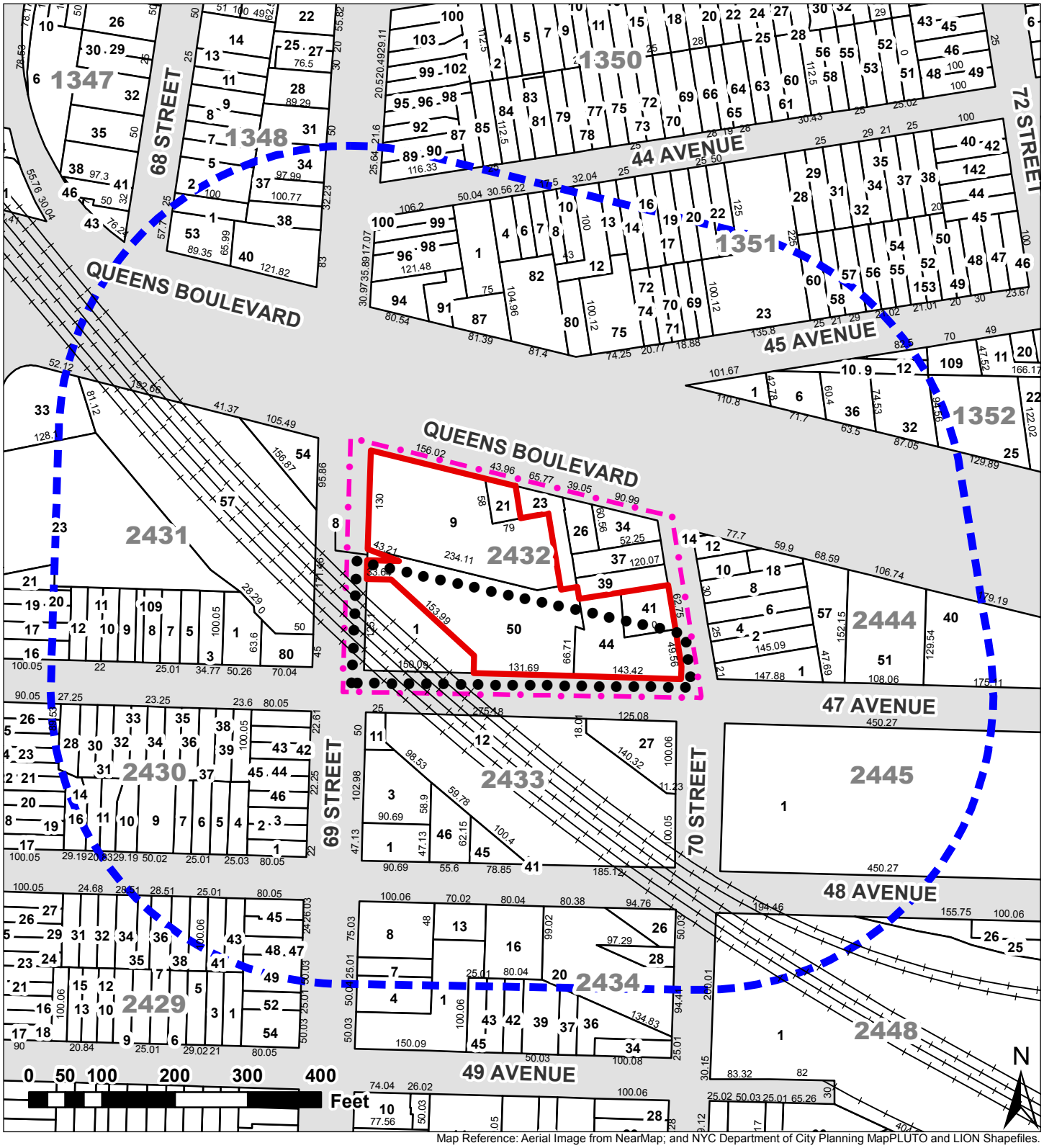
FIGURE 3

TAX MAP

69-02 QUEENS BOULEVARD



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Directly Affected Area
Proposed Rezoning Area
Development Site
2432 Tax Block
9 Tax Lot

WOODSIDE, QUEENS, NY

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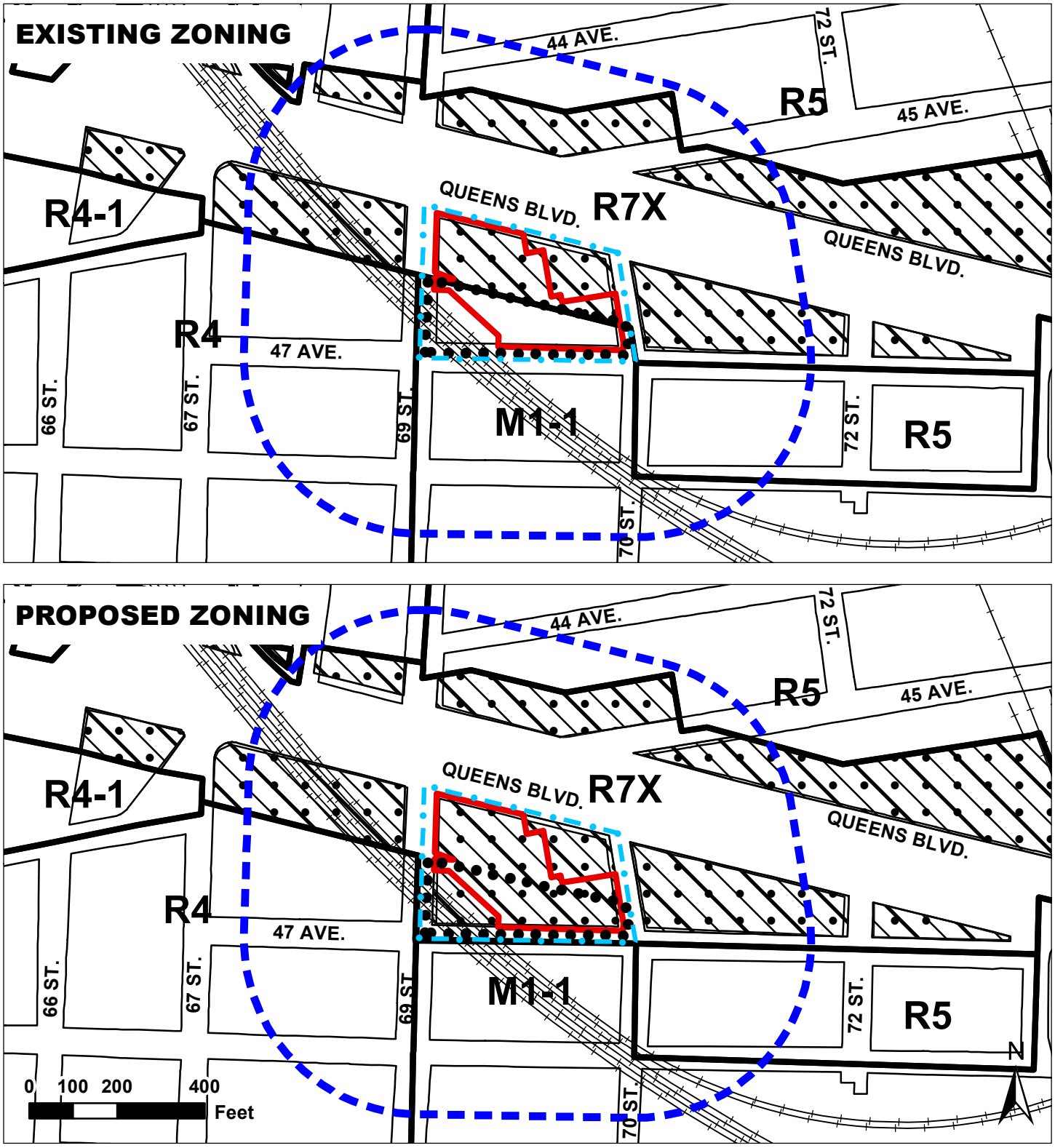
FIGURE 4

69-02 QUEENS BOULEVARD

EXISTING AND PROPOSED ZONING MAP



Map Reference: NYC Department of City Planning MapPLUTO, Zoning Boundary Shapefiles

Directly Affected Area
Proposed Rezoning Area
Development Site
Study Area (400-foot radius)
Zoning District
Commercial Overlay
C2-3

WOODSIDE, QUEENS, NY

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FIGURE 5
PROPOSED PROJECT
WITH-ACTION CONDITION

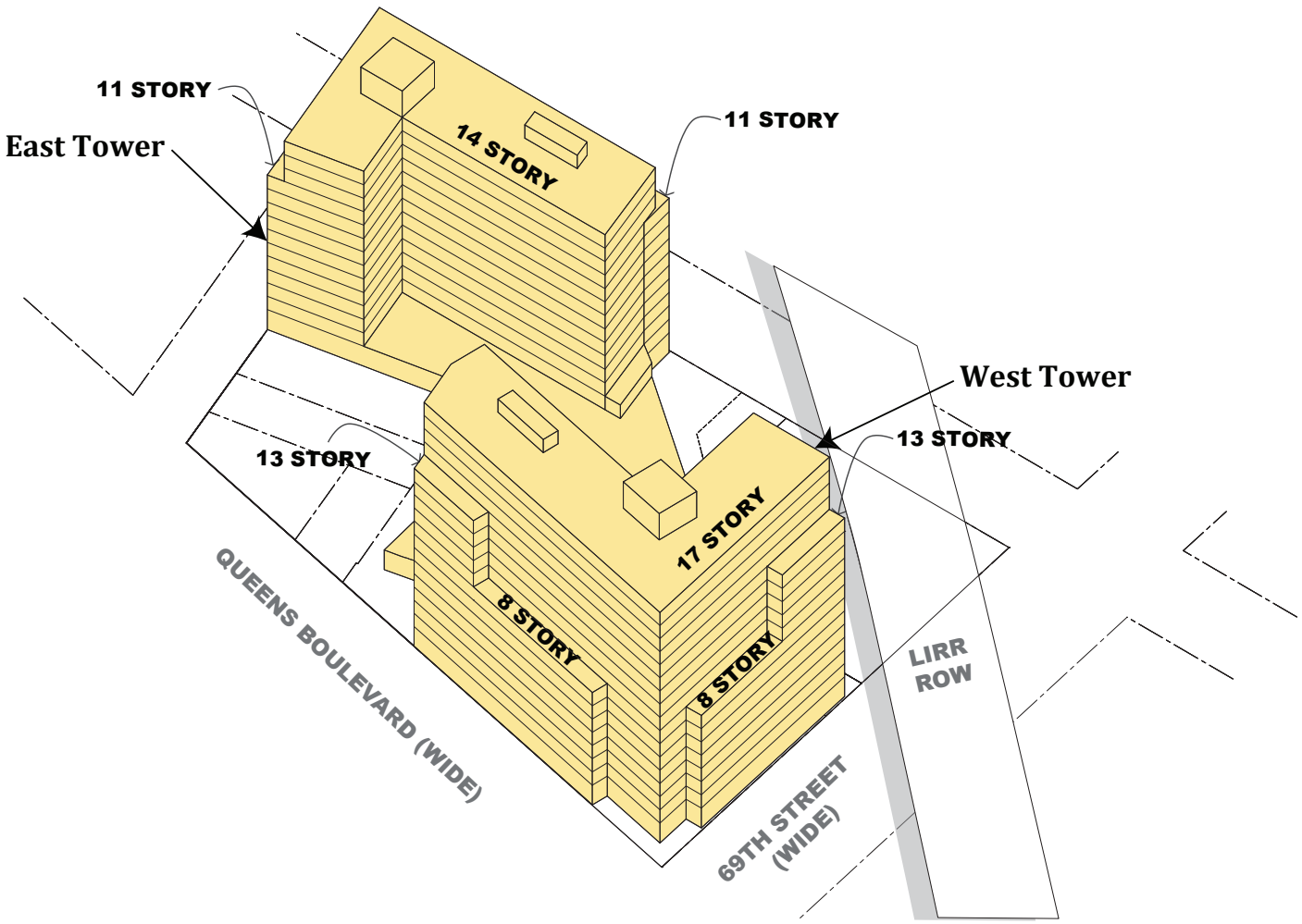

Image Source: Perkins Eastman Architects
For Illustrative Purposes Only

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FIGURE 6
SITE AND ROOF PLAN

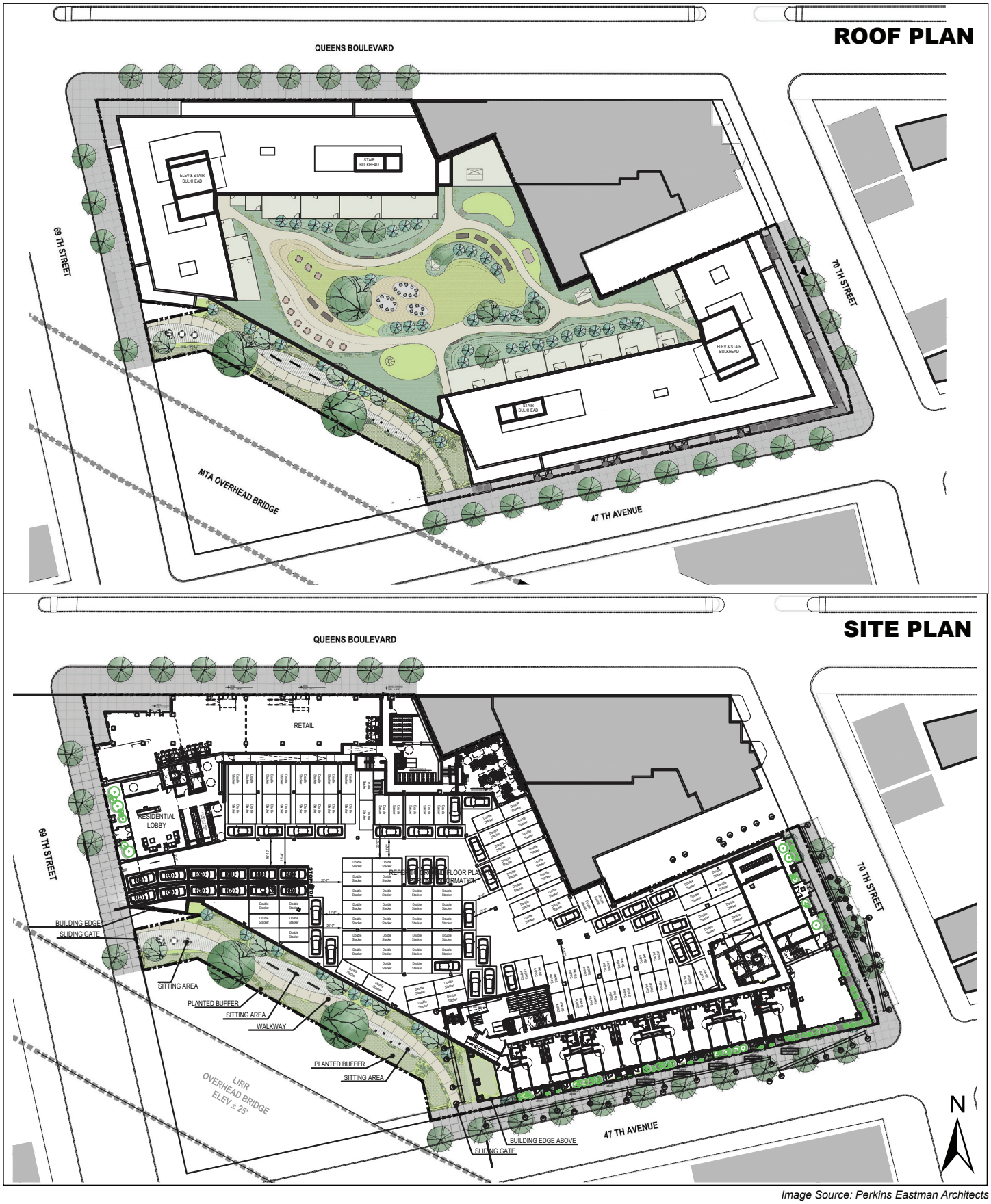
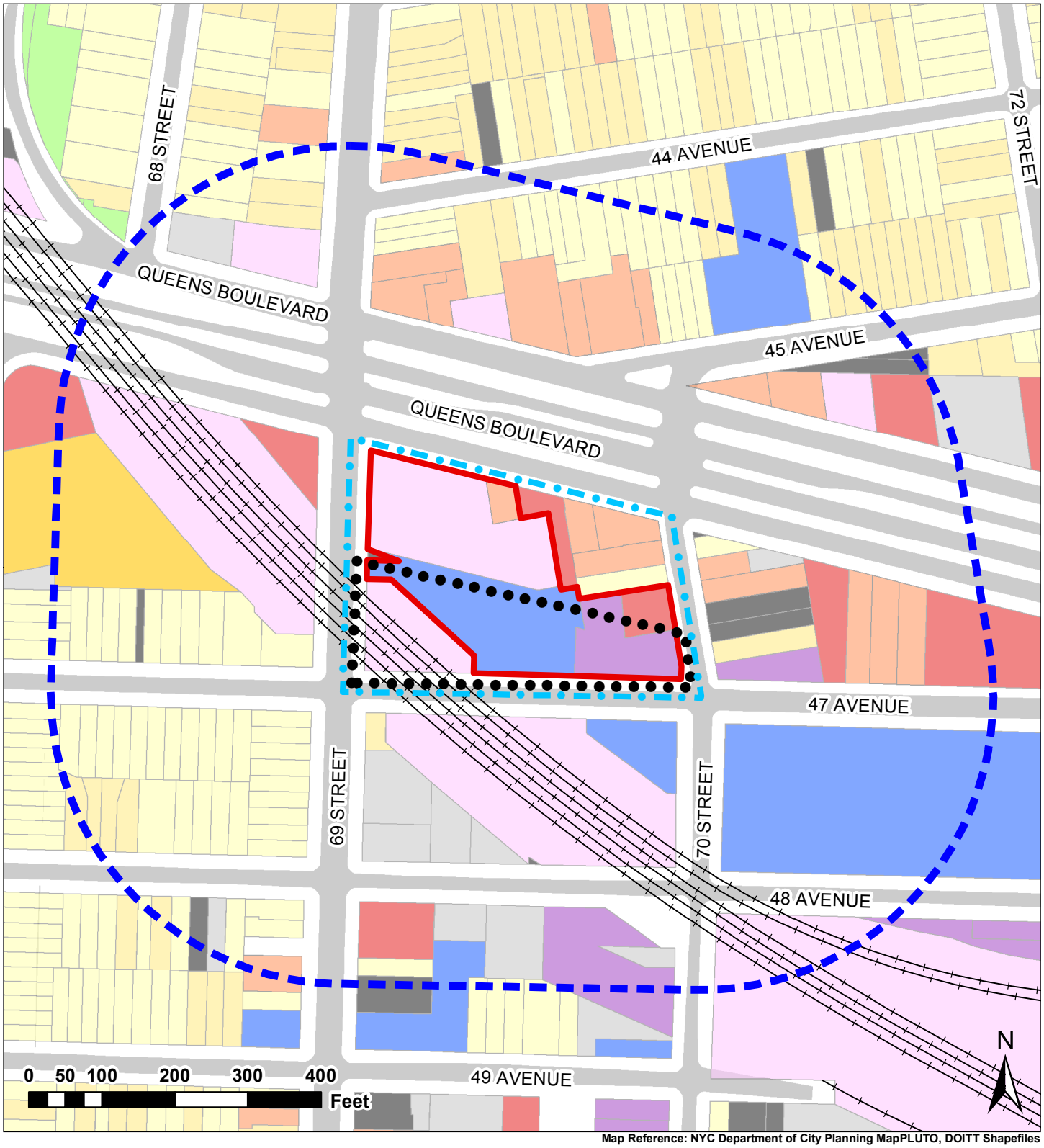


Image Source: Perkins Eastman Architects
For Illustrative Purposes Only

69-02 QUEENS BOULEVARD

FIGURE 7
LAND USE MAP



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site
Study Area (400-foot radius)

Land Use

- One & Two Family Residences
- Multifamily Walkup Residences
- Multifamily Elevator Residences
- Mixed Residential/ Commercial
- Commercial Uses
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities/Institutions
- Open Space
- Parking
- Vacant Land

WOODSIDE, QUEENS, NY

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DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

The information requested in this table applies to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory control. The increment is the difference between the No-Action and the With-Action conditions.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type of residential structures	n/a	Multifamily elevator	Multifamily elevator	Multifamily elevator
No. of dwelling units	0	289	561	272
No. of low- to moderate-income units	0	58	112[9]	54
Gross floor area (sq. ft.)	0	226,840	456,330	229,490
Commercial	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)	Commercial office on Lot 41; Commercial warehouse on Lot 44;	New Ground Floor Local Retail on Lots 9 and 21; Existing commercial warehouse on Lot 44	Ground Floor Local Retail on Lots 9 and 21	
Gross floor area (sq. ft.)	8,700	14,160	5,907	-8,253
Manufacturing/Industrial	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use	n/a	n/a	n/a	
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify:	n/a	n/a	n/a	
Community Facility	☒ YES ☐ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type	Cultural Center and Banquet Hall on Lot 50	Cultural Center and Banquet Hall on Lot 50	n/a	
Gross floor area (sq. ft.)	10,943	10,943	0	-10,943
Vacant Land	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," describe:	Lots 8 and 9 are vacant	Lot 8	Lot 8	
Publicly Accessible Open Space	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):	n/a	n/a	6,971sq. ft. (privately-owned, publicly accessible walkway)	
Other Land Uses	☒ YES ☐ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," describe:	Vacant building on Lot 21	n/a	28,170 sq. ft. (privately-owned, non-publicly accessible rooftop space)	
PARKING				
Garages	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces	0	0	0	0
No. of accessory spaces	0	149	242	93
Operating hours	n/a	n/a	24/7	
Attended or non-attended	n/a	n/a	Attended	-

[9] For the purposes of this environmental review, the With-Action Condition contemplates that 20 percent of the residential floor area (112 dwelling units) would be allocated as affordable for families with incomes averaging at or below 80 percent AMI. However, the Applicant intends to utilize Option 2 of the MIH program, and the Proposed Project would include 30 percent of the residential floor area (169 dwelling units) as affordable for families with incomes averaging at or below 80 percent AMI.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Lots	☒ YES ☐ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces	0	0	0	0
No. of accessory spaces	25	25	0	-25
Operating hours	24/7	24/7	n/a	
Other (includes street parking)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
POPULATION				
Residents	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify number:	0	928	1,801	873
Briefly explain how the number of residents was calculated:	Number of residents calculated using the average household size of renter-occupied units in Census Tract 489 (3.21)			
Businesses	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	Commercial, Restaurant, Banquet	Commercial, Banquet, residential	Commercial, residential	
No. and type of workers by business	73	87	40	-47
No. and type of non-residents who are not workers				
Briefly explain how the number of businesses was calculated:	Employment estimation: 3 employees per 1,000 sf of retail and commercial, 1 employee per 10,000 sf of parking, 1 employee per 300 sf of community facility/ institutional, 1 employee per 1,000 sf of industrial and miscellaneous, and 1 employee per 25 residential dwelling units.			
Other (students, visitors, concert-goers, *etc.*)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If any, specify type and number:				
Briefly explain how the number was calculated:				
ZONING				
Zoning classification	R7X/C2-3 and M1-1	R7X/C2-3 and M1-1	R7X/C2-3 with MIH	
Maximum amount of floor area that can be developed	283,923 zsf	283,923 zsf	431,172 zsf	147,249 zsf
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	The predominant land uses within 400 feet include a mix of one- and two-family and multifamily elevator residences; commercial and industrial uses along Queens Boulevard and the elevated LIRR train tracks; and institutional uses. The lots on the northeast portion of the Development Site on the same block are currently under construction with a 9-story residential building.	The predominant land uses within 400 feet include a mix of one- and two-family and multifamily elevator residences; commercial and industrial uses along Queens Boulevard and the elevated LIRR train tracks; and institutional uses. The lots on the northeast portion of the Development Site on the same block are currently under construction with a 9-story residential building. The No-Action Condition would introduce a 12-story mixed-use building on the Development Site.	The predominant land uses within 400 feet include a mix of one- and two-family and multifamily elevator residences; commercial and industrial uses along Queens Boulevard and the elevated LIRR train tracks; and institutional uses. The lots on the northeast portion of the Development Site on the same block are currently under construction with a 9-story residential building. The With-Action Condition would introduce a 17-story mixed-use building and a 14-story residential building on the Development Site.	

Attach any additional information that may be needed to describe the project.

If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.

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 Full 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? See Attachment C	☒	☐
(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?	☐	☒
○ If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach.		
(d) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(e) 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 more than 200 residential units *or* 200,000 square feet of commercial space?	☒	☐
▪ If "yes," answer *both* questions 2(b)(ii) and 2(b)(iv) below.		
○ Directly displace 500 or more residents?	☐	☒
▪ If "yes," answer questions 2(b)(i), 2(b)(ii), and 2(b)(iv) below.		
○ Directly displace more than 100 employees?	☐	☒
▪ If "yes," answer questions under 2(b)(iii) and 2(b)(iv) below.		
○ Affect conditions in a specific industry?	☐	☒
▪ If "yes," answer question 2(b)(v) below.		
(b) If "yes" to any of the above, attach supporting information to answer the relevant questions below. If "no" was checked for each category above, the remaining questions in this technical area do not need to be answered.		
i. Direct Residential Displacement		
○ If more than 500 residents would be displaced, would these residents represent more than 5% of the primary study area population?	☐	☐
○ If "yes," is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?	☐	☐
ii. Indirect Residential Displacement		
○ Would expected average incomes of the new population exceed the average incomes of study area populations?	☒	☐
○ If "yes:"		
▪ Would the population of the primary study area increase by more than 10 percent?	☐	☒
▪ Would the population of the primary study area increase by more than 5 percent in an area where there is the potential to accelerate trends toward increasing rents?	☐	☒
○ If "yes" to either of the preceding questions, would more than 5 percent of all housing units be renter-occupied and unprotected? See Attachment D	☒	☐
iii. Direct Business Displacement		
○ Do any of the displaced businesses provide goods or services that otherwise would not be found within the trade area, either under existing conditions or in the future with the proposed project?	☐	☒
○ Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it?	☐	☒

iv. Indirect Business Displacement		
○ Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☒
○ Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☒
v. Effects on Industry		
○ Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area? N/A	☐	☐
○ Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses? N/A	☐	☐
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, health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
i. 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)	☐	☒
○ If "yes," would the project result in a collective utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?	☐	☐
○ If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. 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)	☐	☒
○ If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
○ If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iii. 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)	☒	☐
○ If "yes," would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 100 percent?	☒	☐
○ If "yes," would the project increase this collective utilization rate by 5 percent or more from the No-Action scenario? See Attachment E	☐	☒
iv. Health Care Facilities		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of health care facilities in the area?	☐	☐
v. Fire and Police Protection		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of fire or police protection in the area?	☐	☐
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the 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?	☐	☒
(c) If "yes," would the project generate more than 50 additional residents or 125 additional employees?	☐	☐
(d) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
(e) If "yes," would the project generate more than 350 additional residents or 750 additional employees?	☐	☐
(f) If the project is located in an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐
(g) If "yes" to questions (c), (e), or (f) above, attach supporting information to answer the following:		
○ If in an under-served area, would the project result in a decrease in the open space ratio by more than 1 percent? N/A	☐	☐
○ If in an area that is not under-served, would the project result in a decrease in the open space ratio by more than 5 percent? See Attachment F	☐	☒
○ If "yes," are there qualitative considerations, such as the quality of open space, that need to be considered? Please specify:	☒	☐

5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. See Attachment G		
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attachment H		
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?	☐	☒
(c) If "yes" to either of the above, please provide the information requested in Chapter 10. See Attachment I		
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 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? See Attachment J	☒	☐
(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: VOCs in soil vapor beneath the Subject Property; an active Spill No. 9304343; fill material; (E) Designation for HazMat; suspect lead-based peeling paint; and suspect underground tank. See Attachment J, "Hazardous Materials," and Appendix C, "Phase I Environmental Site Assessment Reports."	☒	☐
(i) Based on the Phase I Assessment, is a Phase II Investigation needed?	☒	☐
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 that listed in Table 13-1 in Chapter 13?	☐	☒
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒

(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation.		
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): 24,386		
○ 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?	☐	☒
○ If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☐
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): approximately 57,064,600,600 BTUs		
(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? See Attachment K	☒	☐
(b) If "yes," conduct the appropriate screening analyses, attach 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/rail 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?	☒	☐
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Attachment L		
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) Would the proposed project result in the development of 350,000 square feet or more?	☒	☐
(d) If "yes" to any of the above, would the project require a GHG emission assessment based on guidance in Chapter 18?	☐	☒
○ If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	☐	☐
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?	☒	☐
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Attachment M		
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☐	☒
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
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? See Attachment N	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☐	☒
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☐	☒
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See Attachment O		

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	SIGNATURE	DATE
Robert Kulikowski, Ph.D		11/27/2019

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)

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

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

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

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

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

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

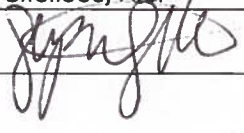
3. Check determination to be issued by the lead agency:

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

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

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

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

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME: Stephanie Shellooe, AICP	DATE: November 27, 2019
SIGNATURE: 	

REVISED NEGATIVE DECLARATION - supersedes the Negative Declaration issued September 5, 2018*

Statement of No Significant Effect

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

Reasons Supporting this Determination

The above determination is based on information contained in this EAS, which finds the proposed actions sought before the City Planning Commission would have no significant effect on the quality of the environment. Reasons supporting this determination are noted below.

Hazardous Materials, Air Quality, and Noise

1. An (E) designation (E-472) for hazardous materials, air quality and noise has been incorporated into the proposed actions. Refer to "Determination of Significance Appendix: (E) Designation" for a list of the sites affected by the proposed (E) designation and applicable (E) designation requirements. This (E) designation will supersede the (E) designation (E-163) for hazardous materials, air quality and noise placed on several lots in the affected area as part of the Maspeth Woodside Rezoning (CEQR No. 06DCP065Q). With these measures in place, the proposed actions would not result in significant adverse impacts to hazardous materials, air quality or noise.

Land Use, Zoning and Public Policy

2. This EAS includes a detailed Land Use, Zoning and Public Policy section, which analyzes the potential significance of the proposed map and text amendments and special permit on land use, zoning and public policy in the study area. The proposed actions would provide the development on the Project Site relief from the maximum permitted building height (145 feet) and the maximum number of stories (14 stories) required under the R7X zoning district regulations. The analysis concludes that the proposed actions would not result in significant adverse impacts on land use, zoning or public policy.

Open Space

3. This EAS includes a detailed Open Space section, which analyzes whether the proposed actions would have the potential to affect open space resources in the study area. The project is expected to introduce new residents to the study area which may increase demand for open space resources. The analysis concludes that the proposed actions would not result in significant adverse impacts related to open space.

Urban Design and Visual Resources

4. This EAS includes a detailed Urban Design and Visual Resources section. This section analyzes whether the proposed actions, which would permit modifications of height and setback requirements on the Project Site would have the potential to affect urban design and visual resources in the study area. The analysis concludes that the proposed actions would not result in significant adverse impacts related to urban design or visual resources.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Rupsha Ghosh at (212) 720-3250.

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME Stephanie Shellooe, AICP	DATE November 27, 2019
SIGNATURE	

TITLE Chair, City Planning Commission	
NAME Marisa Lago	DATE December 2, 2019
SIGNATURE	

*The City Council approved (with modifications) the related land use application (ULURP No. C180265ZMQ, C180267ZSQ, N180266ZRQ) on October 31, 2018. Subsequently, the Applicant has revised the Proposed Actions to reinstate Block 2432, Lot 8, into the Development Site and slightly alter the building footprints of the West and East Towers so that the permitted floor area would be utilized. The Revised Negative Declaration dated December 2, 2019 supersedes the Negative Declaration issued on September 5, 2018 and reflects the Revised EAS dated November 27, 2019, which assesses the changes to the application. As described in this Revised EAS Appendix J, the changes would not alter the conclusions of the Revised EAS dated August 31, 2018. Because Lot 8 has been reinstated, it would require an (E) designation for Hazardous Materials, Air Quality, and Noise. However, the inclusion of the proposed (E) designation on Lot 8 would not alter the conclusions of the EAS.

Project Name: 69-02 Queens Boulevard Minor Modifications
CEQR #: 18DCP132Q
SEQRA Classification: Unlisted

Determination of Significance Appendix: (E) Designation (E-472)

To ensure that there would be no significant adverse hazardous materials, air quality or noise impacts associated with the proposed project, an (E) designation (E-472) will be placed on the project site (Block 2432, Lots 8, 9, 21, 41, 44 and 50). This (E) designation will supersede the (E) designation (E-163) for hazardous materials, air quality and noise placed on Lots 9 and 21 as part of the Maspeth Woodside Rezoning (CEQR No. 06DCP065Q).

Hazardous Materials

Task 1
The applicant submits to OER, for review and approval, a Phase 1A 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
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.

Project Name: 69-02 Queens Boulevard Minor Modifications
CEQR #: 18DCP132Q
SEQRA Classification: Unlisted

Air Quality

Block 2432, Lots 8, 9 and 21 (West Tower):[1] Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least 164.5 feet above grade to avoid any potential significant adverse air quality impacts.

Block 2432, Lots 41, 44 and 50 (East Tower):[2] Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating, and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least 143 feet above grade and at a setback distance of at least 126 feet from the West Tower to avoid any potential significant adverse air quality impacts.

Noise

East Tower: Block 2432, Lots 41, 44 and 50: In order to ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed window condition with a minimum attenuation of 33 dB(A) window/wall attenuation on the interior southern and eastern facades facing the playground, and a minimum of 37 dB(A) window/wall attenuation on all other facades in order to maintain an interior noise level not greater than 45 dB(A) for residential and community facility uses or not greater than 50 dB(A) for commercial uses. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

West Tower: Block 2432, Lots 8, 9 and 21: In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with minimum attenuation of 37 dB(A) window/wall attenuation on western, eastern and southern facades and a minimum attenuation of 33 dB(A) window/wall attenuation on northern facades for the first 100 ft. above the appropriate noise source elevation in order to maintain an interior noise level not greater than 45 dB(A) for residential uses or not greater than 50 dB(A) for commercial uses. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

[1, 2] The development site as analyzed in the EAS is assumed to be developed with two buildings in the future with the proposed actions: the West Tower is a mixed-use residential and commercial building fronting Queens Boulevard and 69th Street, and the East Tower, a residential building fronting 47th Avenue and 70th Street.

PART II: TECHNICAL ANALYSIS

ATTACHMENT B: CEQR ANALYSIS FRAMEWORK

INTRODUCTION

The proposed zoning map amendment, Large-Scale General Development (LSGD) special permit and zoning text amendment ("Proposed Actions") are discretionary approvals by the City Planning Commission (CPC) subject to City Environmental Quality Review (CEQR), which is New York City's process for implementing the New York State Environmental Quality Review Act (SEQRA), by which agencies of the City review proposed discretionary actions to identify and disclose the potential effects those actions may have on the environment. This Environmental Assessment Statement (EAS) has been prepared pursuant to Mayoral Executive Order No. 91 of 1977, as amended, the CEQR Rules of Procedure found at Title 62 RCNY Chapter 5 (CEQR), and the implementing regulations for SEQRA found at 6 NYCRR Part 617. This EAS informs the New York City Department of City Planning (DCP), acting as lead agency on behalf of the CPC, in making the determination whether the Proposed Actions would result in significant adverse environmental impacts and require further environmental quality review.

ANALYSIS FRAMEWORK

The framework for the EAS analysis is based on the guidelines established in the March 2014 Edition of the CEQR Technical Manual (*CEQR Technical Manual*). For each technical area, the *CEQR Technical Manual* defines thresholds that, if met or exceeded, typically require a detailed analysis. Accordingly, preliminary screening analyses were conducted for all applicable CEQR technical areas to determine if detailed analyses would be necessary. The following sections of this EAS report provide additional analyses and information for technical categories listed in Part II of the EAS for which CEQR thresholds were determined to have been met or exceeded, or if supplemental information is needed to complete the analysis.

In order to assess the potential effects of the Proposed Actions, a Reasonable Worst Case Development Scenario (RWCDS) for both the Future Without the Proposed Actions ("No-Action Condition") and Future With the Proposed ("With-Action Condition") was analyzed for Build Year 2020. The future With-Action Condition identifies the extent, type and location of development that would be expected to occur by the end of 2020 as a result of the Proposed Actions. The future No-Action Condition identifies development projections for 2020 absent the Proposed Actions. The potential environmental impacts of the Proposed Actions are based on the incremental differences between the With-Action and No-Action conditions.

PROJECT BUILD YEAR

The Proposed Project would be developed in a single phase. Construction would commence as soon as the necessary discretionary approvals and building permits are granted. The Proposed Project would be complete and operational by the end of 2020 ("Build Year").

REASONABLE WORST CASE DEVELOPMENT SCENARIO (RWCDS)

No-Action Condition

The No-Action Condition would include a new 12-story building on part of the Development Site currently zoned R7X/C2-3 (Lot 9 and 21; and parts of Lots 41, 44, and 50). Lot 9 is currently vacant, and the vacant one-story building on Lot 21 and the two-story commercial building on Lot 41 would be demolished. Only a portion of the existing one-story commercial warehouse on Lot 44 would be demolished to accommodate the development in the No-Action Condition; the remaining portion of the existing warehouse would continue to operate as a warehouse facility. The existing community facility building and the accessory parking lot on Lot 50 would both remain unchanged. The new development in the No-Action Condition would be built pursuant to the underlying R7X/C2-3 zoning regulations with the as-of-right residential Floor Area Ratio (FAR) bonus under the Inclusionary Housing (IH) program. The R7X zoning district permits development at a maximum FAR of 5.00 for residential (with the IH FAR bonus) and community facility uses.[10] The C2-3 commercial overlay permits commercial use at an FAR of 2.00 limited to the first two floors. The building base height is limited to a minimum of 60 feet and a maximum of 80 feet, after which the building must set back to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum building height of 125 feet. The number of spaces of required parking for residential uses in the R7X zoning district is a minimum of 50 percent of the dwelling units, which is waived if 15 or fewer spaces are required.

Pursuant to the underlying zoning regulations, Lot 9, 21, and 41 would be developed with a 12-story, approximately 311,596-gross-square-foot (gsf) mixed residential/commercial building. As shown in Table B-1, the proposed building would include (i) approximately 5,460 sf of commercial space on the ground floor fronting Queens Boulevard; (ii) approximately 226,840 gsf of residential space (289 dwelling units, of which 58 units would be affordable); and (iii) approximately 79,296 gsf of at-grade and below-grade parking (124 spaces). The No-Action Condition would also include the existing two-story, approximately 10,943-gsf community center and surface parking (25 spaces) on Lot 50. A portion of the existing one-story commercial warehouse on Lot 44 would be demolished to accommodate the development in the No-Action Condition; the remaining portion of the existing warehouse would continue to operate as a warehouse facility. The proposed building in the No-Action Condition would have a maximum building height of approximately 125 feet above the mean curb level (Figure 8).

Research based on available resources, including DCP's Land Use & CEQR Application Tracking System (LUCATS), New York City Mayor's Office of Environmental Coordination's (MOEC) CEQR Access, the Department of Buildings (DOB) Buildings Information System (BIS), and the New York YIMBY website indicates that there are two mixed-use developments proposed within the Study Area with a build year of 2020:

(i) A nine-story, mixed residential/commercial building at 46-02 70th Street (Block 2432, Lots 23, 26, 34, and 37); and

[10] Pursuant to ZR §23-154, the permitted base residential FAR in an R7X district may be increased to a maximum FAR of 5.00 with the provision of 20 percent of the total floor area for income-restricted dwelling units.

(ii) A seven-story, mixed residential/commercial building at 70-09 45th Avenue (Block 1351, Lot 75).

With-Action Condition

In the With-Action Condition,[11] the development would maximize the permitted FAR under the proposed R7X/C2-3 zoning district and Mandatory Inclusionary Housing (MIH) program. An R7X zoning district, together with the increase in FAR designated by the MIH program, permits a residential building at a maximum FAR of 6.00. A C2-3 commercial overlay permits commercial use at a maximum FAR of 2.00 limited to the first two floors. The building base height is limited to 60 to 80 feet, after which the building must be set back to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 125 feet. The number of spaces of required parking for residential uses in an R7X zoning district is a minimum of 50 percent of the dwelling units, which is waived if 15 or fewer spaces are required.

In the With-Action Condition, the existing buildings on the Development Site would be demolished and replaced with two (2) predominantly residential buildings totaling approximately 495,343 gsf that would be built pursuant to the proposed R7X/C2-3 zoning district and the MIH program. Lots 9 and 21 would be developed with a 17-story, approximately 248,555-gsf mixed residential/commercial building ("West Tower"); and Lots 41, 44, and Lot 50 would be developed with a 14-story, approximately 213,682-gsf residential building ("East Tower"). The Proposed Project would also include 33,106 gsf of at-grade parking using stackers (242 spaces), which would be shared by both towers and accessed via an existing curb cut on 69th Street (Figure 6 and Figure 8).

As shown in Table B-1, the development in the With-Action Condition would include:

- **West Tower:** approximately 5,907 sf of ground floor retail space; and approximately 242,648 gsf of residential space on floors 2 through 17 consisting of 290 dwelling units[12], of which 58 would be permanently affordable pursuant to the MIH program. The West Tower would reach a maximum height of 181.5 feet above the curb level; and

- **East Tower**: approximately 213,682 gsf of residential space on floors 1 through 14 consisting of 271 dwelling units[13], of which approximately 54 would be permanently affordable pursuant to the MIH program. The East Tower would reach a maximum height of 151.5 feet above the curb level.

[11] For purposes of this environmental review, the With-Action Condition contemplates that 20 percent of the residential floor area (112 dwelling units) would be allocated as affordable for families with incomes averaging at or below 80 percent Area Median Income (AMI). However, the Applicant intends to utilize Option 2 of the MIH program and the Proposed Project would include 30 percent of the residential floor area (169 dwelling units) as affordable for families with incomes averaging at or below 80 percent AMI.

[12] West Tower average dwelling unit size: 836 gsf.

[13] East Tower average dwelling unit size: 788 gsf

FIGURE 8

NO-ACTION AND WITH-ACTION RENDERINGS

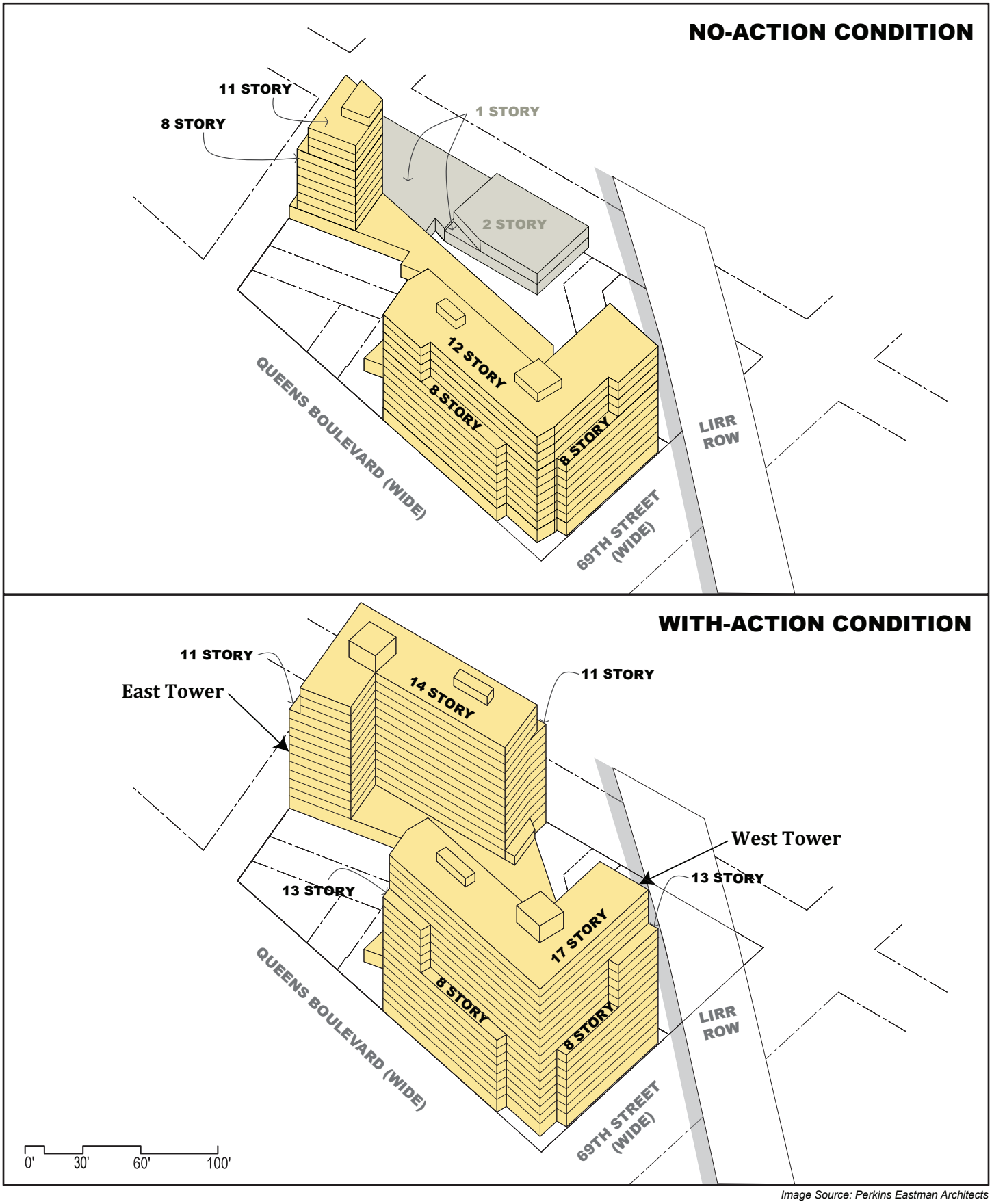


Image Source: Perkins Eastman Architects
For Illustrative Purposes Only

Incremental Difference: No-Action and With-Action Conditions

The incremental difference between the No-Action and With-Action conditions provides the basis by which the potential environmental impacts of the Proposed Actions are evaluated. As shown in Table B-1, the development in the With-Action Condition would result in a net *increase* of 229,490 gsf of residential space, including approximately 272 dwelling units, of which 54 would be permanently affordable; a net *decrease* of 8,253 gsf of commercial space; a net *decrease* of 10,943 gsf of community facility space; and a net *increase* of 93 accessory parking spaces. The development in the With-Action Condition would result in an overall *net increase* of 149,104 gsf of new floor area.

Based on standard employee space utilization rates in the *CEQR Technical Manual*, the With-Action Condition would result in approximately 40 workers, which would be a net *decrease* of 47 workers compared to the No-Action Condition. Based on the permitted FAR under the proposed R7X/C2-3 zoning district regulations, the development in the With-Action Condition would result in a net increase in height of approximately 56.5 feet for the West Tower and 26.5 feet for the East Tower.

Table B-1: Reasonable Worst Case Development Scenario (RWCDS)

Land Use	**No-Action Condition**	**With-Action Condition**			**Increment**
(Use Group)	**gsf/DU/feet/spaces**	***West Tower***	***East Tower***	**Total gsf/DU/feet/spaces**	**gsf/DU/feet/spaces**
Residential (UG 2) (gsf)	226,840	*242,648*	*213,682*	456,330	**229,490**
Total Dwelling Units	289	*290*	*271*	561	**272**
Affordable Dwelling Units	*58*	*58*	*54*	*112*	***54***
Commercial (UG 6) (gsf)	14,160	*5,907*	*0*	5,907	**-8,253**
Community Facility (gsf)	10,943	*0*	*0*	0	**-10,943**
Accessory Parking (gsf)	94,296	*33,106*		33,106	**-59,296**
Accessory Parking Spaces	*149 spaces*	*242 spaces*		*242 spaces*	**93 spaces**
Building Height	125 feet	*181.5 feet*	*151.5 feet*	-	**56.5 feet (West Tower)/26.5 feet (East Tower)**
Total (gsf)	**346,239**	*248,555*	*213,682*	**495,343**	**149,104**

***Source**: The No-Action and With-Action conditions are based on the development scenarios provided by the Applicant.*

The potential significant adverse environmental impacts that may result from the net incremental difference between the two development conditions, along with site-specific conditions, are evaluated in the following sections of this EAS report.

ATTACHMENT C: LAND USE, ZONING AND PUBLIC POLICY

INTRODUCTION

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

The Proposed Actions include:

1. A zoning map amendment to Zoning Map Section 9d to rezone a part of the Development Site from an M1-1 to an R7X zoning district with a C2-3 commercial overlay;

2. A Large-Scale General Development (LSGD) Special Permit pursuant to the New York City Zoning Resolution (ZR) §74-743 to modify height and setback requirements on the Development Site; and

3. A zoning text amendment to modify ZR Appendix F to designate a Mandatory Inclusionary Housing (MIH) area on Block 2432 ("Directly Affected Area").

The Proposed Actions would facilitate development of two buildings: a 17-story, approximately 235,198-gross-square-foot (gsf) mixed residential/commercial building on the northwestern part of the Development Site (Lots 9 and 21); and a 14-story, approximately 213,682-gsf residential building on the southeastern part of the Development Site (Lots 41, 44, and 50). The total development in the With-Action Condition would comprise (i) approximately 456,330 gsf of residential space (561 residential dwelling units, of which 112 units would be designated as permanently affordable pursuant to the MIH program); (ii) approximately 5,907 sf of ground floor retail space fronting Queens Boulevard; and (iii) approximately 33,106 gsf of at-grade parking using stackers (242 parking spaces) and accessed via 69th Street.

According to the *CEQR Technical Manual*, a detailed assessment of land use, zoning, and public policy is appropriate if an action would result in a significant change in land use or would substantially affect regulations or policies governing land use. Because the Proposed Actions include a zoning map and zoning text amendment, a detailed assessment of land use and zoning assessments is warranted. A detailed public policy analysis was also prepared to determine the potential for the Proposed Actions to alter or conflict with applicable public policies. The detailed land use, zoning, and public policy analysis in this chapter (i) describes land uses and development trends in the area that could potentially be affected by the Proposed Actions; (ii) describes zoning and public policies that guide development; and (iii) determines whether the Proposed Actions are compatible with those conditions and policies or whether it may adversely affect them.

METHODOLOGY

The analysis methodology is based on the guidelines in the *CEQR Technical Manual* and involves an assessment of the Proposed Actions' consistency with land use patterns and development trends,

zoning regulations, and applicable public policies. The land use, zoning, and public policy analysis considers a 400-foot radius around the Directly Affected Area (the "Study Area"). Existing conditions were identified through field studies in the Study Area and research of available resources, including New York City Department of City Planning's (DCP) Land Use & CEQR Application Tracking System (LUCATS); the Primary Land Use Tax Lot Output (PLUTO™) data files; the New York City Mayor's Office of Environmental Coordination's (MOEC) CEQR Access; and the Queens Community District 2 webpage. The ZR and DCP's web-based Zoning and Land Use Application (ZOLA) were used to identify and describe existing zoning districts in the Study Area and for the zoning evaluation of the No-Action and With-Action conditions. The analysis also examines available information regarding the MIH program, including material from the City's website and direct correspondence with DCP.[14] Relevant public policy documents were examined to assist in identifying and describing existing public policies that have the potential to affect the Study Area.

LAND USE

Existing Conditions

Development Site

The Development Site is at 69-02 Queens Boulevard in the Woodside neighborhood in Queens, Community District 2 (Block 2432, Lots 9, 21, 41, 44, and 50) (Figures 1 through 3). The approximately 71,696-square-foot (sf) Development Site is bounded by Queens Boulevard to the north; 69th Street to the east; elevated Long Island Rail Road (LIRR) tracks to the southeast; 47th Avenue to the south; and 70th Street to the west. The northwestern part of the Development Site comprises Lots 9 and 21. Lot 9 is currently vacant and was previously improved with a one-story building used as a gas station/car wash and an auto repair shop; Lot 21 is improved with a vacant one-story building. The southwestern part of the Development Site comprises Lot 41, which is improved with a two-story commercial building; Lot 44, which is improved with a one-story warehouse building; and Lot 50, which is improved with a two-story community center and surface parking.

Study Area

As shown in Figure 7, the Study Area is characterized by a mix of one- and two-family and multifamily elevator residences to the north and southwest; commercial and industrial uses along Queens Boulevard and the LIRR train tracks; and institutional uses on the Development Site and to the southwest. The lots to the northeast of the Development Site on Block 2432 (Lots 23, 26, 34, and 37) are currently being redeveloped with a nine-story residential building. Lot 39, fronting 70th Street, is occupied by a single-family residence. The LIRR right-of-way runs adjacent to the southwest corner of the Development Site, and Queens Boulevard runs east-west along the north side. There are two churches to the south of the Development Site: (1) Little Flock Church, at the northeast corner of Block 2433, and (2) St. Mary's Church, which occupies the entire block (Block 2445) southwest of the

[14] NYC Department of City Planning Mandatory Inclusionary Housing (MIH) program. https://www1.nyc.gov/site/planning/plans/mih/mandatory-inclusionary-housing.page (Accessed: August 31, 2018).

Development Site; St. Mary's houses a church, church rectory, a School for Language & Communication Development (intermediate school), and a SCO Family Services center.

Assessment

No-Action Condition

In the No-Action Condition, part of the Development Site (Lots 9 and 21; and parts of Lots 41, 44, and 50) would be developed pursuant to the existing R7X/C23 zoning district and the Inclusionary Housing (IH) program. The existing buildings on Lots 21 and 41 would be demolished and replaced with a 12-story, approximately 311,596-gsf, as-of-right mixed residential and commercial building. Only a portion of the existing one-story commercial warehouse on Lot 44 would be demolished to accommodate the development in the No-Action Condition; the remaining portion of the existing warehouse would continue to operate as a warehouse facility. The existing community facility building, together with the accessory parking lot on Lot 50, would also remain unchanged. The development in the No-Action Condition would be predominantly residential with ground floor retail (Use Group 6). The new residential and ground floor commercial uses would be similar to the existing residential uses to the north and west of the Development Site – including the 9-story residential building under construction on the northeast corner of Block 2432 – and the existing ground floor commercial uses located along Queens Boulevard to the north of the Development Site.

With-Action Condition

In the With-Action Condition, the entire Development Site would be redeveloped pursuant to the proposed R7X/C2-3 zoning district regulations and the Mandatory Inclusionary Housing (MIH) program. The existing buildings on the Development Site would be demolished and replaced with two mixed residential/commercial buildings (West Tower and East Tower), which would include a total of approximately 495,343 gsf of floor area. The 17-story West Tower would be located on the northwestern portion of the Development Site (Lot 9 and 21) at the intersection of Queens Boulevard and 69th Street, and would include approximately 5,907 sf of ground floor retail and approximately 242,648 gsf of residential use on the upper floors. The 14-story East Tower would be located on the southeastern portion of the Development Site (Lots 41, 44, and 50) at the intersection of 70th Street and 47th Avenue, and would be entirely residential with approximately 213,682 gsf of residential space. The Proposed Project would also include approximately 33,106 gsf of parking (242 spaces) using stackers accessed via an existing curb cut on 69th Street. Although the development in the With-Action Condition would include residential uses at a comparatively higher density, the proposed uses would be similar to the predominant residential uses to the north and west of the Development Site including the one- and two-family residences; the three- to four-story mixed residential/commercial buildings; and the 9-story residential building currently under construction on the northeast corner of Block 2432. In addition, the proposed ground floor commercial use along Queens Boulevard would be similar to the existing ground floor commercial uses located along Queens Boulevard. The proposed residential/commercial buildings are also appropriate, in terms of form and scale, to sites along Queens Boulevard—a wide thoroughfare where such higher density development is to be encouraged. Moreover, because the East Tower "steps down" in height, the proposed development responds to the medium- to lower-density character of the built environment south and east of the Development Site.

Conclusion

The Proposed Actions would facilitate the construction of two primarily residential buildings on the Development Site that would include ground floor retail in the West Tower fronting Queens Boulevard and residential uses on the upper floors in both the East and West Towers. As described above, the Study Area primarily comprises residential uses and ground floor commercial uses are primarily located along Queens Boulevard. The development facilitated by the Proposed Actions would reflect these surrounding land uses.

Based on this information, the Proposed Actions would not result in any potentially significant adverse impacts to the existing land uses in the Study Area; therefore, further analysis of land use is not warranted.

ZONING

Existing Conditions

Development Site

The northwestern part of the Development Site is currently mapped with an R7X zoning district with a C2-3 commercial overlay, and the southwestern part is mapped with an M1-1 zoning district. M1-1 zoning districts permit development at a maximum FAR of 2.40 for community facility uses (Use Group 4), and light industrial and commercial uses are permitted at a maximum FAR of 1.00. Residential uses are not permitted in M1-1 zoning districts. An R7X zoning district permits development at a maximum FAR of 5.00 for community facility uses and residential uses. In R7X zoning districts, the building base height is limited to a minimum of 60 feet and a maximum of 80 feet, after which the building must be set back to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 125 feet. In addition, R7X zoning districts are governed by Quality Housing bulk regulations. C2-3 commercial overlay, when mapped in R7X zoning districts, permit commercial uses at a maximum FAR of 2.00, limited to the first two floors. Residential uses must be located above the commercial uses.

Study Area

As shown in Figure 4, the predominant zoning districts within the Study Area are residential zoning districts—an R4 district is mapped in the west, an R5 district is mapped in the east, and an R7X district is mapped in the north. An M1-1 manufacturing zoning district is mapped to the south of the Development Site (Figure 4).

R4 zoning districts permit development at a maximum FAR of 0.75 for residential uses in one and two-family detached or semi-detached residences, and community facility uses are permitted at a maximum FAR of 2.00. R5 zoning districts permits development at a maximum FAR of 2.00 for community facility uses, and residential uses are permitted at a maximum FAR of 1.25. The R5 zoning district mapped in the Study Area provides a transition between the industrial M1-1 zoning district to the south and the higher density neighborhood to the north, which is mapped with an R7X zoning district.

Assessment

No-Action Condition

In the No-Action Condition, part of the Development Site (Lot 9 and 21; and parts of Lots 41, 44, and 50) would be developed pursuant to the maximum FAR permitted by the underlying R7X/C2-3 zoning district regulations and IH program. Only a portion of the existing one-story commercial warehouse on Lot 44 would be demolished to accommodate the new building; the remaining portion of the existing warehouse would function as a warehouse facility. The existing community facility building and accessory parking lot on Lot 50 would remain unchanged.

The existing buildings on Lots 21 and 41 would be demolished and replaced with a 12-story, approximately 311,596-gsf, as-of-right mixed residential/commercial building. The proposed No-Action building would include approximately 5,460 gsf of ground floor commercial use; approximately 226,840 gsf of residential use on the upper floors (approximately 289 residential dwelling units, of which approximately 58 would be affordable through the IH program); and approximately 79,296 gsf of at-grade and below-grade parking (124 spaces). The No-Action building would reach a maximum height of 125 feet above the curb level. The approximately 8,700 gsf of commercial space and approximately 10,943 gsf of community facility space on Lots 44 and 50, respectively, would remain generally unchanged from existing conditions.

With-Action Condition

The development in the With-Action Condition would maximize the permitted FAR under the proposed R7X/C2-3 zoning district and MIH program regulations. The Development Site would be redeveloped with two primarily residential buildings comprising a total of approximately 495,343 gsf. The R7X zoning district, combined with an increase in FAR designated by the MIH program, permits residential use at a maximum FAR of 6.00. A C2-3 commercial overlay permits commercial use at a FAR of 2.00, limited to the first two floors. The R7X zoning district, with the MIH designation permits a building base height between 60 feet and 105 feet, after which the building must set back to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 140 feet (145 feet with a Qualifying Ground Floor).[15] However, the proposed LSGD Special Permit would provide the development in the With-Action Condition relief from the maximum permitted building height (145 feet) or the maximum number of stories (14 stories) required under the R7X zoning district regulations. The West Tower would reach a maximum height of approximately 181.5 feet (17 stories) above the curb level, and the East Tower would reach a maximum height of approximately 151.5 feet (14-stories) above the curb level.

Pursuant to the proposed zoning district regulations and the MIH program, the proposed development in the With-Action Condition would include (i) an approximately 248,555-gsf mixed residential/commercial building (West Tower), and (ii) an approximately 213,682-gsf residential building (East Tower). The West Tower would include approximately 5,907 sf of ground floor commercial use; and approximately 242,648 gsf of residential use on floors 2 through 17 consisting

[15] A Qualifying Ground Floor is defined by the New York City Zoning Resolution (ZR) as the ground floor of a development or enlargement of a Quality Housing building, where the start of the second story is 13 feet or more above the level of the sidewalk and, in certain instances, where additional supplementary use provisions are met.

of approximately 290 dwelling units, of which approximately 58 would be permanently affordable pursuant to the MIH program. The West Tower would reach a maximum height of approximately 181.5 feet above the curb level. The East Tower would include approximately 213,682 gsf of residential use on floors 1 through 14 consisting of approximately 271 residential dwelling units, of which approximately 54 would be permanently affordable The East Tower would reach a maximum height of approximately 151.5 feet above the curb level. The Proposed Project would also include approximately 33,106 gsf of at-grade parking (242 spaces) using double stackers and accessed via an existing curb cut on 69th Street.

Conclusion

The Proposed Actions include rezoning part of the Development Site currently mapped with an M1-1 zoning district to an R7X zoning district with a C2-3 commercial overlay. As discussed above, the proposed R7X/C2-3 zoning district would be similar to the existing residential and commercial zoning districts within the Study Area (Figure 4). Further, the Proposed Actions would permit a higher-density, mixed residential/commercial development on the southeastern portion of the Development Site; in terms of use, height, and bulk, this would be similar to the building that can be built as-of-right on the northwest portion on the Development Site.

In addition, the net increase in residential floor area would include approximately 112 permanently affordable dwelling units (30 percent of the total residential floor area), which would provide the neighborhood with new mixed-income dwelling units, and would support the City's efforts to increase the amount of affordable housing. Based on this information, the Proposed Actions are not anticipated to result in potentially significant adverse impacts to zoning;, therefore, further analysis of zoning is not warranted.

PUBLIC POLICY

According to the *CEQR Technical Manual*, a proposed project located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. A preliminary assessment of public policy identifies and describes relevant public policies, including formal plans or published reports, which pertain to the Study Area. If the proposed action could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is necessary.

Public policies applicable to portions of the Study Area include *One New York: The Plan for a Strong and Just City* (OneNYC) and *Housing New York: A Five-Borough, Five-Year Plan* (*Housing New York*).

OneNYC

OneNYC, originally released as PlaNYC in 2007, is a policy document designed to address New York City's long-term challenges, including a projected population increase to 9 million residents by 2040, changing climate conditions, an evolving economy, and aging infrastructure. OneNYC builds upon PlaNYC and focuses on four guiding principles: growth, equity, sustainability, and resiliency.

The Proposed Actions are consistent with several of OneNYC's initiatives and support the growth goals of Vision 1, which aim to create the world's most dynamic urban economy where families, businesses, and neighborhoods thrive. The development facilitated by the Proposed Actions would support the goals of "Housing" and "Thriving Neighborhoods" under Vision 1 of OneNYC.

Housing

Goal: New Yorkers will have access to affordable, high-quality housing coupled with robust infrastructure and neighborhood services.

To ensure that all New Yorkers have access to housing they can afford, OneNYC's goal for housing is to produce and preserve affordable units, increase the overall supply of all types of new housing, and coordinate with regional partners to stimulate production of more housing to meet demand.[16] The Proposed Actions would support the following initiatives and sub-initiatives under this goal:

- Creating and preserving 200,000 affordable housing units over ten years to alleviate New Yorker's rent burden and meet the needs of a diverse population; and supporting efforts by the private market to produce 160,000 additional new units of housing over ten years to accommodate a growing population;

- Establishing a MIH program to promote economic diversity and affordable-housing development; and

- Pursuing neighborhood planning initiatives that expand opportunities for mixed residential/commercial development, especially the attraction of retail and services to underserved neighborhoods.

The Proposed Actions would facilitate the development of approximately 561 dwelling units on the Development Site, of which approximately 112 dwelling units would be permanently affordable (30 percent of the residential floor area). By facilitating the creation of permanent affordable housing, the Proposed Actions would support a diverse residential population and would create additional housing options within commuting distance to Manhattan, which would help strengthen the City's economy. Moreover, the Proposed Actions would expand opportunities for mixed residential/commercial development by facilitating approximately 5,907 sf of ground floor retail space in the Project Area.

Based on this information, the Proposed Actions are consistent with the policies of OneNYC.

[16] *OneNYC* (http://www1.nyc.gov/html/onenyc/visions/thriving/goal-3.html)

Thriving Neighborhoods

Goal: New York City's neighborhoods will continue to thrive and be well-served.

OneNYC identifies three core principles for guiding the City's neighborhood planning efforts: (i) supporting vibrant, mixed residential/commercial communities that align transit, housing, and jobs, and offer residents access to essential retail and services; (ii) proactively planning for current and future growth; and (iii) engaging New Yorkers in the planning process.[17] In particular, OneNYC outlines how neighborhood planning, including changes to existing zoning, has the potential to create a wide range of opportunities for mixed residential/commercial neighborhoods.

By rezoning a portion of the Development Site from an M1-1 to an R7X zoning district with a C2-3 commercial overlay, the Proposed Actions would facilitate the redevelopment of the Development Site, which is largely underutilized, into a mixed residential/commercial development that would include commercial uses at the street level. The development facilitated by the Proposed Actions would include approximately 456,330 gsf of residential use (561 dwelling units, 112 of which would be permanently affordable); approximately 5,907 sf of ground floor retail space; and approximately 33,106 gsf of accessory parking (242 spaces). The proposed zoning amendments under the Proposed Actions are designed to provide new affordable housing opportunities in the Woodside neighborhood, as well as facilitate new commercial uses to activate the Development Site at the street level.

Based on this information, the Proposed Actions are consistent with the policies of OneNYC.

Housing New York

Housing New York is the City's comprehensive housing development policy that includes a primary goal of building or preserving 200,000 units of high-quality affordable housing over the next decade. *Housing New York* was developed in conjunction with the New York City Department of Housing and Preservation (HPD) to create housing opportunities for New Yorkers with a range of incomes, while fostering vibrant and diverse neighborhoods. Framed by the policy goals and objectives in *Housing New York*, the City Council adopted an amendment to the ZR to establish the MIH program on March 22, 2016 that requires that a percent of new housing be permanently affordable when an increase in residential floor area is requested (i.e., an upzoning).

The primary components of *Housing New York* include:

- Mandatory affordable housing: production of affordable housing would be a condition of residential development when developers build in a designated MIH area, whether rezoned as part of a City neighborhood plan or a private rezoning application; and
- Affordable housing would be permanent: there would be no expiration to the affordability requirement of apartments generated through MIH, making them a long-term, stable reservoir of affordable housing.

[17] *OneNYC* (https://onenyc.cityofnewyork.us/) (Accessed: August 31, 2018)

The Proposed Actions would support the policies and goals of *Housing New York*. Under the With-Action Condition, development on the Development Site would provide approximately 561 new residential dwelling units, of which 112 dwelling units would be permanently affordable under the MIH program. The Proposed Actions would therefore provide the Woodside neighborhood with new mixed-income, permanently affordable housing, which would support the City's effort to increase the overall supply of affordable housing.

Based on this information, the Proposed Actions would align with the goals and objectives of *Housing New York*.

Conclusion

The Proposed Actions would facilitate the development of mixed-income affordable housing in the Woodside neighborhood in Queens, as well as generate commercial uses to activate the Development Site at the street level, which would promote the initiatives and goals of OneNYC and *Housing New York*. Therefore, the Proposed Actions would align with the public policies discussed above.

ATTACHMENT D: SOCIOECONOMIC CONDITIONS

INTRODUCTION

According to the *CEQR Technical Manual,* the socioeconomic character of an area includes its population, housing, and economic activity. Even when socioeconomic change may not result in environmental impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. According to the *CEQR Technical Manual*, a socioeconomic assessment considers whether development resulting from a proposed project could result in significant adverse impacts on the socioeconomic character of the area as a result of (i) direct displacement of the residential population on the project site; (ii) indirect displacement of the residential population within the project area; (iii) direct displacement of existing businesses on the project site; (iv) indirect displacement of existing businesses within the project area; and/or (v) adverse effects on specific industries.

METHODOLOGY

According to the *CEQR Technical Manual*, an assessment of socioeconomic conditions typically separates the socioeconomic conditions of area residents from those of area businesses, although a proposed project may affect both in similar ways. A proposed project may directly displace residents or businesses, or change the area's socioeconomic conditions that may indirectly displace residents or businesses.

The *CEQR Technical Manual* defines direct displacement as the involuntary displacement of residents or businesses from a project site(s) directly affected by a proposed project. Indirect displacement is the involuntary displacement of residents, businesses, or employees that results from a change in socioeconomic conditions in a particular study area as a result of the proposed project.

Direct Residential Displacement

Because there are no residential uses currently occupying the Development Site, the Proposed Actions would not result in the direct displacement of any existing residential population in the With-Action Condition. Therefore, an assessment of direct residential displacement is not warranted.

Indirect Residential Displacement

The development in the With-Action Condition would result in a net increase of approximately 272 dwelling units over the No-Action Condition. According to the *CEQR Technical Manual*, projects that would result in more than 200 new residential units may lead to indirect residential displacement. Therefore, a preliminary assessment of potential indirect residential displacement is warranted.

Direct Business Displacement

The Proposed Actions would result in the direct displacement of two existing businesses from the Development Site: the floral decorating facility on Lot 44, which would result in the direct displacement of approximately 40 employees, and the cultural center on Lot 50 which would result in the direct displacement of approximately 33 employees.[18]

However, the displacement of approximately 73 total employees does not exceed the *CEQR Technical Manual* 100-employee threshold warranting an assessment. In addition, the products and services offered by these businesses are not uniquely dependent on this location; are not the subject of other regulations or publically adopted plans aimed at their preservation; and do not serve a population uniquely dependent on their services in their present location. Based on these criteria, an assessment of direct displacement of existing businesses is not warranted.

Indirect Business Displacement

The With-Action Condition would result in the development of approximately 5,907 sf of commercial floor area on the Development Site, which represents a net decrease of approximately 8,253 sf compared to the No-Action Condition. According to the *CEQR Technical Manual*, projects resulting in less than 200,000 square feet of retail on a single development site would not typically result in indirect socioeconomic impacts due to market saturation. Based on these criteria, an assessment of indirect business displacement is not warranted.

Adverse Effects on Specific Industries

The Directly Affected Area does not contain any existing industries or categories of businesses that are categorized as "specific industries," as they are defined in the CEQR Technical Manual. Therefore, an assessment of the Proposed Actions' potential effects on "specific industries" is not warranted.

STUDY AREA

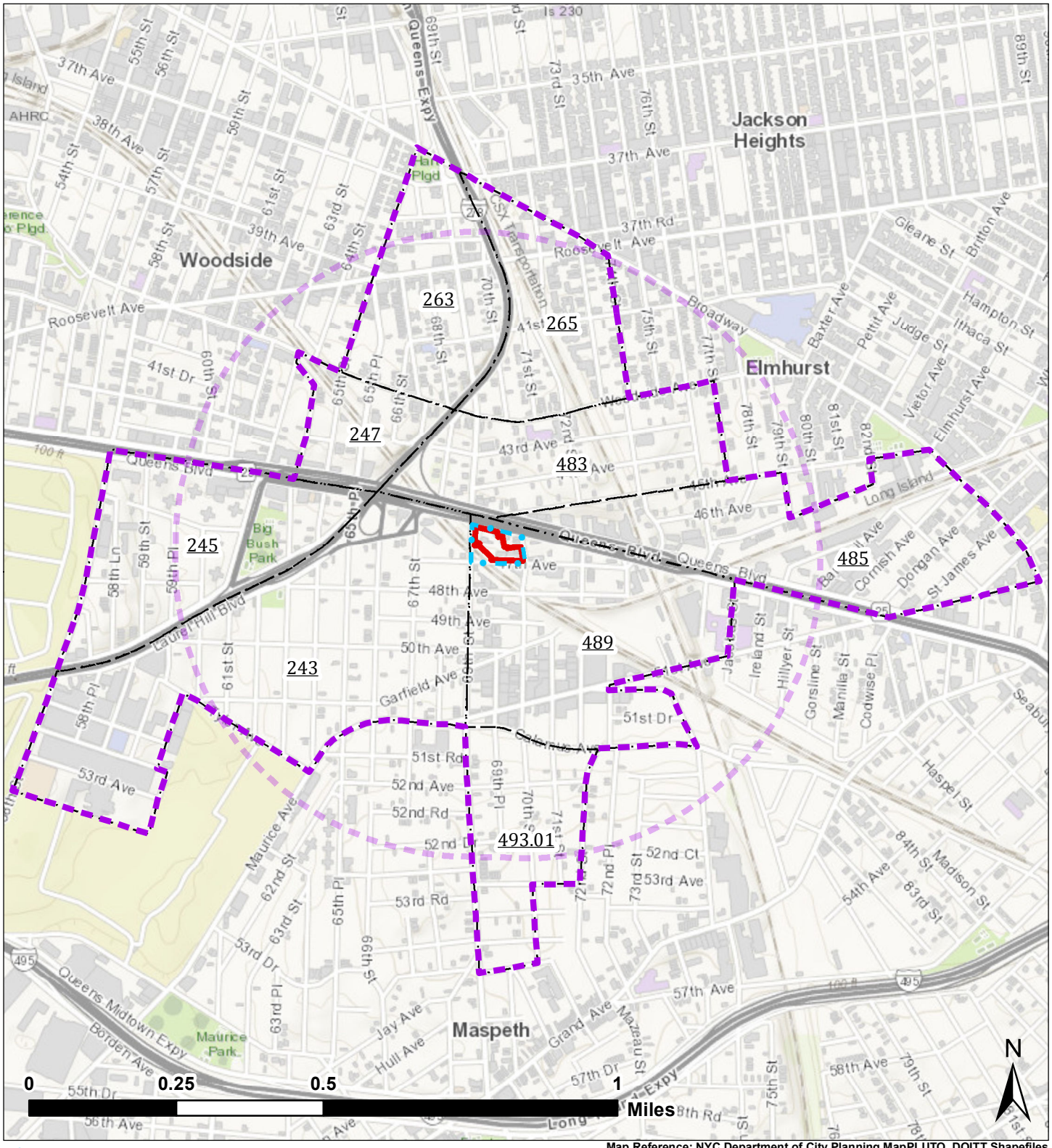
The *CEQR Technical Manual* states that for projects that would increase the population by more than 5 percent within a 0.25-mile Study Area compared to the projected population in the future without the proposed action, a 0.5-mile Study Area would be appropriate for socioeconomic conditions analysis purposes (Figure 9).

The Proposed Project facilitated by the Proposed Actions is anticipated to generate approximately 873 residents over the No-Action Condition; this With-Action net population increase exceeds 5 percent of the Study Area population within a 0.25-mile radius of the Directly Affected Area. Therefore, pursuant to *CEQR Technical Manual* guidelines, the Study Area was expanded to a 0.5-mile radius ("0.5-mile Study Area").

[18] The existing number of employees on the Project Site is based on 3 employee per 1,000 sf of retail; 4 employee for every 1,000 sf of office space; 1 employee per 450 sf of community facility/institutional; 1 employee per 500 sf of hotel; 1 employee per 10,000 sf of parking; and 1 employee per 25 residential units. (http://nces.ed.gov/programs/stateprofiles/sresult.asp?mode=short&s1=36).

69-02 QUEENS BOULEVARD

FIGURE 9
SOCIOECONOMIC STUDY AREA MAP



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

WOODSIDE, QUEENS, NY

LANGAN

As described in the Preliminary Assessment below, the With-Action Condition would result in a 2.25 percent increase in the population within a 0.5-mile Study Area over the No-Action Condition. For this analysis, the 0.5-mile Study Area includes Queens Census Tracts 243, 245, 247, 263, 265, 483, 485, 489, and 493.01. In accordance with *CEQR Technical Manual* guidelines, because the estimated 2.25-percent incremental population increase within the 0.5-mile Study Area would be less than 5 percent, the 0.5-mile Study Area will be used to analyze the Proposed Actions' potential to result in indirect residential displacement.

PRELIMINARY ASSESSMENT

Indirect Residential Displacement

The development in the With-Action Condition would result in a net increase of 272 new dwelling units, 54 of which are would be allocated as affordable housing. Assuming that the average renter-occupied household size for Census Tract 489 would not change, the additional 272 dwelling units would result in an increase of approximately 873 residents within the 0.5-mile Study Area.[19] Accordingly, the additional residents in the With-Action Condition would increase the total population in the Study Area to 39,703 residents by the 2020 Build Year, which is an increase of approximately 2.25 percent over the No-Action Condition.

Table D-1: Residential Population and Dwelling Units – 0.5-mile Study Area

	Existing Condition (2016)	2020 Study Area[1]	No-Action Condition (Build Year 2020)	With-Action Condition (Build Year 2020)	Increment between No-Action and With-Action (Build Year 2020)	Percent Change in Population between No-Action Condition and With-Action Condition
Population	37,537	37,902	38,830	39,703	873	2.25%
Dwelling Units	12,168	12,282	12,571	12,843	272	2.16%

***Source**: Existing population is from US Census Bureau, 2010 Census; and existing Housing Units is from US Census Bureau, 2011-2015 American Community Survey (ACS) 5-Year Estimates for Selected Census Tract(s) within 0.5-mile: Queens* 243, *245, 247, 263, 265, 483, 485, 489 and 493.01.*

Notes:

[1]2020 Study Area includes population generated from the No-Build projects located at 46-02 70th Street and 70-09 45th Avenue.

According to the *CEQR Technical Manual,* a preliminary assessment of a particular project's potential to result in indirect residential displacement considers the following questions:

- Would the expected average incomes of the new population exceed the average incomes of the study area population?
- If yes, would the increase in population represent more than 5 percent of the primary study area population or otherwise potentially affect real estate market conditions?
- If yes, would the study area have a significant number of unprotected rental units?

[19] The average household size of renter-occupied units in Queens Census Tract 489 is 3.21 (Selected Housing Characteristics 2011-2015 ACS 5-Year Estimates)

In order to determine if the expected average incomes of the new residents in the development in the With-Action Condition would exceed the average incomes of the population in the Study Area, this preliminary analysis examines the new populations expected to occupy the proposed market rate and affordable dwelling units and the expected incomes of these populations. According to the US Census Bureau 2011-2015 American Community Survey 5-year Estimates, the existing average (median) household income in the 0.5-mile Study Area around the Directly Affected Area is approximately $55,099.[20] The average household size within the 0.5-mile Study Area for renter-occupied units is 3.06. However, the average household size for renter-occupied units within Census Tract 489 (in which the Development Site is located) is 3.21.[21] The development in the With-Action Condition would include the addition of approximately 272 residential dwelling units compared to the No-Action Condition.

The development in the With-Action Condition would allocate approximately 20 percent of the total residential floor area to affordable housing units for residents with annual incomes averaging at or below 80 percent AMI (approximately $34,360 per year for a family of three), according to the U.S. Department of Housing and Urban Development (HUD).

Under the Proposed Actions, approximately 20 percent of the *incremental* residential floor area (54 dwelling units) would be allocated as affordable housing for low-income families. The remaining 80 percent of the incremental residential floor area (218 dwelling units) would be available at the market rate.

Based on this information, the average annual income anticipated for the new population that would qualify for affordable housing in the With-Action development is expected to be approximately $34,360 for a family of three, which is lower than the existing average (median) household income in the 0.5-mile Study Area. The average annual income anticipated for the new population that would occupy market rate housing would be at least that of the 0.5-mile Study Area median income—approximately $55,099.

Although the estimated average annual incomes of the incremental population in the With-Action Condition would have the potential to be higher than the anticipated average annual incomes in the No-Action Condition within the 0.5-mile Study Area, the total population introduced as a result of the With-Action Condition would represent less than a 5 percent increase in the total 0.5-mile Study Area population as compared to the No-Action Condition. Furthermore, the development in the With-Action Condition would build on existing socioeconomic trends in the Woodside neighborhood, specifically along Queens Boulevard. Most notably, the 2006 Maspeth-Woodside rezoning included an Inclusionary Housing component for the segment of Queens Boulevard along the northern boundary of the Development Site. The development in the No-Action Condition would contain both market-rate and affordable dwelling units. Therefore, the Proposed Actions would continue this trend by providing market-rate apartments with approximately 20 percent of the residential floor area designated for permanent affordable housing under the Mandatory Inclusionary Housing

[20] US Census Bureau 2011-2015 American Community Survey 5-Year Estimates for Selected Queens Census Tracts 243, 245, 247, 263, 265, 483, 485, 489 and 493.01
(https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?fpt=table)
[21] US Census Bureau 2011-2015 American Community Survey 5-Year Estimates for Selected Queens Census Tract 489.
(https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?fpt=table)

program (MIH). Based on the marginal increase in total population in the 0.5-mile Study Area as a result of the Proposed Actions, as well as the incremental addition of approximately 54 permanent affordable dwelling units, it is unlikely that the development in the With-Action Condition would introduce or accelerate a trend of change in the residential real estate market that would result in the potential displacement of a vulnerable population to the extent that the socioeconomic condition of the neighborhood would change.

CONCLUSION

The 2.25 percent increase in total population in the 0.5-mile Study Area that would result from the Proposed Actions is not anticipated to be large enough to cause indirect displacement of residents or businesses, or broadly affect real estate market conditions as compared to the No-Action Condition. Moreover, because this 2.25-percent increase in population accounts for less than 5 percent of the 0.5-mile Study Area, and 20 percent of the incremental residential floor area would be designated as permanently affordable (approximately 54 units for families with incomes averaging at or below 80 percent AMI), the Proposed Actions are unlikely to increase incomes in the Study Area to the extent that it would potentially displace a vulnerable population by adversely affecting the socioeconomic condition of the neighborhood.

Based on the preliminary analysis above, the Proposed Actions are not anticipated to result in the indirect displacement of existing residents or businesses in the Study Area. Therefore, the development in the With-Action Condition is not anticipated to result in a potentially significant adverse impact on the socioeconomic conditions of the neighborhood and, therefore, no further analysis is necessary.

ATTACHMENT E: COMMUNITY FACILITIES AND SERVICES

INTRODUCTION

This section examines the potential effects of the Proposed Actions on community facilities on the Development Site and surrounding Study Area. The *CEQR Technical Manual* defines community facilities as public or publicly funded schools, hospitals, libraries, child care centers, health care facilities, and fire and police protection services. City Environmental Quality Review (CEQR) methodology focuses on direct impacts to existing community facilities and services and on increased demand for existing community facilities and services generated by increases in population.

This analysis of community facilities and services was conducted in accordance with *CEQR Technical Manual* guidelines and was based on the latest data and guidance provided by city agencies, including the New York City Department of Education (DOE), the New York City Administration for Children's Services (ACS), the New York City School Construction Authority (SCA), and the New York City Department of City Planning (DCP).

METHODOLOGY

Direct Impacts

According to the *CEQR Technical Manual*, if a proposed project would physically alter a community facility, whether by displacement of the facility or other physical alteration, this "direct" effect triggers the need to assess service delivery of the facility and the potential effect that physical alteration may have on that service delivery. The Proposed Actions would not directly eliminate, displace, or alter any publicly funded community facilities, including public schools, libraries, health care facilities, day care centers, or police or fire stations. Therefore, an analysis of the Proposed Actions' potential for direct impacts on community facilities is not warranted.

Indirect Impacts

According to the *CEQR Technical Manual*, an increase in population as a result of a proposed project could potentially result in an increase in the demand for existing services, which in turn may result in an "indirect" effect on community facilities or public services. Depending on the size, income characteristics, and age distribution of the new population, there may be effects on public schools, libraries, or child care centers.

Libraries

According to the *CEQR Technical Manual*, if a proposed project would result in a five (5) percent or more increase in the ratio of residential units to library branches, then a library impact assessment is required. The Proposed Actions would not result in a five (5) percent or more increase in the ratio of residential units to library branches; therefore, an assessment of the Proposed Actions' potential indirect impacts on libraries is not warranted.

Fire and Police Services/Health Care Facilities

According to the *CEQR Technical Manual*, if a proposed project would introduce a sizable new neighborhood where none existed before, then an assessment of potential impact to fire and police services and health care facilities is required. The Proposed Actions would not result in the introduction of a sizable new neighborhood where none existed before. Therefore, an assessment of the Proposed Actions' potential indirect impacts on fire and police services and health care facilities is not warranted.

Public Schools

According to the *CEQR Technical Manual*, an analysis of a proposed project's potential indirect impacts on elementary and intermediate public schools is required if a project in the borough of Queens would generate at least 124 new residential dwelling units. An analysis of a project's potential indirect impacts on public high schools is required if a project would generate at least 1,068 new dwelling units.[22] Because the Proposed Actions would result in a net increase of approximately 272 residential dwelling units as compared to the No-Action Condition, an analysis of potential indirect impacts on public elementary schools and public intermediate schools is necessary. Because the Proposed Actions would not generate 150 or more high school students, an analysis of potential indirect impacts on public high schools in the borough is not warranted.

Publicly Funded Child Care

According to the *CEQR Technical Manual*, an analysis of publicly funded child care and head start facilities is required if a proposed project introduces 20 or more eligible children under age six. The Proposed Actions would result in approximately 112 total low- to moderate-income housing units, which would result in 16 children under the age of six eligible for publicly funded child care. In the With-Action Condition there would be eight (8) additional children under the age of six eligible for publicly funded child care as compared to the No-Action Condition, which would not exceed the CEQR threshold.[23] Therefore, an analysis of potential indirect impacts to publicly funded child care is not warranted.

Study Area

Elementary and intermediate schools in New York City are in geographically defined school districts. Following the methodologies outlined in the *CEQR Technical Manual*, the study area for the analysis of public elementary and intermediate schools is the community school district's sub-district in which the project is located. As shown in Figure 10, the Development Site is located in Sub-district 2 of Community School District (CSD) 24; therefore, elementary and intermediate school assessment in this analysis is limited to CSD 24, Sub-district 2 ("School Study Area").

[22] *CEQR Technical Manual*, Table 6-1, Page 6-3.

[23] In the borough of Queens, the minimum number of low-to moderate- income residential units to yield 20 children less than six years of age is 139 units. Multipliers to calculate children generated in the No-Action and With-Action Conditions are provided in the *CEQR Technical Manual*, Table 6-1b, Page 6-4.

EXISTING CONDITIONS

As shown in Figure 10, the Development Site is located in Sub-district 2 of CSD 24. Elementary and intermediate schools analyzed within the School Study Area can generally be defined by one of four categories: elementary, intermediate, combined elementary/intermediate, or combined intermediate/high schools. Elementary schools (P.S.) serve pre-kindergarten (Pre-K) or kindergarten through grade 5; intermediate schools (I.S.) serve grades 6 through 8; elementary/intermediate schools (P.S./I.S.) serve Pre-K or kindergarten through grade 8; and intermediate/high schools (I.S./H.S.) serve grades 6 through 12. In addition to these four categories, there are temporary buildings, transportable classroom units (TCUs), mini-schools, and annexes; however, because these are not permanent, based on the *CEQR Technical Manual* their capacity is excluded from the assessment, but enrollment is included.

Tables E-1 and E-2 list the existing enrollment, capacity, and utilization rates for elementary and intermediate schools in the School Study Area. As shown in Figure 10, there are a total of 18 public schools within the School Study Area (School District 24, Subdistrict 2), of which ten (10) are elementary school and eight (8) are intermediate schools.

Elementary Schools

As shown in Table E-1, there are ten elementary schools within the School Study Area have an existing utilization rate of approximately 116 percent and a deficit of approximately 572 seats.

Table E-1: Existing Public Elementary School (P.S.) Enrollment, Capacity, and Utilization: 2016-2017 School Year (School District 24, Sub-District 2)

Map No.[1]	School Name	Address	Grades Served	P.S. Enrollment	P.S. Target Capacity	P.S. Seats Available	P.S. Percent Utilization
1	P.S. 19	86-37 53rd Avenue	K-5	24	61	37	39%
2	P.S. 58	72-24 Grand Avenue	Pre-K–8	926	861	-65	108%
3	P.S. 102	55-24 Van Horn Street	Pre-K–8	906	736	-170	123%
4	P.S. 199	39-20 48th Avenue	Pre-K–8	559	621	62	90%
5	P.S. 199 (*Annex*)	50-15 44th Street	K–5	152[2]	113[3]	-39[4]	135%
6	P.S. 199	48-25 37th Street	K–5	265	304	39	87%
7	Elm Tree Elementary	86-37 53rd Avenue	K–5	270	220	-50	123%
8	P.S. 229	67-25 51st Road	Pre-K–5	1,460	1,081	-379	135%
9	The Children's Lab School	45-45 42nd Street	Pre-K–5	304	340	36	89%
10	The 51 Avenue Academy (Q877)	76-05 51st Avenue	4-5	460	378	-82	122%
Total Capacity for Elementary Schools				**5,326**	**4,602**	**-572**	**116%**

***Source**: NYC Department of City Planning, 2018; New York City Department of Education, Enrollment – Capacity – Utilization Report, 2016-2017 School Year.*
***Notes**:*
[1] Refer to Figure 10.
[2] Includes enrollment of temporary facilities.
[3] Excludes capacity of temporary facilities.
[4] Excludes available seats in temporary buildings

Intermediate Schools

As shown in Table E-2, the eight intermediate schools within the School Study Area have an existing utilization rate of approximately 124 percent and a deficit of approximately 541 seats.

Table E-2: Existing Public Intermediate School (I.S) Enrollment, Capacity, and Utilization: 2016-2017 School Year (School District 24, Sub-District 2)

Map No.[1]	School Name	Address	Grades Served	I.S. Enrollment[2]	I.S. Target Capacity[3]	I.S. Seats Available[4]	I.S. Percent Utilization
11	P.S. 58	72-24 Grand Ave	Pre-K–8	113	105	-8	108%
12	P.S. 102	55-24 Van Horn Street	Pre-K–8	412	335	-77	123%
13	I.S. 5	50-40 Jacobus Street	6–12	1,836	1,582	-254	116%
14	I.S. 73	70-02 54th Avenue	6–8	1,650	1,560	-90	106%
15	I.S. 73 (*Mini-School*)	70-02 54th Avenue	6–8	400	447	47	89%
16	I.S. 125	46-02 47th Avenue	6–8	1,268	1,157	-111	130%
17	I.S. 125 (*TCU*)[3]	46-02 47th Avenue	6-8	240	0	-240	-
18	R. F. Wagner Secondary School for Arts & Tech	47-07 30th Place	6–12	139	138	-1	101%
Total Capacity for Intermediate Schools				**6,058**	**4,877**	**-541**	**124%**

Source*: NYC Department of City Planning, 2016; New York City Department of Education, Enrollment – Capacity – Utilization Report, 2016-2017 School Year.*

Notes*:*

[1] Refer to Figure 10.

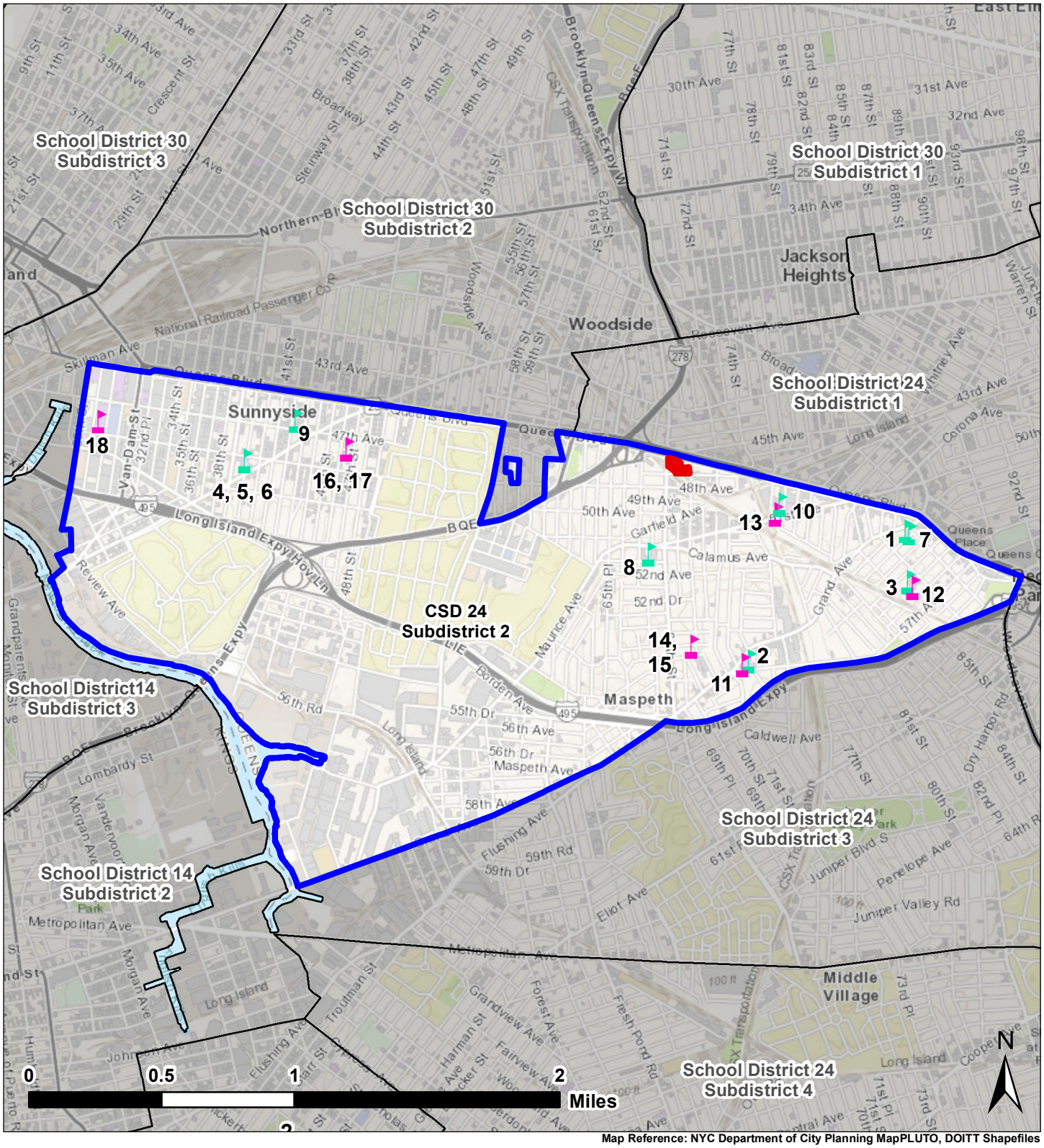
[2] Includes enrollments for temporary buildings.

[3] Excludes capacities of temporary buildings (I.S. 73 Mini-School).

[4] Excludes available seats in temporary buildings.

69-02 QUEENS BOULEVARD

FIGURE 10
PUBLIC SCHOOLS MAP



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site
School Subdistricts
CSD-24 Sub-2

Schools
Pre-K - 5 (Elementary School)
Grades 6 - 8 (Intermediate School)

WOODSIDE, QUEENS, NY

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ASSESSMENT

Public Schools

According to the *CEQR Technical Manual,* only public schools operated by the DOE are included in the analysis, while private, parochial, and charter schools within the School Study Area are excluded. The *CEQR Technical Manual* further indicates if a project would introduce more than 50 school-age children (elementary and intermediate school students), significant impacts on public schools have the potential to occur and therefore, further analysis of public schools would be warranted.

Provided in the *CEQR Technical Manual*, by definition, a significant adverse impact may occur if the Proposed Actions would result in a condition satisfying both of the following:

1. A collective utilization rate of the elementary or intermediate schools that is equal to or greater than 100 percent in the With-Action Condition; and

2. An increase of five (5) percent or more in the collective utilization rate between the No-Action and With-Action conditions.

No-Action Condition

SCA provides future district enrollment projections for up to ten (10) years that focus on the organic growth of the City's student population and other increases in populations that do not necessarily result from new residential development planned in the area ("No-Build" projects). The SCA also provides data on the number of new elementary and intermediate school students expected from new housing in CSD 24, Sub-district 2 based on capital planning work. As shown in Table E-3, the anticipated number of students enrolled in elementary and intermediate schools in the School Study Area by 2020 in the No-Action Condition is based on (i) these SCA projections, (ii) the estimated number of students generated by No-Build dwelling units, and (iii) the estimated number of students generated by the anticipated development on the Development Site in the No-Action Condition. Development in the No-Action Condition would include approximately 289 residential dwelling units. Based on public school student multipliers provided in the *CEQR Technical Manual*, the development in the No-Action Condition would generate approximately 81 elementary school students and approximately 35 intermediate school students by 2020.

Therefore, as shown in Table E-3, elementary and intermediate schools in the School Study Area would operate over capacity in the 2020 No-Action Condition; elementary schools would have a deficit of approximately 716 seats (116 percent utilization), and intermediate schools would have a deficit of approximately 1,760 seats (136 percent utilization).

Table E-3: 2020 Estimated No-Action Public Elementary and Intermediate School: Enrollment, Capacity, and Utilization in the School Study Area

	Projected Enrollment 2020[1]	No-Build Students[2]	No-Action Students on Development Site	Total No-Action Enrollment	Capacity	Available Seats	Utilization (%)
Elementary Schools							
CSD 24, Sub-District 2	5,135	102	81	5,318	4,602	-716	116%
Intermediate Schools							
CSD 24, Sub-District 2	6,558	44	35	6,637	4,877	-1,760	136%

Notes:
[1] The projected enrollment in the School Study Area in 2020 is based on DOE *Enrollment Projections* by *Statistical Forecasting (Actual 2015, Projected 2016-2025)* and SCA's Housing Pipeline for the 2015-2019 Capital Plan.
[2] The number of students expected to be generated by No-Build Projects.

With-Action Condition

Development in the With-Action Condition would introduce approximately 561 residential dwelling units to the Study Area. Based on public school student multipliers provided in the *CEQR Technical Manual*, the development in the With-Action Condition would generate approximately 157 elementary school students and approximately 67 intermediate school students by 2020.

Therefore, as shown in Table E-4, elementary and intermediate schools in the School Study Area would operate over capacity in the 2020 With-Action Condition; elementary schools would have a deficit of approximately 793 seats (117 percent utilization), and intermediate schools would have a deficit of approximately 1,793 seats (137 percent utilization).

In the With-Action Condition, there would be a net increase in the elementary school utilization rate of approximately 1.65 percent and a net increase in the intermediate school utilization rate of approximately 0.67 percent (Table E-4).

Table E-4: Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization in the Study Area (2020 With-Action Condition)

	Projected 2020 Enrollment[1]	No-Build Students[2]	With-Action Students	Total Enrollment (2020)	Capacity	Available Seats	Utilization (%)	Change in Utilization (%) from No-Action to With-Action conditions
Elementary Schools								
CSD 24, Sub-District 2	5,135	102	157	5,395	4,602	-793	117%	1.65%
Intermediate Schools								
CSD 24, Sub-District 2	6,558	44	67	6,670	4,877	-1,793	137%	0.67%

Notes:
[1] The projected enrollment in the School Study Area in 2020 is based on DOE *Enrollment Projections (Actual 2015, Projected 2016-2025)* and SCA's Housing Pipeline for the 2015-2019 Capital Plan.
[2] The number of students expected to be generated by No-Build Projects.

According to the *CEQR Technical Manual*, a significant adverse impact may occur if a proposed action would result in both (i) a utilization rate of the elementary schools in the sub-district study area that is equal to or greater than 100 percent in the With-Action Condition; and (ii) an increase of five (5) percent or more in the collective utilization rate between the No-Action and With-Action conditions.

In the With-Action Condition, it is anticipated that both elementary and intermediate schools would continue to operate at collective utilization rates greater than 100 percent. It is also anticipated there would be a net increase in the elementary school utilization rate of approximately 1.65 percent and a net increase in the intermediate school utilization rate of approximately 0.67 percent, as compared to the No-Action Condition.

CONCLUSION

Based on the analysis above, the With-Action Condition would result in a collective utilization rate of approximately 127 percent for elementary and intermediate schools. The increase in the collective utilization rate would represent an approximately 1.15 percent increase over the No-Action Condition. Although elementary and intermediate schools within the School Study Area would continue to operate above their designed capacity, the increase in the collective utilization rate would be less than the threshold set forth by the *CEQR Technical Manual* (five (5) percent) representing the potential to result in a significant adverse impact. Therefore, the Proposed Action would not be anticipated to result in a significant adverse impact on elementary schools or intermediate schools within the School Study Area (Sub-District 2 of CSD 24).

Based on this information, the Proposed Action is not anticipated to result in any significant adverse impacts to community facilities and services; therefore, no further analysis is warranted.

ATTACHMENT F: OPEN SPACE

INTRODUCTION

This chapter assesses the potential impacts of the Proposed Actions on open space resources. According to the *CEQR Technical Manual*, an open space assessment is conducted to determine whether a proposed project would have a direct impact resulting from the elimination or alteration of open space and/or an indirect impact resulting from burdening available open space by the introduction of a new residential or worker population. The *CEQR Technical Manual* defines open space as publicly or privately owned land that is publicly accessible and available for leisure, play, or sport, or is set aside for the protection or enhancement of the natural environment. An open space analysis focuses on all existing or planned publicly accessible open space.

In addition to the analysis provided in this section, Attachment G, "Shadows," provides an assessment of the Proposed Action's potential shadow effects on open space resources.

METHODOLOGY

Direct Effects

According to *CEQR Technical Manual*, a proposed project would directly affect open space resources if it would encroach upon, limit public access to, or cause a loss of, public open space. Direct effects may also occur if the facilities within an open space would be so changed that the open space no longer serves the same user population, or if the proposed project would result in increased noise or air pollutant emissions, odor, or shadows that would temporarily or permanently affect the usefulness of a public open space. Because no open space resources would be physically displaced as a result of the Proposed Actions, no analysis of direct effects is warranted; therefore, this chapter analyzes only the Proposed Actions' indirect effects on existing open space resources.

Indirect Effects

As described in the *CEQR Technical Manual*, open space can be indirectly affected by a proposed action if the project would add sufficient population, either residential or non-residential, to noticeably diminish the capacity of open space in the area to serve the future population. Typically, an assessment is conducted if a proposed project would generate more than 200 residents or 500 employees; however, the need for an open space assessment may vary in certain areas of the City that are considered either underserved or well-served by open space. For areas underserved by open space, the threshold for assessment is more than 50 residents or 125 employees; for areas well-served by open space, the threshold for assessment is more than 350 residents or 750 employees; and for areas that are neither well-served nor underserved by open space, the threshold for assessment is more than 200 residents or 500 employees.

Based on open space maps provided in Chapter 7 of the *CEQR Technical Manual*, the Directly Affected Area is not within an area that has been identified as either underserved or well-served by open space; therefore, the threshold for assessment is more than 200 residents or 500 employees.

Pursuant to *CEQR Technical Manual* guidelines, the open space analysis and impact assessment is based on the anticipated incremental residents generated by the Proposed Actions. As discussed in Attachment B, "CEQR Analysis Framework," the Proposed Actions would result in an incremental increase of approximately 229,490 gsf of residential space (approximately 272 dwelling units, of which 54 would be permanently affordable); a net decrease of 8,253 gsf of commercial space and a net decrease of 10,943 gsf of community facility space. The increase in residential area would result in the addition of approximately 873 residents as compared to the No-Action Condition. The Proposed Actions would facilitate a development that would result in approximately 47 fewer employees generated as compared the No-Action Condition.[24]

Study Area

According to the *CEQR Technical Manual*, an open space study area is generally defined by a reasonable walking distance that users would travel to reach local open space and recreation areas—typically a 0.5-mile radius for residential projects and a 0.25-mile radius for commercial projects with a worker population. Because the Proposed Actions would facilitate a primarily residential development, a 0.5-mile radius is used as an appropriate study area boundary (the "Open Space Study Area"). Based on *CEQR Technical Manual* guidelines, the Open Space Study Area includes all census tracts with at least 50 percent of their area within the 0.5-mile radius around the Directly Affected Area and all publicly accessible open space resources within that census tract. As shown in Figure 11, the Open Space Study Area includes Queens Census Tracts 243, 245, 247, 263, 265, 483, 485, 489, and 493.01, and ten publicly accessible open space resources: Big Bush Park (2.5 acres), Hart Playground (0.90 acres), Nathan Weidenbaum Park (0.73 acres), Spargo Park (0.38 acres), Sherry Park/Dog Run (0.35 acres), Winfield Plaza (0.09 acres), Pigeon Plaza (0.07 acres), Crosson Green (0.06 acres), Latham Park (0.03 acres), and P.S. 12 Playground (0.34 acres).

Open Space Ratio (OSR)

The *CEQR Technical Manual* defines OSR as the amount of open space acreage per 1,000 residents. Based on the *CEQR Technical Manual*, because local OSRs vary widely in New York City, as a planning goal, an OSR of 2.5 acres per 1,000 residents represents an area well-served by open space.[25] If the OSR would increase or remain substantially the same in the With-Action Condition as compared to the No-Action Condition, no further analysis of open space is necessary. If there is a decrease in the OSR that approaches or exceeds five (5) percent, it is generally considered to be a substantial change warranting a more detailed analysis.

Analysis Framework

Based on the *CEQR Technical Manual,* if a project exceeds thresholds outlined in Section 200 of Chapter 7, "Open Space," a preliminary assessment is required to determine whether a more detailed

[24] Estimate of workers based on the following rates: four employees per 1,000 sf of office, three employees per 1,000 sf of retail/supermarket/restaurant uses, one employee per 25 dwelling units, one employee per 1,000 sf of auto-related and industrial uses, three employees per 1,000 sf of all other community facility uses, and one employee per 50 parking spaces (Source: East New York Rezoning FEIS; CEQR No. 15DCP102K).

[25] According to the *CEQR Technical Manual*, the City's planning goal of 2.5 acres of active open space per 1,000 residents is based, in part, on National Recreation and Park Association guidelines of 1.25 to 2.5 acres per 1,000 residents of neighborhood parks within 0.5-mile.

analysis is warranted. However, in areas that are particularly scarce with regard to open space, even a small reduction in the OSR may be considered potentially significant; therefore, a detailed analysis to evaluate any indirect impacts of the Proposed Actions on open space resources should be conducted.

The adequacy of open space can be assessed both quantitatively and qualitatively. According to the *CEQR Technical Manual*, the quantitative approach requires assessing the OSR (ratio of open space acreage to the population in the study area). The qualitative assessment examines other factors that may affect utilization, including proximity to additional resources beyond the study area, the availability of private recreational facilities, and the demographic age characteristics of the study area population.

To estimate the population expected in the Study Area in the Future Without the Proposed Actions (No-Action Condition), an average household size of 3.21 persons is applied to the number of new housing units expected to occur in the study area.[26] Open space ratios are calculated for the future With-Action Condition and compared to the No-Action Condition ratios to determine changes in future levels of adequacy.

Impact Assessment

Open space impacts are based in part on how the Proposed Actions would change open space ratios in the Open Space Study Area. In addition to quantitative analyses, the *CEQR Technical Manual* also recommends conducting a qualitative assessment in order to identify the potential for open space impacts. Qualitative analyses consider the availability of open space resources, the beneficial effects of new open space resources provided by a project, and the comparison of projected open space ratios with City defined guidance. Accordingly, the ratios provided by City guidance to measure quantitative impacts are often not attainable for many areas of the City, and the City does not consider these ratios as its open space policy for every neighborhood. Per *CEQR Technical Manual* guidelines, the ratios do not constitute an absolute impact threshold, but rather benchmarks that represent how well an area is served by its open space.

EXISTING CONDITIONS

The Open Space Study Area contains approximately 5.45 acres of publicly accessible open space. Open space resources within 0.5 miles of the Development Site include Big Bush Park (2.5 acres), Hart Playground (0.90 acres), Nathan Weidenbaum Park (0.73 acres), Spargo Park (0.38 acres), Sherry Park/Dog Run (0.35 acres), Winfield Plaza (0.09 acres), Pigeon Plaza (0.07 acres), Crosson Green (0.06 acres), Latham Park (0.03 acres), and P.S. 12 Playground (0.34 acres) (Figure 11). The Open Space Study Area has an existing population of approximately 37,537 residents; creating an OSR for the Study Area of approximately 0.145 acres of open space per 1,000 residents.[27]

[26] 2011-2015 American Community Survey 5 Year Estimates average household size of renter-occupied units for Census Tract 489.
[27] US Census Bureau, 2010 Census, Queens Census Tract(s):243, 245, 247, 263, 265, 483, 485, 489, and 493.01.

Big Bush Park

Big Bush Park is a 2.5-acre neighborhood park adjacent to, and north of, the Brooklyn Queens Expressway (BQE) along 61st Street, between Lauren Hill Boulevard and Queens Boulevard. The park contains two baseball fields, climbing structures, swings, slides, handball courts, and sitting areas. It is regularly used by the residents of the neighborhood, as well as baseball and soccer youth leagues.[28]

Hart Playground

Hart Playground is a 0.9-acre neighborhood park west of the BQE, adjacent to the block bounded by Broadway to the north, 69th Street to the east, 37th Avenue to the south, and 65th Street to the west. The park features a playground area, a basketball court, and benches.[29]

Nathan Weidenbaum Park

Nathan Weidenbaum Park is a 0.73-acre neighborhood park on Lauren Hill Boulevard between 63rd and 64th Streets and just south of the BQE. The park features a basketball court, play area, and benches.[30]

Spargo Park

Spargo Park is a 0.38-acre triangular park north of the BQE and Queens Boulevard intersection. The park is enclosed by a fence.[31]

Sherry Dog Run/Park

The Sherry Dog Run/Park is 0.35-acre dog park north of the BQE and Queens Boulevard intersection. The dog park features several sitting areas with game tables and a large, open play area with trees and benches.[32]

Winfield Plaza

Winfield Plaza is a 0.09-acre triangular plaza bounded by 69th Street to the east, Woodside Avenue to the south, and the BQE to the west. The plaza contains benches, a drinking fountain, and trees.[33]

Pigeon Paradise Plaza

Pigeon Paradise Plaza is a 0.07-acre irregularly-shaped plaza bounded by Broadway to the north, a one-way street ramp to the east, 37th Avenue to the south, and 69th Street to the west. The small plaza features trees, shrubs, lampposts, and benches for seating.

[28] http://www.nycgovparks.org/parks/big-bush-park/history (Accessed: August 31, 2018).
[29] https://www.nycgovparks.org/parks/hart-playground/ (Accessed: August 31, 2018).
[30] http://www.nycgovparks.org/parks/nathan-weidenbaum-park/history (Accessed: August 31, 2018).
[31] http://www.nycgovparks.org/parks/spargo-park/history (Accessed: August 31, 2018).
[32] http://www.nycgovparks.org/parks/sherry-dog-run/history (Accessed: August 31, 2018).
[33] http://www.nycgovparks.org/parks/winfield-plaza/history (Accessed: August 31, 2018).

Crosson Green

Crosson Green is 0.06-acre irregularly shaped park south of the intersection of Woodside Avenue and 68th Street. The park is bounded by Woodside Avenue to the north, 68th Street to the east, a residential lot to the south, and the BQE to the west. Crosson Green is characterized by benches, a water fountain, lampposts, trees, and other greenery.[34]

Latham Park

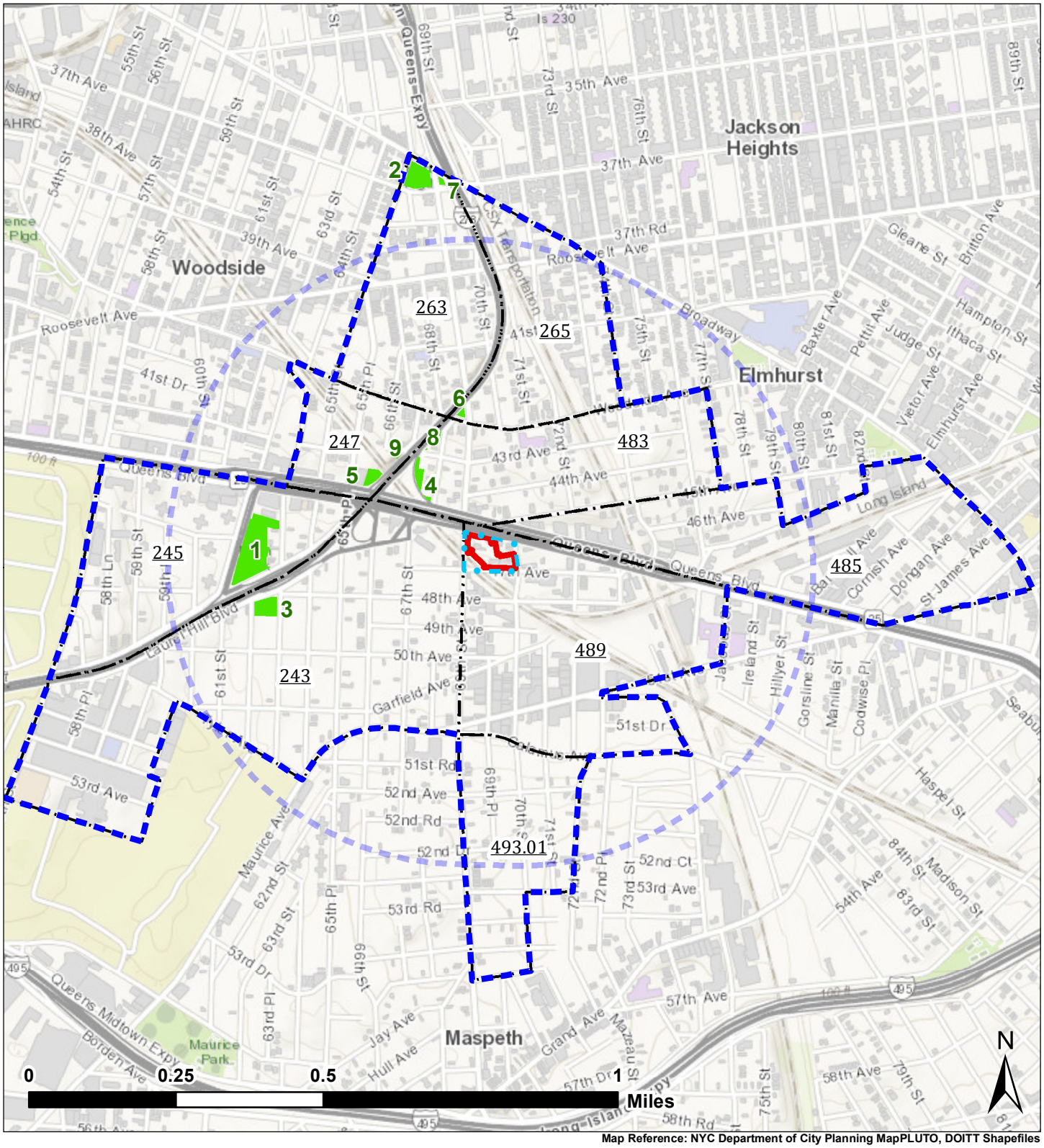
Latham Park is a 0.03-acre triangular plaza at the western corner of 43rd Avenue and the BQE. The plaza features a sitting area with benches and greenery.[35]

P.S. 12 Playground

P.S. 12 Playground is a 0.34-acre rectangular playground at 42-00 72nd Street. The playground features an athletic field, and courts.

[34] http://www.nycgovparks.org/parks/crosson-green/history (Accessed: August 31, 2018)
[35] http://www.nycgovparks.org/parks/latham-park/history (Accessed: August 31, 2018)

FIGURE 11
OPEN SPACE MAP



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Directly Affected Area
Development Site
Open Space Study Area
0.5-mile Radius
489 Census Tracts
Open Space Resources

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According to the *CEQR Technical Manual*, open space can be public or private and used for active or passive recreational purposes. Pursuant to CEQR guidelines, publicly accessible open space is defined as recreational facilities open to the public at designated hours on a regular basis and is assessed for impacts using both a quantitative and a qualitative analysis, whereas private open space not accessible to the general public on a regular basis is considered qualitatively. Table F-1 below provides a descriptive summary of the ten open space resources within the Open Space Study Area, including location, acreage, category (active or passive), amenities, condition, and utilization.

Table F-1: Open Space Resources within the Open Space Study Area

Map ID	Open Space Resource	Location	Study Area	Owner/ Agency	Amenities	Total Acreage	Passive		Active		Open Space Category	Condition[1]
							Acres	%	Acres	%		
1	Big Bush Park	Laurel Hill Blvd. between 61st St. and 64th St.	0.5-Mile	DPR	Baseball fields, handball courts, playgrounds, and bathrooms	2.50	-	-	2.50	100%	Active	Unacceptable
2	Hart Playground	Intersection of Broadway & 37th Ave., between 65th St. and 69th St.	0.5-Mile	DPR	Playgrounds and bathrooms	0.90	-	-	0.90	100%	Active	Acceptable
3	Nathan Weidenbaum Park	Intersection of Laurell Hill Boulevard & 48th Ave., between 63rd St. and 64th St.	0.5-Mile	DPR	Playgrounds	0.73	-	-	0.73	100%	Active	Acceptable
4	Spargo Park	Brooklyn Queens Expressway (BQE) between 43rd Ave. and Queens Blvd.	0.5-Mile	DPR	Greenspace	0.38	0.38	100%	-	-	Passive	Acceptable
5	Sherry Dog Run	Queens Blvd. between 65th Place and the BQE	0.5-Mile	DPR	Benches, Dog Friendly Area	0.35	0.35	100%	-	-	Passive	Acceptable
6	Winfield Plaza	Intersection of Woodside Ave., 69th S.t, and the BQE	0.5-Mile	DPR	Benches, *Reverend Matthew J. Crosson Tablet*, Greenspace	0.09	0.09	100%	-	-	Passive	Unacceptable
7	Pigeon Paradise	Intersection of Broadway, 37th Ave., and 69th St.	0.5-Mile	DPR	Greenspace	0.07	0.07	100%	-	-	Passive	Acceptable
8	Crosson Green	68th St. between the BQE and 43rd Ave.	0.5-Mile	DPR	Benches, trees, greenspace	0.06	.06	100%	-	-	Passive	Acceptable
9	Latham Park	Western corner of 43rd Ave. and the BQE	0.5-Mile	DPR	Benches, trees, greenspace	0.03	0.03	100%	-	-	Passive	Acceptable
10	P.S. 12 Playground	42-00 72nd St., Woodside, NY	0.5-Mile	DOE	Playground	0.34	-	-	0.34	100%	Active	-

Notes:
[1] Condition of Park derived from inspection summary performed by New York City Department of Parks & Recreation (https://www.nycgovparks.org/parks)

Residential Population

According to the 2010 U.S. Census, the Open Space Study Area (Census Tracts 243, 245, 247, 263, 265, 483, 485, 489, and 493.01) has a residential population of approximately 37,537. However, it is the age distribution that can affect the way open space is utilized and the concomitant need for different types of recreational facilities.

According to the *CEQR Technical Manual*, children four (4) years old or younger typically use traditional playgrounds and "tot lots" that have play equipment for toddlers and preschool children. Children ages five (5) through nine (9) typically use traditional playgrounds with play equipment suitable for school-age children, as well as grassy and hard-surfaced open spaces, which are important for ball playing, running, and skipping rope. Children ages 10 through 14 typically use playground equipment, court spaces, and ball fields. Teenagers and young adults tend to use court facilities such as basketball courts and sports fields, such as football or soccer fields. Adults ages 20 through 64 continue to use court facilities and fields for sports, as well as space for more individualized recreation, such as rollerblading, biking, and jogging, which require bike paths, esplanades, and vehicle-free roadways. Adults also gather for picnicking and other recreational activities in which all ages can participate. Finally, adults 65 years and older engage in active recreation such as handball, tennis, gardening, and swimming, as well as passive recreational activities.

As shown in Table F-2 below, more than half the Study Area population is comprised of residents between the ages of 25 and 64, suggesting the need for facilities geared toward the recreational preferences of adults. Children and teenagers (five to 17 years old) account for approximately 13 percent of the Study Area population, suggesting a need for facilities geared toward the recreational preferences of a younger age group as well.

Table F-2: Study Area Population Age Breakdown

Census Tract	Total Residential Population	Age Distribution																Median Age
		Under 5		5 to 17		18 to 24		25 to 44		45 to 54		55 to 64		65 to 74		75 years and over		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
243	6,119	361	5.9%	667	10.9%	642	10.5%	1,958	32%	948	15.5%	747	12.2%	434	7.1%	361	5.9%	39
245	6,158	339	5.5%	788	12.8%	462	7.5%	1,847	30%	1,053	17.1%	837	13.6%	419	6.8%	400	6.5%	40
247	1,574	112	7.1%	206	13.1%	189	12%	559	35.5%	271	17.2%	88	5.6%	82	5.2%	68	4.3%	34
263	7,124	556	7.8%	1,054	14.8%	598	8.4%	2,714	38.1%	841	11.8%	698	9.8%	527	7.4%	150	2.1%	35
265	4,127	248	6%	673	16.3%	223	5.4%	1,725	41.8%	479	11.6%	380	9.2%	277	6.7%	124	3%	36
483	4,212	206	4.9%	640	15.2%	379	9%	1,499	35.6%	636	15.1%	388	9.2%	265	6.3%	202	4.8%	37
485	4,639	158	3.4%	464	10%	357	7.7%	1,619	34.9%	733	15.8%	659	14.2%	455	9.8%	195	4.2%	41
489	1,651	107	6.5%	205	12.4%	190	11.5%	619	37.5%	178	10.8%	192	11.6%	107	6.5%	54	3.3%	32
493.1	1,933	85	4.4%	296	15.3%	122	6.3%	580	30%	344	17.8%	222	11.5%	145	7.5%	137	7.1%	39
Study Area Totals	37,537	2,171	5.72%	4,993	13.42%	3,162	8.7%	13,121	35.04%	5,483	14.74%	4,210	10.77%	2,711	7.03%	1,691	4.58%	36.96
Total for Queens	2,301,139	142,671	6.2%	259,961	14.3%	211,705	9.2%	706,450	30.7%	326,762	14.2%	280,739	12.2%	167,983	7.3%	138,068	6.00%	37.70
Total for NYC	8,426,743	527,514	6.26%	1,257,270	14.9%	837,618	9.9%	2,590,381	30.7%	1,137,610	13.5%	974,131	11.6%	606,725	7.2%	482,010	5.7%	36.24

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates (Selected Characteristics of the Total and Native Populations in the United States)

ASSESSMENT OF OPEN SPACE ADEQUACY

Quantitative Assessment

There is a total of 5.45 acres of open space within the Study Area, of which approximately 0.98 acres are for passive use and approximately 4.47 acres for active use. The residential population is approximately 37,537, which results in an open space ratio of 0.145 acres per 1,000 residents. The Study Area's passive and active open space ratios are 0.026 acres and 0.119 acres per 1,000 residents, respectively. Neither the Study Area's passive nor its active open space ratios satisfy guidance for open space as defined in the *CEQR Technical Manual*. Based on this information, there is an existing shortfall of passive and active open space resources within the Study Area (Table F-3).

Table F-3: Adequacy of Open Space Resources: Existing Conditions

	Population	Open Space Acreage			Open Space Ratios per 1,000 People			*CEQR Technical Manual* Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Study Area (0.50-Mile)										
Residents	37,537	5.45	0.98	4.47	0.145	0.026	0.119	2.50	0.50	2.00

Notes:
[1] Based on target open space ratios established by creating a weighted average of the amount of open space necessary to meet City guidance of 0.50 acres of passive open space per 1,000 residents and 0.15 acres of passive open space per 1,000 workers.

No-Action Condition

Direct Effects

The No-Action conditions would not result in the physical loss or alteration of a public open space; therefore, an analysis of direct open space effects is not warranted.

Indirect Effects

Open Space Study Area Population

Two No-Build development projects (Block 2432, Lot 23 and Block 1351, Lots 75 and 80), have been identified within the Open Space Study Area. The two (2) identified developments are anticipated to collectively generate approximately 366 residents, whereas the development in the No-Action Condition is anticipated to generate approximately 928 residents. Combined, the population for the Open Space Study Area in the No-Action Condition would be approximately 38,830 residents.

Assessment of Open Space Adequacy

The 38,830 residents generated under the No-Action Condition would result in an OSR of approximately 0.140. The passive open space ratio would be approximately 0.025, while the active open space ratio would be approximately 0.115. Both would remain below the *CEQR Technical Manual* guidance for open space.

With-Action Condition

In the With-Action Condition, it is anticipated that the development facilitated by the Proposed Actions would result in a net increase of approximately 272 dwelling units (approximately 873 residents), and a net reduction of 47 workers.

Direct Effects

The With-Action conditions would not result in the physical loss or alteration of a public open space; therefore, an analysis of direct open space effects is not warranted.

Indirect Effects

The With-Action Condition would result in an incremental increase of approximately 272 dwelling units compared to the No-Action Condition. Based on an average household size of 3.21 residents per dwelling unit in Queens Census Tract 489, the additional 272 dwelling units would generate approximately 873 additional residents in the With-Action Condition.[36]

With approximately 5.45 acres of publicly accessible open space within a 0.5-mile radius of the Directly Affected Area, and a No-Action residential population of approximately 38,830[37], the OSR in the No-Action Condition would be approximately of 0.140 acres per 1,000 residents, which remains below the planning goal of 2.5 acres of open space per 1,000 residents stated in the *CEQR Technical Manual*. In the With-Action Condition, an approximately 0.16 acre public walkway will be constructed along the Long Island Rail Road (LIRR) embankment at the southwest corner of the Development Site. The development of the 0.16 acre publicly accessible walkway would result in approximately 5.61 acres of open space within a 0.5-mile radius of the Development Site. Based on the total With-Action Condition residential population of 39,703, the OSR in the With-Action Condition would then be approximately 0.141 acres per 1,000 residents, which is an increase of approximately 0.67 percent from the OSR in the No-Action Condition (Table F-4).

Table F-4: Open Space Calculations

Existing Population within 0.5 miles	37,537
Total Open Space within 0.5 miles (*acres*)	5.45
Existing OSR[1] (*Acres per 1,000 residents*)	0.145
No-Action Population within 0.5 miles	38,830
Total No-Action Open Space within 0.5 miles (*acres*)	5.45
No-Action OSR (*Acres per 1,000 residents*)	0.140
With-Action Population within 0.5 miles	39,703
Total With-Action Open Space within 0.5 miles (*acres*)	5.61[2]
With-Action OSR (*Acres per 1,000 residents*)	0.141
Change in Open Space Ratio (%)	**+0.67%**

***Source*:** *Existing Population Sources: 2011-2015 American Community Survey (ACS) 5-Year Estimates for Selected Census Tract(s): 243, 245, 247, 263, 265, 483, 485, 489 and 493.01); Existing open space acreage derived from NYC DCP MapPluto Data.*
Notes:
[1] Open Space Ratio (OSR) = Acres of Open Space per 1,000 residents.
[2] Includes the approximately 0.16 publicly accessible walkway component of the Proposed Project.

[36] The Project Site is in Queens Census Tract 489, which has an average household size of 3.21, based on the 2011-2015 American Community Survey: Renter-occupied Household Size, Queens Census Tract 489.

[37] The No-Action residential population includes the existing population as cited in Table F-4, as well as the Study Area's No-Build Project generated residents, as referenced herein.

Open Space Resources

The Proposed Project would develop an approximately 6,971-square-foot (0.16 acre) landscaped pedestrian walkway, accessible to the general public, adjacent to the LIRR embankment on the southwest corner of the Development Site.

Assessment of Open Space Adequacy

As a result of the development in the With-Action Condition, the total open space ratio would increase to 0.141 acres per 1,000 residents. Dissected further, the passive open space ratio would increase to approximately 0. 029, while the active open space ratio would decrease to approximately 0.113. Overall, the open space ratio in the With-Action condition would increase by approximately 0.67 percent as compared to the No-Action condition. In the With-Action Condition, the active and passive use open space ratios for the Study Area would remain below the planning goal of 2.5 acres of open space per 1,000 residents stated in the *CEQR Technical Manual*. The population generated in the With-Action Condition as compared to the No-Action Condition is not expected to have any special characteristics, such as a disproportionately younger or older population that would place particular demands on the Study Area's open space resources.

Qualitative Assessment

The Open Space Study Area provides a mix of active and passive open space resources, with approximately 18 percent dedicated to passive uses and approximately 82 percent dedicated to active uses. However, the active and passive open space ratios are below the *CEQR Technical Manual* recommended open space ratios for active and passive uses, as well as the city-wide median ratio of 1.5 acres per 1,000 residents.

The deficiency of open space resources within the Open Space Study Area is partly offset by six publicly accessible parks within a quarter mile of the Study Area boundary. These include Elmhurst Park, Moore Homestead Playground, and Frank D. O'Connor Playground, Long Island Mews, Doughboy Plaza, and Lawrence Virgilio Playground. As shown in Table F-5, these six open space resources total approximately 14.78 acres, of which four contain exclusively active use amenities, including playgrounds, ball courts, fields, and greenways, one contains exclusively passive use amenities (seating areas), and one contains both active and passive use amenities. While these open space resources are outside of the 0.5 mile Study Area, they are nonetheless in close proximity and, therefore, may be utilized by residents and workers (Figure 12).

In addition, the proposed project would include a 28,170 square-foot on-site open space area that would be available to the proposed development's residents and workers. It is anticipated that this privately-held open space would offset a portion of any potential project-generated indirect effects on the existing open space in the Study Area.

FIGURE 12

69-02 QUEENS BOULEVARD

OPEN SPACE MAP - QUALITATIVE ANALYIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Directly Affected Area

Development Site

Open Space Study Area

Open Space Resources

WOODSIDE, QUEENS, NY

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Table F-5: Open Space Resources for Qualitative Assessment

Map ID[1]	Open Space Resource	Location	Owner/ Agency	Amenities	Acreage	Open Space Category
A	Elmhurst Park	Bounded by Grand Ave. and 57th Ave., between 74th St. and 80th St.	DPR	Fields, jogging paths, seating, and a playground	6.22	Active and Passive
B	Moore Homestead Playground	Bounded by Broadway, 82nd St. and 45th Ave.	DPR	Basketball courts, eateries, handball courts, spray showers, bathrooms, fitness equipment, and playgrounds	1.98	Active
C	Frank D. O'Connor Playground	Bounded by Broadway, 78th St., and Woodside Ave.	DPR	Basketball courts, eateries, handball courts, spray showers, bathrooms, fitness equipment, and playgrounds	1.54	Active
D	Long Island Mews	Between 51st Ave., 51st Rd., and 72nd St.	DPR	Playgrounds	0.32	Active
E	Doughboy Plaza	South side of Woodside Ave., between 56th St. and 54th St.	DPR	Benches, Dog Friendly Area	1.71	Passive
F	Lawrence Virgilio Playground	Bound by 52nd St., 39th Drive, Woodside Ave., and 39th Rd.	DPR	Basketball courts, eateries, handball courts, spray showers, bathrooms, fitness equipment, playgrounds, outdoor pools, and a track	3.01	Active
				Total (acres)	**14.78**	

According to the *CEQR Technical Manual*, a significant adverse open space impact may occur if a proposed action would reduce the open space ratio by more than five (5) percent in areas that are currently below the City's median community district open space ratio of 1.50 acres per 1,000 residents. In areas that are extremely scarce with regard to open space, a reduction as little as one (1) percent may be considered significant, depending on the area of the City. These reductions may result in overburdening existing facilities or further exacerbating a deficiency in open space.

Table F-6: Open Space Ratio Summary

	Study Area		
	Total – Residents	**Passive – Residents**	**Active – Residents**
CEQR Technical Manual Open Space Guidelines	2.50	0.50	2.00
Existing Open Space Ratio	0.145	0.026	0.119
No-Action Open Space Ratio	0.140	0.025	0.115
With-Action Open Space Ratio	0.141	0.029	0.113
Percent Change (No-Action to With-Action)	**+0.67%**	**+16.0%**	**-1.74%**

The Proposed Actions would facilitate development within an area that is presently burdened in terms of open space resources. While the reduced active open space ratio in the With Action Condition would not exceed five percent, the particularly low open space ratio within the Open Space Study Area warranted a detailed assessment that contemplates open space both quantitatively and qualitatively. The qualitative analysis indicated there are a number of additional open space facilities that are close in proximity to the Directly Affected Area, but fall outside of the boundary of the Study

Area (as defined in the *CEQR Technical Manual*). While these facilities are outside of the Open Space Study Area, residents can be anticipated to frequent them given their close proximity to the Study Area as well as their size and amenities, which make them attractive open space destinations. Moreover, the Proposed Project would provide a 6,971-square-foot (0.16 acre) publicly accessible landscaped pedestrian walkway. These open space resources would further offset the reduction in the open space ratio.

CONCLUSION

As described above, neither the No-Action nor the With-Action Condition would result in the physical loss or alteration of a public open space; therefore, an analysis of direct open space effects was not warranted.

Based on the analysis of project-generated *indirect effects* on open space above, the Proposed Actions are not anticipated to result in any potentially significant adverse impacts to open space; therefore, no further analysis is necessary.

ATTACHMENT G: SHADOWS

INTRODUCTION

According to the *CEQR Technical Manual*, a shadow assessment is necessary when a proposed action would result in a new structure(s) or additions to an existing structure(s) that are greater than 50 feet in height and/or are adjacent to an existing sunlight-sensitive resource. The *CEQR Technical Manual* defines a shadow as a condition that results when a building or other built structure blocks sunlight that would otherwise directly reach a certain area, space, or feature. An adverse shadow impact would occur when a shadow from a proposed project falls on a publicly accessible open space, historic landscape, or other historic resource that requires sunlight for its enjoyment by the public, or its architectural and historic integrity (*e.g.*, stained glass windows), or if the shadow falls on an important natural feature and adversely affects its use or landscaping and vegetation. Shadows occurring on non-significant features (city streets, sidewalks, buildings, and privately-owned open space), or within 1.5 hours of sunrise or sunset, generally are not considered significant under CEQR.

The No-Action Condition would result in a new 12-story (125-foot) mixed residential/commercial building on the northern part of the Development Site; the existing one-story (15-foot) warehouse building, the two-story (25-foot) community facility building, and the accessory parking lot on the southern part of the Development Site would remain as is. The With-Action Condition would result in a 17-story (181.5-foot) mixed residential/commercial building on the northern part of the Development Site, and a 14-story (151.5-foot) residential building on the southern part.

METHODOLOGY

The analysis methodology is based on the guidelines of the *CEQR Technical Manual*, which includes conducting a preliminary assessment to determine whether shadows resulting from a proposed project could reach any sunlight-sensitive resource at any time of year. The Tier 1 screening assessment identifies a shadow study area based on the height of structure(s) in the future with the proposed action and the longest shadow a proposed structure(s) could cast, which in New York City is 4.3 times the height of the structure. If there are sunlight-sensitive resources within the shadow study area, a Tier 2 screening assessment is warranted. As stated in the *CEQR Technical Manual*, because of the path the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, the area is between -108 and +108 degrees from true north. If the area outside this triangular area contains a sunlight-sensitive resource(s), further analysis is necessary. The Tier 3 screening assessment is a detailed assessment that further refines the analysis once sunlight-sensitive resources have been identified by analyzing specific representative days of the year and determining the maximum extent of shadows over the course of each representative day on these sunlight-sensitive resources.

Based on the guidelines of the *CEQR Technical Manual*, if the three-tiered screening analysis described above does not rule out the possibility that project-generated shadows would reach any sunlight-sensitive resources, a detailed shadow analysis is warranted.

Preliminary Screening Assessment

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City is 4.3 times its height. The area surrounding the structure is defined as the shadow study area and is used to determine if a sunlight-sensitive open space and historic resources would be shaded by the incremental shadows cast as a result of the development in the With-Action Condition. According to the *CEQR Technical Manual*, public open spaces and certain publically accessible designated historic landmarks – such as landmarks that have sunlight sensitive components including stained glass or ornate carving on the façade, the enjoyment of which relies on sunlight) are considered sunlight-sensitive resources.

The Proposed Actions would result in the development of two buildings, the West Tower on the northern part of the Development Site would reach a building height of 181.5 feet (17-stories) and the East Tower on the southern part would reach a building height of 151.5 (14-stories). Therefore, a three-tiered shadow screening analysis in accordance with *CEQR Technical Manual* guidelines is performed using the maximum building height of 181.5 feet to determine the longest shadow study area and the sunlight-sensitive open space and historic resources within that study area that could be shaded by the incremental shadows cast as a result of the development in the With-Action Condition.

Tier 1 Screening Assessment

As shown in Figure 13, the building in the With-Action Condition at a maximum height of 181.5 feet would cast a shadow extending over a maximum radius of 780.5 feet (Shadow Study Area). The Shadow Study Area includes one sunlight-sensitive open space resource, Spargo Park located in the northwestern part of the study area. Therefore, a Tier 2 screening assessment is necessary to determine whether this sunlight-sensitive open space resource would be adversely affected by any incremental project-generated shadows in the With-Action Condition.

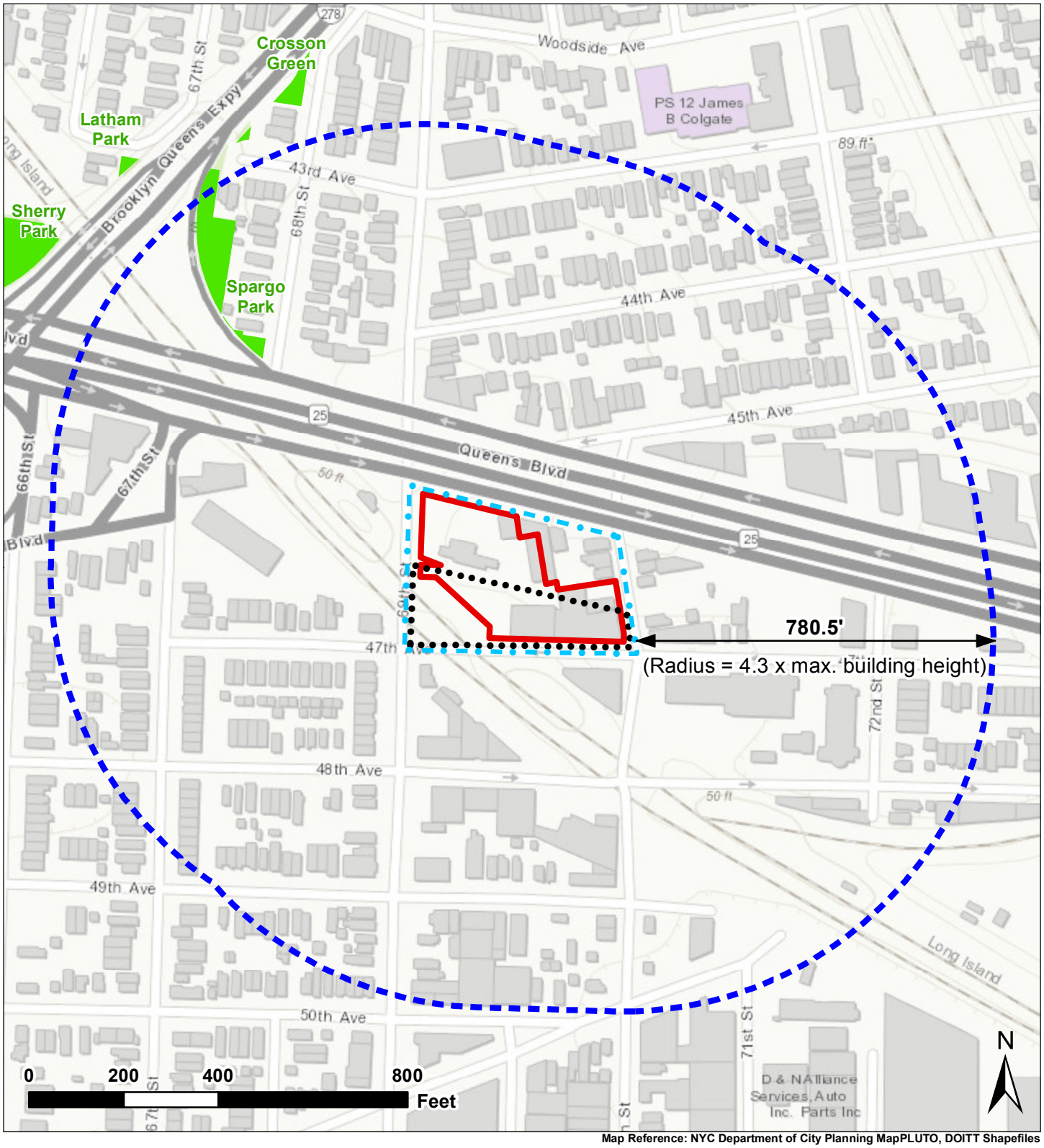
Tier 2 Screening Assessment

The purpose of the Tier 2 screening is to determine if incremental project-generated shadows would result adversely impact the use of Spargo Park, which is a sunlight-sensitive open space resource located in the northwestern part of the Shadow Study Area. According to the *CEQR Technical Manual,* shadows cast by a proposed building fall generally to the north, east, and west depending on the day and time. In New York City, the shadow area is between –108 degrees and +108 degrees from true north. Conversely, any area lying to the south of a site in the triangular area beyond these angles cannot be shaded by a proposed project. As shown in Figure 14, Spargo Park falls within the Shadow Study Area in which a shadow could occur.

Based on the results of the Tier 2 screening, a Tier 3 screening assessment was required to determine if the incremental shadows resulting from the development in the With-Action Condition could reach Spargo Park during the representative analysis days and result in an adverse impact.

FIGURE 13

69-02 QUEENS BOULEVARD **TIER 1 SHADOW SCREENING ASSESSMENT**



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Directly Affected Area
Development Site
Proposed Rezoning Area
Shadow Study Area
Open Space Resources

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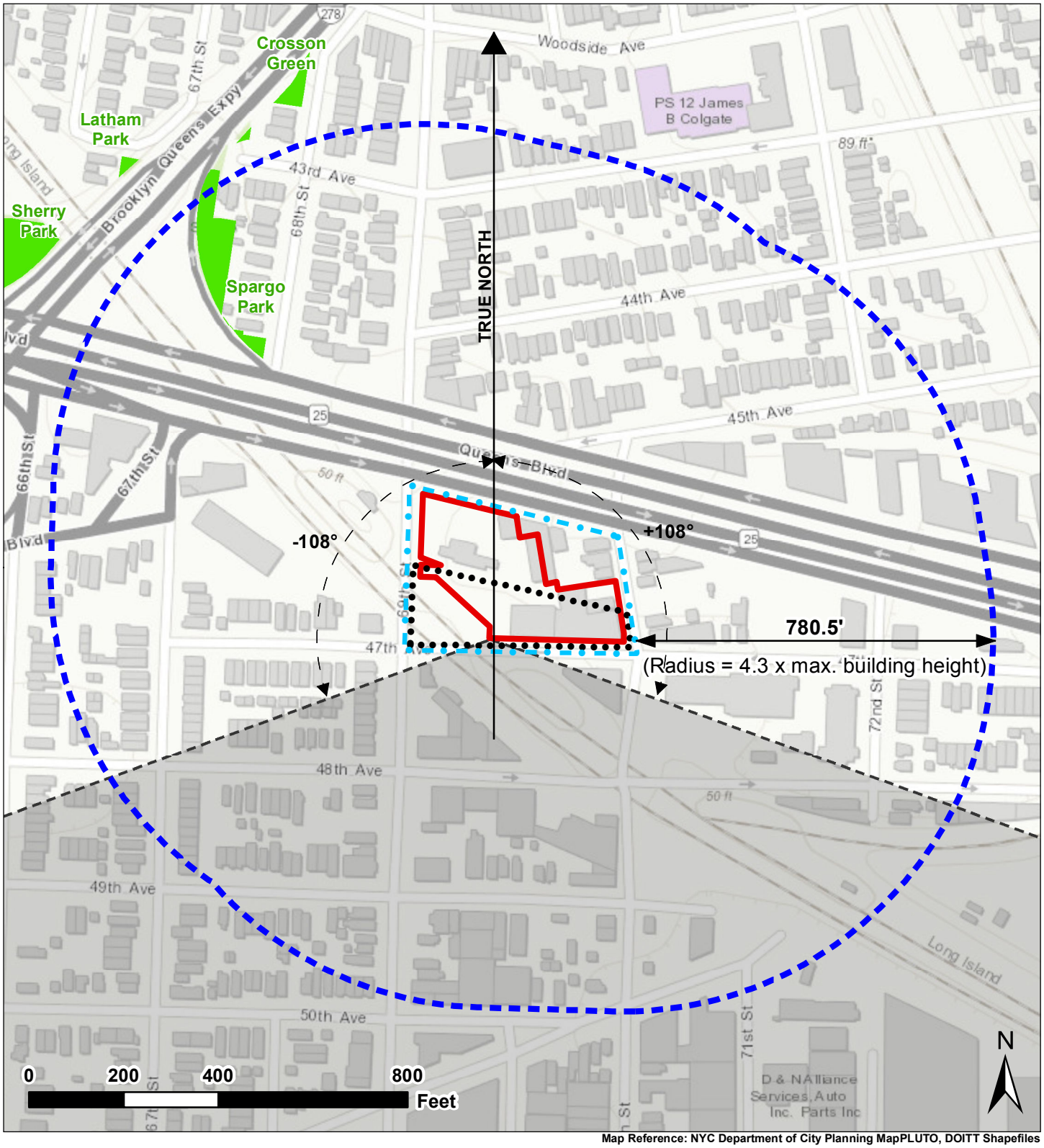
FIGURE 14

69-02 QUEENS BOULEVARD

TIER 2 SHADOW SCREENING ASSESSMENT



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Directly Affected Area
- Shadow Study Area
- Area That Cannot Be Shaded
- Development Site
- Open Space Resources
- Proposed Rezoning Area

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Tier 3 Screening Assessment

Tier 3 screening used 3D computer modeling software to depict the shadow patterns of the development in the With-Action Condition within the Shadow Study Area. The shadow model utilized 3D representations of the elements of the base maps used in the Tier 1 and Tier 2 assessments to determine the incremental shadow in the With-Action Condition as compared to the No-Action Condition, and the duration of the incremental shadows on Spargo Park.

DETAILED ANALYSIS OF SHADOW IMPACTS

Incremental Shadow Assessment

A shadow analysis was performed in accordance with the guidelines in the *CEQR Technical Manual* of Spargo Park for four representative days of the year: March 21, the vernal equinox (which is equivalent to September 21, the autumnal equinox); May 6, the midpoint between the summer solstice and the equinox (and equivalent to August 6); June 21, the summer solstice and longest day of the year, and December 21, the winter solstice and shortest day of the year. The shadow analysis shows the incremental difference in the shadow patterns between the No-Action and With-Action conditions.

In accordance with *CEQR Technical Manual* guidelines, all times reported herein are Eastern Standard Time and do not reflect adjustments for daylight savings time that is in effect from mid-March to early November. The three-dimensional shadow analysis considers the times when the two buildings in the With-Action Condition would increase shadows falling on the open space resources identified as sunlight-sensitive (Spargo Park). As the earth rotates around the sun, shadows fall in a curve on the ground opposite the sun. When the sun rises, shadows fall to the west. As the sun travels across the southern part of the sky throughout the day, shadows move in a clockwise direction until they stretch east as the sun sets in the west. Midday shadows are always shorter than those at other times because the sun is highest in the sky at that time. Because of the tilt of the earth's axis, the angle at which the sun's rays strike the earth varies throughout the year, so that during the summer, the sun is higher in the sky and shadows are shorter than during the winter. Because the sun is low in the sky, winter shadows, although longest, move the most quickly along their paths (because of the earth's tilt) and do not affect the growing season of outdoor trees and plants. The With-Action Condition represents the worst-case development scenario for environmental analysis and was used for all three-dimensional computer modeling of shadows.

The shadow analysis used the maximum building heights of the development in the No-Action and With-Action conditions, 125 feet and 181.5 feet, respectively, to determine the shadows on the four representative days of the year. Shadows in the With-Action Condition were then compared to the shadows from the No-Action Condition to determine the incremental shadow. The incremental shadows resulting from the development in the With-Action Condition are shown in dark gray. The results of the shadow analysis are discussed below.

Table G-1 shows the duration of incremental shadows created by the two proposed buildings in the With-Action Condition as compared to the development in the buildings in No-Action Condition.

Table G-1: Incremental Shadow Durations

	March 21	May 6	June 21	December 21
Start	7:36 AM	6:27 AM	5:57 AM	8:51 AM
End	4:29 PM	5:18 PM	6:01 PM	2:53 PM
With-Action – Spargo Park				
Shadow Enter Time	-	-	-	8:51
Shadow Exit Time	-	-	-	9:24
Total Shadow Duration	-	-	-	0:33
No-Action – Spargo Park				
Shadow Enter Time	-	-	-	8:51
Shadow Exit Time	-	-	-	9:01
Total Shadow Duration	-	-	-	0:10
Incremental Shadow Duration	-	-	-	0:23

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

According to the *CEQR Technical Manual*, the uses associated with open space that rely on sunlight include passive uses, such as sitting or sunning, and active uses, such as using playfields or paved courts, gardening, or playing in children's wading pools and sprinklers. Vegetation requiring direct sunlight includes tree canopies, flowering plants, and plots in community gardens. Four to six hours a day of sunlight, particularly in the growing season (defined in the *CEQR Technical Manual* as March to October), is a general minimum requirement. Shade created by trees and other natural features is not considered to be shadow of concern for the impact analysis; however, incremental shadow on a tree-shaded environment may create an adverse impact because the incremental shadow is not redundant with tree shade, and the tree canopy may be considered a sunlight-sensitive resource.

March 21

As shown in Table G-1, on March 21st the time period for shadows analysis begins at 7:36 AM and continues until 4:29 PM. As shown in Figure 15, the incremental shadows generated by the buildings in the With-Action Condition during the March 21 analysis period would not reach Spargo Park; therefore, further analysis is not necessary.

Based on this information, during the March 21st analysis period, the buildings in the With-Action Condition would not result in a significant adverse incremental shadow impact on Spargo Park.

May 6

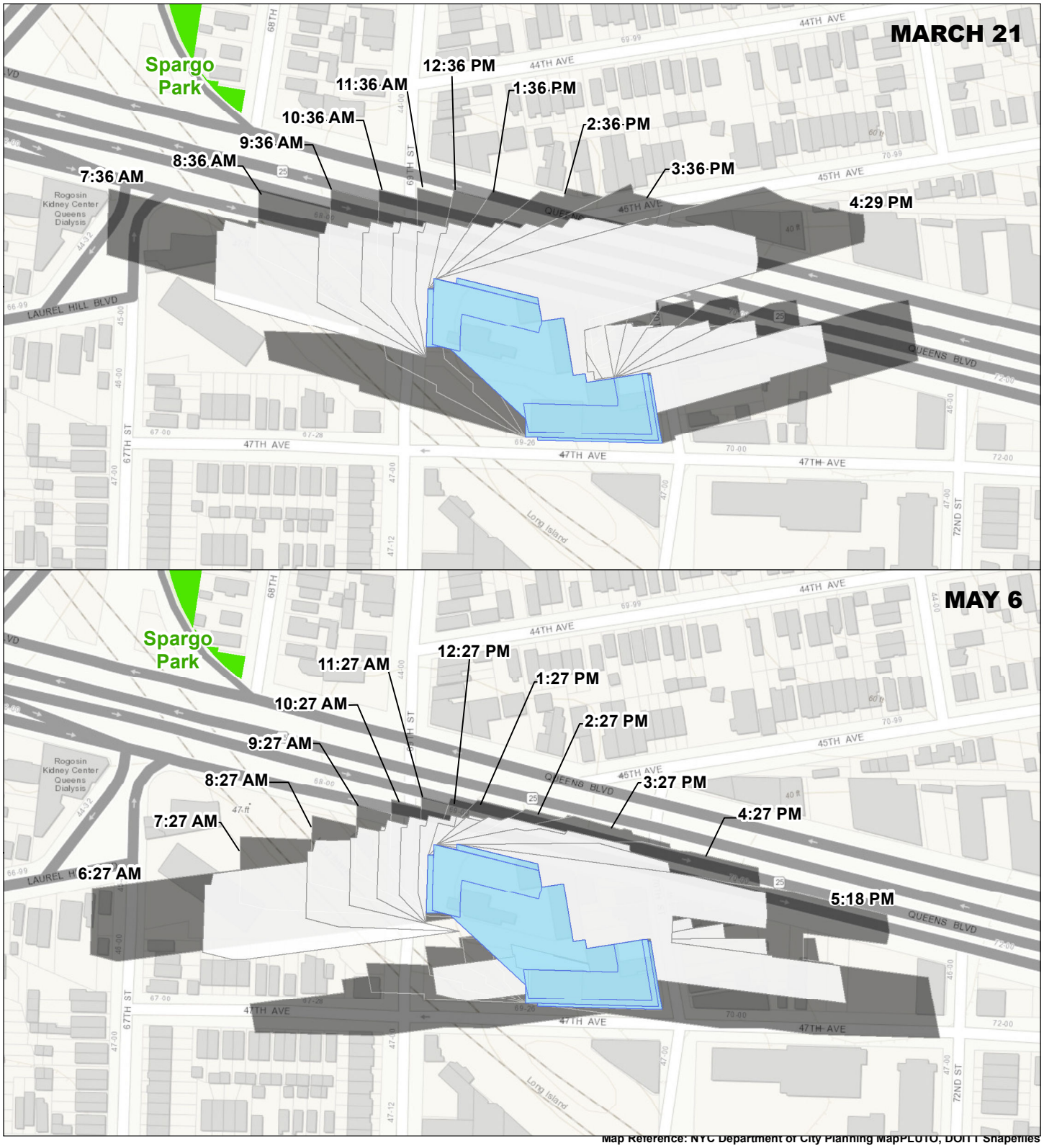
As shown in Table G-1, on May 6th the time period for shadows analysis begins at 6:27 AM and continues until 5:18 PM. As shown in Figure 15, incremental shadows generated by the buildings in the With-Action Condition during the May 6 analysis period would not reach Spargo Park; therefore, further analysis is not necessary.

Based on this information, during the May 6th analysis period, the buildings in the With-Action Condition would not result in a significant adverse incremental shadow impact on Spargo Park.

FIGURE 15

TIER 3 SHADOW SCREENING ASSESSMENT

69-02 QUEENS BOULEVARD



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Proposed Development

Sunlight Sensitive Resources

Open Space

As-of-Right Shadows (No-Action Condition)

Incremental Shadows (With-Action Condition)

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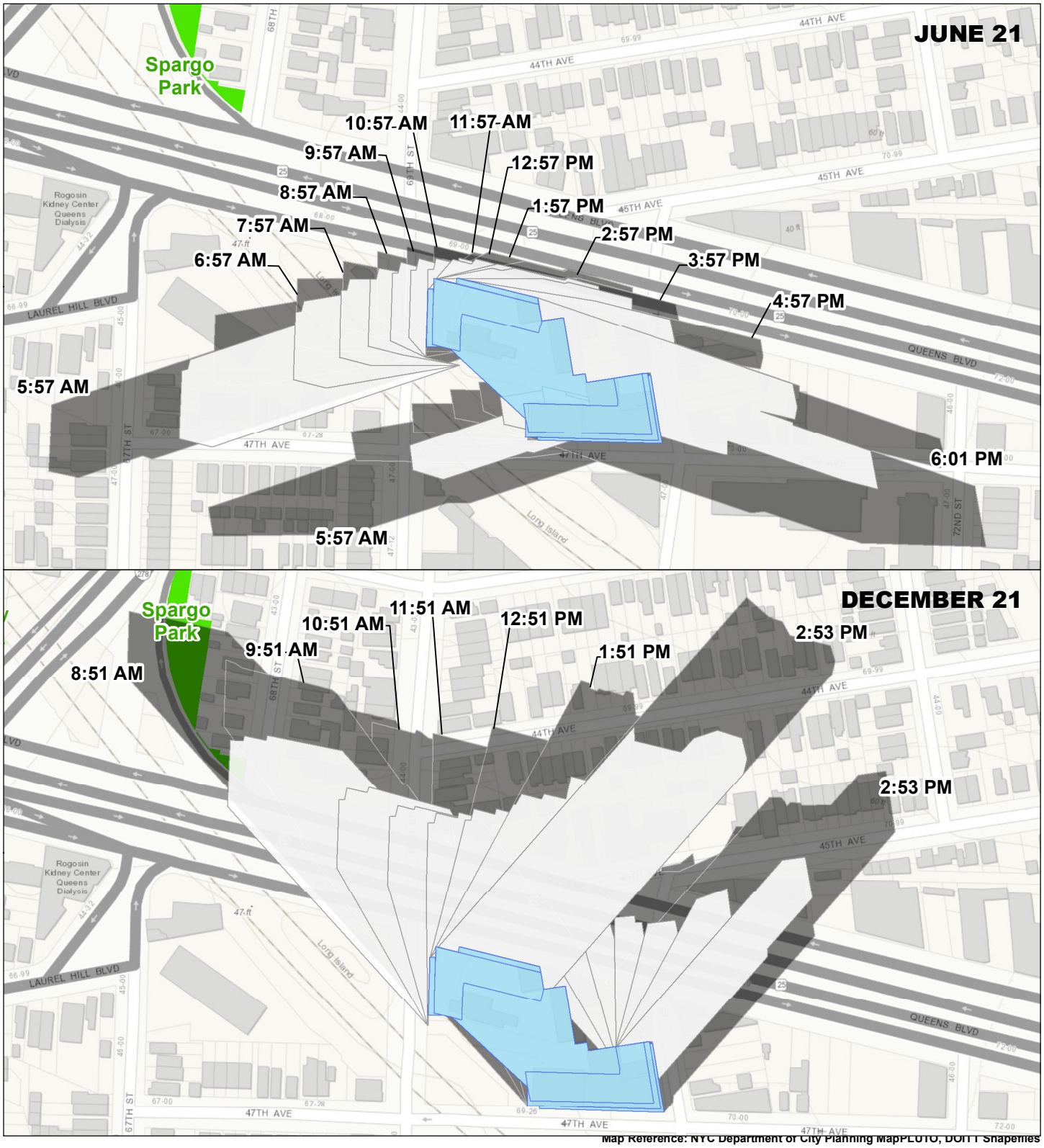
FIGURE 16

TIER 3 SHADOW SCREENING ASSESSMENT

69-02 QUEENS BOULEVARD



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Proposed Development

Sunlight Sensitive Resources

Open Space

As-of-Right Shadows (No-Action Condition)

Incremental Shadows (With-Action Condition)

WOODSIDE, QUEENS, NY

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June 21

As shown in Table G-1, on June 21st, the summer solstice (the longest day of the year), the time period for shadows analysis begins at 5:57 AM and continues until 6:01 PM. As shown in Figure 16, incremental shadows generated by the buildings in the With-Action Condition during the June 21 analysis period would not reach Spargo Park; therefore, no further analysis is necessary.

Based on this information, during the June 21st analysis period, the buildings in the With-Action Condition would not result in a significant adverse incremental shadow impact on Spargo Park.

December 21

As shown in Table G-1, on December 21st, the winter solstice (the shortest day of the year), the time period for shadows analysis begins at 8:51 AM and continues until 2:53 PM. As shown in Figure 13, the buildings in the With-Action Condition during the December 21 analysis period would cast a shadow on part of Spargo Park beginning at 8:51 AM and ending at approximately 9:24 AM, for a maximum duration of 33 minutes. The shadows cast by the With-Action buildings would be present for approximately 23 minutes longer than the shadow cast by the 12-story building in the No-Action Condition. As shown in Figure 16, the incremental shadow cast on this analysis day would cover the majority of Spargo Park that includes passive recreation areas. However, based on the short duration of incremental shadows; the expected cold temperatures in New York City during December; and the early morning time period when usage is less likely, the incremental shadows on the park are not expected to result in significant adverse impact on the utilization of the park by the public. Additionally, because the incremental shadow cast by the development in the With-Action Condition would occur outside of the "growing season," and is of only 33 minutes in duration, no effect on growing vegetation is anticipated as a result of the development.

Based on this analysis, during the December 21 analysis period, the buildings in the With-Action Condition would not result in a significant adverse shadow impact on Spargo Park.

CONCLUSION

Based on the results of the Tier 3 shadows analysis, the Proposed Actions would not result in any significant adverse shadow impacts on Spargo Park on any analysis day.

On the March 21st, May 6th, and June 21st CEQR analysis days, the incremental project-generated shadows would not reach Spargo Park. Although incremental shadows would reach Spargo Park on the December 21st analysis day, because of the short duration of incremental shadow and reduced number of visitors to the park during the winter season and early morning hours, the incremental shadows would not affect a significant number of users or last for long durations during the day. Therefore, it is also not expected that the incremental shadow on Spargo Park on the December 21st analysis day would adversely affect public enjoyment of the park.

Based on this analysis, the With-Action Condition is not expected to result in any significant adverse shadow impacts on sunlight-sensitive resources of concern within the shadow study area.

ATTACHMENT H: HISTORIC AND CULTURAL RESOURCES

INTRODUCTION

According to the 2014 *CEQR Technical Manual*, an assessment of architectural and archaeological resources is typically required for any project involving new construction, demolition, or any in-ground disturbance. Historic resources are defined as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, or archaeological importance. This includes designated New York City Landmarks (NYCL); properties calendared for consideration as landmarks by the New York City Landmarks Preservation Commission (LPC); properties listed on the State/National Register of Historic Places (S/NR) or contained within a district listed or formally determined eligible for S/NR listing; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHL); and properties not identified by one of the programs listed above, but that meet their eligibility requirements.

EXISTING CONDITIONS

The Development Site is located at 69-02 Queens Boulevard and is comprised of Tax Lot9, 21, 41, 44, and 50 on Queens Block 2432. All of the lots included in the Development Site have been either previously disturbed or improved. The Development Site is approximately 71,696 sf and currently contains multiple commercial, manufacturing, and community facilities for a cumulative building footprint total of approximately 39,126 gsf.

The development in the With-Action Condition would involve in-ground disturbance throughout the Development Site to an unknown depth. Although Lots 9, 21, 41, 44, and 50 on Queens Block 2432 have to some extent been previously excavated or improved, the extent of previous in-ground disturbance is unknown. Therefore, an assessment of the Proposed Action's potential impacts on historic resources is warranted.

ASSESSMENT

According to the New York City Zoning and Land Use (ZoLa) database and State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS), the Development Site and 400-foot Study Area does not contain any S/NR or LPC designated historic resources (Figure 7). As part of the historic resources assessment, an environmental review request was sent to LPC for comment on the architectural and archaeological significance of the Development Site and 400-foot Study Area. In its determination letter dated August 15, 2017, LPC confirmed that there are no architectural or archaeological sensitive resources within the Project Area. All correspondence with LPC is included in Appendix E, "Agency Correspondence."

CONCLUSION

Based on this information, the Proposed Action would not result in any potential adverse impacts to historic and cultural resources and, therefore, no further analysis is required.

ATTACHMENT I: URBAN DESIGN AND VISUAL RESOURCES

INTRODUCTION

This section assesses the potential effects on urban design and visual resources that could occur as a result of the Proposed Actions. According to the *CEQR Technical Manual*, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from street level, a physical alteration beyond that allowed by the existing zoning, including (i) projects that permit the modification of yard, height, and setback requirements; and (ii) projects that result in an increase in built floor area beyond what would be allowed as-of-right or in the No-Action Condition. City Environmental Quality Review (CEQR) requires a detailed analysis for projects that would result in substantial alterations to the streetscape of the neighborhood by noticeably changing the scale of buildings.

In the No-Action Condition, part of the Development Site (Block 2432, Lots 9 and 21; and parts of Lots 41, 44, and 50) would be developed with a 12-story (125-foot), approximately 311,596-gross-square-foot (gsf) mixed residential/commercial building with a base height of 85 feet. The existing one-story commercial warehouse on Lot 44, the existing two-story community facility building, and the surface parking lot on Lot 50 would remain in place. In the Future With the Proposed Actions (With-Action Condition), the Development Site would be developed with a 17-story (181.5-foot) mixed residential/commercial building and a 14-story (151.5-foot) residential building, both with an 85-foot base height, totaling approximately 495,075 gsf.

The With-Action Condition would result in a maximum building height increment of approximately 56.5 feet. The With-Action Condition would not result in a base height increment. Because development in the With-Action Condition has the potential to alter the arrangement, appearance, and functionality of the built environment and, consequently, change the experience of a pedestrian in the project study area, an urban design and visual resources assessment is required.

METHODOLOGY

Based on the guidelines and definitions in the *CEQR Technical Manual*, this assessment of urban design and visual resources considers the Proposed Actions' potential effect on the following elements:

1. Streetscape: This urban design component refers to the arrangement and orientation of streets (the "street grid") that defines the location and flow of activity in an area, sets street views, and creates the blocks on which buildings and open spaces are organized. Streetscape elements are physical features that make up a streetscape, such as building street walls, building entrances, building fenestrations, sidewalks, street trees, street furniture, and other permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, or newsstands that are critical to making a successful streetscape.

2. Buildings: Buildings support the street grid and the streetscape by conveying a sense of the overall form and design of a block or a larger area. A building's street wall forms the most common backdrop for public space and includes a building's size, shape, setbacks, lot

coverage, and placement on the zoning lot and block. Active uses and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape.

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

STUDY AREA

According to the *CEQR Technical Manual*, the study area for an urban design analysis is defined as the area where the project may influence land use patterns and the built environment, and is generally consistent with that used for the land use analysis (400-foot study area). Therefore, this urban design and visual resources analysis focuses on a 400-foot study area around the Directly Affected Area ("Study Area") (Figure 17), and considers views within the Study Area that could potentially be altered because of the development on the Development Site in the With-Action Condition.

EXISTING CONDITIONS

Development Site

The Development Site is an approximately 71,696-square-foot (sf) irregularly-shaped lot (Block 2432, Lot 9, 21, 41, 44 and 50), bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; elevated Long Island Rail Road (LIRR) tracks to the southwest; and 69th Street to the east. The Study Area includes mainly residential uses in areas to the north and southwest of the Development Site and includes one- and two-family, and multifamily walk-up residences with heights ranging between one and three stories. The Study Area also includes residential uses in mixed residential/commercial buildings along Queens Boulevard to the north, and industrial uses along 47th Avenue to the southeast. Community facilities in the Study Area include the Armenian Cultural Center, which is on the Development Site; the Little Flock Church at the northeast corner of Block 2433, along the elevated LIRR tracks; and Saint Mary's Church and rectory on Block 2445 to the southeast. A LIRR right-of-way runs adjacent to the Development Site on the southwestern corner of the block; Queens Boulevard, a major eight-lane thoroughfare, runs east-west along the north side of the Development Site.

Existing Streetscape

The Development Site comprises the majority of the block bounded by (i) Queens Boulevard to the north, an eight-lane, approximately 192-foot-wide thoroughfare that runs east-west with approximately 17-foot sidewalks on either side and protected bike-lanes in both directions; (ii) 70th Street to the east, an approximately 45-foot-wide, two-way local street with approximately 12-foot sidewalks on either side; (iii) 47th Avenue to the south, an approximately 58-foot-wide one-way local street with approximately 14-foot sidewalks on either side; and (iv) 69th Street to the west, a two-lane, approximately 72-foot wide street with approximately 18-foot sidewalks on either side (Figures 18 and 19). The elevated track of the LIRR runs adjacent to the Development Site and bifurcates the southwestern part of the Study Area. The Development Site has three curb cuts on Queens Boulevard, two curb cuts on 70th Street, three curb cuts on 47th Avenue, and three curb cuts on 69th Street. Queens Boulevard and 70th Street have one lane of on-street parking adjacent to the Development

Site and 47th Avenue has one lane of parking on either side of the street. There is no on-street parking permitted on 69th Street. The street grid in the Study Area is a traditional north-south, east-west grid pattern.

Existing Buildings

The northeastern corner of Block 2432 is currently being developed with a 9-story residential building. The southwestern corner of Block 2432 includes the elevated LIRR right-of-way and undeveloped land. The majority of the 400-foot Study Area is mapped with residential zoning districts (R7X, R5, and R 4) to the north, east, and west and is generally characterized by two- and three-story single-family and multifamily residences. Buildings along Queens Boulevard are also one and two stories; however, most buildings include ground floor commercial uses with residential above, or are fully commercial. The area to the south of the Development Site is zoned M1-1 and is characterized by one-story commercial automotive and industrial uses along 48th Avenue.

Visual Resources

As discussed in the EAS Full Form and in Attachment H, "Historic and Cultural Resources," the 400-foot Study Area does not include any historic landmarks or otherwise distinct buildings or groups of buildings, natural resources, or views of the waterfront, as defined by the *CEQR Technical Manual*. Furthermore, as shown on Figure 17, there are no open space resources within the 400-foot Urban Design Study Area. Therefore, an assessment of the impact of the Proposed Actions on the Study Area's visual resources is not warranted.

FIGURE 17

69-02 QUEENS BOULEVARD

URBAN DESIGN VIEWSHED LOCATION MAP



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Directly Affected Area

Proposed Rezoning Area

Development Site

Study Area (400-foot radius)

1 Vieshed Location/Direction

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FIGURE 18

URBAN DESIGN - EXISTING CONDITIONS



Queens Boulevard between 45th Avenue and 74th Street , looking west



Queens Boulevard and 67th Street, looking east

FIGURE 19

URBAN DESIGN - EXISTING CONDITIONS



47th Avenue and 72nd Street, looking west



69th Street and 47th Avenue, looking north

URBAN DESIGN ASSESSMENT

Streetscape

The West Tower's northern and western street wall would be built to the lot line along Queens Boulevard and 69th street, respectively. The East Tower's southern and eastern street wall would be built to the lot line along 47th Avenue and 70th Street, respectively. This configuration would create continuous street walls along the segments of the perimeter streets surrounding the Development Site. The With-Action Condition would include streetscape improvements, such as street trees planted every 25 feet along all four perimeter streets, and a landscaped walkway with seating between the LIRR right-of-way and the proposed buildings. It is the Applicant's intention that these proposed building configurations and streetscape improvements would enhance the overall pedestrian experience and public realm within the Study Area. Moreover, the With-Action Condition would introduce new ground-floor commercial uses along Queens Boulevard, thereby activating a currently underutilized segment of the street. The development in the With-Action Condition would not alter the existing streets, street grid, streetscape, or sidewalks in the Study Area. The development in the With-Action Condition would enhance the streetscape along all four streets bounding the Development Site by providing street trees and other pedestrian-friendly features, as well as ground-floor commercial uses.

Buildings

The development in the With-Action Condition would result in the development of two buildings: (i) a 17-story (181.5-foot) mixed use building in the northwestern part of the Development Site, with frontage along Queens Boulevard and 69th Street, and (ii) a 14-story (151.5-foot) residential building in the southeastern part of the Development Site, with frontage along 47th Avenue and 70th Street. The maximum building height in the With-Action Condition would exceed that of the No-Action Condition by approximately 56.5 feet. There would be no incremental increase in building base height between the No-Action and With-Action Condition.[38]

[38] The LSGD Special Permit would provide the development in the With-Action Condition relief from the maximum height requirement and the maximum number of stories allowed in a single building on the Development Site. The LSGD Special Permit would allow the development in the With-Action Condition to exceed the maximum height limit of 140 feet by approximately 11.5 feet. Additionally, it would allow the development in the With-Action Condition to exceed the maximum number of stories in a single building on the West Tower by three (3) stories. The LSGD Special Permit would not provide the development in the With-Action Condition relief from lot coverage requirements, yard requirements, setback requirements, or base height requirements.

The development in the With-Action Condition would result in two buildings whose form and scale would be contextually similar to the surrounding built environment, based on the following rationale:

1. Queens Boulevard and 69th Street are both wide streets, where taller, bulkier buildings may be accommodated.

2. The West Tower's southern façade would be buffered from the neighborhood to the south and west by the LIRR right-of-way, as well as the proposed open space area situated between the West and East Towers.

3. The 14-story East Tower would have frontage along 47th Avenue and 70th Street. By "stepping down" in height from the 17-story West Tower, the East Tower would respond to the lower-density buildings that define the urban fabric to the south and east of the Development Site.

4. The East Tower's southern façade would be buffered from the neighborhood to the south by the LIRR right-of-way.

5. Because there would be no incremental increase in base height between the No-Action and With-Action Conditions, the pedestrian experience along Queens Boulevard and 69th Street (West Tower) and along 47th Avenue and 70th Street (East Tower) would be unaffected (Figures 20 through 26).

6. The Proposed Project is similar to several existing buildings in the Study Area in terms of height and bulk, including the 11-story residential building fronting Queens Boulevard between 70th and 72nd Street (Figures 21, 22, and 23).

7. The Proposed Project is consistent with current development trends in the Study Area, including the nine-story mixed-use building currently under construction at the northeastern corner of the Development Site (Figures 20, 21, 22, and 23).

FIGURE 20

69-02 QUEENS BOULEVARD

VIEW 1 - QUEENS BLVD AND 45TH AVE



No-Action Condition (looking south at the intersection of 45th Avenue and Queens Boulevard)

Source: Street photograph taken on June 21, 2017



With-Action Condition (looking south at the intersection of 45th Avenue and Queens Boulevard)

Proposed Project

9-Story Residential Building (No-Build Project)

WOODSIDE, QUEENS, NY

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FIGURE 21

69-02 QUEENS BOULEVARD

VIEW 2 - QUEENS BLVD AND 72ND ST



No-Action Condition (looking west at the intersection of Queens Boulevard and 72nd Street)

Source: Street photograph taken on June 21, 2017



With-Action Condition (looking west at the intersection of Queens Boulevard and 72nd Street)

Proposed Project

9-Story Residential Building (No-Build Project)

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FIGURE 22

69-02 QUEENS BOULEVARD

VIEW 3 - QUEENS BLVD AND 67TH ST



No-Action Condition (looking east at the intersection of Queens Boulevard and 67th Street)

Source: Street photograph taken on June 21, 2017



With-Action Condition (looking east at the intersection of Queens Boulevard and 67th Street)

Proposed Project

9-Story Residential Building (No-Build Project)

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FIGURE 23

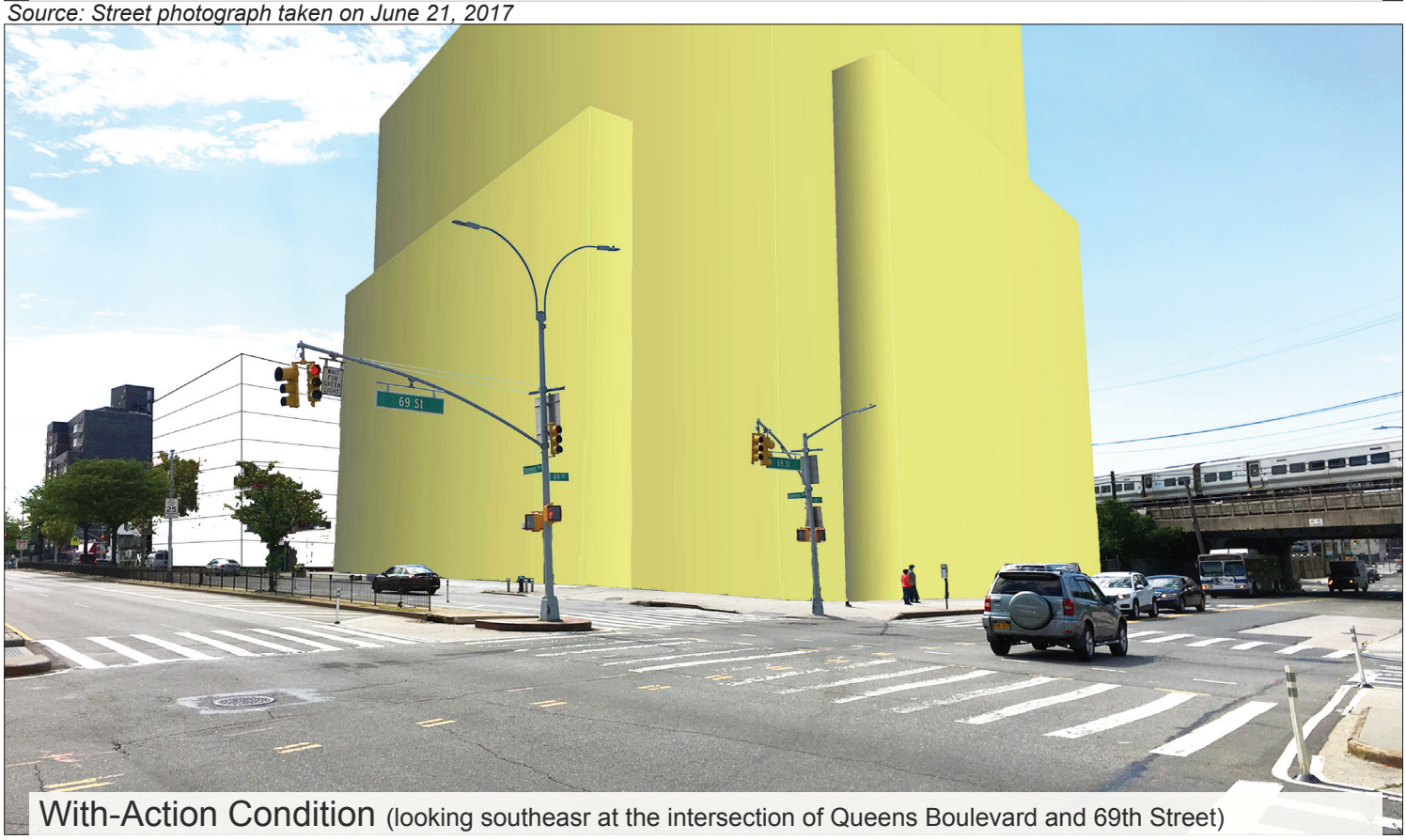
69-02 QUEENS BOULEVARD

VIEW 4 - QUEENS BLVD AND 69TH ST



No-Action Condition (looking southeast at the intersection of Queens Boulevard and 69th Street)

Source: Street photograph taken on June 21, 2017



With-Action Condition (looking southeasr at the intersection of Queens Boulevard and 69th Street)

Proposed Project

9-Story Residential Building (No-Build Project)

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FIGURE 24

69-02 QUEENS BOULEVARD

VIEW 5 - 69TH ST AND 48TH AVE



No-Action Condition (looking north at the intersection of 69th Street and 48th Avenue)

Source: Street photograph taken on June 21, 2017



With-Action Condition (looking north at the intersection of 69th Street and 48th Avenue)

Proposed Project

9-Story Residential Building (No-Build Project)

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FIGURE 25

69-02 QUEENS BOULEVARD

VIEW 6 - 47TH AVE AND 70TH ST



No-Action Condition (looking west at the intersection of 47th Avenue and 70th Street)

Source: Street photograph taken on June 21, 2017



With-Action Condition (looking west at the intersection of 47th Avenue and 70th Street)

Proposed Project

WOODSIDE, QUEENS, NY

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FIGURE 26

69-02 QUEENS BOULEVARD

VIEW 7 - 70TH ST AND 47TH AVE



No-Action Condition (looking north at the intersection of 70th Street and 47th Avenue)

Source: Street photograph taken on June 21, 2017



With-Action Condition (looking north at the intersection of 70th Street and 47th Avenue)

Proposed Project

9-Story Residential Building (No-Build Project)

WOODSIDE, QUEENS, NY

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CONCLUSION

The Proposed Actions are not anticipated to result in any significant adverse impacts on pedestrians' experience of the neighborhood at street level, or the existing built environment characterizing the Study Area. The buildings in the With-Action Condition would conform to the lot line and provide a continuous street wall along all perimeter street frontages. The Proposed Project would also provide streetscape improvements including street trees and pedestrian features along segments of the four perimeter streets, as well as a landscaped pathway between the LIRR right-of-way and the new development. In addition, the proposed ground floor commercial uses would activate this segment of Queens Boulevard with enhanced pedestrian activity.

The proposed buildings' form and scale are contextually similar to the surrounding built environment, specifically along Queens Boulevard, and would be well-buffered from the lower density character of the surrounding area by the LIRR right-of-way to the south and west and Queens Boulevard to the north. Moreover, because there would be no incremental increase in base height between the No-Action and With-Action Conditions, the pedestrian experience along the Development Site's perimeter streets would be unaffected.

Based on this information, the Proposed Actions are not anticipated to result in any potentially significant adverse impacts on urban design and visual resources; therefore, no further analysis is necessary.

ATTACHMENT J: HAZARDOUS MATERIALS

INTRODUCTION

The *CEQR Technical Manual* defines hazardous materials as substances that pose 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, including petroleum constituents and chlorinated solvents, and SVOCs), methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically active, ignitable, corrosive, or toxic).

The potential for significant impacts from hazardous materials occurs when hazardous materials exist on a site and an action would increase pathways to their exposure to humans and the environment, or an action would introduce new activities or processes using hazardous materials. Potential routes of exposure to hazardous materials can include: direct contact, *e.g.,* contact between contaminated soil and skin (dermal contact); breathing of VOCs or chemicals associated with suspended soil particles (inhalation), and/or swallowing soil or water (ingestion). Public health may also be threatened when soil vapors migrate through the subsurface and/or along preferential pathways (*e.g.,* building foundations, utility conduits, or duct work) and accumulate beneath a concrete slab or inside a basement, resulting in an explosive, oxygen-deficient, or hazardous atmosphere.[39]

METHODOLOGY

In accordance with *CEQR Technical Manual* guidelines, the first step in evaluating potential presence of hazardous materials on the Development Site (Block 2432, Lots 9, 21, 41, 44, and 50) is to conduct a Phase I Environmental Site Assessment (ESA). Typically, a Phase I ESA is conducted to provide a qualitative evaluation of environmental conditions within a particular project area.

In January 2016, a Phase I ESA Report was prepared for the northwestern part of the Development Site (Block 2432, Lots 9 and 21) to identify recognized hazardous substances or petroleum products that indicate an existing release, a past release, or a material threat of a release into structures on the property or into the ground, groundwater, or surface water of the property. In July 2017, a Phase I ESA Report was prepared by Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C for the remainder of the Development Site (Block 2432, Lots 41, 44 and 50). The findings and recommendations contained in both Phase I ESA reports are summarized below.

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

A Phase I ESA was conducted for the northwestern part of the Development Site (Lots 9 and 21) in May 2015 and was published in January 2016; the Phase I ESA was prepared in accordance with the ASTM Practice E1527-13 (Standard Practice for ESA: Phase I ESA Process) and the U.S. Environmental Protection Agency (USEPA) All Appropriate Inquiry (AAI) Rule.

[39] *CEQR Technical Manual* (2014).

A separate Phase I ESA was conducted for the southeastern part of the Development Site (Lots 41, 44, and 50) in July 2017; this Phase I ESA was also prepared in accordance with the ASTM Practice E1527-13 (Standard Practice for ESA: Phase I ESA Process) and the U.S. Environmental Protection Agency (USEPA) All Appropriate Inquiry (AAI) Rule.

The objective of the Phase I ESA reports was to identify the presence or likely presence, use, or release of hazardous substances or petroleum products, as defined in ASTM E1527-13 as a Recognized Environmental Condition (REC), on the Development Site (Lots 9, 21, 41, 44, and 50). A controlled REC (CREC) is a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (ASTM E 1527-13, §3.2.18). The Phase I ESA reports are included in Appendix C, "Phase I Environmental Site Assessment Reports."

PHASE I ESA FINDINGS

Recognized Environmental Conditions (RECs): Phase I Environmental Site Assessment (ESA) Report: Lots 9 and 21 (January 2016)

The following RECs were identified in the January 2016 Phase I ESA Report and refer specifically to the investigated area (Lots 9 and 21), unless otherwise noted:

REC 1: Presence of VOCs in soil vapor beneath site

Gasoline volatile organic compounds (VOCs) were identified in the central and southwestern part of the investigated area. The gasoline VOCs were characterized by elevated concentration of benzene, toluene, ethylbenzene and xylenes (BTEX) (max. 18,022 µg/L) and methyl-tertiary-butyl ether (MTBE) (max. 250 µg/L). The gasoline VOCs present at the investigated area does not appear to extend off-site.

REC 2: Active Spill Listing

New York State Department of Environmental Conservation (NYSDEC) Spill No. 9304343 was reported in the investigated area in 1993, when an unknown amount of gasoline and MTBE was released and impacted soil and groundwater due to equipment failure. Five (5), 6,000-gallon gasoline underground storage tanks (USTs) were removed from the northwestern part of the investigated area in 2004. During removal, approximately 5,000 tons of contaminated soil were excavated around the USTs and properly disposed off-site. The closure of the spill is pending in 2018.

REC 3: Presence of fill material at the Development Site

Historical fill material with elevated levels of polycyclic aromatic hydrocarbons (PAHs) and metals was discovered in the investigated area.

REC 4: (E) Designation for Hazardous Materials

There is an (E) designation (E-163) on Block 2432, Lots 9 and 21 for Hazardous Materials. This (E) designation was assigned by the New York City Department of City Planning (DCP) on June 29, 2006, and is listed under CEQR No. 06DCP065Q. The (E) Designation pertains to UST testing protocol for petroleum and non-petroleum materials in addition to remediation determination for "Hazardous Materials."[40]

REC 5: Presence of suspect Lead-Based Paint (LBP)

Evidence of peeling paint was identified on the southern interior wall of the basement of the building on Lot 21. Due to the age of the building, peeling paint is suspected to contain lead. No other visual evidence of suspect lead-based peeling paint was identified.

REC 6: Presence of a suspect Underground Storage Tank (UST)

One (1) vent pipe and one (1) fill port were identified along the northeastern exterior wall of the building on Lot 21. No stains, odors or evidence of spills were identified in the vicinity of the vent pipe and fill port. The presence of the vent pipe and fill port is likely to be indicative of the presence of a UST. However, no evidence of piping entering the basement was identified in the vicinity of the fill port and vent pipe. No visual evidence of current or former USTs or aboveground storage tanks (AST) was identified on the investigated area.

<u>Recognized Environmental Conditions (RECs): Phase I Environmental Site Assessment (ESA) Report: Lots 41, 44, and 50 (July 2017)</u>

The following RECs were identified in the July 2017 Phase I ESA Report for the southeastern part of the Development Site and refer specifically to the investigated area (Lots 41, 44, and 50), unless otherwise noted:

REC 1: Suspected Undocumented Storage Tanks

According to the Environmental Data Resources (EDR) radius report and information maintained online by NYSDEC, no USTs have been registered for any of the buildings on Lots 41, 44, and 50. However, during site reconnaissance, a fuel oil fill port and vent pipe were observed protruding from the exterior wall of the building on Lot 44 at approximately 3 feet above sidewalk grade at the southern building perimeter. Further investigation of the fuel oil fill port and vent pipe location on the interior of the building revealed two 0.5-inch-diameter copper lines connected to a vacuum pump, fuel oil filter, and vacuum gauge. According to warehouse personnel, fuel oil is regularly delivered to the warehouse. The 0.5-inch fill and return lines were observed to be connected to the overhead ventilation ductwork; however, a detailed inspection of the fill/return line connections could not be performed due to stored materials related to the current site use.

[40] (E) Designation (E-163) was assigned to the northwestern part of the Project Site (Block 2432, Lots 9 and 21) as a result of the Maspeth Woodside Rezoning (06DCP065Q) (Appendix C, "Phase 1 Environmental Assessment Reports").

REC 2: Historic Use of the Subject Property

Based on the review of historic Sanborn Fire Insurance Maps, a railroad spur was present on Lot 50 in 1902; a sheet metal works including a welding shop occupied Lot 44 in 1951; and the existing building located on Lot 44 was labeled for unspecified manufacturing from 1981 through 2006. Based on the review of the City Directory Abstract, furniture and clothing manufacturing operations were completed on the southeastern part of the investigated area between 1962 and 1970. Due to the potential use of chemicals associated with historical site operations, the Phase I ESA states that the historical site use had the potential to impact subsurface conditions in the investigated area. As such, the historic use of the subject property is considered a REC.

REC 3: Open Spill at Adjacent Property

Lot 9 was recently occupied by a gasoline filling station, automobile repair shop, and car wash. According to the EDR radius report, information maintained online by NYSDEC, and documentation provided by the User, NYSDEC Spill No. 9304343 was assigned to Lot 9 in 1993 as the result of an equipment failure at the former Branded Exxon Station, and BTEX and MBTE were reported to have impacted soil and groundwater quality beneath the property. Following the release, remedial investigations and remedial actions were conducted from 2004 onward. Based on the ongoing remediation efforts on Lot 9 and its proximity to, and upgradient location relative to the subject property, the Phase I ESA states that the potential for adverse impacts to the subject property from this lot is moderate. Further, the Phase I ESA states that this lot represents a potential vapor intrusion concern.

<u>Historic Recognized Environmental Conditions (HRECs)</u>

Closed Spills

According to the NY Spills Database, there are five (5) closed spills on the Development Site (Lots 9, 21, 41, 44 and 50):

1. Spill No. 9811087 was reported on December 3, 1998, when an unknown truck turned around in the gas station and spilled diesel into the sewer. The spill was cleaned up to the satisfaction of NYSDEC and considered closed on May 14, 1999;

2. Spill No. 0312172 was reported on February 2, 2004, when an unknown amount of gasoline was released due to storage tank failure. The spill was cleaned up to the satisfaction of NYSDEC and considered closed on April 8, 2004;

3. Spill No. 0404766 was reported on August 1, 2004, when five (5) gallons of gasoline were released and impacted soil during tank cleaning. The spill was cleaned up to the satisfaction of NYSDEC and considered closed on December 22, 2006. Spill no. 0404768 was reported on August 1, 2004. This spill was identified to be a duplicate report for spill No. 0404766, which was considered closed on August 3, 2004;

4. Spill No. 0513187 was reported on February 16, 2006, when 2-ounces of gasoline were released from a leaking pipe. The spill was cleaned up to the satisfaction of NYSDEC and considered closed on February 21, 2006; and

5. Spill No. 0901267 was reported on April 30, 2009, when water was found in the outer containment system of a fuel storage tank. The spill was cleaned up to the satisfaction of NYSDEC and considered closed on June 19, 2009.

Historic Underground Storage Tanks (UST)

According to the NYSDEC Petroleum Bulk Storage (PBS), the Development Site (Lots 9, 21, 41, 44 and 50) is identified in the database as Cumberland Farms #70 and registered under PBS #2-192171. The Development Site previously contained:

- Two (2) 4,000-gallon gasoline USTs that were closed and removed on January 1, 2004;
- Three (3) 4,000-gallon gasoline USTs that were closed and removed on February 1, 2004;
- Five (5) 4,000-gallon gasoline/ethanol USTs that were closed and removed on August 14, 2015;
- Two (2) 550-gallon unknown USTs that were closed and removed on September 2 and September 8, 2015;
- One (1) 4,000-gallon leaded gasoline UST that was closed and removed before April 1, 1991.; and
- Four (4) 4,000-gallon unleaded gasoline USTs that were closed and removed before April 1, 1991.

No violations were identified in the records. However, the historic presence of USTs could be associated with the spills at the Development Site and their presence has been discussed as a REC.

In addition, the Phase I ESA Report completed in July 2017 indicates the potential presence of undocumented USTs. The Development Site historically has been occupied by residential, commercial, industrial, and unspecified manufacturing uses, and might have been occupied by buildings of unknown use prior to the earliest reviewable records (1902). One undocumented UST was identified during site reconnaissance, as discussed above. It is the opinion of the environmental professional that there is potential for additional heating oil USTs to be present beneath the investigated area (Lots 41, 44 and 50) or adjacent sidewalks.

SUBSURFACE INVESTIGATION

A subsurface investigation was performed in March 2015 to assess the general soil and groundwater quality on the northwestern part of the Development Site (Lots 9 and 21). The investigation consisted of a Ground Penetrating Radar (GPR) survey, soil waste characterization testing, and the monitoring and sampling of existing monitoring wells. Due to limitations associated with a strict soil sampling protocol imposed by site ownership, the soil waste characterization sampling was reduced to

standard soil sampling and analysis to determine any impact associated with current and historic use of Lot 9 as a gasoline filling station.

Ground Penetrating Radar (GPR) Survey

The GPR survey was conducted across the northwestern part of the Development Site (Lots 9 and 21) over a predetermined grid pattern. The GPR was performed for approximately 60 percent of the site perimeter and covered all accessible portions and vacant spaces available during the survey. The GPR survey identified no anomalies indicative of suspect USTs outside the perimeter of existing tank pad.

Soil Probes

The soil testing on the northwestern part of the Development Site (Lots 9 and 21) was limited to investigating the soil quality beneath the UST exclusion zone as a result of current and historic use of the site as a gasoline filling station. Due to restrictions imposed by site ownership in association with a requested soft digging via air knife and vactor during the installing soil borings to 8 feet below grade surface, soil waste characterization could not be performed successfully. A total of nine (9) soil probes were installed during this investigation (SP-1 through SP-9). Soil probes locations are shown on Figure 2 in Appendix D, "Subsurface Investigation Report." The soil probes were first installed utilizing soft digging using air knife and vactor technologies to clear the soil borings to 8 feet below grade surface (bgs) in the exclusion zone and to 5 feet outside this zone. Each borehole was cleared within an opening approximately 12 inches in diameter. Soil samples were collected at continuous 2-foot intervals utilizing a hand auger to 5 feet bgs in SP-4 and 8 feet bgs in the remaining soil probes. A 5-foot-long Macro core sampler fitted with dedicated acetate liners was then driven into the final depth of the soil probe.

No groundwater was encountered in any of the nine (9) installed soil probes. Infield characterization and screening of each soil sample were performed utilizing the Unified Soil Classification System and a Photo Ionization Detector (PID). The general soil type consists of a mixture of sand and pebbles. Evidence of fill material consisting of bricks, charcoal, and ash was encountered in all soil probes.

All soil samples were analyzed at a State-certified laboratory, for VOCs in accordance with EPA 8260, for SVOCs in accordance with EPA 8270BN, and for TAL metals. Laboratory analytical results indicate the presence of VOCs associated with gasoline compounds detected in deep soil samples from SP-4 and SP-7. The VOC acetone was detected in shallow soil from SP-5. Only the concentration of 1,2,4-trimethylbenzene of 5 mg/Kg detected in SP-4 exceeded its Unrestricted Use Soil Cleanup Objective (SCO) listed in the NYSDEC 6NYCRR Part 375 Section 6.8 (a,b). No other individual VOCs were detected in the other samples at concentrations exceeding their respective method detection limits (MDLs). Individual SVOCs were detected in SP-1, SP-4, SP-7, SP-8, and SP-9 at concentrations exceeding their Restricted Residential and Unrestricted Use SCOs. No other SVOCs exceeded their Unrestricted Use SCOs. Metals including arsenic, cadmium, chromium trivalent, chromium hexavalent, copper, lead, mercury, nickel, and zinc were detected at concentrations above their respective Unrestricted Use SCOs. Among these, arsenic, cadmium, chromium trivalent, chromium hexavalent, copper, lead and zinc also exceeded the Restricted Residential SCOs. These metals were

detected in shallow fill and deep soil and could be associated with impacted fill material as well as unknown historic uses on Lots 9 and 21.

The soil/fill material present beneath the UST exclusion is likely to be homogeneously distributed, and the SVOCs and metals impacts associated with this fill material are likely to be present across the entire Development Site (Lots 9, 21, 41, 44 and 50).

Monitoring Wells

Thirty five (35) existing monitoring well points were monitored and sampled during this investigation. The monitoring was performed utilizing a Solinst 122 Oil/Water Interface Probe (Interface Probe). None of the monitoring wells were found to contain free product. The depth to water during this monitoring event ranged from 14.38 feet to 18.89 feet.

Utilizing the casing elevation reported for 16 monitoring wells, the groundwater elevation was determined. The groundwater elevations range from 77.05 bgs to 83.23 bgs. The groundwater elevations were then imported into a computer-contouring program to determine the site-specific groundwater flow direction. The site-specific groundwater flow direction was determined to be toward the southwest. This finding is consistent with the historic flow direction reported for the Development Site (Lots 9, 21, 41, 44 and 50). No free product was detected in any of the existing well points on Lots 9 and 21. The results of the groundwater sampling indicate that a plume of dissolved gasoline constituents at concentrations above Groundwater Quality Standards (GQS) is present beneath the northwestern part of the Development Site (Lots 9 and 21), appears beneath southeastern portion of the dispenser island, and extends to the down gradient southwestern portion of the investigated area. The plume is also characterized by elevated MTBE concentrations.

Groundwater samples were obtained from 33 of the 35 wells points following the monitoring event. The sampling was performed utilizing a peristaltic pump fitted with dedicated polyethylene tubing. All groundwater samples were analyzed at a State-certified laboratory for VOCs in accordance with EPA 8260, and SVOCs in accordance with EPA 8270BN. Laboratory analytical results indicate the gasoline VOCs and their derivative compounds occurred in 26 of the 33 monitoring well points present on Lots 9 and 21, and their concentrations exceeded their respective 6 NYCRR Part 703.5 Class GQS. SVOCs occurred in 31 of the 33 monitoring well points and their concentrations exceeded their respective GQS.

CONCLUSION

The January 2016 Phase I ESA report (Lots 9 and 21) identified six (6) RECs: (i) the presence of VOCs in soil vapor beneath the site; (ii) the presence of active Spill No. 9304343; (iii) the presence of historic fill material; (iv) the presence of an (E) Designation (E-163) for Hazardous Materials; (v) the anticipated presence of lead-based peeling paint; and (vi) the presence of a suspected UST. The July 2017 Phase I ESA report (Lots 41, 44, and 50) identified three (3) RECs: (i) the potential presence of undocumented USTs; (ii) the manufacturing and industrial uses that previously occurred on site; and (iii) the presence of active Spill No. 9304343 (Lot 9).

An (E) designation (E-472) for hazardous materials has been incorporated into the proposed actions. This (E) designation will supersede the (E) designation (E-163) for hazardous materials, air quality

and noise placed on Lots 9 and 21 as part of the Maspeth Woodside Rezoning (CEQR No. 06DCP065Q)."

The requirements of **(E) Designation (E-472)** would be as follows:

Task 1:

The applicant submits to OER, for review and approval, a Phase 1A 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:

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.

With the proposed (E) Designation (E-472) in place, the Proposed Actions would not result in any potentially significant adverse impacts related to hazardous materials; therefore, no further analysis is necessary.

ATTACHMENT K: TRANSPORTATION

INTRODUCTION

The objective of a transportation analysis is to determine whether a proposed action may have a potentially significant adverse impact on traffic operations and mobility, public transportation facilities and services; pedestrian elements and flow; safety of roadway users (pedestrians, bicyclists, and vehicles); and on- and off-street parking or goods movement. The *CEQR Technical Manual* identifies minimum development densities that potentially require a transportation analysis. Development at less than the development densities shown in Table 16-1 of the *CEQR Technical Manual* generally result in fewer than 50 peak-hour vehicle trips, 200 peak-hour subway/rail or bus transit riders, or 200 peak-hour pedestrian trips, where significant adverse impacts are considered unlikely. For residential developments in Zone 3 (which includes all areas within 0.5 mile of a subway station with respect to the Development Site's location in Queens County), the development threshold under *CEQR Technical Manual* guidelines is 200 new dwelling units. The development facilitated by the Proposed Actions would exceed this threshold.

This section includes analyses of traffic, parking, transit, and pedestrian conditions for the Proposed Actions.[41]

METHODOLOGY

For transportation analysis purposes, the incremental difference in trip generation between the No-Action and With-Action conditions provides the basis for assessing transportation conditions in the Study Area. As shown in Table K-1, the development in the With-Action Condition would result in a net increase of approximately 229,490 gsf of residential area (approximately 272 dwelling units); a net decrease of approximately 8,253 gsf of commercial area; a net decrease of approximately 10,943 gsf of community facility area; and a net increase of 93 parking spaces.

Table K-1: Incremental Difference Between the No-Action and With-Action Conditions

Component	Local Retail (gsf)	Community (gsf)	Residential Units *(785 gsf/unit)*	Parking Spaces
No-Action Condition	14,160	10,943	289	149
With-Action Condition	5,907	0	561	242
INCREMENT	**-8,253**	**-10,943**	**272**	**93**

ASSESSMENT

In order to assess the potential effects of the Proposed Actions, it is necessary to determine the increment of development that would occur on the Development Site. As such, a Reasonable Worse Case Development Scenario (RWCDS) for both the Future Without the Proposed Actions ("No-Action Condition") and Future With the Proposed Actions ("With-Action Condition") was developed for

[41] The Transportation Demand Factors (TDF) Memorandum was submitted to the New York City Department of Transportation on July 31, 2017 and is included in Appendix F, "TDF Memo."

Build Year 2020. The Proposed Actions would facilitate a predominantly residential development, which would include permanently affordable dwelling units pursuant to the Mandatory Inclusionary Housing (MIH) program.

No-Action Condition

The No-Action Condition would include the development of a 12-story building that would occupy the portion of the Development Site currently zoned R7X/C2-3 (Lots 9 and 21; and parts of Lots 41, 44, and 50). Lot 9 is currently vacant, and the existing vacant one-story building on Lot 21 and the two-story commercial building on Lot 41 would be demolished. Only a portion of the existing one-story commercial warehouse building on Lot 44 would be demolished to accommodate the development in the No-Action condition. The existing community facility building and the accessory parking lot on Lot 50 would both remain unchanged. The development in the No-Action Condition would be built pursuant to the underlying R7X/C2-3 zoning regulations with the as-of-right (AOR) residential Floor Area Ratio (FAR) bonus under the Inclusionary Housing (IH) program.

Pursuant to the underlying zoning regulations, Lots 9 and 21, and part of Lots 41, 44, and 50 would be developed with an approximately 311,596-gsf, 12-story, mixed-use building. As shown in Table K-2, the development in the No-Action condition would include (i) approximately 5,460 sf of commercial space on the ground floor fronting Queens Boulevard; (ii) approximately 226,840 gsf of residential space (289 dwelling units, of which 58 units would be affordable); and (iii) approximately 79,296 gsf of accessory parking spaces (124 spaces). The No-Action Condition would also include the existing one-story, approximately 8,700-gsf warehouse building on Lot 44, and the existing two-story, approximately 10,943-gsf community center and surface parking (approximately 25 spaces) on Lot 50.

Table K-2: No-Action Condition (R7X/C2-3 and M1-1 Zoning Districts)

Component	Local Retail (gsf)	Community (gsf)	Residential Units *(785 gsf/unit)*	Parking Spaces
(New AOR Uses) Lot 9, 21, 41	5,460	0	289	124
(Existing Uses) Lot 8, 44, 50	8,700	10,943	0	25
TOTAL	**14,160**	**10,943**	**289**	**149**

Note:
(1) Total Lot Area is 71,862 sf (44,247 sf in R7X/C2-3; and 27,615 sf in M1-1)

Two developments are proposed within the Study Area with a build year of 2020 including:

1. A nine-story, mixed-use building at 46-02 70th Street (Block 2432, Lot 23); and

2. A seven-story, mixed-use building at 70-09 45th Avenue (Block 1351, Lot 75).

With-Action Condition

In the Future With the Proposed Actions (With-Action Condition), the entire Development Site would be developed pursuant to the proposed R7X/C2-3 zoning district and the MIH program. The development in the With-Action Condition would total approximately 495,343 gsf comprising a 17-

story mixed-use building on Lot 9 and 21; and a 14-story residential building on Lots 41, 44, and 50. As shown in Table K-3, the development in the With-Action Condition would include a total of approximately 456,330 gsf (561 dwelling units) of residential space, of which approximately 20 percent (112 dwelling units) would be permanently affordable pursuant to the MIH program; and approximately 5,907 sf of ground floor retail space. The Proposed Project would also include and approximately 33,106 gsf of at-grade accessory parking that would have an entry/exit via an existing curb cut on 69th Street. The attended parking facility, which would be shared by both towers, would provide approximately 242 spaces using double stackers; 226 parking spaces would be for residential use and 20 parking spaces would be for commercial use.

The 17-story mixed residential/commercial building ("West Tower") would front Queens Boulevard and would include the following components:

- Approximately 242,648 gsf of residential space (290 dwelling units, of which 58 would be permanently affordable pursuant to the MIH program) on floors 2 through 17; and
- Approximately 5,907 sf of ground floor commercial space.

The 14-story residential building ("East Tower") would front 47th Avenue and would include the following components:

- Approximately 213,682 gsf of residential space (271 dwelling units, of which 54 would be permanently affordable) on floors 2 through 14.

The detailed building program in the With-Action Condition is shown in Table K-3.

Table K-3: With-Action Condition/Proposed Project (R7X/C2-3 Zoning Districts)

Component	Local Retail (gsf)	Community (gsf)	Residential Units *(785 gsf/unit)*	Parking Spaces
West Tower (Lots 9, 21)	5,907	0	290	121
East Tower (Lots 41, 44, 50)	0	0	271	121
TOTAL	**5,907**	**0**	**561**	**242**

Notes:
(1) The With-Action Condition is based on the development program provided by the Applicant.

TRANSPORTATION SCREENING ASSESSMENT

The *CEQR Technical Manual* describes a two-tier screening process to determine if quantified analyses of transportation conditions are warranted. The preliminary assessment starts with a trip generation analysis (Level 1) to estimate person and vehicle trips attributable to the project. According to the *CEQR Technical Manual*, if the project is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips that could be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that

the Proposed Actions would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses may be warranted to assess transportation conditions in the study area.

Level 1 (Project Trip Generation) Screening Assessment

A Level 1 screening assessment was conducted in accordance with *CEQR Technical Manual* guidelines to determine if the incremental development between the No-Action Condition and With-Action Condition would exceed CEQR thresholds for conducting quantified transportation analyses. To undertake this assessment, a trip generation analysis was conducted for the weekday AM, midday, PM, and Saturday midday peak hours. Trip estimates were developed for the local retail, community facility, and residential uses for the No-Action and With-Action conditions.

Trip Generation

The assumptions for local retail, community facility, and residential uses employed in the trip generation analysis are summarized in Table K-4. These assumptions are based on the *CEQR Technical Manual* guidelines, the 2011-2015 U.S. Census Bureau's American Community Survey (ACS) database, other recently approved transportation studies with similar characteristics, such as the *Hunter's Point South Rezoning and Related Actions FEIS (2008)* (CEQR No. 08DME006Q), the *ITE Trip Generation Manual, 10th Edition,* and guidance from New York City Department of Transportation (NYC DOT).

Local Retail

The travel demand forecast for local retail use is based on trip rates and temporal distribution from the *CEQR Technical Manual*; the directional split is based on data from the *Hunter's Point South Rezoning and Related Actions FEIS (2008)* transportation study*;* and the modal split and vehicle occupancy are based on the "Queens – Non-Transit Zone" factors, as per NYC DOT guidance.

Community Facility

The travel demand forecast for community facility use is based on trip rates, temporal distribution and vehicle occupancy from the *ITE Trip Generation Manual, 10th Edition* Recreational Community Facility land use, adjusted as per NYC DOT guidance; and the directional split and modal split are based on data from the *Hunter's Point South Rezoning and Related Actions FEIS (2008)* transportation study.

Residential

The forecast of travel demand from projected residential development is based on trip rates and temporal distribution rates as per the *CEQR Technical Manual* guidelines. The directional split and taxi vehicle occupancy is based on data from the *Hunter's Point South Rezoning and Related Actions FEIS 2008* transportation study. The residential modal split and auto vehicle occupancy reflect journey-to-work data from the 2015 Census database.

Net Incremental Trips

Trip generation for the No-Action Condition, With-Action Condition, and the resulting Net Incremental trips is shown in Tables K-5, K-6, and K-7, respectively. As summarized in Table K-7, the With-Action Condition is expected to generate approximately 134, -260, 26 and -11 net incremental person trips, and 49, -35, 30 and 17 net incremental vehicle trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

Table K-4: Transportation Planning Assumptions and Demand Estimates

Use	Local Retail				Community Facility				Residential (DU)			
Total Daily Person Trip	(1) Weekday 205 Trips/KSF			SAT 240	(4) Weekday 53.4 Trips/KSF			SAT 16.9	(1) Weekday 8.075 Trips/DU			SAT 9.60
Trip Linkage	0%				0%				0%			
Net Daily Person Trip	Weekday 205 Trips/KSF			SAT 240	Weekday 53.4 Trips/KSF			SAT 16.9	Weekday 8.075 Trips/DU			SAT 9.60
Temporal	(1)				(4)				(1)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
	3.0%	19.0%	10.0%	10.0%	6.0%	8.0%	8.0%	11.8%	10.0%	5.0%	11.0%	8.0%
Direction	(3)				(3)				(3)			
In	50%	50%	50%	50%	94%	45%	42%	45%	15%	50%	70%	50%
Out	50%	50%	50%	50%	6%	55%	58%	55%	85%	50%	30%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(5)				(3)				(2)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
Auto	29.0%	29.0%	29.0%	29.0%	12.0%	12.0%	12.0%	12.0%	30.7%	30.7%	30.7%	30.7%
Taxi	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	0.6%	0.6%	0.6%	0.6%
Subway	0.0%	0.0%	0.0%	0.0%	28.0%	28.0%	28.0%	28.0%	53.2%	53.2%	53.2%	53.2%
Bus	7.0%	7.0%	7.0%	7.0%	2.0%	2.0%	2.0%	2.0%	7.7%	7.7%	7.7%	7.7%
Railroad	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%
Ferry	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	1.1%	1.1%
Walk	64.0%	64.0%	64.0%	64.0%	57.0%	57.0%	57.0%	57.0%	4.8%	4.8%	4.8%	4.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy	(5)				(4)				(2)(3)			
Auto	1.50				1.77				1.15			
Taxi	1.60				1.40				1.17			
Daily Delivery Trip Generation Rate	(1) Weekday 0.35 Delivery Trips/ KSF			SAT 0.04	(3) Weekday 0.32 Delivery Trips/ KSF			SAT 0.01	(1) Weekday 0.06 Delivery Trips/DU			SAT 0.02
Delivery Temporal	(1)				(3)				(1)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
	8.0%	11.0%	2.0%	11.0%	6.6%	11.0%	1.0%	11.0%	12.0%	9.0%	2.0%	9.0%
Delivery Direction	(1)				(3)				(1)			
In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sources
(1) 2014 CEQR Technical Manual
(2) Journey to Work, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates (using weighted average of Census Tracts 243, 479, 483, 485, and 489 of Queens County, NY).
(3) Hunter's Point South Rezoning and Related Actions;(FEIS), 2008 (CEQR No. 08DME006Q)
(4) ITE Trip Generation Manual, 10th Edition, Recreational Community Facility, with adjustments, provided by NYCDOT.
(5) "Queens - Non-Transit Zone" factors provided by NYCDOT.

Table K-5: Transportation Demand Forecast, No-Action Condition

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Bicycle	Walk	Total	Auto	Taxi	Delivery	Total
Local Retail	Weekday AM	In	13	0	0	3	0	0	28	44	8	0	0	9
		Out	13	0	0	3	0	0	28	44	8	0	0	9
		Total	25	0	0	6	0	0	56	87	17	0	0	17
	Weekday Midday	In	80	0	0	19	0	0	176	276	53	0	0	54
		Out	80	0	0	19	0	0	176	276	53	0	0	54
		Total	160	0	0	39	0	0	353	552	107	0	1	107
	Weekday PM	In	42	0	0	10	0	0	93	145	28	0	0	28
		Out	42	0	0	10	0	0	93	145	28	0	0	28
		Total	84	0	0	20	0	0	186	290	56	0	0	56
	Saturday Midday	In	49	0	0	12	0	0	109	170	33	0	0	33
		Out	49	0	0	12	0	0	109	170	33	0	0	33
		Total	99	0	0	24	0	0	217	340	66	0	0	66
Community Facility	Weekday AM	In	4	0	9	1	0	0	19	33	2	0	0	3
		Out	0	0	1	0	0	0	1	2	0	0	0	1
		Total	4	0	10	1	0	0	20	35	2	1	0	3
	Weekday Midday	In	3	0	6	0	0	0	12	21	1	0	0	2
		Out	3	0	7	1	0	0	15	26	2	0	0	2
		Total	6	0	13	1	0	0	27	47	3	1	0	4
	Weekday PM	In	2	0	5	0	0	0	11	20	1	0	0	2
		Out	3	0	8	1	0	0	15	27	2	0	0	2
		Total	6	0	13	1	0	0	27	47	3	1	0	4
	Saturday Midday	In	1	0	3	0	0	0	6	10	1	0	0	1
		Out	1	0	3	0	0	0	7	12	1	0	0	1
		Total	3	0	6	0	0	0	12	22	1	0	0	2
Residential (DU)	Weekday AM	In	11	0	19	3	1	0	2	35	9	1	1	2
		Out	61	1	105	15	4	2	9	198	53	1	1	2
		Total	72	1	124	18	5	3	11	233	62	2	2	4
	Weekday Midday	In	18	0	31	4	1	1	3	58	16	1	1	17
		Out	18	0	31	4	1	2	3	60	16	1	1	17
		Total	36	1	62	9	2	3	6	118	31	1	2	34
	Weekday PM	In	55	1	96	14	4	2	9	180	48	1	0	49
		Out	24	0	41	6	2	1	4	77	20	1	0	22
		Total	79	1	136	20	5	3	12	257	68	3	0	71
	Saturday Midday	In	34	1	59	9	2	1	5	111	30	1	0	31
		Out	34	1	59	9	2	1	5	111	30	1	0	31
		Total	68	1	118	17	5	2	11	222	59	2	0	61
Total	Weekday AM	In	27	1	28	6	1	0	48	112	20	1	1	23
		Out	74	1	106	18	4	2	39	244	61	1	1	64
		Total	101	2	134	25	5	3	87	356	81	3	3	87
	Weekday Midday	In	100	1	37	24	1	1	191	355	70	1	1	72
		Out	101	1	38	24	1	2	194	361	71	1	1	73
		Total	201	1	75	48	2	3	385	716	141	2	2	145
	Weekday PM	In	100	1	101	24	4	2	113	344	77	2	0	79
		Out	69	1	49	17	2	1	112	249	50	2	0	52
		Total	169	2	150	41	5	3	225	594	128	3	0	131
	Saturday Midday	In	84	1	62	21	2	1	120	291	63	1	0	64
		Out	85	1	62	21	2	1	121	293	63	1	0	64
		Total	169	1	124	41	5	2	241	584	126	3	0	129

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table K-6: Transportation Demand Forecast, With-Action Condition

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Bicycle	Walk	Total	Auto	Taxi	Delivery	Total
Local Retail	Weekday AM	In	5	0	0	1	0	0	12	18	4	0	0	4
		Out	5	0	0	1	0	0	12	18	4	0	0	4
		Total	11	0	0	3	0	0	23	36	7	0	0	7
	Weekday Midday	In	33	0	0	8	0	0	74	115	22	0	0	22
		Out	33	0	0	8	0	0	74	115	22	0	0	22
		Total	67	0	0	16	0	0	147	230	44	0	0	45
	Weekday PM	In	18	0	0	4	0	0	39	61	12	0	0	12
		Out	18	0	0	4	0	0	39	61	12	0	0	12
		Total	35	0	0	8	0	0	77	121	23	0	0	23
	Saturday Midday	In	21	0	0	5	0	0	45	71	14	0	0	14
		Out	21	0	0	5	0	0	45	71	14	0	0	14
		Total	41	0	0	10	0	0	91	142	27	0	0	27
Community Facility	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0
Residential (DU)	Weekday AM	In	21	0	36	5	1	1	3	68	18	2	2	22
		Out	118	2	205	30	8	4	18	385	102	2	2	107
		Total	139	3	241	35	9	5	22	453	121	4	4	129
	Weekday Midday	In	35	1	60	9	2	1	5	113	30	1	2	33
		Out	35	1	60	9	2	1	5	113	30	1	2	33
		Total	69	1	120	17	5	2	11	227	60	2	3	66
	Weekday PM	In	107	2	185	27	7	4	17	349	93	2	0	96
		Out	46	1	79	11	3	2	7	149	40	2	0	43
		Total	153	3	265	38	10	5	24	498	133	5	1	138
	Saturday Midday	In	66	1	115	17	4	2	10	215	57	2	0	59
		Out	66	1	115	17	4	2	10	215	57	2	0	59
		Total	132	2	229	33	9	5	21	431	115	4	0	119
Total	Weekday AM	In	26	0	36	6	1	1	15	86	22	2	2	26
		Out	123	2	205	31	8	4	30	403	106	2	2	110
		Total	149	3	241	37	9	5	45	489	128	4	4	136
	Weekday Midday	In	68	1	60	17	2	1	79	228	52	1	2	55
		Out	68	1	60	17	2	1	79	228	52	1	2	55
		Total	136	1	120	33	5	2	158	457	105	2	3	110
	Weekday PM	In	125	2	185	31	7	4	55	409	105	2	0	107
		Out	63	1	79	16	3	2	46	210	51	2	0	54
		Total	188	3	265	47	10	5	101	619	156	5	1	162
	Saturday Midday	In	87	1	115	21	4	2	56	286	71	2	0	73
		Out	87	1	115	21	4	2	56	286	71	2	0	73
		Total	173	2	229	43	9	5	111	573	142	4	0	146

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table K-7: Transportation Demand Forecast, Net Incremental (With-Action minus No-Action)

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Bicycle	Walk	Total	Auto	Taxi	Delivery	Total
Local Retail	Weekday AM	In	-7	0	0	-2	0	0	-16	-25	-5	0	0	-5
		Out	-7	0	0	-2	0	0	-16	-25	-5	0	0	-5
		Total	-15	0	0	-4	0	0	-32	-51	-10	0	0	-10
	Weekday Midday	In	-47	0	0	-11	0	0	-103	-161	-31	0	0	-31
		Out	-47	0	0	-11	0	0	-103	-161	-31	0	0	-31
		Total	-93	0	0	-23	0	0	-206	-321	-62	0	0	-62
	Weekday PM	In	-25	0	0	-6	0	0	-54	-85	-16	0	0	-16
		Out	-25	0	0	-6	0	0	-54	-85	-16	0	0	-16
		Total	-49	0	0	-12	0	0	-108	-169	-33	0	0	-33
	Saturday Midday	In	-29	0	0	-7	0	0	-63	-99	-19	0	0	-19
		Out	-29	0	0	-7	0	0	-63	-99	-19	0	0	-19
		Total	-57	0	0	-14	0	0	-127	-198	-38	0	0	-38
Community Facility	Weekday AM	In	-4	0	-9	-1	0	0	-19	-33	-2	0	0	-3
		Out	0	0	-1	0	0	0	-1	-2	0	0	0	-1
		Total	-4	0	-10	-1	0	0	-20	-35	-2	-1	0	-3
	Weekday Midday	In	-3	0	-6	0	0	0	-12	-21	-1	0	0	-2
		Out	-3	0	-7	-1	0	0	-15	-26	-2	0	0	-2
		Total	-6	0	-13	-1	0	0	-27	-47	-3	-1	0	-4
	Weekday PM	In	-2	0	-5	0	0	0	-11	-20	-1	0	0	-2
		Out	-3	0	-8	-1	0	0	-15	-27	-2	0	0	-2
		Total	-6	0	-13	-1	0	0	-27	-47	-3	-1	0	-4
	Saturday Midday	In	-1	0	-3	0	0	0	-6	-10	-1	0	0	-1
		Out	-1	0	-3	0	0	0	-7	-12	-1	0	0	-1
		Total	-3	0	-6	0	0	0	-12	-22	-1	0	0	-2
Residential (DU)	Weekday AM	In	10	0	18	3	1	0	2	33	9	1	1	11
		Out	57	1	99	14	4	2	9	187	50	1	1	52
		Total	67	1	117	17	4	2	11	220	58	2	2	63
	Weekday Midday	In	17	0	29	4	1	1	3	55	15	1	1	16
		Out	17	0	29	4	1	-1	3	53	15	1	1	16
		Total	34	1	58	8	2	0	5	108	29	1	1	32
	Weekday PM	In	52	1	90	13	3	2	8	169	45	1	0	46
		Out	22	0	39	6	1	1	3	72	19	1	0	21
		Total	74	1	128	19	5	3	12	242	64	2	0	67
	Saturday Midday	In	32	1	56	8	2	1	5	104	28	1	0	29
		Out	32	1	56	8	2	1	5	104	28	1	0	29
		Total	64	1	111	16	4	2	10	209	56	2	0	58
Total	Weekday AM	In	-1	0	8	0	1	0	-33	-25	2	1	1	3
		Out	50	1	99	13	4	2	-9	159	45	1	1	46
		Total	48	1	107	13	4	2	-42	134	46	2	1	49
	Weekday Midday	In	-32	0	23	-7	1	1	-112	-127	-18	0	0	-17
		Out	-33	0	22	-8	1	-1	-115	-133	-18	0	0	-18
		Total	-65	0	45	-15	2	0	-227	-260	-36	0	1	-35
	Weekday PM	In	25	1	84	7	3	2	-57	65	27	1	0	28
		Out	-6	0	31	-1	1	1	-66	-39	1	1	0	2
		Total	19	1	115	6	5	3	-123	26	28	2	0	30
	Saturday Midday	In	2	1	53	1	2	1	-64	-4	8	1	0	9
		Out	2	0	52	1	2	1	-65	-7	8	1	0	9
		Total	4	1	105	2	4	2	-129	-11	16	2	0	17

Note: In and Out volumes may not sum to Total volumes due to rounding.

Traffic

As shown in Table K-7, the With-Action Condition would result in approximately 49, -35, 30 and 17 incremental vehicle trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. This level of vehicle trip activity is below the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends) during the four analysis peak hours. Therefore, no further traffic analyses are warranted including Level 2 trip assignments for the proposed project site driveway and adjacent intersections. Hence, the Proposed Actions are not anticipated to result in potentially significant adverse traffic impacts.

Transit

As shown in Figure 27, the Development Site is well-served by New York City Transit (NYCT) bus lines, which include the Q47 line that runs north-south on 69th Street; the Q60 line that runs east-west on Queens Boulevard; and the Q18 line that runs on 65th Place, three blocks west of the Proposed Development Site. The northbound Q47 bus and eastbound Q60 bus stop on the northwestern corner of the Development Site at the intersection of 69th Street and Queens Boulevard. The Development Site is also served by the NYCT subway, including the No. 7 subway line (69 St–Fisk Av Station), approximately 0.5 miles to the north at Roosevelt Avenue and 69th Street; and the E, F, M, R, and 7 subway lines (Jackson Heights–Roosevelt Ave/74 St–Broadway station complex), approximately 0.7 miles to the north at Roosevelt Avenue and 74th Street. In addition, the Woodside stop of the Long Island Railroad (LIRR) is approximately 0.7 miles to the northwest of the Development Site.

As shown in Table K-7, the With-Action Condition would result in approximately 107, 45, 115, and 105 incremental subway trips, 13, -15, 6, and 2 incremental bus trips, and 4, 2, 5 and 4 incremental railroad trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Combining the subway, bus and railroad trips would result in total incremental transit trips of 124, 32, 126, and 111 during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Because the transit trips do not exceed the CEQR Level 1 trip generation threshold of 200 or more peak hour transit trips during the four analysis peak hours, no further transit analysis is warranted. Therefore, the Proposed Actions are not anticipated to result in potentially significant adverse transit impacts.

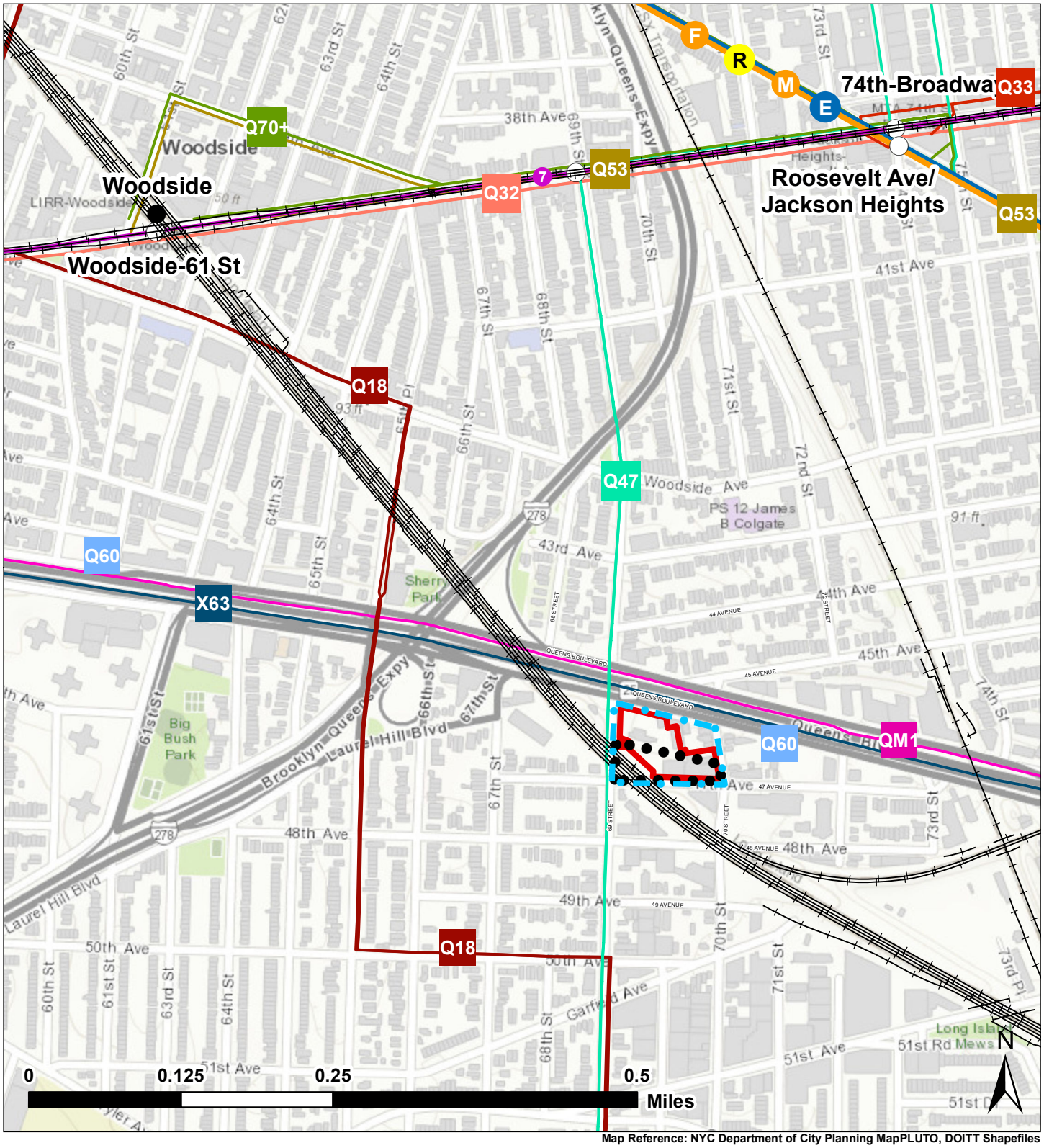
Pedestrians

As shown in Table K-7, the With-Action Condition would result in approximately 134, -260, 26, and -11 net incremental person trips in the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Because the pedestrian trips do not exceed the CEQR Level 1 trip generation threshold of 200 or more peak hour pedestrian trips during the four analysis peak hours, no further pedestrian analysis is warranted. Therefore, the Proposed Actions are not anticipated to result in potentially significant adverse pedestrian impacts.

FIGURE 27

TRANSIT MAP

69-02 QUEENS BOULEVARD



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Directly Affected Area
Development Site
Proposed Rezoning Area

Long Island Rail Road (LIRR)
LIRR Stop

NYCT Subway Lines
- 7, Flushing
- E Subway Line
- F Subway Line
- R Subway Line
- Subway Stop

NYCT Bus Routes
- Q18
- Q32
- Q33
- Q47
- Q53
- Q70-SBS

NYCT Express Bus Routes
- QM1
- X63

WOODSIDE, QUEENS, NY

LANGAN

CONCLUSION

As described above, neither the No-Action nor the With-Action Condition would result in 50 or more peak hour vehicle trips, or 200 or more peak hour transit or pedestrian trips; therefore, a detailed Level 2 analysis of transportation is not warranted.

Based on the Level 1 Trip Generation screening assessment above, the Proposed Actions are not anticipated to result in any potentially significant adverse impacts to traffic operations and mobility, public transportation facilities and services; pedestrian elements and flow; safety of roadway users (pedestrians, bicyclists, and vehicles); and on- and off-street parking or goods movement; therefore, no further analysis is necessary.

According to the guidelines provided in the *CEQR Technical Manual*, an air quality analysis is conducted in order to assess the effect of a proposed action on ambient air quality (*i.e.,* the quality of the surrounding air), or effects on a proposed project because of ambient air quality. Air quality can be affected by mobile sources (pollutants produced by motor vehicles), and by stationary sources (pollutants produced by fixed facilities). According to the *CEQR Technical Manual*, an air quality assessment should be carried out for actions that can result in either significant adverse mobile source or stationary source air quality impacts.

The Development Site is located at 69-02 Queens Boulevard in the Woodside neighborhood of Queens, Community District 2. The Development Site is bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; and 69th Street to the west.

The Proposed Actions include (i) a zoning map amendment to rezone part of the Development Site currently zoned M1-1 to an R7x zoning district with a C2-3 commercial overlay; (ii) a Large-Scale General Development (LSGD) special permit pursuant to the ZR §74-743 to modify height and setback requirements on the Development Site; and (iii) a zoning text amendment to modify ZR Appendix F to establish a Mandatory Inclusionary Housing (MIH) area on Block 2432 ("Directly Affected Area"). The Proposed Actions would facilitate the development of new mixed residential/commercial uses and an on-site accessory parking facility, totaling approximately 481,258 gross square feet (gsf) of development ("Proposed Project)."

This attachment evaluates the potential for significant adverse air quality impacts that may result from stationary sources generated by the Proposed Actions and the potential adverse impacts from surrounding existing sources.

METHODOLOGY

The analysis methodology is based on the guidelines in the *CEQR Technical Manual*. The first step in performing an air quality analysis is to determine the appropriate Study Area. Study areas for the analysis of stationary source impacts depend on the magnitude of the pollutant emission rates from the new source(s), the relative harmfulness of the compounds emitted, the characteristics of the systems that would discharge such pollutants (*e.g*., stack heights, stack exhaust velocities), and the surrounding topography relative to these sources (*e.g.,* tall residential buildings near shorter stacks). In accordance with *CEQR Technical Manual* guidelines, a 400-foot Study Area around the Directly Affected Area has been delineated; preliminary screening analysis includes nearby buildings with heights similar to or greater than the stack.

The Proposed Actions were evaluated for potential air quality impacts from stationary sources, including the Proposed Project's HVAC sources, as well as any potential industrial sources within 400 feet, and large or major sources within 1,000 feet of the Development Site. A mobile source screening analysis was also conducted.

Mobile Sources

Intersection Analysis

Traffic data for intersections for the study area were used for the screening of the Proposed Actions. This includes the incremental peak hour traffic volumes of autos and trucks. For a conservative analysis, trucks were considered as heavy-duty diesel vehicles. Auto traffic volumes were considered to include all vehicular movements except for heavy-duty diesel vehicles. Based on the net incremental auto and truck traffic identified in the Transportation analysis (Attachment K), a detailed analysis is not necessary.

Parking Facilities

The Proposed Actions include an on-site accessory parking facility to account for the new parking demand and supply generated by the Proposed Actions. Emissions from vehicles using this parking area could potentially affect ambient levels of carbon monoxide (CO) and particulate matter (PM) at the intersections analyzed in the With-Action Condition.

A screening analysis of the emissions from the outlet vents and their dispersion in the environment was performed, calculating pollutant levels in the surrounding area, using the methodology set forth in the *CEQR Technical Manual*. Emissions from vehicles entering, parking, and exiting the garage were estimated using emission factors based on the U.S. Environmental Protection Agency's (USEPA) Motor Vehicle Emission Simulator (MOVES) model. For all arriving and departing vehicles, an average speed of 5 miles per hour (mph) was conservatively assumed for travel within the parking garages. In addition, all departing vehicles were assumed to idle for one minute before proceeding to the exit. The concentrations of CO and PM within the garages were calculated assuming a minimum ventilation rate, based on New York City Building Code requirements, of 1 cubic foot per minute of fresh air per gross square foot of garage area. To determine compliance with the National Ambient Air Quality Standards (NAAQS), CO concentrations were determined for the maximum eight-hour average period (no exceedances of the one-hour standard would occur; the eight-hour values have been analyzed for impacts.).

To determine pollutant concentrations, the outlet vents were analyzed as "virtual point sources" using the methodology in USEPA's Workbook of Atmospheric Dispersion Estimates, AP-26. This methodology estimates CO and PM concentrations at various distances from an outlet vent by assuming that the concentration in the garage is equal to the concentration leaving the vent, and determining the appropriate initial horizontal and vertical dispersion coefficients at the vent faces.

When using AP-26, the receptors are situated at the adjacent sidewalk and across the street. The across-the-street receptor includes impacts from the street traffic, represented as a line source. The emission factor for the line source contribution was based on a vehicle speed of 15 mph.

The CO and PM concentrations were conservatively determined based on the assumption that the numbers of cars entering and leaving the garage during any 8 hour period were equal to the greatest number of hourly ins and outs over 24-hours.

Stationary Sources

A stationary source analysis was conducted to evaluate potential impacts from the projected and potential development sites' heat and hot water systems. In addition, an assessment was conducted to determine the potential for impacts due to industrial activities within the affected area, and from any nearby large or major emission sources.

Individual Heat and Hot Water Systems

A screening analysis was performed to assess air quality impacts associated with emissions from heat and hot water systems associated with the development site. The methodology described in the *CEQR Technical Manual* was used for the analysis and considered impacts on sensitive uses (i.e., existing residences and other developments under construction).

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

Because information on the heat and hot water systems' design was not available, each building on the proposed development site was evaluated with the nearest existing or proposed residential development of a similar or greater height analyzed as a potential receptor. The maximum floor area from the RWCDS was used as input for the screening analysis, along with factors predicting fuel usage as a function of floor area.

Although the steps listed in the modeling protocol (refer to Appendix G) suggest that fuel oil would be considered, the developer is committed to using natural gas as the sole fuel source for the HVAC systems. As such, only natural gas was considered for screening, and it was assumed that the exhaust stacks would be located three feet above the roof height.

Cumulative Analysis of Heat and Hot Water Systems

The screening procedure was repeated for the cumulative analysis of the new project HVAC systems onto the existing surrounding buildings.

Background Concentrations

Pollutant background concentrations were added to modeling results for mobile and stationary sources, where applicable, to obtain total pollutant concentrations at an analysis site and/or receptor location. The background concentrations used in the analysis are summarized in Table L-1 below.

Table L-1: Background Concentrations

Location	Station	Pollutant	Averaging period	Units	Background level	NAAQS
Kings	PS 274	$PM_{2.5}$	24-hour	$\mu g/m^3$	16.9	35
Kings	PS 274	$PM_{2.5}$	Annual	$\mu g/m^3$	7.0	12
Queens	QUEENS COLLEGE 2	PM_{10}	24-hour	$\mu g/m^3$	31.0	150
Queens	QUEENS COLLEGE 2	NO_2	1-hour	$\mu g/m^3$	112	188
Queens	QUEENS COLLEGE 2	NO_2	Annual	$\mu g/m^3$	29.7	100
Queens	QUEENS COLLEGE 2	SO_2	1-hour	$\mu g/m^3$	24.8	196
Queens	QUEENS COLLEGE 2	CO	8-hour	ppm	1.2	9

These concentrations represent the most recent three-year average for 24-hour average $PM_{2.5}$ measurements, the highest 2nd maximum value from the three most recent years of data available for PM_{10}, the three-year average of the 98th percentile of daily maximums for the 1-hour NO_2 value, and the 5-year average of the annual NO_2 measurements.[42]

Industrial Manufacturing Source Analysis (Air Toxics)

Pollutants emitted from the exhaust vents of existing permitted and future industrial facilities were examined to identify potential adverse impacts on future residents of the projected and potential development sites. All existing industrial air pollutant emission sources within 400 feet of a projected or potential development site boundary were considered for inclusion in the air quality impact analyses. Based on feedback received from the DCP on the proposed modeling protocol, the following blocks and lots were considered to determine if existing operating permits may exist.

- Block 2432, Lots 41, 44
- Block 2431, Lot 33
- Block 2433, Lots 1, 46, 45
- Block 2434, Lot 1, 20
- Block 2444, Lot 1

A review of the New York City DEP Clean Air Tracking System (CATS) data base indicated that three of the above sites were found to have operating permits for auto body shops with possible paint spray booths:

[42]NYSDEC (http://www.dec.ny.gov/index.html) and EPA (http://oaspub.epa.gov/enviro/ef_home2.air).

- Block 2431, Lot 33
- Block 2433, Lots 1, 45

A survey of aerial imagery for the site revealed no additional sites within a 400-foot radius of the site. The auto body shop located on Block 2431, Lot 33 is over 400 feet from the development site, and therefore was not included in the refined dispersion analysis.

A request was made to the DEP to locate any existing operating permits. For sources that perform paint spraying, such as auto body shops, emission rate information from DEP permits was used in the analysis. For auto body shops without emission rate information in the DEP permit, emission rates from an adjacent auto body shop at 69th Street and 48th Avenue (Maran's Auto Body, Inc.) was applied. The information provides maximum percentage by weight for individual air toxics that are commonly found in coatings used in paint spraying operations. The assumed solvent usage from a source permit for a similar auto body shop assessed for a previous project was multiplied by the weight percentage for each air toxic to estimate the maximum emission rate for the air toxics, by source.

Refined Dispersion Analysis

After compiling the information on facilities with manufacturing or process operations in the study area, maximum potential pollutant concentrations from different sources, at various distances from the development site, were evaluated with a refined modeling analysis.

The refined modeling analysis was performed using the latest version of the AERMOD model and five years of meteorological data (2012-2016) from La Guardia International Airport and concurrent upper air data from Brookhaven, New York. Because the highest concentrations were predicted to occur at nearby elevated locations, the AERMOD model was run without downwash—a procedure that produces the highest concentrations at elevated locations. Discrete receptors (i.e., locations at which concentrations were calculated) were placed on the potentially affected sites. The receptor network consisted of receptors located at spaced intervals along the sides of the development site from the ground floor to the upper level.

Predicted worst-case impacts on the development sites were compared with the short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs) recommended in NYSDEC's DAR-1 AGC/SGC Tables. These guidelines present the airborne concentrations which are applied as a screening threshold to determine if the projected and potential development sites could be significantly impacted by nearby sources of existing air pollution.

Health Risk Assessment

Potential cumulative impacts were evaluated based on EPA's Hazard Index Approach for non-carcinogenic compounds. EPA's Unit Risk Factors for carcinogenic compounds would also be used, but none of the industrial sources were found to include compounds with EPA risk factors. Both methods are based on equations that use EPA health risk information at referenced concentrations for individual compounds to determine the level of health risk posed by an expected ambient

concentration of these compounds at a sensitive receptor. For non-carcinogenic compounds, EPA considers a concentration-to-reference dose level ratio of less than 1.0 to be acceptable.

ASSESSMENT

Mobile Source Analysis

Intersection Analysis

The *CEQR Technical Manual* describes a screening evaluation based on predicted incremental traffic counts determined from a separate traffic study in order to determine whether any roadway intersections would need to be evaluated. The increments are 160 or more automobile trips in the peak hour for CO for the Development Site. For $PM_{2.5}$ several thresholds of incremental peak hour trips for heavy duty diesel vehicles (HDDV) are specified depending on the type of roadway, ranging from 12 to 23 HDDVs. The expected traffic levels generated by the Proposed Action are provided in Table L-2.

Table L-2: Peak Hour Project Generated Vehicle Trips

Peak Hour	Passenger Cars	Trucks	Total
Weekday AM	56	1	57
Weekday Midday	10	1	11
Weekday PM	55	0	55
Saturday Midday	44	0	44

As shown in Table L-2, the maximum number of automobile peak hour vehicle trips is 57 and the maximum for HDDVs is one. These values are well below the CO and $PM_{2.5}$ screening thresholds, and a detailed intersection analysis of mobile source emissions is not necessary.

Parking Garage Analysis

Based on the methodology previously described, the maximum predicted CO and PM concentrations from the proposed parking facility at the site were analyzed, assuming a near sidewalk receptor on the same side of the street (three feet) as the parking facility and a far sidewalk receptor on the opposite side of the street (40 feet from the parking facility). The estimated distances from the parking garage vent on the third floor to the nearest terrace and operable window were 10.7 feet and 19.8 feet, respectively. The maximum predicted eight-hour average CO concentration increment at the development site is 0.235 ppm for the sidewalk, 0.233 ppm for the garage vents. The maximum predicted concentration is below the de minimis CO criteria (not counting background).

The maximum predicted 24-hour and annual average $PM_{2.5}$ increments from parking garage emissions on sidewalks including increments associated with on-street traffic are 1.090 $\mu g/m^3$ and 0.182 $\mu g/m^3$, respectively. The maximum predicted 24-hour and annual average $PM_{2.5}$ increments associated with garage interior vents and including increments are 1.086 $\mu g/m^3$ and 0.181 $\mu g/m^3$, respectively. The maximum predicted $PM_{2.5}$ increments are well below the respective $PM_{2.5}$ de minimis criteria of 9.05 $\mu g/m^3$ for the 24-hour average concentration and 0.3 $\mu g/m^3$ for the annual

concentration. Therefore, the proposed parking garage would not result in any significant adverse air quality impacts.

Stationary Source Analysis

Screening Analysis – Individual HVAC Systems

The first step in the analysis of the HVAC systems for the two proposed buildings is to consider impacts following the screening procedures outlined in the *CEQR Technical Manual* to determine the potential for impacts on existing developments as well as "project-on-project impacts."[43] The nearest existing building and/or proposed development of a similar or greater height relative to the emission release height for the HVAC exhaust source in question was considered as the potential receptor for the screening evaluation.

Project-on-project impacts from individual HVAC systems would be of concern if one or either of the With-Action buildings is taller than the proposed HVAC system exhaust stack. The proposed height of the East Tower is 14 stories, three stories shorter than the proposed height of the West Tower at 17 stories. There are no existing buildings of similar or taller height as either of the proposed Towers within the 400-ft Study Area surrounding the Development Site. The potential for the HVAC exhaust from the East Tower to impact the West Tower was assessed using the screening procedures outlined in the *CEQR Technical Manual*. Figure 17-7 for natural gas operation from Section 322.1 of the 2014 *CEQR Technical Manual* is applied using the curve for the 100 foot stack elevation, the East Tower distance from the West Tower of 126 feet (Image L-1), and approximate gross floor area for the East Tower of 233,786 gsf. Using this figure and the details of the shorter East Tower, the project on project impact passes the screening procedure based on individual boiler operation (Image L-2).

Based on the results of the screening analysis, a potential significant impact due to individual boiler stack emissions is unlikely and no further analysis is required.

[43] This analysis assumes separate HVAC systems for the With-Action buildings.

Image L-1: Distance between West Tower and East Tower

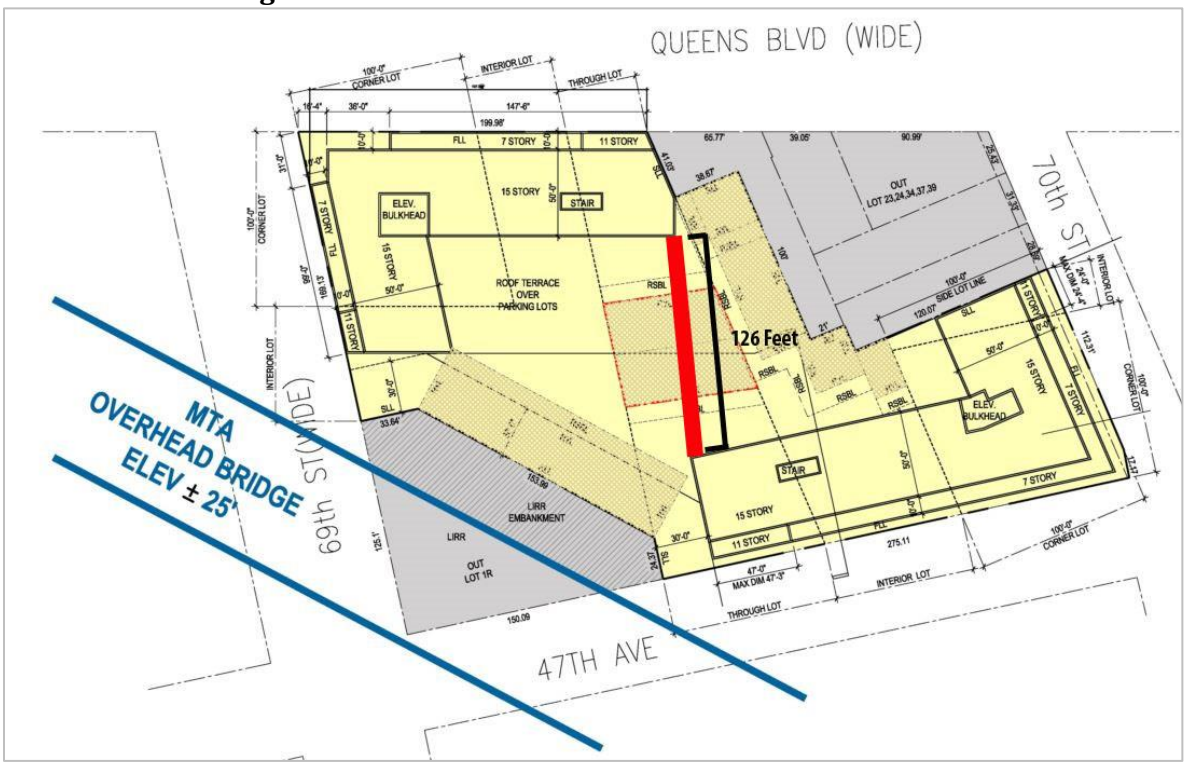
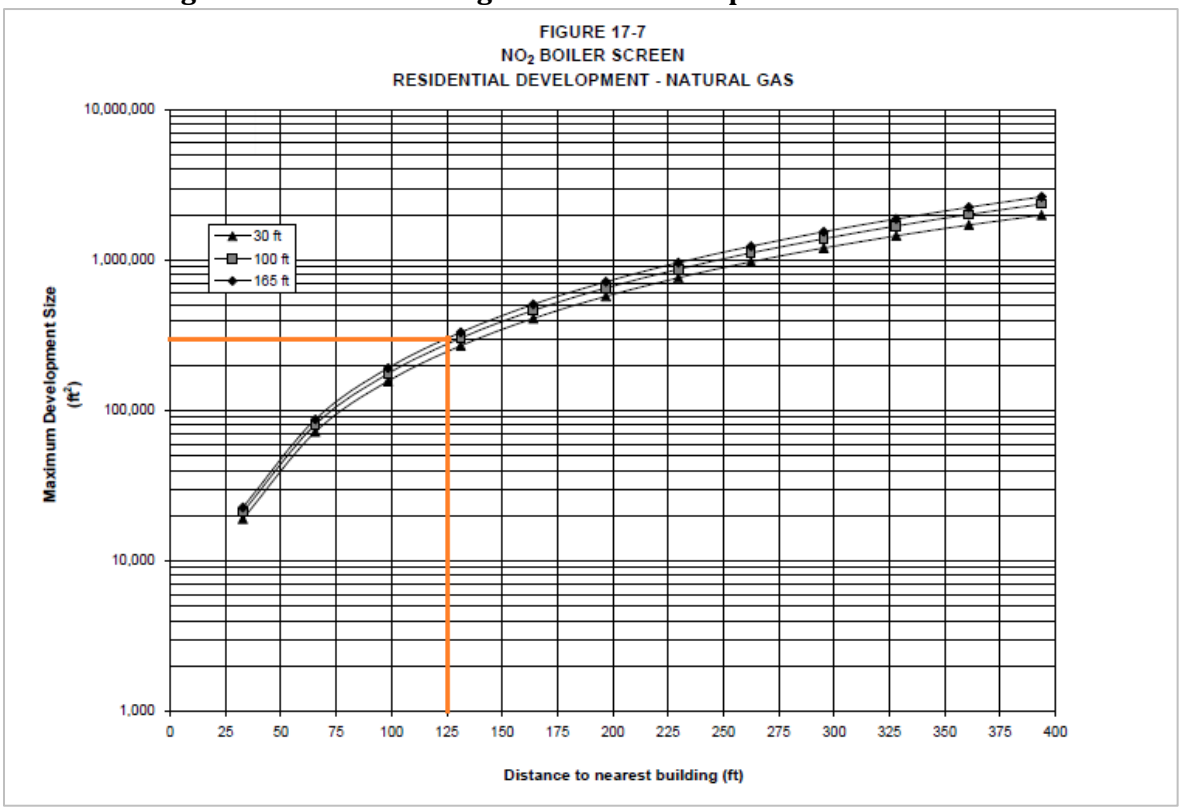


Image L-2: HVAC Screening for Natural Gas Operation – EAST TOWER



Cumulative Analysis

For potential cumulative HVAC impacts from the project-on-existing developments, Figure 17-7 from the Air Quality Appendix of the *CEQR Technical Manual* was also referenced, based on natural gas and a residential building. Using this figure, the development size of 491,709 gsf requires that the distance to the nearest existing development would need to be approximately 160 feet or greater. The actual distance to the nearest existing development is over 400 feet. Therefore, the project passes the cumulative screening based on natural gas, and no further analysis is required.

Industrial Manufacturing Source Analysis (Air Toxics)

As discussed above in Methodology, two existing industrial sources were analyzed. The results in Table L-3 demonstrate that there would be no predicted significant adverse air quality impacts from existing industrial sources (spray booths) in the area based on the assumptions described in the methodology.

Table L-3: Maximum Predicted Impacts Concentrations from Existing Industrial Sources

Pollutant	Chemical Abstract Service (CAS) Number	AERMOD Model Short Term Concentration Impact (µg/m³)	SGC (µg/m³)	AERMOD Model Annual Concentration Impact (µg/m³)	AGC (µg/m³)
Acetone	67-64-1	168.5	180,000	0.56	30,000
Aromatic Petroleum Distillates (naptha heavy aromatic)	64742-94-5	N/A	N/A	N/A	100
Butane	106-97-8	N/A	238,000	N/A	N/A
Ethanol	64-17-5	N/A	N/A	N/A	45,000
Ethyl 3-ethoxypropianate	763-69-9	N/A	140	N/A	64
Ethylbenzene	100-41-4	N/A	N/A	N/A	1,000
Methyl ethyl ketone	78-93-3	111.1	13,000	0.37	5,000
N-butyl acetate	123-86-4	168.5	95,000	0.56	17,000
Propane	74-98-6	N/A	N/A	N/A	43,000
Naphtha	8030-30-6	N/A	N/A	0.94	900
Toluene	108-88-3	111.1	37,000	0.37	5,000
Xylene	1330-20-7	180.0	22,000	0.60	100
Generic $PM_{2.5}$ solids (auto body)[1,2]	NY075-02-5	0.255	88 (Federal)	0.01	12 (Federal)

Source: *NYSDEC, DAR-1 AGC/SGC Tables, August 2016.*
Notes:
[1] Pollutant includes emissions from both Particulates (NY075-00-0) and Total Solid Particulate (NY079-00-0).
[2] Conservatively assumes all particulate emissions would be $PM_{2.5}$. SGC and AGC from Particulate ($PM_{-2.5}$) used.
"N/A" indicates that either the SGC or AGC does not exist for this pollutant.

Using the predicted concentrations of each pollutant, the maximum hazard index was calculated for the development site associated with the Proposed Actions. The hazard index approach was used to determine the effects of multiple non-carcinogenic compounds. None of the compounds for the auto body spray booth industrial sources were found to have carcinogenic unit risk factors, so only annual AGC values were used.

Table L-4 presents the results of the assessment of cumulative non-carcinogenic effects on the proposed actions. As shown in the table, the results of this assessment indicated that there would be no significant adverse air quality impacts on the projected and potential development sites because the hazard index for any affected receptor on the site would not exceed 1.0. Also, none of the compounds have a cancer risk factor.

Table L-4: Estimated Maximum Hazard Index from Existing Industrial Sources

Pollutant	CAS Number	Estimated Annual Pollutant Concentration (µg/m³)	AGC (µg/m³)	Ratio of Annual Concentration to AGC
Acetone	67-64-1	0.56	30,000	1.9E-5
Aromatic Petroleum Distillates (naptha heavy aromatic)	64742-94-5	N/A	100	N/A
Butane	106-97-8	N/A	N/A	N/A
Ethanol	64-17-5	N/A	45,000	N/A
Ethyl 3-ethoxypropianate	763-69-9	N/A	64	N/A
Ethylbenzene	100-41-4	N/A	1000	N/A
Methyl ethyl ketone	78-93-3	0.37	5000	7.4E-5
N-butyl acetate	123-86-4	0.56	17,000	3.3E-5
Propane	74-98-6	N/A	43,000	N/A
Naphtha	8030-30-6	0.94	900	1.0E-3
Toluene	108-88-3	0.37	5,000	7.4E-5
Xylene	1330-20-7	0.60	100	6.0E-3
Generic $PM_{2.5}$ solids (auto body)[1,2]	NY075-02-5	0.04	12 (Federal)	8.5E-4
Total Hazard Index				**0.00806**
Hazard Index Threshold Value				**1.0**

Source: *NYSDEC, DAR-1 AGC/SGC Tables, August 2016.*
Notes: [1] Pollutant includes emissions from both Particulates (NY075-00-0) and Total Solid Particulate (NY079-00-0)
[2] Conservatively assumes all particulate emissions would be $PM_{2.5}$. SGC and AGC from Particulate ($PM_{-2.5}$) used.

Large or Major Sources

A search for existing large and major sources of emissions (i.e., sources having a Title V or State Facility Air Permit) within 1,000 feet of the Development Site was performed using registration lists maintained by NYSDEC and EPA.[44] No large or major sources were identified with Title V or State permits. The closest such source was the Big Six Towers located 2,000 ft from the site. Therefore, no

[44] NYSDEC (http://www.dec.ny.gov/index.html) and EPA (http://oaspub.epa.gov/enviro/ef_home2.air).

significant air quality impacts are expected at the new project site from existing large or major sources, and a detailed analysis is not warranted.

CONCLUSION

The Proposed Action would not result in any significant adverse mobile or stationary source air quality impacts. The Proposed Project would not result in traffic such that it would trigger CEQR thresholds requiring additional mobile source air quality analysis. An analysis of the development under the Proposed Action showed no expected adverse stationary source air quality effects on existing nearby buildings of equal or greater height. In addition, additional analysis of industrial and manufacturing uses within the Study Area is not warranted. Based on this assessment, the Proposed Project would not result in any adverse air quality impacts.

To prevent any potential project-on-project air quality impacts from stationary sources, an (E) Designations (E-472) for air quality would be assigned to Lots 41, 44, and 50 (East Tower) and Lots 9 and 21 (West tower) for air quality. By placing (E) designations on sites where there is a known or potential environmental concern, the potential for a significant adverse impact to human health and the environment resulting from the Proposed Actions would be avoided. The (E) designation provides the impetus to identify and address facilities, activities, or environmental conditions so that significant adverse impacts during site development would be avoided. The New York City Office of Environmental Remediation (OER) would provide regulatory oversight of the environmental investigation and remediation during this process. Building permits are not issued by the DOB without prior OER approval of the investigation and/or remediation pursuant to the provisions of Section 11-15 of the New York City Zoning Resolution (Environmental Requirements).

The requirements of (E) Designation (E-472) would be as follows:

East Tower: Block 2432, Lots 41, 44 and 50: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating, and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least 155 feet above grade and at a setback distance of at least 126 feet from the West Tower to avoid any potential significant adverse air quality impacts.

West Tower: Block 2432, Lots 9 and 21: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel forheating, ventilating and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least 185 feet above grade to avoid any potential significant adverse air quality impacts.

The Proposed Project would be constructed in accordance with the proposed (E) Designation requirements for Lots 9, 21, 41, 44, and 50. With these measures in place, no potentially significant adverse air quality impacts are anticipated and, therefore, no further analysis is required.

ATTACHMENT M: NOISE

INTRODUCTION

According to the *CEQR Technical Manual*, the purpose of a noise assessment is to determine both (i) a proposed project's potential effects on sensitive noise receptors, including the effects on the level of noise inside residential, commercial, and institutional facilities (if applicable), and at open spaces; and (ii) the effects of ambient noise levels on new sensitive uses introduced by a proposed project. If significant adverse impacts are identified, *CEQR* requires such impacts to be mitigated or avoided to the greatest extent practicable.

As described in Attachment K, "Transportation," the Proposed Action would not generate sufficient traffic to have the potential to cause a significant noise impact (i.e., it would not result in a doubling of noise passenger car equivalents [PCEs] which would be necessary to cause a 3 dB increase in noise levels).

The noise analysis was conducted to determine the level of building attenuation necessary to ensure that interior noise levels within the Proposed Project would satisfy applicable interior noise criteria.

Noise Standards and Criteria

The *CEQR Technical Manual* provides attenuation requirements for buildings based on exterior noise levels (see Table M-1, "Required Attenuation Values to Achieve Acceptable Interior Noise Levels"). Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower for residential uses and 50 dBA or lower for commercial uses and are determined based on exterior $L_{10}(1)$ noise levels.

Table M- 1: Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				**Clearly Unacceptable**
Noise Level with Proposed Action	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation[A]	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	$36 + (L_{10} - 80)$[B] dBA

***Source**: New York City Department of Environmental Protection.*
Notes:
[A] The above composite window-wall attenuation values are for residential dwellings. Retail uses would be 5 dBA less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[B] Required attenuation values increase by 1 dBA increments for L_{10} values greater than 80 dBA.

METHODOLOGY

According to CEQR guidelines, an initial impact screening assessment considers whether a proposed project would (i) generate any mobile or stationary sources of noise; and/or (ii) be in an area with existing high ambient noise levels. For a mobile source analysis to be triggered, a project must impact vehicular traffic noise, aircraft noise, and/or train noise. Because the Development Site is located in an area with existing high ambient noise levels from the elevated Long Island Rail Road (LIRR) tracks and Queens Boulevard, an initial noise assessment on vehicular and train noise would be warranted. Based on the *CEQR Technical Manual*, an initial noise assessment on vehicular traffic noise is

necessary if a proposed project would (i) generate or reroute traffic or (ii) introduce a new receptor near a heavily trafficked thoroughfare. In order for a detailed analysis on train noise to be warranted the proposed project must (i) be located within 1,500 feet of existing rail activity and have a direct line of sight to that rail facility or (ii) add rail activity to existing or new rail lines within 1,500 feet and have a direct line of site to a receptor. Because the Development Site is within 1,500 feet of the existing elevated rail tracks and will have a direct line of site to the receptor, a detailed train noise assessment is warranted.

Based on correspondence with the NYC Department of City Planning (DCP), measurements consisted of one (1) 24-hour monitor positioned on the roof of a two-story garage on the south portion of the property line (Lot 50), with a direct line-of-sight to the elevated Long Island Rail Road (LIRR) tracks, and four (4) "spot" measurements taken at street level on the north, south, east, and west sides of the Development Site (Figure 28). A summary of the measurement locations and descriptions are provided below and are in compliance with the noise measurement protocol memo approved on June 20, 2017 (Appendix H, "Noise").

- One (1) 24 hour measurement on the roof of the two-story building on Lot 50, with a direct line-of-sight to the elevated LIRR tracks. Hourly recorded measurements commenced at approximately 6:00PM on Tuesday, June 20, 2017and ended 24 hours later.

- 20 minute street level "spot" measurements along Queens Boulevard at the approximate location of the proposed northern façade. Measurements were recorded from 7:32AM to 7:52AM, 11:58AM to 12:18PM, and 4:02PM to 4:22PM on Wednesday, June 21, 2017.

- 20 minute street level "spot" measurements along 69th Street at the approximate location of the proposed west façade. Measurements were recorded from 7:57AM to 8:17AM, 12:20PM to 12:40PM, and 4:23PM to 4:43PM on Wednesday, June 21, 2017.

- 20 minute street level "spot" measurements along 70th Street at the approximate location of the proposed east façade. Measurements were recorded from 8:41AM to 9:01AM, 12:45PM to 1:05PM, and 5:00PM to 5:20PM on Wednesday, June 21, 2017.

- 20 minute street level "spot" measurements along 47th Avenue at the approximate location of the proposed south façade. Measurements were recorded from 8:20AM to 8:40AM, 1:09PM to 1:29PM, and 5:21PM to 5:41PM on Wednesday, June 21, 2017.

Measurement Locations

For each of the measurements, the recording device was situated no less than five (5) feet above grade/rooftop using a tripod. All measurements were conducted using Larson David 831 sound level meter and microphone in compliance to ANSI S1.4-1938 (R2006) type-1, with the microphone calibrated before and after each measurement session, also in accordance to ANSI S1.4. Reporting of each measurement utilizes A-weight decibels referencing 20 micro-Pascals. Measured quantities included overall L_{EQ}, L_{max}, L_{05}, L_{10}, L_{50}, L_{90}, and 1/3-octave band levels. A windscreen was used during all sound measurements except for calibration.

FIGURE 28

69-02 QUEENS BOULEVARD

NOISE MONITORING LOCATION MAP



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Directly Affected Area
Proposed Rezoning Area
Development Site
Study Area (400-foot radius)
20 Minute Monitoring Location
24 Hour Monitoring Location

WOODSIDE, QUEENS, NY

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EXISTING CONDITIONS

The hourly existing noise levels measured from the roof of the building on Lot 50 are summarized below in Table M-2.

Table M- 2: Hourly Sound Levels [dBA]

Date	Measurement Duration	L_{EQ}	L_{max}	L_{05}	L_{10}	L_{50}	L_{90}
June 20, 2017	6 PM to 7 PM	75.0	104.8	82.6	79.6	59.8	56.9
	7 PM to 8 PM	73.3	104.1	80.3	76.2	59.1	57.0
	8 PM to 9 PM	73.2	104.3	79.1	72.7	58.1	55.8
	9 PM to 10 PM	71.5	105.8	76.7	65.3	57.1	54.7
	10 PM to 11 PM	71.8	103.6	78.3	67.9	56.4	54.1
	11 PM to 12 AM	74.5	105.8	79.5	69.5	55.8	53.5
June 21, 2017	12 AM to 1 AM	69.2	103.6	72.0	60.8	56.2	54.1
	1 AM to 2 AM	72.9	105.9	74.5	59.1	53.9	51.5
	2 AM to 3 AM	69.9	104.0	63.6	57.9	53.0	50.5
	3 AM to 4 AM	67.2	99.8	74.7	60.3	53.5	50.8
	4 AM to 5 AM	69.8	105.4	65.6	59.4	54.8	51.8
	5 AM to 6 AM	70.3	102.4	75.1	62.7	57.1	54.8
	6 AM to 7 AM	74.6	104.5	81.5	77.1	57.4	55.1
	7 AM to 8 AM	74.9	105.7	82.7	79.9	62.1	57.4
	8 AM to 9 AM	75.9	105.4	83.0	79.9	62.6	58.5
	9 AM to 10 AM	75.5	106.3	81.9	78.5	61.1	56.8
	10 AM to 11 AM	74.0	105.3	80.8	74.7	60.8	57.9
	11 AM to 12 PM	74.2	114.3	79.8	72.7	61.1	58.6
	12 PM to 1 PM	73.8	106.5	79.4	74.1	60.7	57.8
	1 PM to 2 PM	72.8	114.5	79.9	72.4	59.7	57.4
	2 PM to 3 PM	74.2	110.1	79.1	70.1	60.4	58.0
	3 PM to 4 PM	72.4	103.5	78.9	74.7	60.3	57.5
	4 PM to 5 PM	75.0	104.5	81.3	77.6	63.2	57.4
	5 PM to 6 PM	76.2	103.7	83.4	***80.1***	60.1	56.5

The maximum hourly L_{10} measurement recorded on the roof of the building on Lot 50, nearest the elevated LIRR tracks, was 80.1 dBA, which would be categorized as "clearly unacceptable" according to the *CEQR Technical Manual*. For all future composite window-wall analysis moving forward for this project, the site specific noise spectrum will be used corresponding to this loudest hourly L_{10} as described below.

Table M- 3: Loudest L_{10} Spectrum Data for Future Analysis

1/3-Octave Band Freq. (Hz)	L_{10} (dB)	1/3-Octave Band Freq. (Hz)	L_{10} (dB)
12.5	80.9	400	73.0
16	78.9	500	72.4
20	76.9	630	72.5
25	76.3	800	72.8
31.5	78.6	1000	71.4
40	78.3	1250	70.6
50	76.5	1600	68.5
63	74.2	2000	67.4
80	72.9	2500	64.4
100	72.0	3150	62.1
125	71.0	4000	59.2
160	71.0	5000	56.1
200	71.6	6300	54.1
250	73.4	8000	51.2
315	72.2	10000	50.5

Table M - 4: Spot Measurement Sound Levels [dBA]

Site	Measurement Location	Day	Time	LEQ	Lmax	L05	L10	L50	L90
A	North, Queens Blvd	June 21, 2017	AM	71.8	102.6	76.9	75.2	69.2	64.4
			MD	71.1	98.3	77.1	74.2	67.7	62.5
			PM	74.5	109.8	78.5	***76.8***	69.8	63.8
B	West, 69th Street	June 21, 2017	AM	75.4	105.7	79.4	***77.2***	68.4	62.1
			MD	72.3	104.0	77.4	75.1	69.5	62.7
			PM	71.5	108.4	78.4	74.8	66.5	62.0
C	South, 47th Avenue	June 21, 2017	AM	69.8	107.0	77.2	73.4	57.1	51.5
			MD	67.0	96.0	73.6	69.1	56.4	52.7
			PM	70.5	99.5	78.2	***73.9***	57.7	52.4
D	East, 70th Street	June 21, 2017	AM	67.4	96.2	73.4	71.1	64.0	58.0
			MD	67.7	101.2	73.7	70.7	62.5	56.3
			PM	68.5	104.7	73.1	***71.2***	65.2	61.2

A traffic count study was also performed at the request of the DCP during the noise measurements. Traffic counts are provided in terms of the Passenger Car Equivalent (PCE) with the percent increase in traffic count needed to increase projected noise levels to the next attenuation category in Table M-1. For areas where vehicular traffic is the primary noise source, the traffic increase as a result of the Proposed Action would not warrant enhanced façade attenuation. As a reference, the number of train passes is also provided during noise measurements where the elevated LIRR tracks were directly visible from the monitoring location.

Table M- 5: Traffic Count Information at Peak Noise Levels

Location	Max L_{10}	Resulting Façade Atten.	PCE 1 hr. (20-min. count)	Increase to Next Façade Req.	Train Passes 1-hr. (20-min count)
North	76.8 dBA	33 dBA	5,940 (1,980)	+35%	21 (7)
West	77.2 dBA	33 dBA	2,112 (704)	+23%	48 (16)
South*	73.9 dBA	31 dBA	24 (8)	+67%	33 (11)
East	71.2 dBA	28 dBA	1,140 (380)	+55%	-

Notes:
*Provided the low traffic count during the loudest 20-min L10 and based on the proximity of the south side of the property to the elevated LIRR tracks, train activity is likely the most significant contributor to noise levels along 47th Avenue.

Based on the traffic count data and L_{10} values for spot measurements and hourly long-term measurements at the Development Site, rail noise generated at the elevated LIRR tracks was the primary noise source for all monitoring locations with a line-of-sight. Vehicular noise was only a primary contributor to the noise levels along the proposed north façade, which faces away from the raised tracks towards Queens Boulevard, the most significantly trafficked road in the area. The maximum hourly L_{10} value recorded with a direct line of sight to the LIRR tracks falls within the 'Clearly Unacceptable' category as defined in the *CEQR Technical Manual*. All street level measurements were categorized as 'Marginally Unacceptable' and these levels are anticipated to increase at higher elevations that would attain a direct line of sight to the elevated LIRR tracks.

ASSESSMENT

Attenuation Requirements

Tables M-6 and M-7 and the attached markup show specific locations for each façade requirement for the Proposed Project. The reductions due to elevations are based on 100 feet above the height of the noise source for that particular façade. For the western, eastern, and southern facades, this was taken as 100 ft. above the height of the railroad tracks with a track height of 17.5 ft. above street level and a 12th Floor elevation of 120 ft. above street level. For the northern façade, this was taken as 100 ft. in elevation above Queens Boulevard with the 10th Floor elevation being 105 ft. above street height. At elevations 100 ft. above each of these noise sources, a 2 dBA reduction in the sound level will be applied. Additionally, for all analysis moving forward, a site-specific spectrum will be used for composite window/wall calculations taken from the L_{10} 1/3-octave band during the loudest hour for the 24 hour measurement (5PM to 6PM, Wednesday, June 21, 2017).

Table M- 6: West Tower Façade Attenuation Requirements

Façade	Elevation	*CEQR* Required Attenuation	Comment
North	1st to 9th Floor 10th Floor and Up	33 dBA 31 dBA	Traffic noise along QB major noise source – no exposure to LIRR
West	1st Floor 2nd to 11th Floor 12th Floor and Up	33 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
South	1st Floor 2nd to 11th Floor 12th Floor and Up	31 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
East	1st Floor 2nd to 11th Floor 12th Floor and Up	28 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have some exposure to LIRR at higher elevations.

Table M- 7: East Tower Façade Attenuation Requirements

Façade	Elevation	*CEQR* Required Attenuation	Comment
North	1st to 9th Floor 10th Floor and Up	33 dBA 31 dBA	Traffic noise along QB major noise source – no exposure to LIRR
West	1st Floor 2nd to 11th Floor 12th Floor and Up	33 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
South	1st Floor 2nd to 11th Floor 12th Floor and Up	31 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
East	All Floors	28 dBA	Based on 20-min spot meas. – façade not anticipated to be impacted by LIRR

The reported attenuation values do not include 5-dBA reduction in required performance for non-residential portions of the façade. The non-residential portion of the Proposed Project would be exclusively located on the ground floor of the West Tower. These recommended noise attenuation values are designed to achieve interior noise levels of approximately 45 dBA or lower for residential use and 50 dBA for commercial and public uses.

To preclude the potential for significant adverse impacts related to noise, an (E) designation **(E-472)** would be incorporated into the rezoning proposal for Block 2432, Lots 9, 21, 41, 44, and 50.[45]

The requirements of **(E) Designation (E-472)** would be as follows:

Block 2432, Lots 9. 21, 41, 44, and 50 (Development Site)

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with minimum attenuation of 37 dB(A) window/wall attenuation on western, eastern and southern facades and a minimum attenuation of 33 dB(A) window/wall attenuation on northern façades for the first 100 ft. above the appropriate noise source elevation in order to maintain an interior noise level of 45 dB(A). To achieve 37 dB(A) or 33 dB(A) of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specially designed windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.

Mechanical Systems

The design of and specification for building mechanical systems, such as heating, ventilation, and air conditioning (HVAC), would meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Mechanical Code) to ensure that the equipment does not result in any significant increase in ambient noise levels.

[45] There is an existing (E) Designation (E-163) for noise on Lots 9 and 21, which was assigned as part of the 2006 Maspeth Woodside Rezoning (CEQR No. 06DCP065Q). The (E) Designation (E-472) proposed in the With-Action Condition would supersede the requirements of E-163.

CONCLUSION

Based on the analyses presented above, the Proposed Actions would not result in any anticipated exceedances of *CEQR Technical Manual* defined incremental thresholds at noise receptor locations. Therefore, the Proposed Actions are not anticipated to result in any potentially significant adverse noise impacts; therefore, no further analysis is necessary.

ATTACHMENT N: NEIGHBORHOOD CHARACTER

INTRODUCTION

This section assesses the Proposed Actions' potential effects on neighborhood character. As defined in the *CEQR Technical Manual*, neighborhood character is an amalgam of various elements that give a neighborhood its distinct "personality." These elements may include a neighborhood's land use, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, transportation, and noise conditions; however, not all of these elements contribute to neighborhood character in all cases. For a proposed project or action, a neighborhood character assessment pursuant to CEQR should first identify the defining features of the neighborhood and then evaluate whether the project or action has the potential to adversely affect one or more of these defining features. A project has the potential to affect a neighborhoods' character by a combination of moderate effects or significant adverse impacts to any of the defining features of the neighborhood. Therefore, to determine the effects of a proposed action on neighborhood character, the relevant features of neighborhood character are considered cumulatively. In addition, a significant impact identified in one of the technical areas that may contribute to a neighborhood's character is not automatically equivalent to a significant impact on neighborhood character, but rather serves as an indication that neighborhood character should be examined.

METHODOLOGY

According to the *CEQR Technical Manual*, an assessment of neighborhood character is generally needed when a proposed action has the potential to result in significant adverse impacts to any of the following technical areas: land use, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, transportation, or noise. The *CEQR Technical Manual* states, even if a proposed action does not have the potential to result in a significant adverse impact in any specific technical area(s), that an assessment of neighborhood character may be required if the project would result in a combination of moderate effects to several elements that may cumulatively affect neighborhood character. A "moderate" effect is generally defined as an effect considered reasonably close to the significant adverse impact threshold for a particular technical analysis area.

A preliminary assessment of neighborhood character determines whether anticipated impacts in identified technical areas may adversely impact a defining feature of the neighborhood. The preliminary assessment first identifies the defining features that contribute to the neighborhood's character and then evaluates whether the proposed project or action has the potential to adversely impact those defining features, either through the potential for a significant adverse impact in a single relevant technical area or a combination of moderate effects in the relevant technical areas. The key elements that define neighborhood character, and their relationships to one another, form the basis of determining impact significance. In general, the more uniform and consistent the existing neighborhood character, the more sensitive it is to change. A neighborhood that has a varied context typically is able to tolerate greater change without experiencing significant impacts. If there is no potential for the proposed project or action to affect the defining features of neighborhood character, a detailed assessment is not warranted.

Study Area

According to the *CEQR Technical Manual*, the study area for a preliminary assessment of neighborhood character is typically consistent with the study areas in the relevant technical areas assessed pursuant to CEQR that contribute to the defining features of the neighborhood. In the context of a rezoning, the study area boundaries of the preliminary assessment of neighborhood character are generally coterminous with those used in the analyses of land use and urban design (400-foot radius).

EXISTING CONDITIONS

The Directly Affected Area comprises Block 2432 in the Woodside neighborhood of Queens, Community District 2. The Directly Affected Area includes Block 2432, Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, and 50 and is bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; elevated LIRR tracks to the southwest; and 69th Street to the west. Queens Boulevard is a primary thoroughfare that runs east-west and divides the 400-foot radius around the Directly Affected Area (the "Study Area").

The Study Area is characterized by a mix of one- and two-family and multifamily elevator residences to the north and southwest; commercial and industrial uses along Queens Boulevard and the LIRR tracks; and public facilities on the Development Site and to the southwest. The lots to the northeast of the Development Site on Block 2432 (Lots 23, 34, 37, and 39) are currently being redeveloped with a nine-story mixed residential/commercial building. The Study Area also contains transportation and utility uses, including the elevated LIRR tracks that extend diagonally in either direction from the southwest corner of the Directly Affected Area.

According to the New York City Zoning and Land Use (ZoLa) database and State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS), neither the Development Site nor the Study Area contains any S/NR or LPC designated historic resources. The built environment within the Study Area includes low to medium density, two- and three-story residential and mixed-use buildings, medium to high density multi-story mixed-use buildings along Queens Boulevard, one-story commercial buildings, and a small number of one- and two-story public facility buildings. The Directly Affected Area is well served with pedestrian infrastructure, providing wide sidewalks along Queens Boulevard and 69th Street and a bike lane in either direction on Queens Boulevard.

ASSESSMENT

The sections below discuss the potential for adverse impacts resulting from the Proposed Actions in the following technical areas that are considered in the neighborhood character assessment pursuant to the CEQR Technical Manual: land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise. The neighborhood character assessment uses information and conclusions from the relevant technical analyses chapters to identify whether the Proposed Actions would result in any significant adverse impacts or moderate adverse effects in these technical areas and whether any such changes would have the potential to affect the defining features of the neighborhood.

Land Use, Zoning, and Public Policy

The Proposed Actions would facilitate the construction of two primarily residential buildings on the Development Site that would include ground floor retail in one, and residential uses on the upper floors in both. The area surrounding the Development Site is primarily comprised of residential uses, with ground floor commercial uses primarily concentrated along Queens Boulevard. The development facilitated by the Proposed Actions would be similar to these surrounding land uses. Additionally, the net incremental residential space on the Development Site in the With-Action Condition would be similar to the existing residential uses in the Woodside neighborhood.

The Proposed Actions include rezoning part of the Development Site currently mapped with an M1-1 zoning district to an R7X zoning district with a C2-3 commercial overlay. As discussed in Attachment C, "Land Use, Zoning, and Public Policy," the proposed R7X/C2-3 zoning district would be similar to the existing residential and commercial zoning districts within the Study Area. Additionally, the Proposed Actions would facilitate the development of mixed-income affordable housing in the Woodside neighborhood in Queens, as well as generate commercial uses to activate the Development Site at the street level, which would promote the initiatives and goals of OneNYC and *Housing New York*.

Based on this information, the Proposed Action would not result in any significant adverse impacts on neighborhood character in the area of land use, zoning, and public policy.

Socioeconomic Conditions

The development in the With-Action Condition would result in a net increase of 272 new dwelling units, 54 of which would be allocated as permanently affordable housing for low-, moderate-, and middle-income families through the Mandatory Inclusionary Housing (MIH) program. The 272 dwelling unit increment would result in an increase of approximately 873 residents within the 0.5-mile Study Area. As discussed in Attachment D, "Socioeconomic Conditions," the development facilitated by the Proposed Actions would result in less than a five (5) percent increase in Study Area population. Therefore, it is not anticipated that the development in the With-Action Condition would introduce, or substantially accelerate, a trend of change in the residential real estate market that would result in the potential displacement of a vulnerable population.

The Proposed Actions are anticipated to displace approximately 73 employees, which would not exceed the 100-employee threshold warranting an assessment, as described in the *CEQR Technical Manual.*

The Proposed Actions would facilitate the development of approximately 5,907 sf of commercial floor area on the Development Site, which represents a net *decrease* of approximately 8,253 sf compared to the No-Action Condition. According to the *CEQR Technical Manual*, projects resulting in less than 200,000 square feet of retail on a single development site would not typically result in indirect socioeconomic impacts due to market saturation.

The Proposed Actions are not anticipated to result in significant adverse impacts on direct or indirect residential displacement, direct or indirect business displacement, or affect specific industries in the Directly Affected Area or the Study Area. Therefore, the neighborhood's character would not be

adversely affected due to potential effects of the Proposed Action on socioeconomic conditions either alone or in combination with potential impacts in other relevant technical areas discussed in this section.

Based on this information, the Proposed Action would not result in a significant adverse impact on neighborhood character as a result of changes to the area's socioeconomic conditions.

Open Space

The Proposed Actions would facilitate the development in the With-Action Condition, which would result in a net increase of 272 new dwelling units, 54 of which would be allocated as permanently affordable housing. The 272 dwelling unit increment would result in an increase of approximately 873 residents within the 0.5-mile Study Area. There is a total of 5.45 acres of open space within the Study Area, of which approximately 0.98 acres are for passive use and approximately 4.47 acres for active use. The residential population is approximately 37,537, which results in an open space ratio of 0.145 acres per 1,000 residents.

Approximately 38,830 residents are contemplated in the No-Action Condition. These 38,830 residents within the Open Space Study Area would result in an OSR of approximately 0.140. The passive open space ratio would be approximately 0.025, while the active open space ratio would be approximately 0.115. Both would remain below the *CEQR Technical Manual* guidance for open space. As a result of the development in the With-Action Condition, the total open space ratio would increase to 0.141 acres per 1,000 residents. The passive open space ratio would increase to approximately 0.029, while the active open space ratio would decrease to approximately 0.113. Overall, the open space ratio in the With-Action condition would be increased by approximately 0.67 percent as compared to the No-Action condition.

The Proposed Actions would facilitate development within an area that is presently burdened in terms of open space availability. While the open space ratio in the With Action Condition would not be reduced, the particularly low existing open space ratio within the Open Space Study Area warranted a detailed assessment that contemplates open space both quantitatively and qualitatively. The qualitative analysis indicated there are a number of additional open spaces facilities that are close in proximity to the Development Site, but fall outside of the boundary of the Study Area (as defined in the *CEQR Technical Manual*). While these facilities are outside of the Open Space Study Area, residents can be anticipated to frequent them given their close proximity to the Study Area as well as their size and amenities, which make them attractive open space destinations.

Based on this information, the Proposed Actions would not result in a significant adverse impact on neighborhood character as a result of availability and utilization of open space resources.

Shadows

The Proposed Actions would facilitate the development of a 17-story (181.5-foot) mixed residential/commercial building on the northern part of the Development Site, and a 14-story (151.5-foot) residential building on the southern part. As shown in Figure 13, the building in the With-Action Condition at a maximum height of 181.5 feet would cast a shadow extending over a maximum radius

of 780.5 feet (Shadow Study Area). The Shadow Study Area includes one sunlight-sensitive open space resource, Spargo Park located in the northwest section of the Study Area.

A Tier 3 screening assessment was required to determine if the incremental shadows resulting from the development in the With-Action Condition could reach Spargo Park during the representative analysis days and result in an adverse impact. On the March 21st, May 6th, and June 21st CEQR analysis days, the incremental project-generated shadows would not reach Spargo Park. Although incremental shadows would reach Spargo Park on the December 21st analysis day, because of the short duration of incremental shadow and reduced number of visitors to the park during the winter season and early morning hours, the incremental shadows would not affect a significant number of users or last for long durations during the day. Therefore, the neighborhood's character would not be adversely affected due to potential shadow impacts of the Proposed Action either alone or in combination with potential impacts in other relevant technical areas discussed in this section.

Based on this information, the Proposed Action would not result in a significant adverse impact on neighborhood character as a result of changes to the area's sunlight sensitive resources.

Historic and Cultural resources

As part of the historic and cultural resources assessment, a request was sent to the Landmarks Protection Commission (LPC) for comment on the architectural and archaeological significance of the Directly Affected Area. LPC confirmed that there are no architectural or archaeological resources within the Directly Affected Area and, as discussed in Attachment H, "Historic and Cultural Resources," the Proposed Actions would not result in any significant adverse impacts to archaeological resources or eligible and/or designated architectural resources. Therefore, the neighborhood's character would not be adversely affected by potential effects of the Proposed Action on historic and cultural resources either alone or in combination with potential impacts in other relevant technical areas.

Based on this information, the Proposed Action would not result in a significant adverse impact on neighborhood character as a result of changes to the area's historic and cultural resources.

Urban Design and Visual Resources

The West Tower's northern and western street wall would be built to the lot line along Queens Boulevard and 69th street, respectively. This configuration would create continuous street walls along the segments of the perimeter streets surrounding the Development Site. The With-Action Condition would include streetscape improvements, such as street trees planted every 25 feet along all four perimeter streets, and a landscaped walkway with seating between the LIRR right-of-way and the proposed buildings. These proposed building configurations and streetscape improvements would enhance the overall pedestrian experience and public realm within the Study Area. Moreover, the With-Action Condition would introduce new ground-floor commercial uses along Queens Boulevard, thereby activating a currently underutilized segment of the street.

The proposed buildings' form and scale are contextually appropriate to the surrounding built environment and would be well-buffered from the lower density character of the surrounding area by the LIRR right-of-way and Queens Boulevard. Moreover, because there would be no incremental

increase in base height between the No-Action and With-Action Conditions, the pedestrian experience along the Development Site's perimeter streets would be unaffected. Therefore, the neighborhoods' character would not be adversely affected due to potential effects of the Proposed Action on urban design and visual resources either separately or in combination with potential impacts in other relevant technical areas discussed in this section.

Based on this information, the Proposed Action would not result in any potentially significant adverse impacts on neighborhood character in relation to urban design and visual resources.

Transportation

A Level 1 screening assessment was conducted in accordance with *CEQR Technical Manual* guidelines to determine if the incremental development between the No-Action and With-Action conditions would exceed CEQR thresholds for conducting quantified transportation analyses. The net incremental vehicle trips during the weekday AM and PM analysis peak hours exceed the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends); therefore, a Level 2 screening assessment for potential project-generated vehicular trips was conducted for these two peak hours. Based on trip generation, it is anticipated that the proposed retail and residential uses would generate the maximum number of trips during the weekday AM peak hour. These person trips include public transit, auto, taxis, bicycle, and walk trips. Based on U.S. Census Journey to Work (JTW) data, the auto share for the study area is approximately 31 percent for commute to work which would also be applicable to the residents of the Proposed Development. The Proposed Development would include approximately 33,106 gsf of at-grade accessory parking (shared by both towers) using double stackers and that would be accessed via an existing curb cut on 69th Street (242 parking spaces). It is anticipated that the residents of the Proposed Development would utilize the on-site parking garage on a daily basis.

The Development Site has frontage on four streets, including Queens Boulevard to the north, which is a major thoroughfare and connects to the Brooklyn Queens Expressway (I-278) to the west and the Long Island Expressway (I-495) to the east. It is anticipated that approximately 60 percent of the vehicle trips generated during the weekday AM peak hour would arrive at the access driveway from the north via the intersection of Queens Boulevard and 69th Street, and approximately 40 percent would arrive from the south via the intersection of 47th Avenue and 69th Street. The vehicular traffic leaving the Development Site would also utilize similar routes. Given this low level of overall peak hour vehicular activity, it is anticipated that the study area intersections and roadways would adequately serve the project generated traffic volumes. Furthermore, the net increase in traffic generated by the proposed development was also analyzed per CEQR specified Level-1 and Level-2 screening criteria. Based on these criteria, the level of vehicle trip activity attributed to the proposed development is below the CEQR thresholds during the four analysis peak hours to undertake any detailed analyses. Therefore, the net increase in traffic volumes per the CEQR criteria would not result in potentially significant adverse traffic impacts.

The Development Site is well-served by New York City Transit (NYCT) bus lines, with access to NYCT subway and Long Island Rail Road (LIRR) within an approximately 0.5-mile radius. Combining the subway and bus trips, the transit trips do not exceed the CEQR Level 1 trip generation threshold of 200 or more peak hour transit trips during the four analysis peak hours; therefore, no further transit

analysis was warranted. Similarly, the pedestrian trips do not exceed the CEQR Level 1 trip generation threshold of 200 or more peak hour pedestrian trips during the four analysis peak hours; therefore, no further pedestrian analysis was warranted.

Noise

According to the *CEQR Technical Manual*, a mobile source noise assessment is required if a proposed project results in an increase in passenger car equivalent (PCE) values by 100 percent or more, which is the equivalent of 3 dBA or more. Based on the traffic analysis in Attachment K, "Transportation," the Proposed Actions would not result in an increase in PCE values by 100 percent; therefore, a mobile source noise analysis is not required. Therefore, the neighborhood's character would not be adversely affected due to potential effects of the Proposed Action on noise either separately or in combination with potential impacts in other relevant technical areas discussed in this section.

The Development Site is within 1,500 feet of the existing elevated rail tracks and will have a direct line of sight to the receptor; therefore, a detailed train noise assessment is warranted. Based on correspondence with the NYC Department of City Planning (DCP), measurements consisted of one (1) 24-hour monitor positioned on the roof of a two-story garage on the south portion of the property line (Lot 50), with a direct line-of-sight to the elevated Long Island Rail Road (LIRR) tracks, and four (4) "spot" measurements taken at street level on the north, south, east, and west sides of the Development Site (Figure 28)

As a result of the detailed train noise assessment, the development facilitated by the Proposed Action would be required, through an (E)-designation, to provide acoustically rated windows and an alternate means of ventilation (*i.e.*, air conditioning) that would not degrade the acoustical performance of the façade. All development facilitated by the Proposed Actions would be designed to provide a composite Outdoor-Indoor Transmission Class 1 (OITC) rating greater than or equal to the attenuation requirements listed in Table M-4 in Attachment M, "Noise." By designing the Proposed Development to provide a composite OITC rating greater than or equal to the attenuation requirements listed in Table M-4, the development facilitated by the Proposed action would be expected to provide sufficient attenuation to achieve the interior noise level guideline of 45 dB(A) or lower for residential uses and 50 dB(A) or lower for commercial uses.

Based on this information, the Proposed Action would not result in any potentially significant adverse impacts on neighborhood character in relation to noise.

CONCLUSION

As stated in the *CEQR Technical Manual*, if a proposed project would have the potential to affect the defining features of the neighborhood, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas, then a detailed assessment is required to determine whether the proposed project may have a significant adverse neighborhood character impact. Of the relevant technical areas specified in the *CEQR Technical Manual*, the Proposed Action would not cause significant adverse impacts regarding land use, zoning, and public policy, socioeconomic conditions, open space, shadows, historic and cultural resources, urban design and visual resources, transportation, or noise. In addition, the technical areas that contribute to a

neighborhood's character would not, either individually or in combination, result in moderate adverse impact on neighborhood character.

Therefore, based on the results of the preliminary assessment, there is no potential for the Proposed Action to result in significant adverse impacts to neighborhood character, and further analysis is not warranted.

ATTACHMENT O: CONSTRUCTION

INTRODUCTION

According to the *CEQR Technical Manual,* construction activities, although temporary, may sometimes result in significant impacts. Construction duration, which is a critical measure to determine a project's potential for adverse impacts during construction, is categorized as short-term (less than 24 months) and long-term (24 months or more). For construction activities not related to in-ground disturbance, short-term construction generally does not warrant a detailed construction analysis. However, consideration of several factors, including the location and setting of the project in relation to other uses and the intensity of construction activities, may indicate that a project's construction activities, even if short-term, warrant analysis in additional areas such as traffic, hazardous materials, historic and cultural resources, noise, and air quality.

As discussed in Attachment A, "Project Description," the Proposed Actions would facilitate the development of one 17-story (181.5-foot) mixed residential/commercial building and one 14-story (151.5-foot) residential building, totaling approximately 495,343 gross square feet (gsf). The Proposed Project would comprise approximately 456,330 gsf of mixed-income residential area, including 561 dwelling units, of which approximately 30 percent (169 dwelling units) would be allocated as permanently affordable for residents with incomes averaging at or below 80 percent Area Median Income (AMI);[46] approximately 5,907 sf of ground floor retail space and approximately 33,106 gsf of at-grade accessory parking using double stackers that would be accessed via 69th Street (242 parking spaces).

The Proposed Project is anticipated to be completed by the end of 2020 (the "Build Year"). Because the Proposed Actions would facilitate construction adjacent to Queens Boulevard, a preliminary assessment of transportation as it relates to construction activities for the Proposed Project is included in this section.

METHODOLOGY

The cumulative construction period for development to be completed on the Development Site is less than 24 months; therefore, pursuant to CEQR Technical Manual guidelines, any impacts resulting from such short-term construction generally do not require a detailed assessment. However, because the Proposed Project is adjacent to Queens Boulevard, a targeted preliminary assessment of transportation as it relates to construction will be included. It is anticipated that construction activities on the Development Site would last approximately 22 months.

[46] For the purpose of this analysis, development contemplated in the With-Action Condition would include 20 percent of the residential floor area (112 dwelling units) as affordable for families with incomes averaging at or below 80 percent AMI and below.

Regulatory Agencies and Oversight

Regardless of the length of the construction period, New York City has defined a number of regulations that must be adhered to. In addition to the regulatory requirements, applicants must coordinate with New York City, New York State, and occasionally federal agencies to ensure that construction is facilitated appropriately.

New York City Air Pollution Control Code

All projects, whether or not subject to the requirements of CEQR, are required to comply with the New York City Air Pollution Control Code, which regulates fugitive dust under Section 1402.2-9.11, "Preventing Particulate Matter from Becoming Air-Borne; Spraying of Asbestos Prohibited; Spraying of Insulating Material and Demolition Regulated" (Title 24 of the Administrative Code of the City of New York, Chapter 1, Subchapter 6, Section 24-146).

New York City Asbestos Control Program

The regulations of the New York City Asbestos Control Program include specific procedures that must be followed for the control of asbestos during construction. In instances where demolition of an existing building could result in release of asbestos, the qualitative analysis should document a commitment to the adherence of these measures and requirements during construction.

Local Law 24 Of 2005

Local Law 24 of 2005 requires the issuance of a Community Reassessment, Impact and Amelioration (CRIA) statement, or Environmental Assessment Statement (EAS)/Environmental Impact Statement (EIS) in lieu of CRIA, if a publicly mapped street is closed for more than 180 consecutive calendar days to vehicular traffic. The CRIA Statement or equivalent EAS/EIS must be delivered to both the community board and the city council member in whose district the street is located on or before the 210th day of the street closure. In addition, at least one public forum must be held prior to the issuance of the CRIA, EAS, or EIS if the project is one for which the New York City Department of Transportation (DOT) has issued a permit.

Required Permits from DOT's Office of Construction Mitigation and Coordination

Before receiving construction permits from the New York City Department of Transportation (NYCDOT) (such as street opening, sidewalk construction, construction activity, or canopy permits), traffic, bicycle detour, and pedestrian access plans must be approved by the Office of Construction Mitigation and Coordination (OCMC). Additionally, pedestrian access plans should identify the extent to which any sidewalks and/or crosswalks would be closed or narrowed to allow for construction-related activity and describe how pedestrian access to adjacent land uses and uses through the area/intersections would be maintained.

New York City Noise Control Code

The New York City Noise Control Code, as amended by Local Law 113 of 2005, defines "unreasonable and prohibited noise standards and decibel levels" for the City of New York. The New York City Noise Control Code, Section 24-219, contains rules that prescribe "noise mitigation strategies, methods,

procedures, and technology that shall be used at construction sites" when certain construction devices or activities occur. Additionally, the New York City Noise Control Code requires construction activities to occur between 7 AM to 6 PM Monday through Friday. Construction activities occurring outside the permitted days/hours would require prior authorization.

New York City Procedure for the Avoidance of Damage to Historic Structures

Regulations for the protection of historic structures are found in "Technical Policy and Procedure Notice #10/88, Procedures for the Avoidance of Damage to Historic Structures Resulting from Adjacent Construction When Subject to Controlled Inspection by Section 27-724 and for Any Existing Structure Designated by the Commissioner," issued by the New York City Department of Buildings (NYCDOB).

CONSTRUCTION SEQUENCING

The Proposed Project would be developed with one 17-story (181.5-foot) mixed residential/commercial building and one 14-story (151.5-foot) residential building, totaling approximately 495,343 gross square feet (gsf), anticipated to be constructed in approximately 22 months.

ASSESSMENT

According to *CEQR Technical Manual* guidelines, a preliminary construction assessment evaluates the impact of construction activities facilitated by the Proposed Actions with regard to transportation, air quality, noise, historic and cultural resources, and hazardous materials. Due to the anticipated construction timeframe of less than 24 months, the only technical area that will be assessed with regard to construction is transportation.

Transportation

Construction activities on the Development Site would generate trips by workers traveling to and from construction sites as well as trips by the delivery of construction related materials and equipment. The New York City Noise Control Code requires construction activities to occur between 7 AM to 6 PM Monday through Friday; therefore, worker trips would be concentrated in off-peak hours and would not generate 50 or more vehicle trips (presented in Passenger Car Equivalents (PCEs)) during peak travel periods. In addition, any closures to pedestrian sidewalk or partial lane closures would occur for less than two years and would be reviewed by NYCDOT. Because construction of the two towers is anticipated to occur simultaneously, and trips generated by construction activities would not generate 50 or more PCEs during peak traffic hours, the construction activities facilitated by the Proposed Actions would not result in significant adverse impacts to transportation activities in the area.

CONCLUSION

The Proposed Actions would facilitate the development of one 17-story (181.5-foot) mixed residential/commercial building and one 14-story (151.5-foot) residential building, totaling approximately 495,343 gross square feet (gsf). Based on the known development schedule of the Proposed Project, an anticipated construction schedule was created for the development of the Development Site. The anticipated construction schedule assumes that construction activities would not exceed 24 months. Because construction periods of the Projected Development Sites would not exceed 24 months, and because 50 or more PCEs will not be generated during peak traffic hours as a result of construction, the Proposed Action is not anticipated to result in significant adverse impacts related to construction activities.

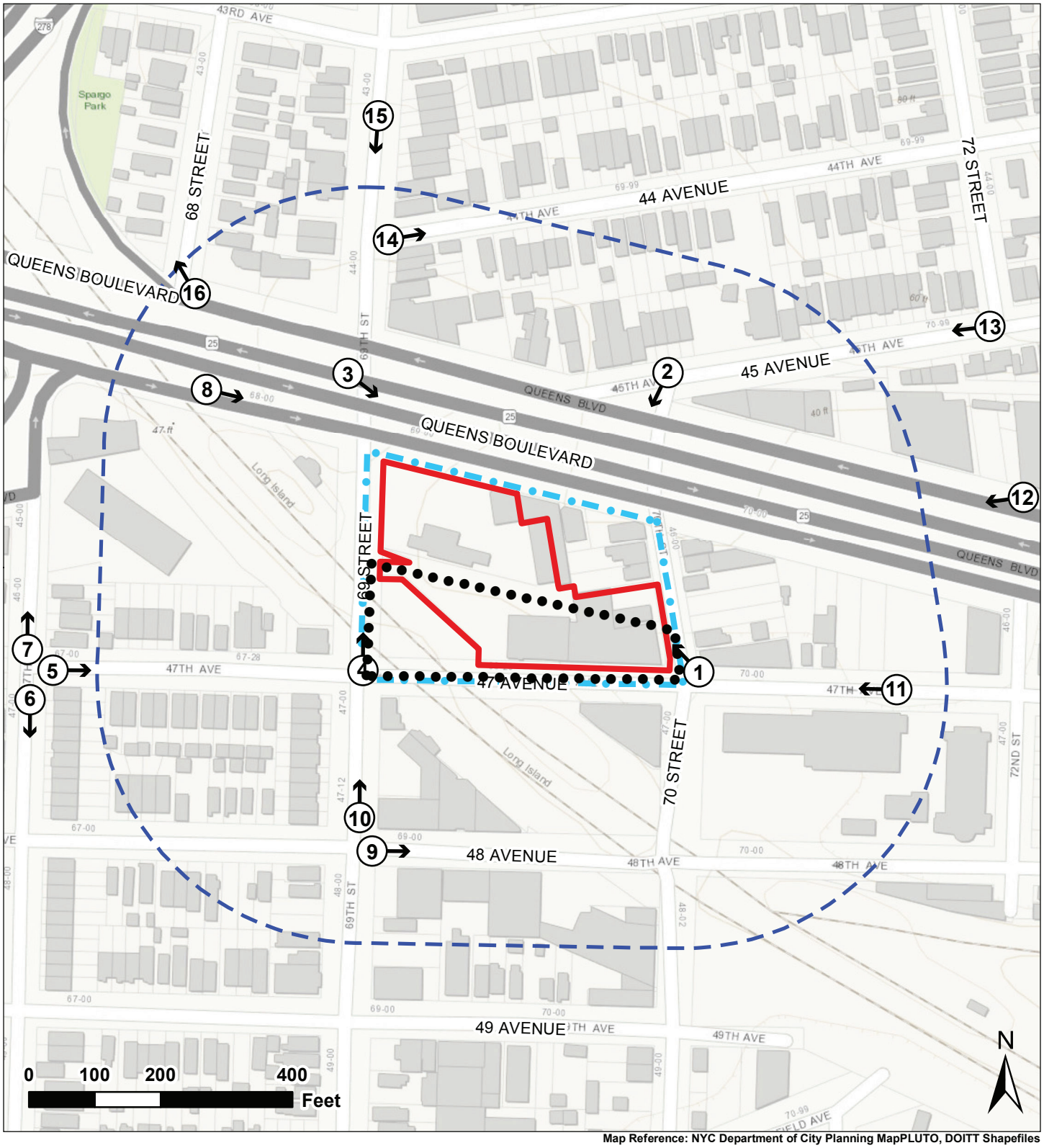
PART III: APPENDICES

APPENDIX A: STUDY AREA PHOTOGRAPHS

(Photographs Taken 21 June 2017)

69-02 QUEENS BOULEVARD

FIGURE A-1
PHOTOGRAPH LOCATION MAP



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Directly Affected Area

Development Site

Study Area (400-foot radius)

4 Photograph Location and Direction

WOODSIDE, QUEENS, NY

LANGAN



Photograph 1: At the intersection of 70th Street and 47th Avenue, looking northeast at the Development Site



Photograph 2: At the intersection of Queens Boulevard and 45th Avenue, looking southwest at the Development Site



Photograph 3: At the intersection of Queens Boulevard and 69th Street, looking southwest at the Development Site



Photograph 4: At the intersection of 69th Street and 47th Avenue, looking north on 69th Street



Photograph 5: At the intersection of 47th Avenue and 67th Street, looking east on 47th Avenue



Photograph 6: At the intersection of 47th Avenue and 67th Street, looking south on 67th Street



Photograph 7: At the Intersection of 67th Street and 47th Avenue, looking north on 67th Street



Photograph 8: On the south side of Queens Boulevard, between 67th Street and 69th Street, looking east at the Development Site



Photograph 9: At the intersection of 48th Avenue and 69th Street, looking east on 48th Avenue



Photograph 10: At intersection of 69th Street and 48th Avenue, looking north



Photograph 11: On 47th Avenue, between 70th Street and 72nd Street, looking west



Photograph 12: On the north side of Queens Boulevard, between 45th Avenue and 74th Street, looking west



Photograph 13: At the intersection of 45th Avenue and 72nd Street, looking southwest



Photograph 14: At the intersection of 69th Street and 44th Avenue, looking northeast



Photograph 15: South view on 69th Street from 69th Street between 43rd Avenue and 44th Avenue



Photograph 16: At the intersection of Queens Boulevard and 68th Street, looking northwest

APPENDIX B: LANGAN LAND USE SURVEY

(Site Visit 28 January 2016)

BLOCK 1348				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	43-31 68 St.	One & Two Family Residence	3	One & Two Family Residence
2	43-27 68 St.	One & Two Family Residence	3	One & Two Family Residence
34	43-22 69 St.	One & Two Family Residence	3	One & Two Family Residence
37	43-28 69 St.	Multifamily Walkup Residence	3	Multifamily Walkup Residence
38	43-30 69 St.	Multifamily Walkup Residence	3	Multifamily Walkup Residence
40	68-15 Queens Blvd	Transportation/Utility	1	Dunkin Donuts/Mobil Service Station
53	68-01 Queens Blvd	Parking	1	Transportation/Utility
BLOCK 1350				
LOT	**ADDRESS**	**CURRENT LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
89	43-21 69 St.	Mixed Residential/Commercial	2	Ground floor retail; residential above
90	43-19 69 St.	Multifamily Walkup Residence	2	Multifamily Walkup Residence
BLOCK 1351				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	69-14 44 Ave.	Multifamily Walkup Residence	3	Multifamily Walkup Residence
4	69-18 44 Ave.	Multifamily Walkup Residence	3	Multifamily Walkup Residence
6	69-20 44 Ave.	One & Two Family Residence	2	One & Two Family Residence
7	69-22 44 Ave.	One & Two Family Residence	2	One & Two Family Residence
8	69-24 44 Ave.	One & Two Family Residence	3	One & Two Family Residence
10	69-26 44 Ave.	One & Two Family Residence	3	One & Two Family Residence
12	69-30 44 Ave.	One & Two Family Residence	2	One & Two Family Residence
13	69-32 44 Ave.	One & Two Family Residence	2	One & Two Family Residence
14	69-34 44 Ave.	One & Two Family Residence	2	One & Two Family Residence
16	69-38 44 Ave.	One & Two Family Residence	2	One & Two Family Residence
17	69-40 44 Ave.	One & Two Family Residence	2	One & Two Family Residence
19	69-42 44 Ave.	One & Two Family Residence	2	One & Two Family Residence
23	70-29 45 Ave.	Public Facilities/Institutions	1	St. John Chrysostom Church and a parking lot
69	70-19 45 Ave.	One & Two Family Residence	3	One & Two Family Residence
70	70-17 45 Ave.	One & Two Family Residence	3	One & Two Family Residence
71	70-15 45 Ave.	One & Two Family Residence	2	One & Two Family Residence
72	70-13 45 Ave.	One & Two Family Residence	2	One & Two Family Residence
74	70-11 45 Ave.	Mixed Residential/Commercial	2	Ground floor retail; residential above
75	70-09 45 Ave.	Mixed Residential/Commercial	2	Ground floor retail; residential above
80	69-29 45 Ave.	Mixed Residential/Commercial	2	Ground floor restaurant; residential on second floor
82	69-19 Queens Blvd	Mixed Residential/Commercial	2	Ground floor retail (Tattoo/Piercing Parlor/Motor Cycle Store); residential on second floor
87	69-15 Queens Blvd	Transportation/Utility	0	Industrial Use (Electrical Supply Storage Area)
91	69-09 Queens Blvd	Mixed Residential/Commercial	2	Ground floor retail (Electrical Supply Store); residential on second floor
94	69-01 Queens Blvd	Mixed Residential/Commercial	2	Ground floor retail (Deli Grocery/Vacuums Store/Hair Studio); residential on second floor
96	44-07 69 St.	Mixed Residential/Commercial	3	Ground floor retail (Computer Service Center/Fast Fix); residential on upper floors
98	44-05 69 St.	One & Two Family Residence	2	One & Two Family Residence
99	44-03 69 St.	One & Two Family Residence	2	One & Two Family Residence
100	44-01 69 St.	One & Two Family Residence	2	One & Two Family Residence
BLOCK 1352				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	70-01 Queens Blvd	Mixed Residential/Commercial	2	Safety supply store on ground floor; residential above
6	70-11 Queens Blvd	Mixed Residential/Commercial	2	Auto repair shop on ground floor; residential above
9	45 Ave.	Vacant	0	Vacant
BLOCK 2429				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
45	48-02 69 St.	One & Two Family Residence	3	One & Two Family Residence
BLOCK 2430				

LOT	ADDRESS	LAND USE	FLOORS	NOTES/CURRENT USE
1	47-20 69 St.	One & Two Family Residence	1	One & Two Family Residence
2	47-18 69 St.	One & Two Family Residence	1	One & Two Family Residence
3	47-16 69 St.	One & Two Family Residence	1	One & Two Family Residence
4	67-33 48 Ave.	One & Two Family Residence	2	One & Two Family Residence
5	67-31 48 Ave.	One & Two Family Residence	2	One & Two Family Residence
6	67-29 48 Ave.	One & Two Family Residence	2	One & Two Family Residence
7	67-27 48 Ave.	One & Two Family Residence	2	One & Two Family Residence
9	67-21 48 Ave.	One & Two Family Residence	3	One & Two Family Residence
31	67-16 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
32	67-18 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
33	67-20 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
34	67-24 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
35	67-26 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
36	67-28 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
37	67-30 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
38	67-32 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
39	67-34 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
40	47-02 69 St.	One & Two Family Residence	1	One & Two Family Residence
42	47-04 69 St.	One & Two Family Residence	1	One & Two Family Residence
43	47-06 69 St.	One & Two Family Residence	1	One & Two Family Residence
44	47-08 69 St.	One & Two Family Residence	1	One & Two Family Residence
45	47-12 69 St.	One & Two Family Residence	1	One & Two Family Residence
46	47-14 69 St.	One & Two Family Residence	1	One & Two Family Residence
BLOCK 2431				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	67-31 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
3	67-27 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
5	67-25 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
7	67-23 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
8	67-21 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
9	67-19 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
10	67-17 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
11	67-15 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
12	67-11 47 Ave.	One & Two Family Residence	2	One & Two Family Residence
21	46-09 67 St.	Vacant	0	Vacant
23	46-01 67 St.	Multifamily Elevator Residence	4	Multifamily Elevator Residence
33	67-02 Queens Blvd	Commercial/Office	1	Commercial car lot (Luxury Auto of Queens Blvd)
54	68-12 Queens Blvd	Commercial/Office	1	Commercial Use (Financial Services Building; parking lot)
57	69 St.	Transportation/Utility	0	Elevated LIRR Track
80	46-34 69 St.	One & Two Family Residence	1	One & Two Family Residence
109	47 Ave.	One & Two Family Residence	0	Driveway area/undeveloped
BLOCK 2432				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	47 Ave.	Transportation/Utility	0	Elevated LIRR Tracks Above
8	69 St.	Vacant	0	Vacant (Development Site)
9	69-02 Queens Blvd	Transportation/Utility	1	Previously used as gas station/car wash/auto repair (Development Site)
21	69-20 Queens Blvd	Mixed Residential/Commercial	2	Vacant one-story building (Development Site)
23	69-28 Queens Blvd	Commercial/Office	1	Abandoned storefront and warehouse
26	69-30 Queens Blvd	Mixed Residential/Commercial	2	Ground floor retail (Wine and Liquor store); residential above
34	46-02 70 St.	Mixed Residential/Commercial	2	Transportation/Utility (Auto repair shop - Infinity Auto Boutique)
37	46-04 70 St.	Mixed Residential/Commercial	2	Vacant ground floor; residential above
39	46-08 70 St.	One & Two Family Residence	3	One & Two Family Residence

41	46-12 70 St.	Commercial/Office	2	Commercial Use (Atlas Floor and Decorations) (Development Site)
44	69-39 47 Ave.	Industrial/Manufacturing	1	Warehouse (Atlas Floor and Decorations) (Development Site)
50	69-23 47 Ave.	Public Facilities/Institutions	2	Public facilities use (Armenian Center) and accessory parking lot (Development Site)
BLOCK 2433				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	47-19 69 St.	Parking Facilities	1	Transportation/Utility
3	47-15 69 St.	Parking Facilities	1	Transportation/Utility
11	69-02 47 Ave.	Multifamily Walkup Residence	3	Multifamily Walkup Residence
12	47 Ave.	Transportation/Utility	0	Elevated LIRR Tracks
27	69-38 47 Ave.	Public Facilities/Institutions	1	Little Rock Flock Church
41	48 Ave.	Vacant	0	Vacant (adjacent to LIRR tracks)
45	69-15 48 Ave.	Parking Facilities	1	Transportation/Utility (Auto Repair Shop)
46	69-11 48 Ave.	Parking Facilities	1	Transportation/Utility (Auto Repair Shop -Genesis Auto Repair/Body Shop)
BLOCK 2434				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	48-19 69 St.	Public Facilities/Institutions	2	Community Facility (Swaminarayan Shubh Sanskar Sanstha)
7	48-09 69 St.	One & Two Family Residence	2	One & Two Family Residence
8	48-03 69 St.	Commercial/Office	1	Commercial (Laundromat/Dry Cleaners)
13	69-14 48 Ave.	Parking	1	Transportation/Utility (Eurotech Automotive/Repair Shop)
16	69-20 48 Ave.	Parking	1	Transportation/Utilit (Sensational Service Inc. Auto Repair Shop)
20	48-16 70 St.	Industrial/Manufacturing	1	Brick storage area and Industrial Use (STIHC)
26	70 St.	Vacant	0	Industrial/Manufacturing (Brick storage area)
28	48-08 70 St.	Parking	2	Industrial/Manufacturing (Warehouse)
BLOCK 2444				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	46-21 70 St.	Industrial/Manufacturing	1	Industrial/Manufacturing (Warehouse)
2	46-19 70 St.	Multifamily Walkup Residence	2	Multifamily Walkup Residence
4	46-17 70 St.	Vacant	0	Vacant land connected to lot 6
6	46-09 70 St.	Vacant	0	Vacant land connected to lot 4
8	46-07 70 St.	Mixed Residential/Commercial	2	Ground floor commercial (Tricor Worldwide Nation Courier Service); residential above
10	46-03 70 St.	Mixed Residential/Commercial	2	Ground floor commercial; residential above
12	46-01 70 St.	One & Two Family Residence	2	One & Two Family Residence
14	70 St.	Vacant	0	Vacant garden area
18	70-08 Queens Blvd	Parking	1	Transportation/Utility (Aman's Auto warehouse)
51	70-32 Queens Blvd	Mixed Residential/Commercial	0	Under construction
57	70-20 Queens Blvd	Commercial/Office	1	Commercial Use (Aman's Auto Sales Store)
BLOCK 2445				
LOT	**ADDRESS**	**LAND USE**	**FLOORS**	**NOTES/CURRENT USE**
1	70-31 48 Ave.	Public Facilities/Institutions	2	Middle/High School: School for Language and Communicant Development
BLOCK 2448				
Lot	**Address**	**Current Land Use**	**Floors**	**Notes/Current Use**
1	70-32 48 Ave.	Transportation/Utility	0	Elevated LIRR Track
Notes:				
	Land Use revised based on survey			
	Lot under construction with current use, but higher bulk/height			

APPENDIX C: PHASE I ENVIRONMENTAL SITE ASSESSMENT

(Dated January 21, 2016)

PHASE I ENVIRONMENTAL SITE ASSESSMENT

for

46-12 70th Street, 69-39 47th Avenue, and 69-23 47th Avenue
(Tax Block 2432, Lots 8, 41, 44, and 50)
Queens, Queens County, New York

Prepared For:

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EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) was prepared Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. on behalf of Madison Realty Capital to identify current or potential environmental concerns and Recognized Environmental Conditions (RECs) at the ±40,712 square foot proposed development site consisting of the property at 69-23 and 69-39 47th Avenue and 46-12 70th Street (Block 2432 Lots 8, 41, 44, and 50) located in Queens, New York. The ESA included a site inspection, review of historical information, completion of a federal/state/local environmental database search, and interviews with local and state agencies to assess current and past site conditions.

Lots 8, 41, 44, and 50 are part of the proposed 69-02 Queens Boulevard development, which includes Lots 9 and 21 to the north of the subject property. For the purposes of this Phase I ESA, Lot 9 is considered an adjacent property. Lot 8 is currently vacant. Lot 44 is occupied by a one-story warehouse used for storage of floral decorations. Lot 41 is occupied by a two-story building used for management offices for the floral warehouse as well as additional storage space. Lot 50 is occupied by a two-story institutional building and paved parking lot used for the Armenian Cultural Center of America.

Based on information obtained during the visual inspection of the subject property, review of environmental databases and historic information, and contact with federal/state/local official agencies, the following recognized environmental conditions (RECs) and business environmental risks that may impact proposed redevelopment of the site were identified:

Recognized Environmental Conditions

A REC is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. It is the opinion of the environmental professional that the following represent RECs:

Suspected Undocumented Underground Storage Tanks

According to the EDR radius report and information maintained online by the New York State Department of Environmental Conservation (NYSDEC), no underground storage tanks (USTs) have been registered for any of the site buildings. However, during site reconnaissance, a fuel oil fill port and vent pipe were observed protruding from the exterior wall of the building at approximately three-feet above sidewalk grade at the southern

building perimeter. Further investigation of the fuel oil fill port and vent pipe location on the interior of the building revealed two ½-inch-diameter copper lines connected to a vacuum pump, fuel oil filter, and vacuum gauge. According to warehouse personnel, fuel oil is regularly delivered to the warehouse. The ½-inch fill and return lines were observed to be connected to the overhead ventilation ductwork; however, a detailed inspection of the fill/return line connections could not be performed due to stored materials related to the current site use. It is the opinion of the environmental professional that the potential presence of a heating oil UST beneath the lots or adjacent sidewalks represents REC.

Historic Use of the Subject Property

Based on the review of historical Sanborn Fire Insurance Maps, a railroad spur was present on Lot 50 in 1902, a sheet metal works including a welding shop occupied Lot 44 in 1951, and the existing located on Lot 44 was labeled for unspecified manufacturing from 1981 through 2006. Based on the review of the City Directory Abstract, furniture and clothing manufacturing operations were completed at the site between 1962 and 1970. Due to the potential use of chemicals associated with historical site operations, it is the opinion of the environmental professional that the historical site use had the potential to impact subsurface conditions at the site. As such, the historic use of the subject property is considered a REC.

Open NYSDEC Spill No. 9304343 at Adjacent Property to the North (Lot 9)

Lot 9 was most-recently occupied by a gasoline filling station, automobile repair shop, and car wash. According to the EDR radius report, information maintained online by NYSDEC, and documentation provided by the User, NYSDEC Spill No. 9304343 was assigned to the 69-02 Queens Boulevard (Lot 9) property in 1993 as the result of an equipment failure at the former Branded Exxon Station, and benzene, toluene, ethylbenzene, and xylene (BTEX) and methyl tertiary butyl ether (MTBE) were reported to have impacted soil and groundwater quality beneath the site. Following the release, remedial investigations and remedial actions were conducted from 2004 onwards. Cleanup activities are ongoing and are expected to be completed as part of site redevelopment activities. Documentation provided by the User indicates that downgradient monitoring wells along 69th Street have not been impacted; however, no monitoring wells have been installed or sampled on the subject property to confirm that no downgradient impacts exist. Based on the ongoing remediation efforts at this site and its proximity to and upgradient location relative to the subject property, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from this site is moderate and that this site represents a potential vapor intrusion concern. Therefore, this site constitutes a REC.

Business Environmental Risks

A BER is defined as a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of BER issues may involve addressing one or more non-scope considerations. It is the opinion of the environmental professional that the following represent business environmental risks:

Potential Presence of Undocumented Underground Storage Tanks (UST)

The site has historically been operated for residential, commercial, industrial, and unspecified manufacturing purposes may have been developed with buildings of unknown use prior to the earliest reviewable records (1902). One undocumented UST was identified during site reconnaissance as discussed above. It is the opinion of the environmental professional that there is potential for additional heating oil USTs to be present beneath the lots or adjacent sidewalks, which represents a business environmental risk. This risk will be partially addressed as part of any site investigation. Additionally, during any proposed site redevelopment a contingency plan to properly remove and dispose of any USTs that may be encountered in accordance with state and local regulations should be employed.

Historic Urban Fill

Based on the urban density of the area, it is likely that the subject site area contains historic urban fill which is typically characterized by elevated concentrations of poly-aromatic hydrocarbons (PAHs) and metals. The presence of fill will require implementation of soil handling and management procedures to address excavation, reuse, handling, and possible offsite disposal of this material if the site were to be redeveloped.

Non ASTM Scope Items

Hazardous Building Materials

Due to the age of the buildings it is likely that asbestos containing materials (ACM) and lead-based paint (LBP) are present in the structures. Completion of an asbestos survey will be required if demolition or renovation of the onsite building is proposed and completion of a lead-based paint assessment is recommended prior to the initiation of any renovation activities.

1.0 INTRODUCTION

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) has completed a Phase I Environmental Site Assessment (ESA) of a ±40,712 square foot site located at 69-23 and 69-39 47th Avenue and 46-12 70th Street, Queens, Queens County, New York (Figure 1).

This ESA was conducted to identify current or potential environmental concerns and/or Recognized Environmental Conditions (RECs) resulting from past or current activities on the subject property, as well as to evaluate immediately surrounding environs with the potential to impact upon the property. The assessment consisted of a site reconnaissance of all accessible property areas, a review of State and Federal environmental databases as they concern the subject property and surrounding areas, contact with Federal, State and local agencies, a review of Sanborn Fire Insurance Maps of the subject property and surrounding areas, and a review of local/county records.

The ESA was conducted in a manner consistent with industry standard and practice and in accordance with the Standards of the American Society for Testing and Materials (ASTM) E1527-13 Standard Practice for Environmental Site Assessments. Any deviations from this practice are provided in Section 11.0 of this report.

2.0 RELIANCE/LIMITATIONS

This ESA report was prepared for Madison Realty Capital, for a portion of the Proposed 69-02 Queens Boulevard Development and for the objectives of due diligence. The report is intended to be used in its entirety. Excerpts taken from this report are not necessarily representative of the assessment findings. Langan cannot assume responsibility for use of this report for any property other than the subject property addressed herein, or by any third party without a written authorization from Langan.

Langan's scope of services, as described in the proposal dated 11 July 2017, was limited to that agreed to with Madison Realty Capital and no other services beyond those explicitly stated are implied. No exploratory borings, sampling of soil, soil vapor, or groundwater, or laboratory analysis were performed by Langan as part of the scope of services.

This Phase I ESA was not intended to be a definitive investigation of possible environmental impacts at the subject property. The purpose of this investigation was limited to determining if there is reason to suspect the possibility of Recognized Environmental Conditions (RECs) at the subject property. It should be understood that even the most comprehensive Phase I ESA may fail to detect environmental liabilities at a particular site. Therefore, Langan cannot "insure" or "certify" that the subject property is free of environmental impacts. No expressed or implied representation or warranty is included or intended in this report, except that our services were performed, within the limits prescribed by our client, with the customary thoroughness and competence of our profession. The user is cautioned that federal, state, and local laws may impose environmental obligations that are beyond the scope of ASTM Practice E 1527-13.

The conclusions, opinions and recommendations provided in this report are based solely on the following activities:

- Visual observations of the subject property and the immediate vicinity at the time of Langan's site visit;
- Review of relevant available historical information; and,
- Correspondence and/or discussion with personnel knowledgeable about the site.

The conclusions, opinions and recommendations are intended exclusively for the purpose stated herein, at the specified subject property, as it existed at the time of our site visit.

The User is responsible for the review and identification of environmental liens, activity, and use limitations, and for ascertaining reasons for significantly lower purchase property price in accordance with Section 6 of ASTM E 1527-13. A questionnaire covering these above-concerns was provided to Madison Realty Capital; however, a completed questionnaire was not returned and a blank copy is included as Appendix A. In addition, similar questionnaires were provided for completion by the property owner but were not returned; a blank copy is included as Appendix B. If any of these above-concerns were uncovered during the course of the Phase I ESA, they are addressed in this report.

The report findings are based in part on information provided by local, county and state officials and environmental databases from Federal and State sources. Langan assumes no responsibility for the accuracy and completeness of this information. Visual observations discussed in this report represent conditions at the time of the site inspection and may not be representative of the past or future site conditions.

As per ASTM E1527-13, Phase I ESA Report deviations, as well as professional opinions regarding these deviations, are listed in Section 11.0.

This ESA has been prepared for the sole use of Madison Realty Capital. This ESA should not be relied upon by other parties without the express consent of Langan and Madison Realty Capital. In accordance with Section 4.6 of ASTM E 1527-13 and 40 CFR §312.20, a Phase I ESA may be considered valid for one year starting from the commencement date of the assessment listed on the front cover of this report. The formal property acquisition/real estate transaction must take place during this period. However, the following components must be conducted or updated within 180 days (six months) prior to the date of the property acquisition/real estate transaction:

- Interviews with past and present owners, operators and occupants;
- Searches for recorded environmental cleanup liens;
- Review of governmental records;
- Site Reconnaissance of the property and adjoining properties; and,
- The declaration by the Environmental Professional.

3.0 SITE DESCRIPTION

The subject property is designated as Block 2432, Lots 8, 41, 44, and 50 by the New York City Department of Finance (Figure 2). Lot 8 is currently vacant. Lot 44 is occupied by a one-story warehouse used for storage of floral decorations. Lot 41 is occupied by a two-story building used for management offices for the floral warehouse as well as additional storage space. Lot 50 is occupied by a two-story institutional building and paved parking lot used for the Armenian Cultural Center of America.

The subject property is bound to the north by a predominantly vacant lot that was most-recently occupied by a gasoline filling station, automobile repair shop, and car wash as well as a property currently undergoing redevelopment, to the east by 70th Street followed by properties undergoing redevelopment, to the south by 47th Avenue followed

by a church and the Long Island Railroad (LIRR) right-of-way, and to the west by the LIRR right-of-way and 69th Street followed by the Long Island Railroad right-of-way. The subject property is located within an area of dense residential and commercial development between Queens Boulevard and 47th Avenue.

According to information maintained online in the digital Zoning and Land Use (ZOLA) map by the New York City Planning Commission (http://maps.nyc.gov/doitt/nycitymap/template?applicationName=ZOLA), Lot 8 is currently zoned for residential use (R7X) with a commercial overlay (C2-3) and Lots 41, 44, and 50 are currently zoned for residential and manufacturing use (R7X and M1-1) with a commercial overlay (C2-3).

4.0 GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

For the purpose of report completeness and to better understand the subsurface conditions, the geologic conditions in the general area of the subject property are discussed in this section.

The "Surficial Geologic Map of New York" by the New York State Museum State Geological Survey indicates that the surficial geology at the site consists of till which is generally an impermeable layer comprised of poorly sorted and variably sized clasts. According to the "Bedrock and Engineering Geologic Maps of New York County" by Charles A. Baskerville the site is underlain by the Hartland Formation which consists of interbedded units of feldspar, schist, and amphibolite.

Test borings were completed in the vicinity of the subject property during a preliminary geotechnical investigation conducted by Langan in 2007 at a site located approximately 400-feet to the north of the subject property at Queens Boulevard and 45th Avenue. The site subsurface conditions documented during this geotechnical investigation consisted of an approximately 5- to 18-foot thick layer of miscellaneous fill underlain by successive layers of sand and silty sand followed by gravelly sand and clay. Borings extended to a maximum depth of 177-feet below ground surface (b.g.s.). Bedrock was not encountered. Groundwater was encountered between 10- and 15-feet b.g.s. within the two observations wells that were installed at the site.

Based on information provided by the User, which will be discussed in Section 5.0 below, groundwater flow within the overburden material is anticipated to be to the southwest.

5.0 USER PROVIDED INFORMATION

A questionnaire was completed by the User and is included in Appendix A. Information obtained from this questionnaire is discussed in the sections below. Documents provided by the User are discussed in this section.

5.1 Title Records

A Title Search was not provided by the User for this ESA. Langan completed a limited review of available online records maintained by the New York City Department of Finance to determine current and former site ownership. These records are discussed in Section 8.0.

5.2 Environmental Liens or Activity and Use Limitations

Reasonably ascertainable recorded land title records and lien records that are filed under federal, tribal, state, or local law should be reviewed to identify environmental liens or activity and use limitations, if any, that are currently recorded against the property. Any environmental liens or activity and use limitations are required to be reported to the Environmental Professional conducting the ESA per ASTM E1527-13.

No environmental liens or use limitations (engineering or institutional controls) were identified for the subject property in the EDR report or by the User.

5.3 Specialized Knowledge

Specialized knowledge is defined by ASTM E 1527-13 as *"any specialized knowledge or experience that is material to recognized environmental conditions in connection with the property*". For example, a User is involved in the same line of business as current or former occupants of the property or adjoining property and has specialized knowledge of the chemicals and processes used in this line of business.

The User did not provide specialized knowledge material related to recognized environmental conditions in connection with the property as part of this ESA.

5.4 Valuation Reduction for Environmental Issues

In a transaction involving the purchase of a parcel of commercial real estate, the User shall consider the relationship of the purchase price of the property to the fair market value of the property if the property was not affected by hazardous substances or petroleum products. The User should try to identify an explanation for a lower price which does not reasonably reflect fair market value if the property were not contaminated.

No information related to a valuation reduction for environmental issues was provided to Langan.

5.5 Commonly Known Information

If the user is aware of any commonly known or reasonably ascertainable information within the local community about the property that is material to recognized environmental conditions in connection with the property, it is the User's responsibility to communicate such information. This information may include past uses of the property, specific chemicals that were used on site, spills or releases or environmental cleanups that have taken place.

No additional information regarding the environmental condition of the subject site was provided to Langan.

5.6 Documentation Provided by the User

No additional information regarding the environmental condition of the subject site was provided to Langan. However, the User provided the following documents related to the adjacent property to the north (69-02 Queens Boulevard, Lot 9) and a nearby property to the north (69-20 Queens Boulevard, Lot 21) that are part of the same proposed redevelopment as the subject property:

- Underground Storage Tank Closure Report – 69-02 Queens Boulevard, NYSDEC Spill No. 032172, prepared by Leggette, Brashears, & Graham, Inc. (LBG), dated April 2004;
- Soil Vapor Extraction and Air Sparging Pilot Tests Report – 69-02 Queens Boulevard, prepared by LBG, dated October 2004;

- Quarterly Reports Report – 69-02 Queens Boulevard, prepared by LBG, dated 2004 through 2015;
- Technical Design and Specifications Document Soil Vapor Extraction/Air Sparging System – 69-02 Queens Boulevard, prepared by LBG, dated January 2005;
- Operation, Maintenance, and Monitoring Plan – 69-02 Queens Boulevard, prepared by LBG, dated January 2006;
- System Start-Up Report – 69-02 Queens Boulevard, prepared by LBG, dated June 2006;
- Subsurface Investigation – 69-02 Queens Boulevard, prepared by LBG, dated August 2006;
- Additional Subsurface Investigation – 69-02 Queens Boulevard, prepared by LBG, dated 4 June 2008;
- Multi-Phase Extraction Feasibility Test – 69-02 Queens Boulevard, prepared by LBG, dated November 2009;
- Multi-Phase Extraction Feasibility Investigation – 69-02 Queens Boulevard, prepared by LBG, dated March 2010;
- Remedial Action Work Plan – 69-02 Queens Boulevard, prepared by LBG, dated 30 July 2010;
- Remedial Action Event Summary – 69-02 Queens Boulevard, prepared by LBG, dated 20 March 2015;
- Subsurface Investigation Report – 69-02 Queens Boulevard, prepared by Hydro Tech Environmental, Corp. (Hydro Tech), dated 24 March 2015;
- UST Closure Work Plan – 69-02 Queens Boulevard, prepared by LBG, dated 3 April 2015;
- Affidavit of Compliance – Tank Removals – 69-02 Queens Boulevard, prepared by American Petroleum Equipment and Construction, dated 14 September 2015;
- Comprehensive Environmental Site Assessment Report – 69-20 Queens Boulevard, prepared by Hydro Tech, dated 19 October 2015; and,
- Phase I ESA – 69-02 & 69-20 Queens Boulevard, prepared by Hydro Tech, dated 21 January 2016.

In addition to the documents identified above, correspondence between the site owner, environmental consultants, NYSDEC, and New York City Office of Environmental Remediation (NYCOER) pertaining to approval of proposed remedial actions at 69-02 Queens Boulevard as well as issuance of a Notice of

No Objection for the removal of the USTs and infrastructure associated with the former gasoline filling station were also provided by the User.

As discussed in Section 7.0 below, NYSDEC Spill No. 9304343 was assigned to the 69-02 Queens Boulevard property in 1993 as the result of an equipment failure at the former Branded Exxon Station, and gasoline and MTBE were reported to have impacted soil and groundwater quality beneath the site. Following the release, remedial investigations and remedial actions were conducted from 2004 onwards. In 2004, five 6,000-gallon gasoline USTs were reportedly removed and contaminated soil was excavated between 14- and 20-feet b.g.s. Information in the UST closure report indicates that NYSDEC Spill No. 0312712 (which was later consolidated with Spill No. 9304343) was assigned to the site as a result of these activities. Post-excavation endpoint soil samples were collected that exhibited elevated concentrations of volatile organic compounds (VOCs) above the regulatory standards. An air sparge/soil vapor extraction (AS/SVE) system was installed at the site to address remaining impacts. Operation of the SVE portion of the system commenced in October 2005 and operation of the AS portion commenced in June 2006. SVE/AS was discontinued in November 2011.

A groundwater monitoring and sampling program was implemented prior to December 2004 and continued through May 2015, which revealed that free product had not been observed in any wells between December 2013 and May 2015. The most recently quarterly reports (March and June 2015) documented that groundwater flow was determined to be to the south and southwest during each event, respectively. Additional remedial activities conducted at the site included in-situ chemical oxidation (ISCO) events and free product recovery at 12 on-site wells in the southwestern portion of the site, using hand bailers, high vacuum extraction (HVE), and surfactant-enhanced multi-phase extraction (MPE) methods. Hydro Tech identified in the Subsurface Investigation report, dated 24 March 2015, that overall groundwater results indicated that the BTEX (benzene, toluene, ethylbenzene, and xylenes) and MTBE plume is confined to the southwestern portion of the site and does not extend off-site in any concentrations of significance as compared to the concentration detected on-site. However, it should be noted that no wells were installed or monitored on the subject property, portions of which are located

hydraulically downgradient of the 69-02 Queens Boulevard site according to the groundwater flow diagrams provided in the report.

As of September 2015, the removal and disposal of five additional 4,000-gallon USTs and associated product and vent lines had been conducted. Following the removal, a Comprehensive Environmental Site Assessment Report was prepared by Hydro Tech, dated 19 October 2015, for the property adjacent to 69-02 Queens Boulevard, located at 69-20 Queens Boulevard. According to Hydro Tech, the presence of an open spill associated with soil and groundwater contamination at the 69-02 Queens Boulevard property should be considered a potential vapor encroachment concern at the 69-20 Queens Boulevard property. Subsurface investigation results at the 69-20 Queens Boulevard property revealed that soil vapors associated with gasoline compounds and chlorinated solvents were detected at trace to moderate concentrations. Gasoline vapors were reportedly equally distributed across the site and, based on these findings, Hydro Tech concluded that the gasoline spill case at the 69-02 Queens Boulevard property did not impact the soil vapor quality beneath the 69-20 Queens Boulevard property. Elevated concentrations of chloroform and tetrachloroethene (PCE) in soil vapor were attributed to an unknown off-site source.

6.0 REVIEW OF PREVIOUS LAND USE

Historic Sanborn Fire Insurance Maps and City Directory Information were requested from Environmental Data Resources (EDR) of Shelton, Connecticut. Provided are descriptions of the materials provided by these resources.

6.1 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps of the subject property and surrounding area dated 1902, 1914, 1932, 1951, 1981, 1982, 1986, 1988, 1989, 1991, 1992, 1993, 1994, 1996, 1999, 2001, 2002, 2003, 2004, 2005, and 2006 were obtained from Environmental Data Resources and reviewed as part of this ESA. Copies of Sanborn Maps are provided in Appendix C.

1902 Sanborn Map

Subject Property: Lot 8 is vacant. The current extents of Lots 41 and 44 are identified as a single property. Lot 41 is occupied by a two-story store and two-story residential building. The central, southern, and southeastern portions of

Lot 44 are undeveloped; the remainder of Lot 44 is occupied by a three-story residential building, two-story building occupied by a carpenter's shop, and a one-story and a two-story stable, and a one-story building of unspecified use. The current extents of Lot 50 consists of portions of six undeveloped properties and a portion of one larger property which is undeveloped except for railroad spur, a portion of which are located within the extents of the subject property, a vacant two-story building, and a 40-foot tall iron chimney, which are not located within the subject property extents.

Adjoining Properties: The adjoining properties to the north of Lots 8 and 50 are occupied by the vacant two-story building and the 40-foot high iron chimney, undeveloped land, a one-story bowling alley, one-story coop, and one one-story and one two-story building of unspecified use. Thomson Avenue and the Bushwick & Newtown Turnpike are shown to the north of the adjacent property to the north and has not yet been widened to become Queens Boulevard; therefore, adjacent properties to the north are larger in 1902 than they are currently and include a one-story shed, three-story saloon, and two-story residential building in the northern portion of the property that will be removed when Queens Boulevard is constructed. The adjoining property to the north of Lots 41 and 44 is occupied by a three-story store and one-story shed, and an undeveloped backyard behind the store.

The adjoining properties to the east of Lots 41 and 44 are occupied by three two-story stores, two two-story residential building, one one-story residential building, one two-story saloon, and three stables. The adjoining properties to the south of Lots 41, 44, and 50 are occupied by the following: a railroad spur; five vacant properties; one two-story residential building; one one-story wagon shed; one one-story shed; one three-story store; one two-and-a-half-story store; one one-story feed building; and two stables. The adjoining properties to the west of Lots 8 and 50 are vacant. A Chinese laundry is located to the north across the Bushwick & Newtown Turnpike and coal yard bisected by the railroad spur is located across the street to the south.

1914 Sanborn Map

Subject Property: Conditions on Lots 8, 41, and 50 shown on the 1914 Sanborn Map are similar to those shown on the 1902 Sanborn Map. Lot 44 is occupied by a three-story residential building, two-story wood shop, one-story coop, a two-

story stable, and one one-story building of unspecified use; the property is operated by C. Tymann Contractor.

Adjoining Properties: Conditions shown on the 1914 Sanborn Map are similar to those shown on the 1902 Sanborn Map with exception that the adjoining property to the north of Lots 8 and 50 is occupied by the Moisant International Aviators Incorporated; the formerly vacant two-story building now houses a sheet iron works, a machine shop, wood working area, and assembling room. The fuel source is identified as coal. The former saloon to the north is now identified as a store, and the railroad spur and iron chimney are no longer shown. The adjoining properties to the east of Lots 41 and 44 are occupied by two two-and-a-half-story stores, two two-story stores, one one-and-a-half-story residential building, one two-story residential building, one two-and-a-half-story residential building, six one-story buildings of unspecified use, and a one-story stable. The adjoining properties to the south of Lots 41, 44, and 50 are occupied by the following: the LIRR tracks and right-of-way; one one-story carriage house; two two-and-a-half story stores; and stable; and one one-story building of unspecified use. The adjoining property to the west of Lots 8 and 50 is occupied by the LIRR tracks right-of-way. The Chinese laundry is no longer shown to the north of the subject property.

1932 Sanborn Map

Subject Property: Conditions on Lot 50 shown on the 1932 Sanborn Map are similar to those shown on the 1914 Sanborn Map. Lot 8 is occupied by a store. Lot 41 is occupied by two two-story residential buildings. Lot 44 is occupied by two one-story automobile garages, one two-story vacant building, and two one-story buildings of unspecified use.

Adjoining Properties: Conditions shown on the 1932 Sanborn Map are similar to those shown on the 1914 Sanborn Map with exception that the adjoining property to the north of Lots 8 and 50 is occupied by an automobiles sales and repair center that includes a paint spraying area and one gasoline tank. A separate portion of the property is shown with four one-story buildings consisting of a store, automobile painting, an automobile garage, and a kitchen. Queens Boulevard has been widened and the extents of the adjoining property to the north of Lot 50 are approximately the same as the current property extents. The adjoining property to the north of Lots 41 and 44 is occupied by a

two-and-a-half story residential building, one-story automobile garage, and one-story building of unspecified use. The adjoining properties to the east of Lots 41 and 44 are occupied by two two-story stores; one one-story automobile garage; one one-story building used for painting; two two-story attached residential builldings; one one-and-a-half story residential building; and one two-story vacant building; and one vacant property. The adjoining properties to the south of Lots 41, 44, and 50 are occupied by the LIRR tracks and right-of-way; two one-story automobile garages; one three-story store; and one two-and-a-half story store attached to a two-story residential building.

1951 Sanborn Map

Subject Property: Conditions on Lots 8 and 41 shown on the 1951 Sanborn Map are similar to those shown on the 1932 Sanborn Map. Lot 44 is occupied by one one-story automobile garage, one two-story sheet metal shop, one one-story building used as a sheet metal works, one one-story building used for welding, and one one-story building of unspecified use. Conditions on Lot 50 shown on the 1951 Sanborn Map are similar to those shown on the 1932 Sanborn Map with exception that the northwestern corner is occupied by a contractor's yard.

Adjoining Properties: Conditions to the west of Lots 8 and 50 and to the north of Lots 41 and 44 shown on the 1951 Sanborn Map are similar to those shown on the 1932 Sanborn Map. The adjoining property to the north of Lots 8 and 50 is occupied by a private garage and truck repair center, paint spraying area, and gasoline filling station with three gasoline tanks is now shown. The adjoining properties to the north of Lot 50 are predominantly vacant with exception of a one-story sheet metal works building and a store; the former automobile garage and painting facility are no longer shown. Conditions to the east of Lots 41 and 44 shown on the 1951 Sanborn Map are similar to those shown on the 1932 Sanborn Map with exception that the one-story building used for painting and two-story vacant building have been demolished. Conditions to the south of Lots 44 and 50 shown on the 1951 Sanborn Map are similar to those shown on the 1932 Sanborn Map with exception that the two-and-a-half-story store is now occupied by an undertaker.

1981 Sanborn Map

Subject Property: Lot 8 is vacant. Lot 41 is occupied by a two-story residential building, two-story building used for woodworking, and one-story building of

unspecified use. Lot 44 is occupied by a one-story manufacturing building constructed in 1962. Lot 50 is predominantly vacant with exception of a two-story plumbing warehouse constructed in 1962. A one-story commercial building constructed in 1972 appears to be located within the subject property extents, but based on the review of aerial maps, the building is mapped incorrectly and is located on the adjacent property to the north.

Adjoining Properties: The adjoining property to the north of Lots 8 and 50 is occupied by a filling station and associated one-story canopy and one-story building, a one-story commercial building, and a parking area. The adjoining property to the north of Lot 50 is occupied by a one-story motorcycle sales and service center and one-story store. The adjoining property to the north of Lots 41 and 44 is occupied by a two-and-a-half story residential building. Conditions to the east of Lots 41 and 44 shown on the 1981 Sanborn Map are similar to those shown on the 1951 Sanborn Map with exception that the formerly vacant property is occupied by a one-story manufacturing building constructed in 1962. Conditions to the south of Lots 41, 44, and 50 shown on the 1981 Sanborn Map are similar to those shown on the 1951 Sanborn Map with exception that the three-story store is now identified as a three-story flat. The coal yard formerly located to the south of the subject property is now occupied by an automobile repair facility and parking lot.

1982 Sanborn Map

Subject Property: Conditions shown on the 1982 Sanborn Map are similar to those shown on the 1981 Sanborn Map with exception that the two-story former plumbing warehouse on Lot 50 is occupied by the St. Illuminator Armenian School.

Adjoining Properties: Due to the poor quality of the map, most details of the adjoining properties are not distinguishable. Based on what is distinguishable, it is inferred that the conditions shown on the 1982 Sanborn Map are similar to those shown on the 1981 Sanborn Map.

1986, 1988, 1989, 1991, and 1992 Sanborn Maps

Subject Property: Conditions on Lots 8, 44, and 50 shown on the 1986 through 1992 Sanborn Maps are similar to those shown on the 1982 Sanborn Map with the exception that Lot 41 is now occupied by a two-story residential building.

Adjoining Properties: Conditions to the north, east, and west shown on the 1986 through 1992 Sanborn Maps are similar to those shown on the 1982 Sanborn Map with the exception that the adjoining property to the south of Lots 41 and 44 is occupied by a one-story warehouse.

1993 Sanborn Map

Subject Property: Conditions shown on the 1993 Sanborn Map are similar to those shown on the 1992 Sanborn Map.

Adjoining Properties: Conditions shown on the 1993 Sanborn Map are similar to those shown on the 1992 Sanborn Map with exception that an additional one-story building has been constructed on the adjoining property to the north of Lots 8 and 50.

1994, 1996, and 1999 Sanborn Maps

Subject Property: Conditions shown on the 1994 through 1999 Sanborn Maps are similar to those shown on the 1993 Sanborn Map.

Adjoining Properties: Conditions shown on the 1994, 1996, and 1999 Sanborn Maps are similar to those shown on the 1993 Sanborn Map with exception that the warehouse formerly to the south of Lots 44 and 50 is now occupied by a one-story church.

2001, 2002, 2003, 2004, 2005, and 2006 Sanborn Maps

Subject Property: Conditions shown on the 2001 through 2006 Sanborn Maps are similar to those shown on the 1999 Sanborn Maps with exception that the two-story building on Lot 41 is now labeled for commercial use.

Adjoining Properties: Conditions shown on the 2001, 2002, 2003, 2004, 2005, and 2006 Sanborn Maps are similar to those shown on the 1994, 1996, and 1999 Sanborn Maps.

Based on the review of Sanborn Fire Insurance Maps, the subject property has historically been occupied by a railroad spur, a building labeled for unspecified manufacturing use, and a sheet metal works/shop included a building for welding. It is the opinion of the environmental professional that this represents a REC.

6.2 City Directory Search

City directory information was obtained from EDR in an attempt to identify past uses of the subject property and establishments in the surrounding area. As provided in the City Directory Abstract (Appendix D), business directories including city, cross-reference and telephone directories were reviewed. City directories include the site address (69-23 47th Avenue, 69-39 47th Avenue, 46-10 70th Street, and 46-12 70th Street) for the years 1934 through 2014 including 1934, 1962, 1967, 1970, 1976, 1983, 1991, 2000, 2005, 2010, and 2014.

The City Directory Report consists primarily of private residential, commercial, manufacturing and institutional listings including an Armenian cultural institution currently identified as the Armenian Cultural Center of Saint Illuminator's Armenian School (1983-2014), Atlas Floral Decorators (2005-2014), Powers Regulator Company (1967-1976), furniture manufacturing (1962-1970), and a uniform manufacturer (1967).

Based on the review of the City Directory Abstract, listings over the years for surrounding properties did not identify any businesses of potential concern.

7.0 REGULATORY DATABASE SEARCH

A database search report that identifies sites listed on state and federal databases within the ASTM-required radii was obtained for the property from Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut. A copy of EDR's complete report is provided as Appendix E.

The report included the following databases specified by the ASTM Phase I protocol as well as non-ASTM databases (not listed):

RECOMMENDED/**REQUIRED** SEARCH DISTANCES
1.0-mile
Federal National Priority List (NPL) Federal RCRA CORRACTS Facilities List State- and Tribal-Equivalent NPL
0.5-mile
Federal Delisted NPL Federal CERCLIS/SEMS** Federal CERCLIS NFRAP List/SEMS-Archive**

RECOMMENDED/**REQUIRED** SEARCH DISTANCES
Federal RCRA non-CORRACTS TSD Facilities List
State- and Tribal-Equivalent CERCLIS
State and Tribal Landfill and/or Solid Waste Disposal Site Lists
State and Tribal Leaking Underground Storage Tanks (LUSTs)
State and Tribal Voluntary Cleanup Sites
State and Tribal Brownfields Sites
Subject Property and Adjacent Properties Only
Federal RCRA Generators List
State and Tribal Registered Storage Tanks
Subject Property Only
Federal ERNS List
Federal Institutional Controls/Engineering Controls Registries
State and Tribal Institutional Controls/Engineering Controls Registries

* A description of these databases and a complete listing of sites identified on the above-referenced databases is provided in the EDR Report.

** As of March 2016, SEMS replaced the CERCLIS database and SEMS-Archive replaced the CERCLIS NFRAP database.

Additionally, the potential for vapor intrusion impacts to the subject property from onsite or nearby sources was evaluated. Potential vapor intrusion concerns (pVICs) are discussed below.

Subject Properties

The subject properties were not listed in any of the databases searched by EDR or orphan site listings.

Surrounding Properties – ASTM-Required Search Distances

Langan reviewed these databases in accordance with the ASTM-required search radii.

Database	No. of Sites within 1-mile	Adjacent sites (Y/N)	No. of Adjacent Sites
NPL	0	N	--

Database	No. of Sites within 1/2-mile	Adjacent sites (Y/N)	No. of Adjacent Sites
RCRA-TSDF	0	N	--

Surrounding Properties – Recommended Search Distances

Based on the large number of database records identified within one mile of the subject property (234), Langan limited the review of the remaining surrounding properties to records associated with the subject property and adjacent properties with the exception of spills and drycleaners, the review of which was limited to within 1/8-mile of the subject property. It is the environmental professional's opinion that based on the dense development of the site area that the review of the database pertaining to this more limited area is appropriate.

Langan evaluated the following to determine whether additional environmental records with respect to these facilities, including the orphan sites, should be reviewed:

- Case status (i.e., whether a No Further Action letter has been issued or a case has been closed);
- Type of database and whether the presence of soil or ground water contamination is known;
- Distance of the site from the subject property; and,
- Whether the site is upgradient or downgradient of the subject property based on local topography and the anticipated southwestern groundwater flow direction.

Langan reviewed the information provided using the above criteria and the findings are discussed below.

Database	No. of Sites Reported	No. of Adjacent Sites
CORRACTS	1	0
RCRA LQG	1	1
RCRA CESQG	3	1
RCRA NonGen/NLR	42	0
NY SHWS	1	0
NY SWF/LF	5	0
NY UST	10	1
NY CBS	1	0
NY AST	22	1
NY LTANKS	32	2
NY Spills	9	2
NY Drycleaners	2	0
NY E Designation	22	2
NY Manifest	41	4
NJ Manifest	3	1

Database	No. Cases Open/Closed (1/8-mile)	Open Upgradient Cases	No of Adjacent Sites
NY LTANKs	0 / 5	0	2
NY Spills	2 / 11	1	2

Langan reviewed the information provided using the criteria outlined above; and the findings for adjacent and notable sites are discussed in detail below.

69-02 Queens Boulevard

The adjacent site to the north located at 69-02 Queens Boulevard is identified in several of the databases reported by EDR. Based on the site investigations completed as discussed in Section 5.6 this site is located hydraulically upgradient of the subject property.

The site is identified as Exxon #70327 on the RCRA-CESQG, NJ Manifest, and NY Manifest databases. The site is identified on the RCRA-CESQG database for forms received by the United States Environmental Protection Agency (USEPA) on 1 January 2007 classifying the site as a conditionally-exempt small quantity generation (CESQG). Historical generator information includes forms received by the USEPA on 1 January 2006 classifying the site as a small quantity generator (SQG); on 10 August 2004 classifying the site as a large quantity generator (LQG) for the generation of ignitable waste and waste impacted with hazardous concentrations of benzene; on 26 May 2004 classifying the site as a SQG for the generation of ignitable waste and waste impacted with hazardous concentrations of benzene; on 8 August 2001 classifying the site as a CESQG for the generation of an undefined waste and waste impacted with hazardous concentrations of benzene; on 10 March 1994 classifying the site as a LQG; and on 13 March 1991 classifying the site as a CESQG. No violations are reported for the facility. Exxon #70327 is identified in the NJ Manifest database for the disposal of unidentified waste in 2004 and in the NY Manifest database for the disposal of waste impacted with hazardous concentrations of benzene in 2004 and the disposal of non-listed ignitable waste in 1992, 1993, 1994, and 2003.

The site is also identified as Exxon, Exxon Service Station, and Branded Exxon Station in the NY Spills and NY LTANKs databases for the releases summarized in the table below.

Database	Spill No.	Date Reported	Date Closed	Summary
NY Spills	0404766	8/1/2004	12/22/2006	The gasoline spill resulted from human error and was consolidated under Spill No. 9304343.
NY LTANKs	9701296	4/29/1997	4/29/1997	Stone around the fill tubes on-site were observed to be contaminated with gasoline at a concentration of 760 ppm. A retrofit was proposed to be completed.
NY LTANKs	0312172	2/2/2004	4/8/2004	Soil contamination was identified during tank removal activities. Consolidated under Spill No. 9304343.
NY Spills	0404768	8/3/2004	8/3/2004	Duplicate of 0404766. Consolidated under Spill No. 9304343.
NY Spills	0513187	2/16/2006	2/21/2006	A leaking pipe was observed to have spill 2 ounces of gasoline and the pump was shut down. Consolidated under Spill No. 9304343.
NY Spills	0901267	4/30/2009	6/19/2009	Water was found in a sump in the outer containment system of a fuel oil tank. The spill was determined to be non-petroleum related. Consolidated under Spill No. 9304343.
NY Spills	9811087	12/3/1998	5/14/1999	The diesel tank of a truck ruptured on site. The spill was cleaned up with absorbent material. Consolidated under Spill No. 9304343.
NY Spills	9304343	7/7/1993	Remains Open	Petroleum contamination found in soil during the installation of new USTs. Investigation and remediation has been conducted since 2004 and included tank removal, air sparge/soil vapor extraction (AS/SVE) system operation, installation of on-site and off-site groundwater monitoring wells, bailing of free product, enhanced fluid recovery (EFR), surfactant application, sodium persulfate injections, and high vacuum extraction (HVE) events. The USTs were removed in August 2015. A total of 4,861 tons of petroleum-contaminated soil was excavated and disposed from the site as part of the UST closure activities. Petroleum-impacted soil remains on-site due to buildings and building on adjacent property. Direct excavation subsequent to removal of the current site buildings is planned. As of August 2016, it was reported that free phase petroleum has not been detected in wells since November 2013. The spill remains open.

The site is also listed as 69th Street Car Wash in the EDR Hist Auto database for listings from 1969 through 2014 and as Cumberland Farms #70327 in the NY UST database as unregulated/closed PBS Site No. 2-192171 for five 4,000-gallon gasoline USTs removed in 2004; five 4,000-gallon gasoline/ethanol USTs removed in 2015; and two 550-gallon USTs of unknown contents removed in 2015.

The site is also listed as Lot 9, Tax Block 2432 and is identified in the NY E-Designation database for E-designation E-163 for Air Quality – HVAC fuel limited to natural gas; hazardous materials with Underground Gasoline Tanks Testing Protocol; and Window Wall Attenuation & Alternate Ventilation under CEQR No. 06DCP065Q and ULURP No. 060294ZMQ. Based on the review of documents maintained online by the New York City Planning Commission, this listing is associated with the

Maspeth/Woodside Rezoning. The site is also identified as TGAR Enterprises, Inc. located at 69-04 Queens Boulevard in the NY AST database as active PBS Site No. 2-611620 (expired on 7 July 2016) for two 275-gallon waste oil/used oil ASTs installed in 2011; one 275-gallon transmission fluid AST installed in 2011; and three 275-gallon motor oil AST. According to the EDR report as well as information maintained online by NYSDEC, the ASTs are all reportedly in-service.

Based on the ongoing remediation efforts at this site and its proximity to and upgradient location relative to the subject property, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from this site is moderate and that this site represents a pVIC. It is the opinion of the environmental professional that this site represents a REC.

RCRA Large Quantity Generators (LQG)

The RCRA LQG database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kg of hazardous waste per month or over 1 kg of acutely hazardous waste per month.

According to EDR, the only reported RCRA LQG site is Con Edison – Manhole 3317 located adjacent to the east and downgradient of the subject property at 46-19 70th Street. The site is identified in the LQG database for forms received by the USEPA on 5 February 2016 classifying the site as a LQG for the generation of waste impacted with hazardous concentrations of lead. No violations are reported for the facility. The site is also identified as Con Edison in the NY Manifest database for the disposal of waste impacted with hazardous concentrations of lead in 2015. The site is also listed as Con Edison – Opposite 46-19 70th Street and is identified on the NY Manifest database for the disposal of waste impacted with hazardous concentrations of lead in 2015.

Con Edison sites are typically associated with isolated hazardous waste generation and cleanup incidents. Due to the lack of violations for this facility, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from this site is low.

NY MANIFEST

The NY Manifest database lists and tracks hazardous waste from the generator through transporters to a TSD facility.

According to the radius report provided by EDR, the following NY Manifest sites are located adjacent to the subject property:

- Exxon #70327 – 69-02 Queens Boulevard
- Con Edison – Opposite 46-07 70th Street
- Con Edison – Opposite 46-19 70Th Street
- Con Edison – 46-19 70th Street

Exxon #70327, Con Edison – Opposite 46-19 70th Street, and Con Edison – 46-19 70th Street are discussed above. Con Edison located adjacent to the east-northeast and downgradient of the subject property opposite 46-07 70th Street is identified in the NY Manifest database for the disposal of waste impacted with hazardous concentrations of lead in 2015. Con Edison sites are typically associated with isolated hazardous waste generation and cleanup incidents. Due to the lack of violations for this facility, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from this site is low.

NY LTANKS

The NY LTANKS database contains an inventory of reported leaking storage tank incidents from April 1986 to the present. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents identified within this database are either tank test failures, tank failures or tank overfills.

According to the Radius Report provided by EDR, there are 4 NY LTANKS sites located within 1/8-mile of the subject property. Each of the spill cases associated with these sites was administratively closed between 1993 and 2006. The only LTANKS site located adjacent to and/or upgradient of the subject property is associated with the 69-02 Queens Boulevard property, which is discussed above and is associated with two closed LTANKS records. It is the opinion of the environmental professional that, with exception of the 69-02 Queens Boulevard property, that potential for adverse impacts to the subject property from these sites is low based on the closed regulatory status. As discussed above, based on the

ongoing remediation efforts at this site and its proximity to and upgradient location relative to the subject property, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from this site is moderate.

NY Spills & NY Hist Spills

The NY Spills and NY Hist Spills databases include data collected on spills reported to NYSDEC. It includes spills active as of April 1, 1986, as well as spills occurring since this date. The NY Hist Spills database contains records of chemical and petroleum spill incidents prior to 2002.

According to the Radius Report provided by EDR, there are 9 NY Spills sites within 1/8-mile of the subject property. Each of the NY Spills cases were administratively closed between 1997 and 2014, with exception of:

- Branded Exxon Station – 69-02 Queens Boulevard
- Mobil #17-HH7 – 68-09 Queens Boulevard

Branded Exxon Station is discussed above. Mobil #17-HH7 located to the northwest and downgradient of the subject property at 68-09 Queens Boulevard is identified in the NY Spills database for an incident that was reported on 28 September 1990 and assigned NYSDEC Spill No. 9007122. According to the NYSDEC case narrative provided by EDR, 4-inches of free product was encountered in monitoring wells installed at the site. There are several closed Spills cases associated with this property which have been consolidated under this Spill case, and the remediation of this site is being performed under Spill No. 9007122. Remedial actions included AS/SVE system operation and sodium persulfate injections. As of January 2016, concentrations of dissolved-phase hydrocarbons were decreasing in the monitoring wells in the southeastern portion of the site and free phase product was not observed. The maximum concentration of BTEX was 19,000 ug/l. Monitoring of the on-site and off-site wells and operation of the AS/SVE system is reportedly planned to continue. The spill remains open.

Due to the distance of this site (456-feet) and downgradient location relative to the subject property, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from the Mobil #17-HH7 site is low. Due to the cleanup activities completed and the closed regulatory status of the

remaining spill cases, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from the remaining sites is low, with exception of the Branded Exxon Station site. As discussed above, based on the ongoing remediation efforts at this site and its proximity to and upgradient location relative to the subject property, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from this site is moderate.

E-Designation

The E-Designation database is a list of New York City tax lots with potential hazardous material contamination, air, and/or noise quality impacts.

According to the EDR Radius Report, the following E-Designation sites are located adjacent to the subject property:

- Lot 9, Tax Block 2432 – 69-02 Queens Boulevard
- Lot 23, Tax Block 2432 – 69-28 Queens Boulevard

Lot 9, Tax Block 2432 is discussed above. Lot 23, Tax Block 2432 located adjacent to the north and downgradient of the subject property is identified on the NY E-Designation database for E-Designation E-163 for Air Quality – HVAC fuel limited to natural gas; hazardous materials with Underground Gasoline Tanks Testing Protocol; and Window Wall Attenuation & Alternate Ventilation under CEQR No. 06DCP065Q and ULURP No. 060294ZMQ. Based on the review of documents maintained online by the New York City Planning Commission, this listing is associated with the Maspeth/Woodside Rezoning.

Government Databases Review Conclusions

The 69-02 Queens Boulevard property, located adjacent to the subject property (described in detail above) could potentially impact subsurface conditions at the subject property, groundwater and soil vapor in particular, and may pose a moderate risk to the subject property and future redevelopment activities represents a potential vapor intrusion concern. It is the opinion of the environmental professional that this represents a REC.

Based on Langan's review of the sites identified above, environmental impacts to the subject property from the remainder of these sites are not anticipated.

8.0 GOVERNMENT AGENCY RECORDS REVIEW

Federal, state and local agencies were contacted via written correspondence, telephone interviews and/or personnel interviews regarding records of environmental concerns, violations, and/or permits, or any other potentially environmentally-relevant records on the subject property. In additional, government information that was readily available online on government websites was also reviewed. A listing of agencies/individuals contacted by Langan as part of this ESA is provided in Table 1. Copies of government correspondence are provided in Appendix F.

US Environmental Protection Agency (USEPA)

The USEPA online FOIL request form was submitted for the subject property. To date, no response has been received by Langan regarding this request. If any additional pertinent information is provided subsequent to issuance of this report that will change the conclusions of this report, it will be provided as an addendum.

Langan also reviewed the RCRAInfo Search, Enforcement and Compliance History Online, and the Superfund Enterprise Management System (SEMS) databases maintained online by USEPA. No records were identified for the subject property.

US Fish and Wildlife Service (US FWS)

Information regarding critical habitats or endangered species within the vicinity of the subject property was obtained from the US FWS Information Service Information for Planning and Conservation online database (http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action;jsessionid=8E0AF61206046AE7AC0F01D38BC87E45). No Federally-listed or proposed endangered or threatened species were known to exist at the subject property.

New York State Department of Environmental Conservation Region 2

Fawzy Abdelsadek, the Regional Enforcement Coordinator, was contacted by Langan and written file review requests were submitted for the subject property. To date, no response has been received by Langan regarding this request. If any additional pertinent information is provided subsequent to issuance of this report, it will be provided as an addendum. Langan also reviewed the Environmental Site Database records maintained online by the NYSDEC. No spills, storage tanks, or remediation sites were identified for the subject property.

NYSDEC Division of Fish, Wildlife, & Marine Resources

Langan reviewed records maintained online on the NYSDEC Environmental Resource Mapper (http://www.dec.ny.gov/gis/erm/) which revealed that no significant natural communities and rare plants and animals are found in the vicinity of the subject property. Based on these results, a written records request was not submitted.

New York State Department of Health (NYSDOH)

The NYSDOH Records Access Officer was contacted by Langan and a written file review request was submitted for the subject property. In letters dated 17 and 18 July 2017, Langan received acknowledgement of the records request. To date, no additional response has been received by Langan regarding this request. If any additional pertinent information is provided subsequent to issuance of this report that will change the conclusions of this report, it will be provided as an addendum.

New York City Department of Environmental Protection (NYCDEP)

The NYCDEP online FOIL request form was submitted for the subject property. To date, no response has been received by Langan regarding this request. If any additional pertinent information is provided subsequent to issuance of this report that will change the conclusions of this report, it will be provided as an addendum.

According to records maintained online by the NYCDEP Clean Air Tracking System (CATS), one current application for a boiler fired by an unspecified fuel source is documented for Lot 41. No records were identified for Lots 8, 44, or 50.

New York City Department of Health & Mental Hygiene (NYC DOHMH)

Ms. Rene Bryant, the NYC DOHMH Records Access Officer, was contacted by Langan and a written file review request was submitted for the subject property. To date, no response has been received by Langan regarding this request. If any additional pertinent information is provided subsequent to issuance of this report that will change the conclusions of this report, it will be provided as an addendum.

New York City Department of City Planning (NYC DCP)

An electronic version (effective zoning date 21 June 2017) of the NYC Zoning Map for the subject property was downloaded from the NYC DCP website (http://www.nyc.gov/html/dcp/html/zone/zh_zmaptable.shtml).

New York City Mayor's Office of Environmental Coordination (NYC MOEC)

Records maintained online by NYC MOEC through the CEQR Access Portal (https://a002-ceqraccess.nyc.gov/ceqr/) were reviewed on 18 July 2017. Lot 50 was identified as being a part of the CEQR program. According to information maintained online by NYC MOEC, an application was made to the Board of Standards and Appeals for a special permit to allow the proposed legalization and expansion of an existing school within portion of the existing building as well as a proposed addition to the building in a M1-1 zoning district. CEQR No. 96BSA091Q was assigned in 1996. The Lead Agency Letter and Environmental Assessment Statement are provided on the CEQR Access Portal. No additional information is provided.

'E'-Designation Status

The New York City Department of City Planning coordinated a program identifying properties for special environmental concerns based on documented historical use, neighborhood noise concerns, and neighborhood air quality issues. These properties are identified on 'E'-designated sites on zoning maps and in the NYC Department of Buildings (NYCDOB) Building Information System (BIS) database. The NYCDOB is restricted from issuing building permits for the property until the NYC Mayor's Office of Environmental Remediation (NYC OER) has reviewed information prepared by an environmental professional and made a determination to issue of "Notice-of-No-Objection" or a "Notice-to-Proceed" to the NYCDOB. Prior to the NYCOER's creation in 2008, the NYC Department of Environmental Protection (NYCDEP) conducted these reviews.

Langan reviewed the following information sources to determine if the subject property is listed as an 'E'-designated property: CEQR Environmental Designations List dated 14 July 2017 (http://www1.nyc.gov/assets/planning/download/pdf/zoning/zoning-text/appendixc_ tab1.pdf?r=031416), CEQR Restrictive Declaration List dated 27 June 2017 (http://www1.nyc.gov/assets/planning/download/pdf/zoning/zoning-text/appendixc_tab2.pdf?v=020416), and NYCDOB BIS on 18 July 2017 (http://a810-bisweb.nyc.gov/bisweb/bispi00.jsp). The subject property was not listed as an E'-designated or Restricted Declaration site based on these resources.

Fire Department of New York City (FDNY)

Information regarding the presence of petroleum or chemical storage tanks was requested from the FDNY. To date, no response has been received by Langan regarding this request. If any additional pertinent information is provided subsequent to issuance

of this report that will change the conclusions of this report, it will be provided as an addendum.

New York City Department of Buildings (NYC DOB)

Langan completed a limited review of available online records maintained by the NYC DOB. No information was available for Lot 8. The Certificate of Occupancy for Lot 41 identified that the building was approved for storage in the cellar and office on the first and second floors in 1987 with external parking for employees. No other CO's are available. According to NYCDOB, the Department of Finance (DOF) building classification is an office building. An active commercial low pressure boiler is identified in the basement.

The 1962 CO for Lot 44 identified that the building was approved for a factory, storage, office, and unloading space on the first floor. No other CO's are available. A work permit was issued for the building in 2002 to replace three oil-fired unit heaters with three oil-fired split HVAC units and install new gas service. According to NYCDOB, the DOF building classification is a warehouse.

The 2000 CO for Lot 50 identified that the building was approved for a school, multi-purpose room, office, boiler room, mechanical room, and accessory uses on the first floor, and community center, offices, and banquet hall on the second floor with and exterior parking area. The CO notes that there are sound attenuation, landscaping, and fire safety measures required for the building. The 1979 CO identified that the building was approved for a community center and day care center on the first floor, and a community center, offices, meeting rooms, assembly area, kitchen, and bathrooms on the second floor with exterior parking spaces. The 1963 CO identified that the building was approved for warehousing, loading, and unloading of trucks on the first floor, and offices on the second floor. According to NYCDOB, the DOF building classification is an educational structure.

New York City Department of Finance (NYC DOF)

A review of online records maintained by the NYC DOF was conducted as part of this ESA to determine current and former site ownership (http://www.nyc.gov/html/dof/html/home/home.shtml). Current and former ownership records obtained from NYC DOF is summarized in the following table:

Address	Owner's Name	Date of Ownership
69th Street (Lot 8)	Minnie Petovello George Frankian	Prior to 10/30/1970 10/30/1970
46-12 70th Street (Lot 41)	Exrs of Neumayer Anton, Richard J Neumayer, & Joseph W Neumayer Joseph W Neumayer Atfam Realty Corp Atlas Family & Melvin Bogursky Atlas & Sons LLC	Prior to 10/17/1975 10/17/1975 1/4/1985 12/7/1986 3/3/2008
69-39 47th Avenue (Lot 44)	Peter Pan Realty Inc Stfuna Realty Corp Atfam Rlty CP Atlas Family & Melvin Bogursky Atlas & Sons LLC	Prior to 3/18/1977 3/18/1977 Prior to 12/7/1986 12/7/1986 3/3/2008
69-23 47th Avenue (Lot 50)	Powers Regulator Company Armenian Cultural Assn of America Inc	Prior to 4/1/1977 4/1/1977

The ownership information listed above provides no additional information regarding environmental conditions related to past usage different than represented by review of other historical information sources.

9.0 SITE RECONNAISSANCE

Langan conducted an inspection of the site on 14 July 2017. The inspection included a walk-through inspection of the entire site for the purposes of identifying Recognized Environmental Conditions (RECs). Typical RECs may include:

Drum storage	Dumpsters	Aboveground storage tanks	Stained areas
Drains and Sumps	Wells	Underground storage tanks	Pump stations
Waste piles	Landfills	Loading and transfer areas	Boiler rooms
Pits, Ponds, Lagoons	Swales	Process air vents	Process sinks
Storm sewers	Trenches	Detention ponds	PCBs
Impoundments	Lagoons	Floor drains and piping	Transformers
Septic systems	Dry wells	Waste treatment areas	Capacitors
Rail spurs	Incinerators	Compressor discharges	Odors
Pools of liquid	Wastewater	Stressed vegetation	Surface waters

Limiting conditions encountered during the inspection of the site included the following:

- The interior of the site building on Lot 44 is used as a floral warehouse and, as such, much of the floor space was covered with stored floral material and could not be inspected; and,
- Lot 8 was enclosed with perimeter fencing and was inspected from public right of ways.

Photographs of the subject property taken during the site inspection are provided in Appendix G. Langan was accompanied by Mr. Sarkis Halep who provided access to onsite the building on Lot 50 and answered questions during the site inspection. Mr. Halep has been the facilities manager for the Armenian Cultural Center of America (site building on Lot 50) since 2003. A questionnaire was not completed by the property owner, operator, or site manager; a blank version is included as Appendix B. The inspection included a walk-through inspection of the entire site for the purposes of identifying Recognized Environmental Conditions (RECs) as detailed below.

Lot 8 (No Address)

As noted above, Lot 8 is enclosed with perimeter fencing and could not be directly inspected. However, based on observations made from public thoroughfares, the property consists of a vacant asphalt-paved lot. No staining was observed on the asphalt.

69-23 47th Avenue, Lot 50

A two-story building is located on Lot 50 and is currently used for the Armenian Cultural Center of America. The site building is constructed as slab-on-grade. Due to the topography of the site, which gently slopes down toward 47th Avenue, the building entrance at 47th Avenue is approximately three-feet above sidewalk grade. The first floor of the building contains bathrooms, a pantry, classrooms, an open assembly hall, a boiler room, utility room, and elevator mechanical room. The elevator mechanical room contains an electric motor powering a pulley-driven handicapped wheelchair elevator. The second floor contains bathrooms, a full kitchen, an office, and a banquet hall. One grease trap was observed in the second floor kitchen mounted below the sink. According to Mr. Halep, the grease trap is cleaned and certified every three months. Staining was not observed around or below the second floor grease trap.

The building is heated via hot water baseboard heaters connected to a natural gas-fired boiler. Two roof-mounted HVAC units were observed on the roof and cool the first and second floors separately. One small floor drain was observed in the floor of the boiler room to accommodate condensate/overflow from the hot water heater. Staining or odors were not observed around the floor drain.

Spray-on fireproofing was observed on exposed structural steel elements in the western stairway and was in good condition. The rest of Lot 50 includes a parking lot to the north of the site building and a parking lot to the west of the site building enclosed by chain link fencing. Two storm grates were observed in the parking lot to the west of the site building. The storm grate at the interior of the parking lot was inspected and did not contain staining or odors and appeared to be lined with concrete. According to Mr. Halep, the storm drain was connected to the New York City municipal sewer system. The storm drain to the south, closer to 47th Avenue, was observed to be filled in with soil and vegetation indicating that it was no longer in use. An inspection of the structure could not be completed due to the overgrowth and the presence of subsurface pipe connections could not be confirmed.

The far western portion of the parking lot is reportedly unused; however, two 55-gallon drums containing miscellaneous trash, two 5-gallon buckets containing waste oil, and a motor oil drainage pan were observed along the northern boundary of Lot 50. Stained pavement was observed in the vicinity of the 55-gallon drums and 5-gallon buckets. The pavement in the vicinity of the staining appeared to be in good condition and free of cracks. A one-foot strip of vegetation was observed adjacent to the stained pavement that did not appear to be stressed.

<u>69-39 47th Avenue, Lot 44</u>

A one-story warehouse used for floral decorations was observed on Lot 44 and is reportedly slab-on-grade construction. The majority of the building footprint is used for storage of floral arrangement/landscaping materials and the majority of the building floor could not be inspected as it was covered by these materials. The building contained bathrooms, an office, two loading bays that appeared to be used for storage, two walk-in-freezers (constructed on top of the building slab, separate from the building), and a bank of commercial grade floral refrigerators. The building is cooled using roof-mounted HVAC units and heated via overhead ducting.

The interior floor of the warehouse is approximately three-feet above sidewalk grade at 47th Avenue due to the topography of the area. A fuel oil fill port and vent pipe were observed protruding from the southern exterior wall of the site building at approximately three-feet above sidewalk grade. Further investigation of the fuel oil fill port and vent pipe location on the interior of the building revealed two ½-inch-diameter copper lines connected to a vacuum pump, fuel oil filter, and vacuum gauge. Floor staining was not observed in the vicinity of the ½-inch copper lines penetrating through the floor slab; however, deposits were observed on the exterior surface of the fuel oil filter housing. According to warehouse personnel, fuel oil is regularly delivered to the warehouse. The ½-inch fill and return lines were observed to be connected to the overhead ventilation ductwork; however, a detailed inspection of the fill/return line connections could not be performed due to stored materials related to the current site use.

A natural gas connection was also observed in the building warehouse coming from 47th Avenue and is reportedly fueling two hot water heaters located in the bathrooms.

46-12 70th Street, Lot 41

A two-story residential building with a basement is located on Lot 41 and is currently used as the management offices for the adjacent floral warehouse and for additional storage space. The management offices and floral warehouse are connected via a passageway from the southern boundary of Lot 41 to the northern boundary of Lot 44. The Lot 41 building is heated via hot water baseboard heating connected to a natural gas-fired boiler located in the basement.

An approximately 2-inch-pipe was observed penetrating the basement floor and was capped. No staining was observed on the basement floor in this area; however, the current building occupants had no additional information regarding the potential prior use of the capped pipe. Penetrations for municipal sewer piping were observed in the southern basement wall (adjoining the warehouse building) and indicated that a network of piping may exist beneath the warehouse building. Fuel oil fill ports or vent pipes were not observed around the exterior of the Lot 41 building.

Adjacent Properties

A visual inspection of adjoining properties from the subject property line, public rights-of-way or other vantage point (e.g. aerial photography) including a visual inspection where hazardous substances may be or may have been stored, treated, handled or disposed was also conducted.

Limiting conditions encountered during the inspection of adjoining properties were encountered due to the dense urban nature of the surrounding areas which only allowed for limited line of sight that did not extend to areas where hazardous materials or substances might be stored.

Properties located adjacent to the subject property consist of commercial and residential buildings. Lot 39, the adjacent property to the north of Lots 41 and 44, as well as surrounding Lots 23, 26, 34, and 37 have been combined and are currently an active redevelopment site. The former gasoline filling station located on Lot 9 (north of Lot 50) has been removed and appears to have been backfilled with gravel or recycled concrete aggregate (RCA), indicating that the USTs formerly on Lot 9 have been removed. One groundwater monitoring well was observed on the interior of Lot 9, one groundwater monitoring well was observed in the sidewalk along the eastern side of on 69th Street adjacent to Lot 9, and one groundwater monitoring well was observed in the sidewalk along the eastern side of 69th Street adjacent to Lot 50 (subject property). The Lot 50 portion of the subject property is bound to the southwest by the LIRR elevated train tracks and associated concrete embankment support. A vacant lot enclosed with plywood construction fencing was observed east of the subject property, across 70th Street, at 46-09 70th Street. The vacant lot contained exposed soil mixed with brick, concrete, and debris suggesting demolition of the former site buildings. Fuel oil fill ports or vent pipes were not observed in front of any of the adjoining properties.

10.0 ADDITIONAL ISSUES

The following items fall outside the scope of ASTM 1527-13, however Langan can and often does provide these services to its clients if specifically requested and included in the proposed scope of work or are issues that may impact current or proposed site use.

10.1 Wetlands/Floodplain Designation

A wetland and floodplain designation assessment was not conducted as part of this ESA.

10.2 Protected Endangered Species / Critical Habitats

A determination regarding the potential presence of protected or endangered species and critical habitats on or near the subject property was not conducted as part of this ESA. This determination is often required in order to receive state or federal grants, loans, and/or permits.

10.3 Asbestos

In 1973, use of sprayed on fireproofing on structural building components was prohibited by the EPA. On July 12, 1989, EPA issued a final rule banning most friable asbestos-containing products. The following specific asbestos-containing products remain banned: flooring felt, roll board, and corrugated, commercial, or specialty paper. In addition, the regulation continues to ban the use of asbestos in products that have not historically contained asbestos, otherwise referred to as "new uses" of asbestos. Use of asbestos in textured paint and in patching compounds used on wall and ceiling joints was banned in 1977. An asbestos survey of the existing building was not conducted as part of this ESA.

10.4 Lead-based Paint

In 1977, the Consumer Product Safety Commission (CPSC) banned the use of lead based paint (LBP) in housing and restricted maximum levels in lead in new residential paint to less than 0.05% by weight. Based on the age of the onsite building, there is a potential that LBP is present in the onsite building. Interior painted surfaces generally appeared to be in good condition, with little paint peeling and cracking. A lead-based paint inspection was not conducted as part of this ESA.

10.5 Lead in Drinking Water

A lead in drinking water survey of the existing building was not conducted as part of this ESA.

10.6 Indoor Air / Microbial Assessment (Mold)

A mold survey of the existing building was not conducted as part of this ESA.

10.7 Radon

The subject property is located in a Tier 3 Zone as identified by USEPA based on sampling conducted of buildings within the site area. The Tier 3 Zone is considered an area of low radon gas intrusion potential with typically concentrations less than 2 pCi/liter. A radon survey of the existing building was not conducted as part of this ESA. Radon test results from adjacent or surrounding properties are not necessarily indicative of radon conditions on the subject property. As no building specific radon survey documentation was

provided to Langan, no opinion regarding potential risks associated with radon gas exposure can be made.

As per USEPA guidelines, the only way to assess potential radon gas exposure risks is to conduct a radon assessment. In addition, the US EPA recommends that follow-up tests on large buildings should be conducted when major modifications are made either to the building structure or HVAC system or the HVAC system's operation settings.

10.8 Historical and Archaeological Review

Langan reviewed the NYCityMap (http://maps.nyc.gov/doitt/nycitymap/) to review the potential presence of historical landmark buildings near the subject property. As of 18 July 2017, no historical landmarks were identified on or near the subject property.

11.0 DEVIATIONS

This Phase I ESA conforms with ASTM with the following deviations noted:

- Property use was only determined back to 1902, not to first development, as historical property records were not reasonably available;
- Data gaps in excess of 5 years were encountered during the review of historic resources;
- Government agencies that have not responded to record review inquiries are listed above - additional pertinent information provided to Langan subsequent to the issuance of this report will be provided in an addendum;
- Limited access was provided as part of this ESA access as identified in Section 9.0;
- Based on the large number of database records identified within one mile of the subject property (234), Langan limited the review of surrounding properties to sites adjacent to or located within 1/8-mile from the subject property;
- An assessment of the current property value versus the proposed sale price of the property was not completed as this information was not provided by the User;
- Interviews of former business operators were not conducted;
- Interviews of property owners were not conducted; and,
- Questionnaires were not completed by the property owner, operator, or site manager.

It is the opinion of the reviewing Environmental Professional that the above-deficiencies will not detrimentally affect the identification of potential recognized environmental conditions. This opinion is based on the following factors:

- Historical manufacturing and industrial use is documented for subject property and has been identified as a REC.
- Based on the Sanborn Maps and the City Directory information reviewed, though the specific use of the property is not consistent between the 5 year data gaps, the general use of the property (i.e., residential, commercial, or industrial) is consistent between the 5 year data gaps. Therefore, operations on the site between these data gaps will not detrimentally affect the identification of potential RECs.
- Langan limited the database review to sites located adjacent to and within 1/8-mile from the subject property. It is the environmental professional's opinion that based on the dense development of the site area, and former, current and proposed use of the site that the review of the database pertaining to this more limited area is appropriate and will not detrimentally affect the identification of potential recognized environmental conditions.

12.0 FINDINGS/OPINIONS

Based on information obtained during the visual inspection of the subject property, review of environmental databases and historic information, and contact with federal/state/local official agencies, the following recognized environmental conditions (RECs) and business environmental risks that may impact proposed redevelopment of the site were identified:

1. Suspected undocumented heating oil storage tank at Lot 44;
2. Potential impacts from historical site operations;
3. Open NYSDEC Spill No. 9304343 at the adjacent property to the north (Lot 9);
4. Potential presence of other undocumented underground storage tanks;
5. Potential presence of historic urban fill; and,
6. Presence of hazardous building materials.

During site reconnaissance a fuel oil fill port and vent pipe were observed protruding from the exterior wall of the building located on Lot 44. No documented USTs are associated with the subject property. Therefore, Finding 1 represents a REC. Historical site use included a railroad spur, a sheet metal works, and unspecified manufacturing.

It is the opinion of the environmental professional that Finding 2 represents a REC. NYSDEC Spill No. 9304343 is an open spill associated with the former gasoline filling station at the adjacent property to the north (Lot 9). Based on the continued presence of subsurface impacts at this site and its proximity to and upgradient location relative to the subject property, it is the opinion of the environmental professional that the potential for adverse impacts to the subject property from this site is moderate and that this site represents a potential vapor intrusion concern. Therefore, Finding 3 constitutes a REC. Besides Lot 44, it is the opinion of the environmental professional that undocumented USTs may be present beneath the building or sidewalk adjacent to the on-site buildings. Therefore, Finding 4 represents a business environmental risk. It is the opinion of the environmental professional that historic fill may be present in the subsurface at the site which would impact any future site redevelopment considerations. As this condition is consistent in the urban setting that the subject property is located in, Finding 5 represents a BER. Due to the age of the buildings hazardous materials such as asbestos containing materials or lead based paint may be present. Finding 6 represents a non-ASTM scope BER.

13.0 CONCLUSIONS

Langan has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of a ±40,712 square foot site located at 69-23 and 69-39 47th Avenue and 46-12 70th Street, Queens, Queens County, New York, the subject property. Any exceptions to, or deletions from, this practice are described in Section 11.0 of this report. Based on information obtained during the visual inspection of the subject property, review of environmental databases and historic information, and contact with federal/state/local official agencies, this assessment has revealed the following recognized environmental conditions (RECs):

Recognized Environmental Conditions

It is the opinion of the environmental professional that the following represent RECs:

Suspected Undocumented Heating Oil Storage Tank at Lot 44

During site reconnaissance, a fuel oil fill port and vent pipe were observed protruding from the exterior wall of the Lot 44 building. Further investigation of the fuel oil fill port and vent pipe location on the interior of the building revealed two ½-inch-diameter copper lines connected to a vacuum pump, fuel oil filter, and vacuum gauge. According to warehouse personnel, fuel oil is regularly delivered to the warehouse. The ½-inch fill and return lines were observed to be connected to the overhead ventilation ductwork;

however, a detailed inspection of the fill/return line connections could not be performed due to stored materials related to the current site use. Based on the observations made during site reconnaissance, it is the opinion of the environmental professional that an undocumented heating oil underground storage tank may be located along the southern building perimeter; this represents a REC.

Historic Use of the Subject Property

Based on the review of historical Sanborn Fire Insurance Maps and the City Directory Abstract, historical site operations included a railroad spur, a sheet metal works, and manufacturing. Due to the potential use of chemicals associated with historical site operations, it is the opinion of the environmental professional that the historical site use had the potential to impact subsurface conditions at the site. As such, the historic use of the subject property is considered a REC.

Open NYSDEC Spill No. 9304343 at Adjacent Property to the North (Lot 9)

Lot 9 was most recently occupied by a gasoline filling station, auto repair shop, and car wash. According to the EDR radius report, information maintained online by NYSDEC, and documentation provided by the User, NYSDEC Spill No. 9304343 was assigned to the 69-02 Queens Boulevard (Lot 9) property in 1993 as the result of an equipment failure at the former Branded Exxon Station, and BTEX and MTBE were reported to have impacted soil and groundwater quality beneath the site. Following the release, remedial investigations and remedial actions were conducted from 2004 onwards. Cleanup activities are ongoing and are expected to be completed as part of site redevelopment activities. Documentation provided by the User indicates that downgradient monitoring wells along 69th Street have not been impacted; however, no monitoring wells have been installed or sampled on the subject property to confirm that no downgradient impacts exist. Based on the ongoing remediation efforts at this site which indicate the continued presence of subsurface impacts and its proximity to and upgradient location relative to the subject property, it is the opinion of the environmental professional that there is potential for adverse impacts to the subject property from this site and that this site represents a potential vapor intrusion concern. Therefore, this site constitutes a REC.

14.0 QUALIFICATIONS / CERTIFICATION

The following professionals assisted in the completion of this report.

We, the undersigned, declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property as documented in Appendix H. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Site Inspection Completed By:



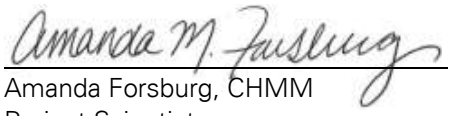
Matthew Oleske
Senior Staff Engineer

Report Written By:

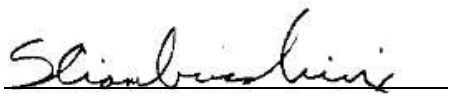


Jessica Friscia
Senior Staff Engineer

Report Reviewed By:



Amanda Forsburg, CHMM
Project Scientist



Steven A. Ciambruschini, P.G., L.E.P.
Principal / Vice President

TABLES

TABLE 1
TABLE OF CONTACTS

Federal

United States Environmental Protection Agency
Region 2 (NJ, NY, PR, VI)
https://foiaonline.regulations.gov/foia/action/public/home

United States Fish and Wildlife Service
https://ecos.fws.gov/ipac/gettingStarted/map

State

New York State Department of Environmental Conservation – Region II
http://www.dec.ny.gov/public/103696.html

Records Access Office
New York State Department of Health
Corning Tower, Room 2364
Albany, New York 12237-0044
foil@health.ny.gov

The New York Natural Heritage Program
http://nynhp.org/ProjectScreening

City

New York City Mayor's Office of Environmental Coordination
http://www.nyc.gov/html/oec/html/cegr/cegr_access.shtml

New York City Department of Environmental Protection
http://www.nyc.gov/html/dep/html/contact_us/foil.shtml

Ms. Renee Bryant, Records Access Officer
New York City Department of Health and Mental Hygiene
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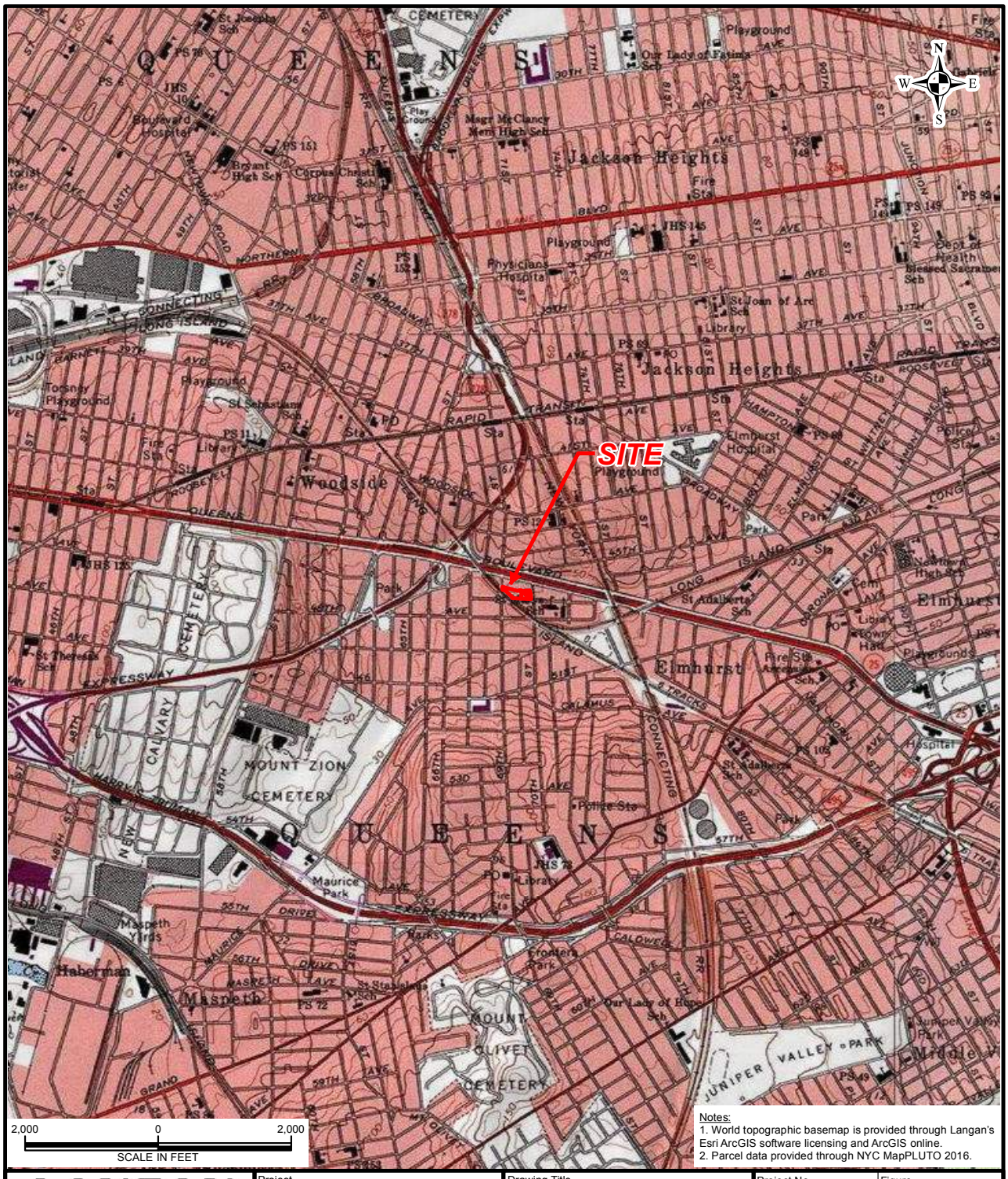
Long Island City, NY 11101
recordsaccess@health.nyc.gov

Ms. Leslie Ifill
Fire Department of New York City
FDNY Bureau of Legal Affairs
Public Records Unit
9 MetroTech Center, 4th Floor
Brooklyn, NY 11201

FIGURES

LANGAN

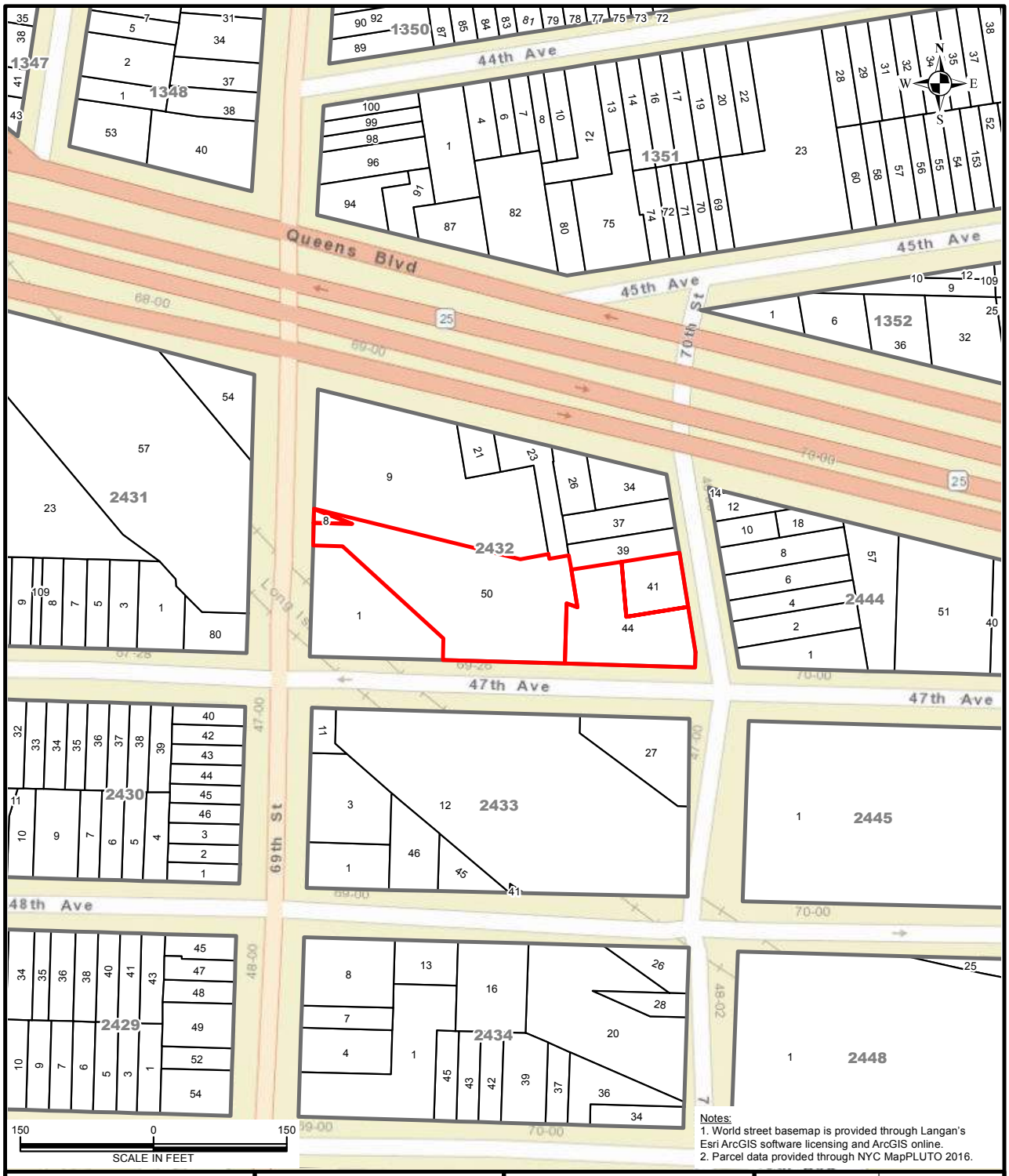


Notes:
1. World topographic basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online.
2. Parcel data provided through NYC MapPLUTO 2016.

LANGAN 300 Kimball Drive Parsippany, NJ 07054 T: 973.560.4900 F: 973.560.4901 www.langan.com Langan Engineering & Environmental Services, Inc. Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan International LLC Collectively known as Langan NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400	Project PROPOSED 69-02 QUEENS BOULEVARD DEVELOPMENT BLOCK No. 2432, LOT No. 8, 41, 44, & 50 QUEENS QUEENS COUNTY NEW YORK	Drawing Title SITE LOCATION MAP	Project No. 170389301 Date 7/19/2017 Scale 1"=2,000' Drawn By JR Last Revised 7/19/2017	Figure 1

© 2013 Langan

Path: \\langan.com\data\NYC\data3\170389301\ArcGIS\ArcMap_Documents\2017-07-Phase I ESA\Figure 1 - Site Location Map.mxd Date: 7/19/2017 User: jrosol Time: 12:04:08 PM



Notes:
1. World street basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online.
2. Parcel data provided through NYC MapPLUTO 2016.

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NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project	PROPOSED 69-02 QUEENS BOULEVARD DEVELOPMENT BLOCK No. 2432, LOT No. 8, 41, 44, & 50 QUEENS QUEENS COUNTY NEW YORK
Drawing Title	TAX MAP
Project No.	170389301
Date	7/19/2017
Scale	1"=150'
Drawn By	JR
Last Revised	7/19/2017
Figure	2

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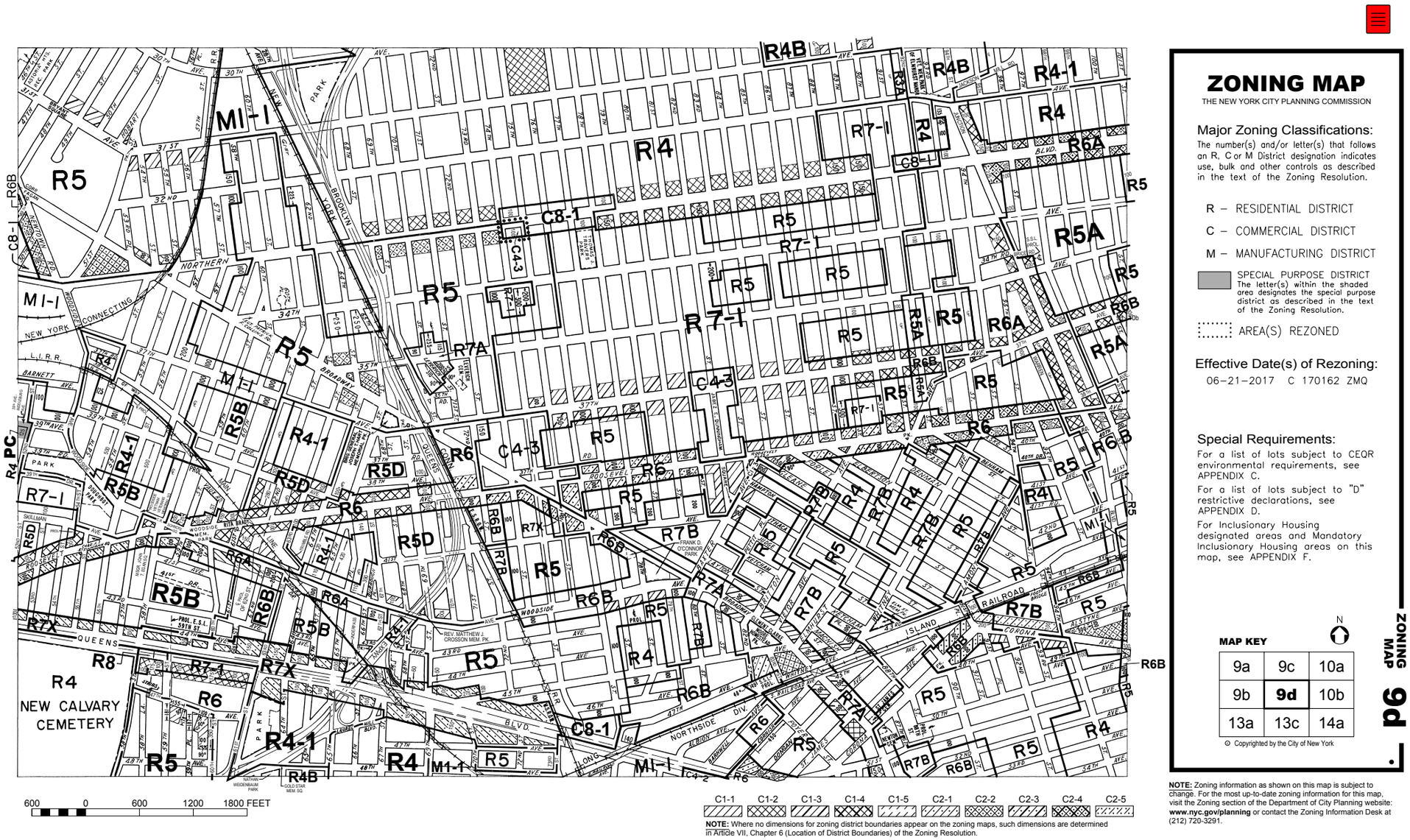
Path: \\langan.com\data\NYC\data3\170389301\ArcGIS\ArcMap_Documents\2017-07-Phase I ESA\Figure 2 - Tax Map.mxd Date: 7/19/2017 User: jrosol Time: 12:04:14 PM


ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
AREA(S) REZONED
Effective Date(s) of Rezoning:
06–21–2017 C 170162 ZMQ
Special Requirements:
For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
For Inclusionary Housing designated areas and Mandatory Inclusionary Housing areas on this map, see APPENDIX F.
MAP KEY
9a 9c 10a
9b 9d 10b
13a 13c 14a
© Copyrighted by the City of New York
ZONING MAP 9d
NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3291.
600 0 600 1200 1800 FEET
C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5
NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

APPENDIX D: SUBSURFACE INVESTIGATION REPORT

(Dated March 24, 2015)

Hydro Tech Environmental, Corp.

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March 24, 2015

Mr. Eugene Rodovsky
Madison Realty Capital
825 Third Avenue, 37th Floor
New York, New York 10022

Re: Subsurface Investigation Report
69-02 Queens Boulevard, New York, NY
NYSDEC Spill # 9304343
Hydro Tech Job #150038

Dear Mr. Rodovsky:

This report is intended to provide the findings of our recent Subsurface Investigation at the above-referenced property, which will hereafter be referred to as the "Site". The scope of work was based upon our review of historical investigations performed at the Site by others and is intended to assess the general soil and groundwater quality beneath the property for due diligence purposes.
The investigation consisted of a Ground Penetrating Radar (GPR) survey, soil waste characterization testing and the monitoring and sampling of existing monitoring wells at the Site. Due to limitations associated with a strict soil sampling protocol imposed by site ownership, the soil waste characterization sampling was reduced to standard soil sampling and analysis to determine any impact associated with current and historic use of the Site as a gasoline filling station. All portions of the fieldwork were conducted in accordance with Exhibit B - Inspection and Site Testing Procedures instituted by the Site ownership.

SITE DESCRIPTION

The Site is approximately 29,050 square feet in area and is described as Tax Block 2432 and Lot 9. The Site is current occupied Gulf gasoline filling station located in the western and northern portion, an auto repair shop located in the eastern portion and a convenient store and a car wash in the southern portion. An underground storage tank (UST) exclusion zone is currently designated at the Gulf gasoline filling station and consists of the area surrounding a concrete tank pad located in the northwestern portion, 6 dispensers located in the central and northern portions and USTs vent pipes situated underground beneath the southwestern portion of the property. The Site is bounded by Queens Boulevard to the north and 69th Street to the west. The topography and its vicinity declines slightly toward the southwest. **Figure 1** provides a Site Plan.

SITE HISTORY

Hydro Tech reviewed the Department of City Planning records for the Site. According to these records, the Site is associated with a little E-Designation listed as HAZMAT/NOISE/AIR.

Hydro Tech also reviewed previous remedial investigations by others between 2004 and 2014. These remedial activities can be summarized as follows:

- According to the NYC Department of Building online records, the Site is associated with a little E-Designation listed as HAZMAT/NOISE/AIR
- New York State Department of Environmental Conservation (NYSDEC) Spill number 9304343 was assigned in 1993 as a results of equipment failure at former branded Exxon Station and gasoline and MTBE (methyl-tert-butyl ether) were reported to have impacted soil and groundwater quality beneath the Site
- Five 6000 gallons gasoline USTs were removed from northwestern portion of the Site in 2004. Information documented in a tank closure report indicates NYSDEC Spill number 032712 was assigned to the Site during tank removal activities. No records of this spill case could be found in the NYSDEC online spill database. Contaminated soil was excavated around the removed USTs between 14 and 20 feet below grade surface, wherever feasible. Southern wall and bottom post excavation endpoint soil samples contained volatile organic compounds (VOCs) that exceeded regulatory standards
- A soil vapor extraction and air sparging (SVE/AS) system consisting of six (6) SVE wells and six (6) AS wells was installed during August 2004. The SVE portion of the system was started first in October 2005 and then AS was started in June 2006. SVE/AS was discontinued in November 2011. During this period, and Operation and Maintenance (O&M) Plan consisting of air sampling from multiple influent, mid- carbon tank and effluent ports on the system and quarterly GW sampling and monitoring program was implemented
- The depth to groundwater beneath the site was measured between 13.28 ft and 18.5 ft and the groundwater flow was determined to be toward the southwest
- A groundwater monitoring and sampling program was implemented prior to December 2004 and continued through February 2014; this program will continue for the second quarter of 2014. This program incorporated six (6) monitoring wells (MW-1 to MW-6) and the six (6) SVE wells (SVE-1 to SVE-6). The program then included additional monitoring wells installed downgradient of the GW plume; two (2) on-Site (MW-7 & MW-8) and three (3) off- site monitoring wells (MW-9 to MW-11) installed in June 2006, one (1) on-site well (MW-12) installed in February 2008 and two (2) on-site wells (MW-14 and MW-5) and one (1) off-site well (MW-13) installed in December 2008, one (1) surfactant-enhanced multi-phase extraction well (MPE-1) installed in January 2011, and seven (7) chemical injection wells (IW-1 to IW-7) installed in November 2011
- Free product recovery was performed on twelve (12) wells located in the southwestern portion of the Site between January 2005 and November 2013 using hand bailers, High vacuum extraction (HVE) and surfactant-enhanced multi-phase extraction (MPE) methods. Maximum product thickness was measured first in MW-7 at 0.7 feet in June 2006 and then in MW-12 at 0.64 feet in April 2008. Free product was last measured in IW-3 and IW-4 at maximum thickness of 0.07 ft in July 2013. No free product was found in any wells in February 2014
- Chemical oxidation injections of Sodium Persulfate/sodium Hydroxide solution (brand name Klozur) was applied via two phases in injection wells IW-1 to IW-7; 6,545 gallons was applied in September 2012 and 8,300 gallons were applied in August 2013

- Overall groundwater results indicated that the plume of benzene, toluene, ethylbenzene and xylenes (or BTEX) and MTBE is confined to the southwestern portion of the Site. This plume does not extend off-site in any concentrations of significance as compared to the concentrations detected on-site. The on- Site BTEX and MTBE concentrations have improved since the injections despite some observed rebounds. A maximum BTEX concentrations of 9,440 ug/L and maximum MTBE concentrations of 556 ug/L were reported in the last groundwater sampling event performed in February 2014 and reported in the First Quarterly Report of 2014

The location of existing monitoring well points at the Site is shown on **Figure 1.**

FIELDWORK

The field portion of the investigation was conducted on March 9, 17 and 18, 2015. Prior to the performance of the fieldwork, a One-Call Public Utility Mark-out was requested. Confirmation #150561143 and #150570815 were issued to the mark-out. **Attachment #1** provides photographs of the fieldwork.

All portions of the fieldwork were performed under the direct oversight of a Hydro Tech Project Manager and under the guidance of an HTE Senior Geologist and in the presence of a representative of Site ownership.

GROUND PENETRATING RADAR (GPR) SURVEY

The purpose of the Ground Penetrating Radar (GPR) survey was to identify the presence of any subsurface anomalies indicative of suspect USTs and also to clear potential sampling locations of sub-grade obstructions.

The GPR survey was conducted across the property over a grid pattern that was determined immediately prior to the survey. The GPR operator wheeled the antenna over the predetermined grid. The GPR takes one "scan" per set unit. The number of scans per unit is based upon the estimated size of targets. As each scan is performed, the antenna emits specific radar amplitude into the subsurface. The amplitude of the radar reflected back to the antenna is based upon the differences in the dielectric constants of the subsurface materials. The differences in amplitude obtained during each scan are graphically displayed on the Control Unit, which are then interpreted by the GPR operator. Additional interpretations are then conducted in the office using computer software.

The GPR was performed throughout approximately 60 percent of the Site perimeter and covered all accessible portions and vacant spaces available during the survey. The GPR survey identified no anomalies indicative of suspect USTs outside the perimeter of existing tank pad in the northwestern portion of the Site.

SOIL PROBES

The soil investigation at the Site initially consisted of characterizing the soil for waste disposal. However, due to restriction imposed by Site ownership in association with a requested soft digging via air knife and vactor during the installing soil borings to 8 feet below grade surface, soil waste characterization could not be performed successfully. Therefore, the soil testing was them limited to investigating the soil quality beneath the UST exclusion zone as a result of current and historic use of the Site as a gasoline filling station.

A total of nine (9) soil probes were installed at the Site during this investigation. Soil probes SP-1 to SP-3 and SP-5 to SP-9 were installed within the UST exclusion zone. Specifically SP-1 was installed to the northwest of the UST pad, SP-2, SP-3 and SP-5 to SP-7 were installed in the vicinity of the dispensers island, SP-8 was installed to the southwest of the UST pad and SP-9 was installed in the southwestern portion of the Site. Soil probe SP-4 was installed to the northwest of the UST exclusion Zone. **Figure 2** provides the locations of the soil probes.

The soil probes were first installed utilizing soft digging using Air Knife and Vactor technologies to clear the soil borings to 8 feet bgs in the exclusion zone and to 5 feet outside this zone. Each borehole was cleared within an opening approximately 12 inches in diameter. Hydro Tech's fleet of Geoprobe® units were then utilized to terminate the soil probe to 12 feet bgs. The Geoprobe installs soil probes utilizing direct-push technology. Soil samples were collected at continuous 2-foot intervals utilizing a hand auger to 5 feet bgs in SP-4 and 8 feet bgs in teh remaining soil probes. A five-foot long Macro core sampler fitted with dedicated acetate liners was then driven but the Geoprobe to the final depth of the soil probe. Each geoprobe sampler was installed with 3½-inch diameter drill rods.

Boreholes for soil probes SP-1, SP-2 and SP-4 were successfully evacuated using Vactor to the required depth of 5 feet bgs and 8 feet bgs and were then terminated at 12 feet bgs. The remaining soil probes were installed to the depth of refusal consisting of brick tiles, stones or large concrete blocks, which could not be evacuated from the borehole using Vactor. The remaining soil probes were then terminated at the following depths:

3 feet bgs in SP-5 and SP-8;
6 feet bgs in SP-3 and SP-6;
8 feet bgs in SP-7 and SP-9;

No groundwater was encountered in any of the installed nine soil probes. A Hydro Tech geologist performed infield characterization and screening of each soil sample utilizing the Unified Soil Classification System and a Photo Ionization Detector (PID). The general soil type consists of mixture of sand and pebbles. Evidence of fill material consisting of bricks charcoal and ash was encountered in all soil probes. Fill material was encountered from grade surface to 2 feet bgs in SP-5 and SP-8, 4 feet bgs in SP-3, 6 feet bgs in SP-6, SP-7 and SP-9 and 8 feet bgs in SP-1, SP-2 and SP-4. No organic vapors were noted (<0.1 parts per million or mg/Kg) in any of the soil samples from the soil probes. Odor was detected in the 8-10 foot soil sample in SP-4 at the 6-8 foot soil samples in SP-7 and SP-9. **Attachment #2** provides soil probe logs.

Based upon the in-field screening results, one soil sample from each soil probe was selected for confirmatory laboratory analysis. Those selected included the following samples:

0 to 2 foot sample from SP-5, and SP-8;
4 to 6 foot sample from SP-3 and SP-6;
6 to 8 foot sample from SP-1, SP-7 and SP-9;
8 to 10 foot sample from SP-2 and SP-4.

Each soil sample was contained into a terra core kit consisting of three 40-milliliter (mL) vials containing appropriate preservatives and an 8-ounce jar and appropriately labeled. All soil samples were analyzed at a State-certified laboratory, for volatile organic compounds (VOCs) in accordance with EPA 8260, semi-volatile organic compounds (SVOCs) in accordance with EPA 8270BN and TAL Metals. Laboratory reports are provided as **Attachment #2**.

MONITORING WELLS

All thirty five (35) existing monitoring well points, MW-1 to MW-15, MPE-1, IW-1 to IW-7, SVE-1 to SVE-6 and AS-1 to AS-6 were monitored and sampled during this investigation. **Figure 1** provides the locations of the monitoring wells.

Prior to samples collection, the monitoring wells points were first identified based on a sampling plan provided in the First Quarterly Report of 2014 by others. The well points were then monitored and gauged for separate phase product and surveyed. The monitoring was performed utilizing a Solinst® 122 Oil/Water Interface Probe (Interface Probe). The Interface Probe can measure depths to water to 0.01 inch. The depth to water was measured in each well from the northern portion of the casing top. **Table 1** provides the groundwater monitoring details. As **Table 1** indicates, MW-9 could not be located as it was previously reported as destroyed. MW-10 was not accessible as it was covered by a thick sheet of ice. None of the monitoring wells were found to contain free product. The depth to water during this monitoring event ranged from 14.38 feet in MW-11 to 18.89 feet in MW-4.

Utilizing the casing elevation reported for MW-1 to MW-15 and MPE-1 in the First Quarterly Report of 2014 by others, the groundwater elevation was then determined**. Table 1** provides the groundwater surveying details for the monitoring wells. The groundwater elevations range from 77.05 feet in MW-11 to 83.23 feet in MW-5. The groundwater elevations were then imported into a computer-contouring program to determine the site-specific groundwater flow direction. The site-specific groundwater flow direction was determined to be toward the southwest. **Figure 3** provides a groundwater flow direction.

Groundwater samples were obtained from 33 of the 35 wells points following the monitoring event. The sampling was performed utilizing a peristaltic pump fitted with dedicated polyethylene tubing. The pump was connected to PVC tubing and was carefully lowered above the middle of the screened interval zone water in order to minimize mixing with stagnant water above and the suspension of solids that collect at the bottom of the well. Initially, each monitoring well was purged 3 to 5 well volumes. The sampling of the wells was performed after the water was allowed to recharge to the original monitoring level.

Each groundwater sample was placed into 3 pre-cleaned 40-milliliter (mL) vials and 2 pre-cleaned 1L amber and appropriately labeled. All groundwater samples were analyzed at a State-certified laboratory, for volatile organic compounds (VOCs) in accordance with EPA 8260, semi-volatile organic compounds (SVOCs) in accordance with EPA 8270BN. Laboratory reports are provided as **Attachment #3**.

INVESTIGATORY-DERIVED WASTE

All waste generated from this investigation has been properly store into a DOT approved 55-gal drums, and arranged for disposal at a certified facility. A final signed off manifest will be provided once it is received from the disposal facility.

ANALYTICAL RESULTS

SOIL RESULTS

Table 2 provides the analytical results of the soil samples from SP-1 through SP-9. **Table 2** also provides a comparison of the analytical results to the NYSDEC 6NYCRR Part 375 Section 6.8 (a,b) Unrestricted Use Soil Cleanup Objectives (SCOs) as well as Restricted Residential Use SCOs.

Laboratory analytical results indicate the presence of VOCs associated with gasoline compounds including 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene, ethylbenzene, xylenes, n-butylbenzene and n-propylbenzene were detected in deep soil samples from SP-4 and SP-7. The VOC acetone was detected in shallow soil from SP-5. Only the concentration of 1,2,4-trimethylbenzene of 5 mg/Kg detected in SP-4 exceeded its Unrestricted Use SCO. No other individual VOCs were detected in the other samples at a concentration exceeding their respective method detection limits (MDLs).

Individual SVOCs including benzo(a)anthracene (maximum 140 mg/Kg), benzo (a)Pyrene (maximum 130 mg/Kg), benzo (b) fluoranthene (maximum 160 mg/Kg), benzo (k) fluoranthene (maximum 58 mg/Kg), chrysene (maximum 130 mg/Kg), fluoranthene (maximum 210 mg/Kg), indeno (1,2,3-cd) pyrene (maximum 8,600 mg/Kg), phenanthrene (maximum 180 mg/Kg), and pyrene (maximum 210 mg/Kg), were detected in SP-1, SP-4, SP-7, SP-8 and SP-9 at concentration exceeding their Restricted Residential Unrestricted Use SCO. No other SVOCs exceeded their Unrestricted Use SCOs.

Metals including arsenic (maximum 28.2 mg/Kg), cadmium (maximum 2.63 mg/Kg), chromium trivalent (maximum 44.4 mg/Kg), chromium hexavalent (maximum 1.4 mg/Kg), copper (maximum 407 mg/Kg), lead (maximum 1,510 mg/Kg), mercury (maximum 0.95 mg/Kg), nickel (maximum 38 mg/Kg) and zinc (maximum 3,320 mg/Kg) were detected at concentrations above their respected Unrestricted Use SCOs soils from SP-1, and SP-4 to SP-9. Among these, arsenic, cadmium, chromium trivalent, chromium hexavalent, copper, lead and zinc also exceeded the Restricted Residential SCOs.

GROUNDWATER RESULTS

Table 3 provides the results the groundwater samples from the 26 monitoring well points.. **Table 3** also provides a comparison to 6 NYCRR Part 703.5 Class Groundwater Quality Standards (GQS).

Laboratory analytical results indicate the gasoline VOC including BTEX and MTBE and their derivative compounds occurred in 26 of the 33 monitoring well points present at the Site and their concentrations exceeded their respective GQS. The detected BTEX concentrations ranged between 1.1 µg/L in AS-1 to 18,022 µg/L in AS-4. The detected MTBE concentrations ranged between 6 µg/L in MPE-1 to 250 µg/L in AS-1. The VOC acetone also occurred in 11 monitoring well points a concentration ranging between 37 µg/L and 2700 µg/L, which exceeded its GQS. No other VOCs were detected in any groundwater sample at concentrations exceeding their respective GQS.

SVOCs occurred in 31 of the 33 monitoring well points. Detected SVOCs included benzo(a)anthracene, benzo (b) fluoranthene, benzo (k) fluoranthene, bis(2-ethylexhyl)phthalate, chrysene, fluoranthene, indeno (1,2,3-cd) pyrene, naphthalene, phenanthrene, and pyrene and their concentrations exceeded their respective GQS.

DISCUSSION OF RESULTS

GPR RESULTS

The GPR survey was performed over 60 percent of the Site. This survey did not identify any anomalies indicative of suspect USTs beyond the concrete UST pad.

SOIL QUALITY

One individual gasoline related VOC was detected in a deep soil sample at a concentration exceeding its Restricted Residential Use SCO as evidenced by the analytical results of the 8-10 foot sample from SP-4. This is further evidenced by the petroleum odor identified in during the infield screening of this soil sample. SVOCs were also detected in shallow and deep soils at the Site across the UST exclusion zone at concentrations in exceedance of their respective Restricted Residential Use SCOs. This is evidenced by the analytical results of SP-1, SP-4 and SP-7 through SP-9. An individual maximum SVOC concentration of 8,600 mg/Kg was detected in SP-7, which is located to the south of the UST exclusion zone. This elevated SVOC concentration in SP-7 is likely to be indicative of a release as this area coincides with the original location of former USTs at the Site. The remaining SVOCs detected at the Site can be specifically characterized as Polycyclic Aromatic Hydrocarbons (PAHs) and are likely to be attributable to the historic fill present at various depths as evidenced by the soil probe logs.

Metals including chromium hexavalent, arsenic, lead and mercury were detected in soil probes at concentrations exceeding their respective Restricted Residential Use SCOs as evidenced by the results of SP-1 and SP-4 through SP-9. These metals were detected in shallow fill and deep soil and could be associated with impacted fill material as well as unknown historic uses at the Site.

The soil/fill material present beneath the UST exclusion is likely to be homogeneously distributed beneath the eastern portion of the Site and the SVOCs and metals impacts associated with this fill material is likely to be present across the entire Site.

GROUNDWATER QUALITY

The groundwater flow direction beneath the Site is toward the southwest. This finding is consistent with the historic flow direction reported for this Site. No free product was detected in any of the existing well points at the Site.

The results of the groundwater sampling indicate a plume of dissolved gasoline constituents at concentrations in exceedance of GQS is present beneath the Site and appears beneath southeastern portion of the dispensers island, where a maximum BTEX concentration of 18,022 µg/L was detected in AS-4, and extends in the downgradient southwestern portion of the property. The plume is also characterized by elevated MTBE concentrations, where a maximum concentration of 250 µg/L was also detected in the vicinity of the dispensers island in AS-1. The location of AS-1 and AS-4 coincides in the southern portion of the UST exclusion zone and also coincides with the original location of former USTs at the Site.

The gasoline plume present at the Site does not appear to extend off-site as no VOCs occurred in monitoring well MW-11. The detected concentrations of BTEX and MTBE are consistent with reported values in previous investigations performed at the Site. **Figure 4** provides the BTEX and MTBE contamination diagram.

CONCLUSIONS

VOCs in exceedance of regulatory standards are present in deep soil to the northeast of the UST exclusion zone. Historic fill material impacted with elevated levels of PAHs and metals is identified in soil across the UST exclusion zone at the Site to the depth of 8 feet. PAH and metals impact in soil/fill is likely to extend beneath the eastern portion of the Site with the likely even distribution of fill material across the property. A plume of gasoline VOCs is present in the central and southwestern portion of the Site. This plume is characterized by elevated concentration of BTEX and MTBE.

RECOMMENDATIONS

The quarterly groundwater sampling of monitoring wells at the Site should continue.

During any future Site redevelopment activities, all impacted soil/fill material with levels of VOCs, SVOCs and metals should be properly characterized and disposed of at a licensed disposal facility in accordance with local, state and federal regulations. Future development at the Site should be performed in accordance with a Remedial Action Work Plan, which should be prepared pursuant to the requirements of the Mayor Office of Environmental Remediation (NYCOER) in order to address the Little E-Designation listed as HAZMAT and the NYSDEC requirements in order to address the closure of the open Spill # 9304343.

Should you have any questions or comments, please feel free to contact me at your convenience.

Very Truly Yours
Hydro Tech Environmental, Corp.

Paul Matli
Senior Project Manager

PM/ph
cc: Hydro Tech File 150038 w/ Enc.

EXCLUSIONS & DISCLAIMER

The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

In preparing this report, **Hydro Tech Environmental, Corp.** may have relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to **HydroTech Environmental, Corp.** at the time of the subject property assessment. Although there may have been some degree of overlap in the information provided by these various sources, **Hydro Tech Environmental, Corp.** did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this subject property assessment.

Observations were made of the subject property and of structures on the subject property as indicated within the report. Where access to portions of the subject property or to structures on the subject property was unavailable or limited, **Hydro Tech Environmental,Corp**. renders no opinion as to the presence of non-hazardous or hazardous materials, or to the presence of indirect evidence relating to a non hazardous or hazardous materials, in that portion of the subject property or structure. In addition, **Hydro Tech Environmental, Corp.** renders no opinion as to the presence of hazardous materials, or the presence of indirect evidence relating to hazardous materials, where direct observation of the interior walls, floors, or ceiling of a structure on a subject property was obstructed by objects or coverings on or over these surfaces.

Hydro Tech Environmental, Corp. did not perform testing or analyses to determine the presence or concentration of asbestos at the subject property or in the environment of the subject property under the scope of the services performed.

The conclusions and recommendations contained in this report are based in part, where noted, upon the data obtained from a limited number of soil samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

Any water level reading made in test pits, borings, and/or observation wells were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

Except as noted within the text of the report, no qualitative laboratory testing was performed as part of the subject property assessment. Where such analyses have been conducted by an outside laboratory, **Hydro Tech Environmental, Corp**. has relied upon the data provided, and has not conducted an independent evaluation of the reliability of the data.

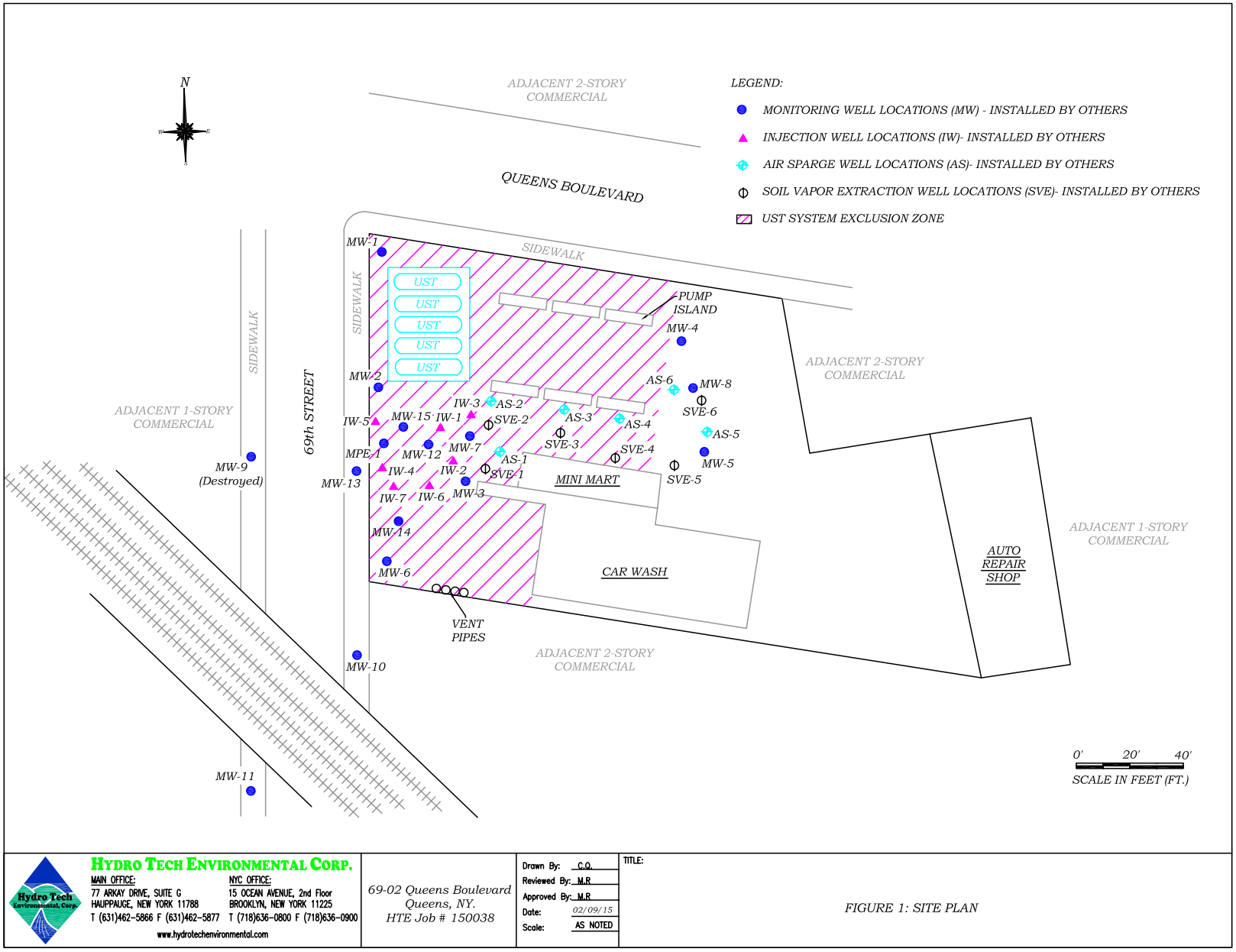
The conclusions and recommendations contained in this report are based in part, where noted, upon various types of chemical data and are contingent upon their validity. The data have been reviewed and interpretations were made in the report. As indicated within the report, some of the data may be preliminary “screening” level data, and should be confirmed with quantitative analyses if more specific

information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, the data should be reviewed, and the conclusions and recommendations presented herein modified accordingly.

Chemical analyses have been performed for specific constituents during the course of this subject property assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the subject property.

Any GPR survey described above was performed in accordance with good commercial and customary practice and generally accepted protocols within the consulting industry. **Hydro Tech Environmental, Corp.** does not accept responsibility for survey limitations due to inherent technological limitations or site specific conditions, however, made appropriate effort to identify and notify the client of such limitations and conditions. In particular, please note that the survey described above does not represent a full utility clearance survey, and does not relieve any party of applicable legal obligations to notify a utility one-call service prior to excavating or drilling.

FIGURES



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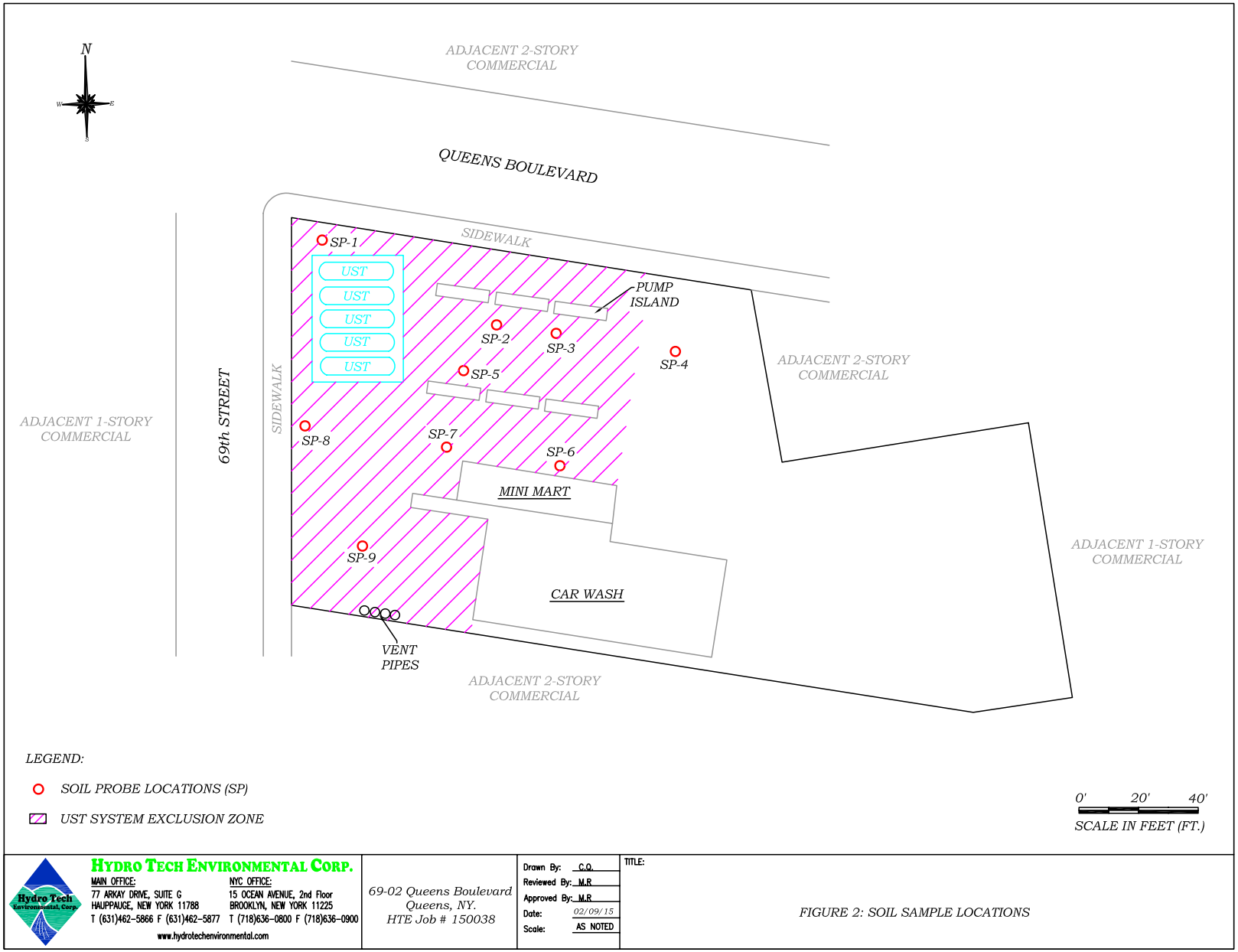
Queens, NY.
HTE Job # 150038

Drawn By: C.Q.
Reviewed By: M.R
Approved By: M.R
Date: 02/09/15
Scale: AS NOTED

TITLE:

FIGURE 1: SITE PLAN



HYDRO TECH ENVIRONMENTAL CORP.
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69-02 Queens Boulevard
Queens, NY.
HTE Job # 150038

Drawn By: C.Q.
Reviewed By: M.R
Approved By: M.R
Date: 02/09/15
Scale: AS NOTED

TITLE:

FIGURE 2: SOIL SAMPLE LOCATIONS

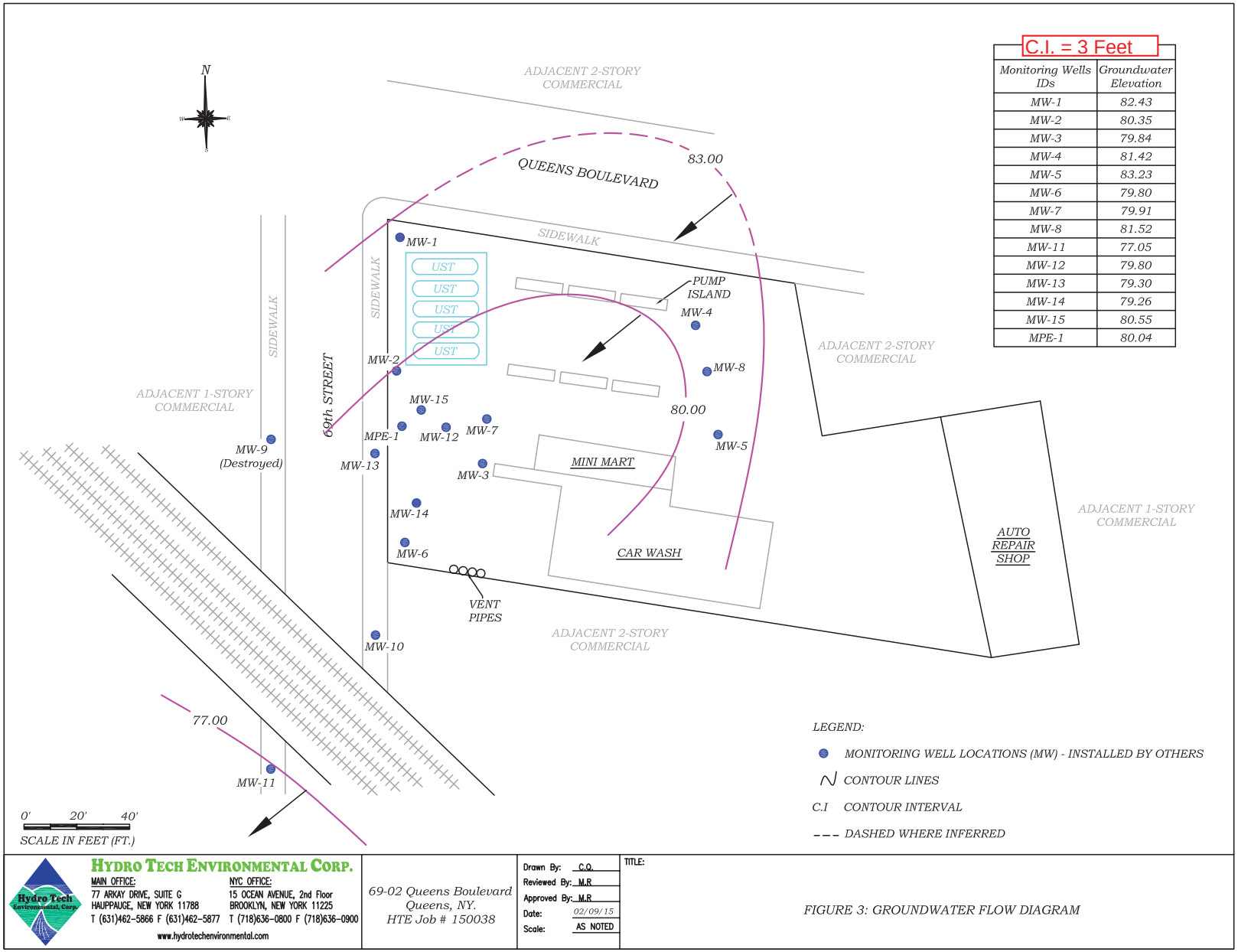
C.I. = 3 Feet
Monitoring Wells IDs | Groundwater Elevation
MW-1 | 82.43
MW-2 | 80.35
MW-3 | 79.84
MW-4 | 81.42
MW-5 | 83.23
MW-6 | 79.80
MW-7 | 79.91
MW-8 | 81.52
MW-11 | 77.05
MW-12 | 79.80
MW-13 | 79.30
MW-14 | 79.26
MW-15 | 80.55
MPE-1 | 80.04
N
ADJACENT 2-STORY COMMERCIAL
QUEENS BOULEVARD
83.00
SIDEWALK
MW-1
UST
PUMP ISLAND
MW-4
MW-8
MW-2
69th STREET
ADJACENT 1-STORY COMMERCIAL
MW-15
80.00
MPE-1
MW-12
MW-7
MW-5
MW-9 (Destroyed)
MW-13
MW-3
MINI MART
MW-14
AUTO REPAIR SHOP
MW-6
CAR WASH
VENT PIPES
MW-10
77.00
MW-11
0' 20' 40'
SCALE IN FEET (FT.)
LEGEND:
MONITORING WELL LOCATIONS (MW) - INSTALLED BY OTHERS
CONTOUR LINES
C.I CONTOUR INTERVAL
--- DASHED WHERE INFERRED
HYDRO TECH ENVIRONMENTAL CORP.
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FIGURE 3: GROUNDWATER FLOW DIAGRAM

Monitoring Wells IDs	BTEX	MTBE
MW-1	106	11
MW-2	3,586	67
MW-3	150	150
MW-4	ND	ND
MW-5	ND	ND
MW-6	448	180
MW-7	3,327	50
MW-8	5	ND
MW-11	ND	ND
MW-12	3,247	ND
MW-13	1,379	44
MW-14	2,920	210
MW-15	3,566	47
MPE-1	54	6
IW-1	291	40
IW-2	136	ND
IW-3	203	ND
IW-4	ND	ND
IW-5	858	33
IW-6	799	140
IW-7	348	36
SVE-1	553	190
SVE-2	1,159	35
SVE-3	ND	ND
SVE-4	46	ND
SVE-5	ND	ND
SVE-6	1,120	ND
AS-1	1	250
AS-2	889	ND
AS-3	ND	ND
AS-4	18,022	ND
AS-5	2	ND
AS-6	ND	ND

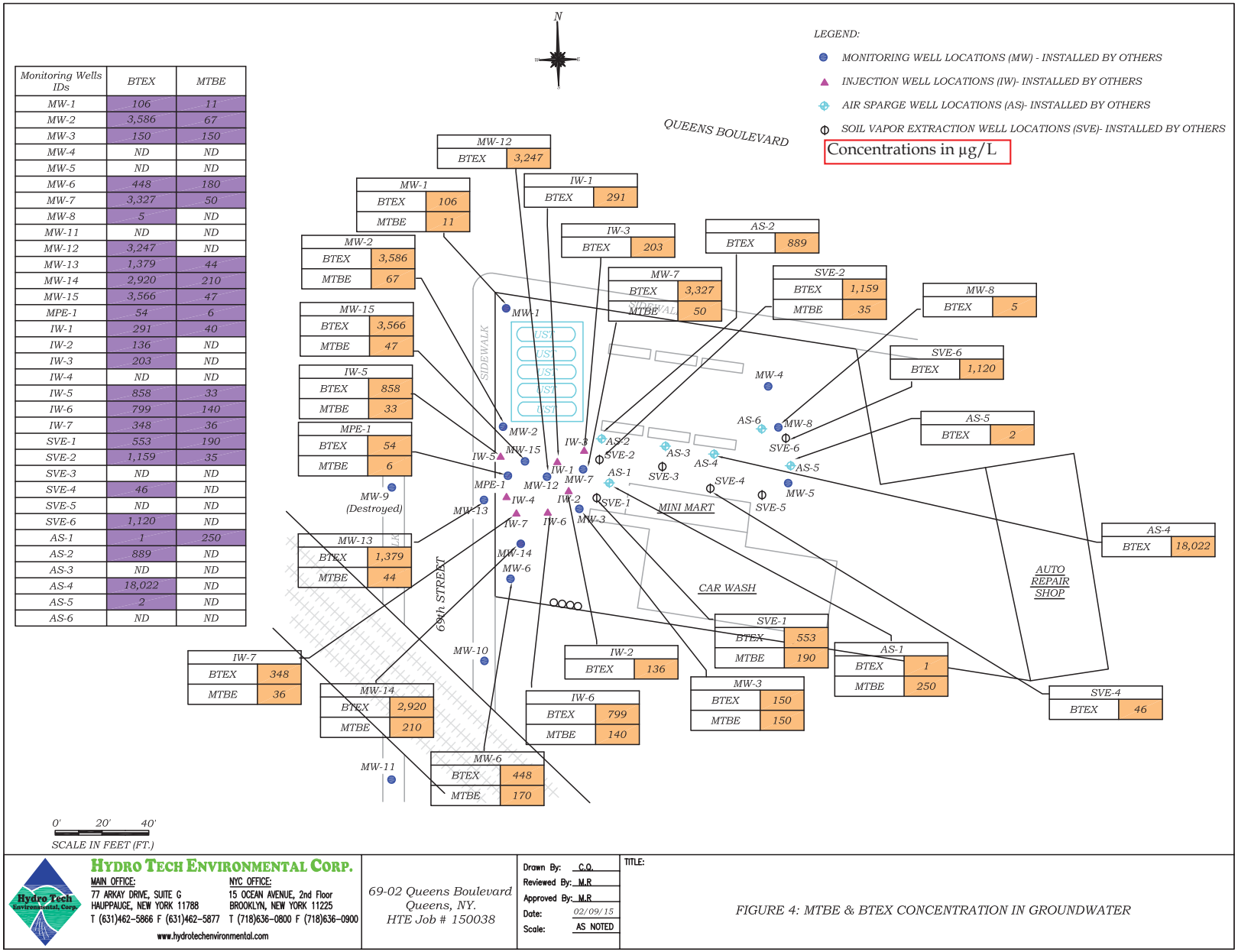

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FIGURE 4: MTBE & BTEX CONCENTRATION IN GROUNDWATER

TABLES

Table 1
Groundwater Surveying and Monitoring Details - March 2015
69-02 Queens Boulevard, Woodside, New York

Well Identification	Top of Casing Elevation (ft) [1]	Depth To Product (ft)	Depth To Water (ft)	Groundwater Elevation (ft)
MW-1	99.26	Not Detected	16.83	82.43
MW-2	96.78	Not Detected	16.43	80.35
MW-3	97.63	Not Detected	17.79	79.84
MW-4	100.31	Not Detected	18.89	81.42
MW-5	99.08	Not Detected	15.85	83.23
MW-6	96.08	Not Detected	16.28	79.80
MW-7	96.95	Not Detected	17.04	79.91
MW-8	99.89	Not Detected	18.37	81.52
MW-9	Destroyed			
MW-10	94.19	Burried Under Ice		
MW-11	91.43	Not Detected	14.38	77.05
MW-12	96.59	Not Detected	16.79	79.80
MW-13	96.07	Not Detected	16.77	79.30
MW-14	96.17	Not Detected	16.91	79.26
MW-15	97.17	Not Detected	16.62	80.55
MPE-1	96.57	Not Detected	16.53	80.04
IW-1	Not measured	Not Detected	16.43	Not calculated
IW-2	Not measured	Not Detected	16.86	Not calculated
IW-3	Not measured	Not Detected	16.54	Not calculated
IW-4	Not measured	Not Detected	16.62	Not calculated
IW-5	Not measured	Not Detected	16.21	Not calculated
IW-6	Not measured	Not Detected	17.61	Not calculated
IW-7	Not measured	Not Detected	16.79	Not calculated
SVE-1	Not measured	Not Detected	19.23	Not calculated
SVE-2	Not measured	Not Detected	16.49	Not calculated
SVE-3	Not measured	Not Detected	16.84	Not calculated
SVE-4	Not measured	Not Detected	16.44	Not calculated
SVE-5	Not measured	Not Detected	15.45	Not calculated
SVE-6	Not measured	Not Detected	18.15	Not calculated
AS-1	Not measured	Not Detected	16.98	Not calculated
AS-2	Not measured	Not Detected	17.43	Not calculated
AS-3	Not measured	Not Detected	17.69	Not calculated
AS-4	Not measured	Not Detected	17.55	Not calculated
AS-5	Not measured	Not Detected	16.54	Not calculated
AS-6	Not measured	Not Detected	18.18	Not calculated

All values reported in feet below top of casing
[1] …Mesurement reported by Leggette, Brashears & Graham, Inc. in November 2014

Table 2
Soil Samples Analytical Results for VOCs
69-02 Queens Boulevard, Woodside, NY

Sample ID	SP-1 6-8 FT		SP-2 8-10 FT		SP-3 4-6 FT		SP-4 8-10 FT		SP-5 0-2 FT		SP-6 4-6 FT		SP-7 6-8 FT		SP-8 0-2 FT		SP-9 6-8 FT		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential
Sampling Date	3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015			
Client Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil			
Compound	Result		Result		Result		Result		Result		Result		Result		Result		Result			
Units	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/Kg	mg/Kg
1,1,1,2-Tetrachloroethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
1,1,1-Trichloroethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.68	100
1,1,2,2-Tetrachloroethane	< 0.0022	U	< 0.0024	U	< 0.0034	U	< 0.21	U	< 0.0026	U	< 0.0039	U	< 0.21	U	< 0.0038	U	< 0.0059	U	NS	NS
1,1,2-Trichloroethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
1,1-Dichloroethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.27	26
1,1-Dichloroethene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.33	100
1,1-Dichloropropene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
1,2,3-Trichlorobenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
1,2,3-Trichloropropane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
1,2,4-Trichlorobenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
1,2,4-Trimethylbenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	**5**		< 0.28	U	< 0.0064	U	**0.82**		< 0.0063	U	< 0.53	U	3.6	52
1,2-Dibromo-3-chloropropane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
1,2-Dibromoethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
1,2-Dichlorobenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	1.1	100
1,2-Dichloroethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.02	3.1
1,2-Dichloropropane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
1,3,5-Trimethylbenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	**1.1**		< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	8.4	52
1,3-Dichlorobenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	2.4	49
1,3-Dichloropropane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
1,4-Dichlorobenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	1.8	13
2,2-Dichloropropane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
2-Chlorotoluene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
2-Hexanone	< 0.018	U	< 0.02	U	< 0.028	U	< 1.7	U	< 0.022	U	< 0.032	U	< 1.8	U	< 0.031	U	< 0.049	U	NS	NS
2-Isopropyltoluene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
4-Chlorotoluene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
4-Methyl-2-pentanone	< 0.018	U	< 0.02	U	< 0.028	U	< 1.7	U	< 0.022	U	< 0.032	U	< 1.8	U	< 0.031	U	< 0.049	U	NS	NS
Acetone	< 0.0022	U	< 0.024	U	< 0.034	U	< 2.1	U	**0.042**		< 0.039	U	< 2.1	U	< 0.038	U	< 0.05	U	0.05	100
Acrylonitrile	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Benzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.06	4.8
Bromobenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
Bromochloromethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Bromodichloromethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Bromoform	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Bromomethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Carbon Disulfide	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Carbon tetrachloride	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.76	2.4
Chlorobenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	1.1	100
Chloroethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Chloroform	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.37	49
Chloromethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
cis-1,2-Dichloroethene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.25	100
cis-1,3-Dichloropropene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Dibromochloromethane	< 0.0022	U	< 0.0024	U	< 0.0034	U	< 0.35	U	< 0.0026	U	< 0.0039	U	< 2.1	U	< 0.0038	U	< 0.0059	U	NS	NS
Dibromomethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Dichlorodifluoromethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Ethylbenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	**0.98**		< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	1	41
Hexachlorobutadiene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
Isopropylbenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
m&p-Xylene	< 0.0037	U	< 0.004	U	< 0.0057	U	**2**		< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Methyl Ethyl Ketone	< 0.022	U	< 0.024	U	< 0.034	U	< 2.1		< 0.0026	U	< 0.039	U	< 2.1	U	< 0.038	U	< 0.059	U	0.12	100
Methyl t-butyl ether (MTBE)	< 0.0074	U	< 0.008	U	< 0.011	U	< 0.7	U	< 0.0087	U	< 0.013	U	< 0.7	U	< 0.013	U	< 0.02	U	0.93	100
Methylene chloride	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.05	100
Naphthalene	< 0.0037	U	< 0.004	U	< 0.0057	U	**6**		< 0.28	U	< 0.0064	U	**0.62**		< 0.0063	U	< 0.53	U	12	100
n-Butylbenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	**0.39**		< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	12	100
n-Propylbenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	**1**		< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	3.9	100
o-Xylene	< 0.0037	U	< 0.004	U	< 0.0057	U	**0.77**		< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
p-Isopropyltoluene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	NS	NS
sec-Butylbenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	11	100
Styrene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
tert-Butylbenzene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.28	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.53	U	5.9	100
Tetrachloroethene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	1.3	19
Tetrahydrofuran (THF)	< 0.0074	U	< 0.008	U	< 0.011	U	< 0.7	U	< 0.0087	U	< 0.013	U	< 0.7	U	< 0.013	U	< 0.02	U	NS	NS
Toluene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.7	100
trans-1,2-Dichloroethene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.19	100
trans-1,3-Dichloropropene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
trans-1,4-dichloro-2-butene	< 0.0074	U	< 0.008	U	< 0.011	U	< 0.7	U	< 0.56	U	< 0.013	U	< 0.7	U	< 0.013	U	< 1.1	U	NS	NS
Trichloroethene	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.47	21
Trichlorofluoromethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Trichlorotrifluoroethane	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	NS	NS
Vinyl chloride	< 0.0037	U	< 0.004	U	< 0.0057	U	< 0.35	U	< 0.0043	U	< 0.0064	U	< 0.35	U	< 0.0063	U	< 0.0098	U	0.02	0.9
Total VOC's	ND		ND		ND		**17.54**		**0.042**		ND		**1.44**		ND		ND		NS	NS

NOTES:
Q is the Qualifier Column with definitions as follows:
U=analyte not detected at or above the level indicated
NS=this indicates that no regulatory limit has been established for this analyte
ND=analyte not detected
Bleu shaded value represent concentration exceeding Restricted Residential Use SCO

Table 2 (Cont.)
Soil Samples Analytical Results for SVOCs
69-02 Queens Boulevard, Woodside, NY

Sample ID	SP-1 6-8 FT		SP-2 8-10 FT		SP-3 4-6 FT		SP-4 8-10 FT		SP-5 0-2 FT		SP-6 4-6 FT		SP-7 6-8 FT		SP-8 0-2 FT		SP-9 6-8 FT		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential
Sampling Date	3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015			
Client Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil			
Compound	Result		Result		Result		Result		Result		Result		Result		Result		Result			
Units	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/Kg	mg/Kg
1,2-Dichlorobenzene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
1,2-Diphenylhydrazine	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
1,3-Dichlorobenzene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
1,4-Dichlorobenzene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
2,4-Dinitrotoluene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
2,6-Dinitrotoluene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
2-Chloronaphthalene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
2-Methylnaphthalene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	**2.4**		< 0.52	U	< 2.4	U	NS	NS
2-Nitroaniline	< 1.1	U	< 1.0	U	< 1.1	U	< 54.0	U	< 10.0	U	< 1.1	U	< 2.7	U	< 2.2	U	< 9.8	U	NS	NS
3,3'-Dichlorobenzidine	< 1.5	U	< 1.4	U	< 1.5	U	< 75.0	U	< 1.4	U	< 1.5	U	< 3.7	U	< 3.0	U	< 140.0	U	NS	NS
3-Nitroaniline	< 1.1	U	< 1.0	U	< 1.1	U	< 54.0	U	< 10.0	U	< 1.1	U	< 2.7	U	< 2.2	U	< 9.8	U	NS	NS
4-Bromophenyl phenyl ether	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
4-Chloroaniline	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
4-Chlorophenyl phenyl ether	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
4-Nitroaniline	< 1.1	U	< 1.0	U	< 1.1	U	< 54.0	U	< 10.0	U	< 1.1	U	< 2.7	U	< 2.2	U	< 9.8	U	NS	NS
Acenaphthene	**0.43**		< 0.25	U	< 0.26	U	**18**		< 2.5	U	< 0.026	U	**3**		< 0.52	U	< 2.4	U	20	100
Acenaphthylene	**0.34**		< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	**2**		< 0.52	U	< 2.4	U	100	100
Anthracene	**1.2**		< 0.25	U	< 0.26	U	**27**		< 2.5	U	< 0.026	U	**78**		**0.52**		**50**		100	100
Benz(a)anthracene	**3.8**		< 0.25	U	< 0.26	U	**59**		< 2.5	U	< 0.026	U	**22**		**2.1**		**140**		1	1
Benzidine	< 1.5	U	< 1.4	U	< 1.5	U	< 75.0	U	< 1.4	U	< 1.5	U	< 3.7	U	< 3.0	U	< 140.0	U	NS	NS
Benzo(a)pyrene	**3**		< 0.25	U	< 0.26	U	**47**		< 2.5	U	< 0.026	U	**19**		**2**		**130**		1	1
Benzo(b)fluoranthene	**3.9**		< 0.25	U	< 0.26	U	**59**		< 2.5	U	< 0.026	U	**23**		**3.1**		**160**		1	1
Benzo(ghi)perylene	**1.7**		< 0.25	U	< 0.26	U	**27**		< 2.5	U	< 0.026	U	**8.1**		**1**		**54**		100	100
Benzo(k)fluoranthene	**1.2**		< 0.25	U	< 0.26	U	**20**		< 2.5	U	< 0.026	U	**7.9**		**0.86**		**58**		0.8	1
Benzoic acid	< 0.37	U	< 0.36	U	< 0.38	U	< 1.9	U	< 3.6	U	< 0.370	U	< 0.92	U	< 0.75	U	< 34	U	NS	NS
Benzyl alcohol	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Benzyl butyl phthalate	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Bis(2-chloroethoxy)methane	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Bis(2-chloroethyl)ether	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Bis(2-chloroisopropyl)ether	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Bis(2-ethylhexyl)phthalate	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	**2.6**		< 2.4	U	NS	NS
Chrysene	**4**		< 0.25	U	< 0.26	U	**60**		< 2.5	U	< 0.026	U	**24**		**2.2**		**130**		1	1
Dibenz(a,h)anthracene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	0.33	0.33
Dibenzofuran	**3**		< 0.25	U	< 0.26	U	**14**		< 2.5	U	< 0.026	U	**3**		< 0.52	U	< 2.4	U	NS	NS
Diethyl phthalate	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Dimethylphthalate	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Di-n-butylphthalate	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Di-n-octylphthalate	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Fluoranthene	**9**		< 0.25	U	**0.34**		**150**		< 2.5	U	< 0.026	U	**44**		**3.4**		**210**		100	100
Fluorene	**0.37**		< 0.25	U	< 0.26	U	**20**		< 2.5	U	< 0.026	U	**4**		< 0.52	U	< 2.4	U	30	100
Hexachlorobenzene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Hexachlorobutadiene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Hexachlorocyclopentadiene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Hexachloroethane	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Indeno(1,2,3-cd)pyrene	**1.4**		< 0.25	U	< 0.26	U	**26**		< 2.5	U	< 0.026	U	**8,600**		**0.91**		**52**		0.5	0.5
Isophorone	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Naphthalene	**0.28**		< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	**3**		< 0.52	U	< 2.4	U	12	100
Nitrobenzene	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
N-Nitrosodimethylamine	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
N-Nitrosodi-n-propylamine	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
N-Nitrosodiphenylamine	< 0.26	U	< 0.25	U	< 0.26	U	< 13.0	U	< 2.5	U	< 0.026	U	< 0.64	U	< 0.52	U	< 2.4	U	NS	NS
Phenanthrene	**5**		< 0.25	U	**0.29**		**160**		< 2.5	U	< 0.026	U	**36**		**2.9**		**180**		100	100
Pyrene	**8.3**		< 0.25	U	**0.28**		**130**		< 2.5	U	< 0.026	U	**44**		**2.8**		**210**		100	100
Total SVOC's	**46.52**		ND		**0.91**		**817**		ND		ND		**8,923**		**24.39**		**1,374**		NS	NS

NOTES:
Q is the Qualifier Column with definitions as follows:
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NS=this indicates that no regulatory limit has been established for this analyte
ND=analyte not detected
Grey shaded values represent concentration exceeding Unrestricted Use SCO
Bleu shaded value represent concentration exceeding Restricted Residential Use SCO

Table 2 (Cont.)
Soil Samples Analytical Results for Metals
69-02 Queens Boulevard, Woodside, NY

Sample ID	SP-1 6-8 FT		SP-2 8-10 FT		SP-3 4-6 FT		SP-4 8-10 FT		SP-5 0-2 FT		SP-6 4-6 FT		SP-7 6-8 FT		SP-8 0-2 FT		SP-9 6-8 FT		NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives - Restricted Residential
Sampling Date	3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015		3/18/2015			
Client Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil			
Compound	Result		Result		Result		Result		Result		Result		Result		Result		Result			
Units	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/kg	Q	mg/Kg	mg/Kg
Aluminum	**9,420**		**6,030**		**10,900**		**7,200**		**5,730**		**12,300**		**6,040**		**8,840**		**6,730**		NS	NS
Antimony	< 3.3	U	< 3.4	U	< 4.0	U	< 3.9	U	< 3.4	U	< 3.3	U	**8.9**		< 3.4	U	**156**		NS	NS
Arsenic	**6**		**1**		**3.2**		**6.1**		**4.5**		**1.6**		**19.4**		**3.8**		**28.2**		13	16
Barium	**130**		**29.5**		**54.3**		**59.2**		**45.8**		**120**		**149**		**134**		**245**		350	350
Beryllium	**0.34**		**0.27**		**0.34**		**0.33**		< 0.27	U	**1.08**		**0.33**		**0.35**		< 0.54	U	7.2	14
Cadmium	**0.68**		< 0.34	U	< 0.40	U	**0.78**		< 0.34	U	< 0.33	U	**2.13**		**1.08**		**2.63**		2.5	2.5
Calcium	**21,200**		**729**		**47,700**		**5,220**		**58,200**		**2,040**		**11,400**		**35,400**		**34,200**		NS	NS
Chromium, Trivalent	**19.6**		**28**		**11.5**		**18.7**		**15.4**		**44.4**		**28.6**		**19.5**		**33.9**		30	36
Chromium, Hexavalent	< 0.45	U	**0.77**		< 0.46		< 0.46	U	**1.4**		< 0.44	U	< 0.58	U	< 0.45	U	< 0.85	U	1	22
Cobalt	**7.54**		**5.1**		**3.84**		**6.49**		**6.52**		**14.6**		**18.5**		**7.24**		**8.83**		NS	NS
Copper	**77.6**		**15**		**20.9**		**74.5**		**22.5**		**38.1**		**335**		**55.6**		**407**		50	270
Iron	**19,200**		**10,600**		**14,000**		**19,400**		**9,110**		**30,000**		**93,800**		**16,300**		**72,700**		NS	NS
Lead	**378**		**4.83**		**27.9**		**364**		**43.8**		**52.1**		**660**		**226**		**1,510**		63	400
Magnesium	**4,710**		**2,030**		**15,400**		**2,340**		**5,100**		**4,950**		**2,170**		**7,050**		**9,370**		NS	NS
Manganese	**309**		**176**		**706**		**204**		**161**		**315**		**753**		**244**		**502**		1,600	2,000
Mercury	**0.32**		< 0.03	U	< 0.03	U	**0.24**		**0.13**		**0.06**		**0.95**		**0.17**		**0.39**		0.18	0.81
Nickel	**13.1**		**8.8**		**6.57**		**11.3**		**11.5**		**33**		**38**		**16.7**		**29**		30	140
Potassium	**2,280**		**877**		**1,130**		**1,180**		**1,690**		**6,190**		**1,300**		**2,530**		**1,690**		NS	NS
Selenium	< 1.3	U	< 1.4	U	< 1.6	U	< 1.6	U	< 1.4	U	< 1.3	U	< 1.7	U	< 1.4	U	< 2.7	U	3.9	36
Silver	**0.98**		< 0.34		< 0.40		< 0.39		< 0.34		< 0.33	U	< 0.41	U	< 0.34	U	**1.89**		2	36
Sodium	**670**		**287**		**1,580**		**253**		**1,680**		**875**		**2,150**		**1,450**		**5,510**		NS	NS
Thallium	< 3.0	U	< 3.1	U	< 3.6	U	< 3.5	U	< 3.1	U	< 3.0	U	< 3.7	U	< 3.0	U	< 6.1	U	NS	NS
Vanadium	**24.5**		**22.3**		**16.4**		**24.8**		**24.5**		**37.1**		**45.4**		**29.8**		**19.1**		NS	NS
Zinc	**357**		**51.6**		**24.5**		**320**		**58.7**		**108**		**1,370**		**157**		**3,320**		109	2,200

NOTES:
Q is the Qualifier Column with definitions as follows:
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NS=this indicates that no regulatory limit has been established for this analyte
Grey shaded values represent concentration exceeding Unrestricted Use SCO
Bleu shaded value represent concentration exceeding Restricted Residential Use SCO

Table 3
Ground Water Samples Analytical Results for VOCs
69-02 Queens Boulevard, Woodside, NY

| Sample ID | MW-1 | | MW-2 | | MW-3 | | MW-4 | | MW-5 | | MW-6 | | MW-7 | | MW-8 | | MW-11 | | MW-12 | | MW-13 | | MW-14 | | MW-15 | | MPE-1 | | IW-1 | | IW-2 | | IW-3 | | IW-4 | | IW-5 | | IW-6 | | IW-7 | | SVE-1 | | SVE-2 | | SVE-3 | | SVE-4 | | SVE-5 | | SVE-6 | | AS-1 | | AS-2 | | AS-3 | | AS-4 | | AS-5 | | AS-6 | | TOGS-WQ/GA |
|---|---|---

Table (Cont.)
Ground Water Samples Analytical Results for SVOCs
69-02 Queens Boulevard, Woodside, NY

| Sample ID | MW-1 | | MW-2 | | MW-3 | | MW-4 | | MW-5 | | MW-6 | | MW-7 | | MW-8 | | MW-11 | | MW-12 | | MW-13 | | MW-14 | | MW-15 | | MPE-1 | | IW-1 | | IW-2 | | IW-3 | | IW-4 | | IW-5 | | IW-6 | | IW-7 | | SVE-1 | | SVE-2 | | SVE-3 | | SVE-4 | | SVE-5 | | SVE-6 | | AS-1 | | AS-2 | | AS-3 | | AS-4 | | AS-5 | | AS-6 | | TOGS-WQ/GA |
|---|---|---

APPENDIX E: AGENCY CORRESPONDENCE

LANGAN

Technical Excellence
Practical Experience
Client Responsiveness

7 August 2017

Gina Santucci
Environmental Review Coordinator
NYC Landmarks Preservation Commission
One Centre Street – 9th Floor North
New York, New York 10007

Re: 69-02 Queens Boulevard (Proposed Project)
Bronx, New York (Block 2432, Lots 1, 8, 9, 21, 41, 44, and 50)
Langan Project No: 170389301

Dear Ms. Santucci:

On behalf of 69-02 Queens Blvd Woodside, LLC ("Applicant"), Langan Engineering, Environmental, Surveying and Landscape Architecture, DPC (Langan) requests LPC review of a proposed project in the Woodside neighborhood of Queens. The Applicant is seeking approval of three discretionary actions that would affect part of Block 2432:

(i) a zoning map amendment to rezone Lot 1 and parts of Lots 41, 44, and 50 on Block 2432 from an M1-1 zoning district to an R7X zoning district with a C2-3 commercial overlay;

(ii) (ii) a Large-Scale General Development (LSGD) Special Permit to modify height, setback, and parking regulations; and

(iii) (iii) a zoning text amendment to designate a Mandatory Inclusionary Housing (MIH) area on Lots 8, 9, 21, 41, 44, and 50 on Block 2432.

The Proposed Actions would facilitate the construction of one 17-story (181.5-foot) mixed-use building, and one 14-story (151.5-foot) residential building, totaling approximately 481,258 gross square feet (gsf). The Proposed Project would include approximately 440,413 gsf of residential floor area (561 dwelling units), approximately 5,845 gsf of ground floor commercial space, and approximately 35,000 gsf of ground floor parking.

The Project Site is bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; a Long Island Rail Road (LIRR) right-of-way to the southwest; and 69th Street to the west (Figure 1). This request is made as a part of a City Environmental Quality Review (CEQR) Full Environmental Assessment Statement (EAS).

Based on our preliminary assessment, the 400-foot radius around the Project Site does not contain any LPC or State/National Register (S/NR) designated historic landmarks. Further, according to the NYS Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS), the Project Site is not

in a designated Archaeologically Sensitive Area.

Langan requests LPC determination on any potential architectural or archaeological significant resources on the Project Site (Block 2432, Lots 1, 8, 9, 21, 41, 44, and 50).

We look forward to your review of the project. Should have any questions regarding this matter, please do not hesitate to contact Michael Keane at (212) 479-5503 or MKeane@Langan.com.

Thank you for your assistance.

Sincerely,



Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

Michael R. Keane, AICP
Senior Environmental Planner

Enclosure(s): Project Site Location Map

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-Q
Project: 69-02 QUEENS BLVD
Date received: 8/7/2017

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 47 Avenue, BBL: 4024320001
2) ADDRESS: 69 Street, BBL: 4024320008
3) ADDRESS: 69-20 Queens Boulevard, BBL: 4024320021
4) ADDRESS: 46-12 70 Street, BBL: 4024320041
5) ADDRESS: 69-39 47 Avenue, BBL: 4024320044
6) ADDRESS: 69-23 47 Avenue, BBL: 4024320050
7) ADDRESS: 69-02 Queens Boulevard, BBL: 4024320009,

Gina Santucci 8/15/2017

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 32664_FSO_DNP_08152017.doc

APPENDIX F: TRANSPORTATION DEMAND FACTORS (TDF) MEMO

LANGAN

Technical Memorandum

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444

To: New York City Department of Transportation

From: Michael Halkias, Langan Engineering & Environmental Services

Info: Adnan Pasha, Brian Weinberg

Date: July 31, 2017

Re: Transportation Demand Factors (TDF) Memorandum
69-02 Queens Boulevard
Queens, New York
Langan Project No.: 170389301

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1.0 INTRODUCTION

The Project Site is located at 69-02 Queens Boulevard in Woodside neighborhood of the Borough of Queens, Community District 2 (see Figure 1). The site is bound by Queens Boulevard to the north; 69th Street to the south; 47th Avenue to the south; and 70th Street to the east (see Figure 2).

This technical memorandum summarizes and documents the transportation planning factors to be used for the Environmental Assessment Statement (EAS) analyses of traffic, parking, transit, and pedestrian conditions for the Proposed Actions, which would result in the development of new residential and commercial uses, and an on-site accessory parking facility. The Proposed Actions facilitating this development would require rezoning of a portion of the project site from the existing M1-1 zoning district to an R7X zoning district with a C2-3 commercial overlay (see Figure 3).

2.0 PROPOSED PROJECT

In order to assess the potential effects of the Proposed Actions, it is necessary to determine the increment of development that would occur on the Project Site (Block 5087). As such, a Reasonable Worse Case Development Scenario (RWCDS) for both the "Future Without the Proposed Actions," also referred to as the No-Action Condition and "Future With the Proposed Actions," also referred to as the With-Action Condition was developed for Build Year 2020. The Proposed Actions would facilitate a predominantly residential development, which would include permanent affordable mixed-income dwelling units pursuant to the Mandatory Inclusionary Housing (MIH) program.

2.1 No-Action Condition

The future without the Proposed Actions (No-Action Condition) would include a new 12-story building that would occupy part of the Project Site currently zoned R7X/C2-3 (Lots 8, 9, 21, p/o 41, p/o 44 and p/o 50). Lots 8 and 9 are currently vacant; and the existing one-story restaurant on Lot 21 and the two-story commercial building on Lot 41 would be demolished. Only a small portion of the existing one-story commercial warehouse building on Lot 44 would be demolished to accommodate the new building. The existing community facility building, along with the accessory parking lot on Lot 50 would remain as-is. The new development in the No-Action Condition would be built pursuant to the underlying R7X/C2-3 zoning regulations with the As-of-Right (AOR) residential FAR bonus under the Inclusionary Housing (IH) program.

Pursuant to the underlying zoning regulations, Lots 8, 9, 21, p/o 41, p/o 44, and p/o 50 would be developed with a 12-story, approximately 311,596 gsf, mixed-use building. As shown in Table 1, the proposed building would include: (i) approximately 5,460 gsf of commercial space on the ground floor fronting Queens Boulevard; (ii) approximately 226,840 gsf of residential space (289 dwelling units, of which 58 units would be affordable); and (iii) approximately 79,296 gsf of accessory parking spaces (124 spaces). The No-Action Condition would also include the existing one-story, approximately 8,700 gsf warehouse building on Lot 44, and the existing two-

story, approximately 10,943 gsf community center and surface parking (25 spaces) on Lot 50. The detailed building program in the No-Action Condition is shown in Table 1.

Table 1: No-Action Condition (R7X/C2-3 and M1-1)

Component	Local Retail (gsf)	Community (gsf)	Residential Units *(785 gsf/unit)*	Parking Spaces
(New AOR Uses) Lot 8, 9, 21, 41	5,460	0	289	124
(Existing Uses) Lot 44, 50	8,700	10,943	0	25
TOTAL	**14,160**	**10,943**	**289**	**149**

Note:
(1) Total Lot Area is 71,862 sf (44,247 sf in R7X/C2-3; and 27,615 sf in M1-1)

In addition, there are two new developments proposed within the Study Area with a build year of 2020 including:

(i) A 9-story, mixed-use building at 46-02 70th Street (Block 2432, Lot 23); and
(ii) A 7-story, mixed-use building at 70-09 45th Avenue (Block 1351, Lot 75).

2.2 With-Action Condition

In the future with the Proposed Actions (With-Action Condition), the entire Project Site would be developed pursuant to the proposed R7X/C2-3 zoning district. The With-Action Condition would include a 17-story mixed-use building on Lots 8, 9, and 21; and a 14-story residential building on Lots 41, 44, and 50 totaling approximately 481,258 gsf ("Proposed Project"). The Proposed Project would include a total of approximately 440,413 gsf (561 dwelling units) of mixed-income residential space, of which approximately 20 percent (112 dwelling units) would be permanently affordable pursuant to the MIH program; approximately 5,845 gsf of ground floor retail space; and approximately 35,000 gsf of at-grade accessory parking that would be accessed via 69th Street. The attended parking facility would provide approximately 246 spaces using double stackers, out of which 226 parking spaces will be for residential use and the remaining 20 parking spaces will be for commercial use.

The 17-story mixed-use building ("West Tower") would front Queens Boulevard and would include the following components:

- Approximately 229,353 gsf of residential space (290 dwelling units, of which 58 would be permanently affordable) on floors 2 through 17;
- Approximately 5,845 gsf of ground floor commercial space; and
- Approximately 17,500 gsf of at-grade accessory parking (123 parking spaces) using double stackers that would be accessed via 69th Street.

The 14-story residential building ("East Tower") would front 47th Avenue and would include the following components:

- Approximately 211,060 gsf of residential space (271 dwelling units, of which 54 would be permanently affordable) on floors 2 through 14; and
- Approximately 17,500 gsf of at-grade accessory parking (123 parking spaces) using double stackers that would be accessed via 69th Street.

The detailed building program in the With-Action Condition is shown in Table 2.

Table 2: With-Action Condition/Proposed Project (R7X/C2-3)

Component	Local Retail (gsf)	Community (gsf)	Residential Units *(785 gsf/unit)*	Parking Spaces
West Tower (Lots 8, 9, 21)	5,845	0	290	123
East Tower (Lots 41, 44, 50)	0	0	271	123
TOTAL	**5,845**	**0**	**561**	**246**

Notes:
(1) The With-Action Condition is based on the development progran provided by the Applicant (May 2016)
(2) Based on an average parking size of approximately 466 sf per parking space.

3.0 TRANSPORTATION ANALYSIS

3.1 Analysis Methodology

The 2014 Edition of the CEQR Technical Manual (*CEQR Technical Manual)* identifies minimum development densities that potentially require transportation analysis. Table 16-1 of the 2014 *CEQR Technical Manual* lists the minimum densities that would generally result in fewer than 50 peak hour vehicle trips, 200 peak hour subway/rail or bus transit riders, and 200 peak hour pedestrian trips, for which significant adverse impacts are generally considered unlikely. For residential developments in Zone 3 (which includes all areas within 0.5 miles of a subway station with respect to the current project location in Queens County), the development threshold under CEQR is 200 new dwelling units. The development facilitated by the Proposed Actions would exceed this threshold.

For transportation analysis purposes, the incremental difference in trip generation between the No-Action and With-Action conditions provides the basis for assessing transportation conditions in the Study Area. As shown in Table 3, the With-Action Condition would result in a net increase of 213,573 gsf of residential space (272 dwelling units); a net decrease of 8,315 gsf of commercial facility; a net decrease of 10,943 gsf of community facility space; and a net increase of 97 parking spaces.

Table 3: Incremental Difference Between No-Action and With-Action Conditions

Component	Local Retail (gsf)	Community (gsf)	Residential Units *(785 gsf/unit)*	Parking Spaces
No-Action Condition	14,160	10,943	289	149
With-Action Condition	5,845	0	561	246
INCREMENT	**-8,315**	**-10,943**	**272**	**97**

3.2 Transportation Screening Assessment

The *CEQR Technical Manual* describes a two-tier screening process to determine if quantified analyses of transportation conditions are warranted. The preliminary assessment starts with a trip generation analysis (Level 1) to estimate person and vehicle trips attributable to the project. According to the *CEQR Technical Manual*, if the project is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips that could be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Actions would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses may be warranted to assess transportation conditions in the Study Area.

Level 1 (Project Trip Generation) Screening Assessment

A Level 1 screening assessment was conducted in accordance with the CEQR guidelines to determine if the increment in the With-Action Condition as compared to the No-Action Condition would exceed CEQR thresholds for conducting quantified transportation analyses. To undertake this assessment, a trip generation analysis was conducted for the weekday AM, midday, PM, and Saturday midday peak hours. Trip estimates were developed for the local retail, community facility, and residential components for the No-Action and With-Action conditions.

Trip Generation

Transportation planning assumptions for local retail, community and residential uses used in trip generation analysis are summarized in Table 4 and are based on information provided in the *CEQR Technical Manual*, 2011-2015 U.S. Census Bureau's American Community Survey (ACS) database, and other recently approved transportation studies with similar characteristics, such as the *Hunter's Point South Rezoning and Related Actions FEIS 2008* (CEQR No. 08DME006Q).

Local Retail

The travel demand forecast for local retail is based on trip rates and temporal distribution from the *CEQR Technical Manual* and the directional splits, mode share, and vehicle occupancy are based on data from the *Hunter's Point South Rezoning and Related Actions FEIS 2008*.

Community Facility

The factors used to forecast travel demand for the community facility were developed from the *Hunter's Point South Rezoning and Related Actions FEIS 2008* transportation study.

Residential

The forecast of travel demand from projected residential development is based on trip rates and temporal distribution rates as per the *CEQR Technical Manual*. The directional split and taxi vehicle occupancy is based on data from the *Hunter's Point South Rezoning and Related Actions FEIS 2008*. The residential modal split and auto vehicle occupancy reflects journey-to-work data from the 2015 Census database.

Net Incremental Trips

Trip generation for the No-Action Condition, With-Action Condition, and the resulting Net Incremental trips are shown in Tables 5, 6, and 7, respectively. As summarized in Table 7, the With-Action Condition is expected to generate approximately 142, -242, 40 and -17 net incremental person trips, and 57, 11, 55 and 44 net incremental vehicle trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

Table 4: Transportation Planning Assumptions and Demand Estimates

Use	Local Retail				Community Facility				Residential (DU)			
Total Daily Person Trip	(1) Weekday 205 Trips/KSF		SAT 240		(3) Weekday 34 Trips/KSF		SAT 34		(1) Weekday 8.075 Trips/DU		SAT 9.60	
Trip Linkage	0%				0%				0%			
Net Daily Person Trip	Weekday 205 Trips/KSF		SAT 240		Weekday 34 Trips/KSF		SAT 34		Weekday 8.075 Trips/DU		SAT 9.60	
Temporal	(1)				(3)				(1)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
	3.0%	19.0%	10.0%	10.0%	7.2%	7.1%	8.3%	7.1%	10.0%	5.0%	11.0%	8.0%
Direction	(3)				(3)				(3)			
In	50%	50%	50%	50%	94%	45%	42%	45%	15%	50%	70%	50%
Out	50%	50%	50%	50%	6%	55%	58%	55%	85%	50%	30%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(3)				(3)				(2)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
Auto	2.0%	2.0%	2.0%	2.0%	12.0%	12.0%	12.0%	12.0%	30.7%	30.7%	30.7%	30.7%
Taxi	3.0%	3.0%	3.0%	3.0%	1.0%	1.0%	1.0%	1.0%	0.6%	0.6%	0.6%	0.6%
Subway	10.0%	10.0%	10.0%	10.0%	28.0%	28.0%	28.0%	28.0%	53.2%	53.2%	53.2%	53.2%
Bus	10.0%	10.0%	10.0%	10.0%	2.0%	2.0%	2.0%	2.0%	7.7%	7.7%	7.7%	7.7%
Railroad	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%
Ferry	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	1.1%	1.1%
Walk	75.0%	75.0%	75.0%	75.0%	57.0%	57.0%	57.0%	57.0%	4.8%	4.8%	4.8%	4.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy	(3)				(3)				(2)(3)			
Auto	1.65				1.50				1.15			
Taxi	1.40				1.50				1.17			
Daily Delivery Trip Generation Rate	(1) Weekday 0.35 Delivery Trips/ KSF		SAT 0.04		(3) Weekday 0.32 Delivery Trips/ KSF		SAT 0.01		(1) Weekday 0.06 Delivery Trips/DU		SAT 0.02	
Delivery Temporal	(1)				(3)				(1)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
	8.0%	11.0%	2.0%	11.0%	6.6%	11.0%	1.0%	11.0%	12.0%	9.0%	2.0%	9.0%
Delivery Direction	(1)				(3)				(1)			
In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sources
(1) 2014 CEQR Technical Manual
(2) Journey to Work, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates (using weighted average of census tract 243, 479, 483, 485, and 489 of Queens county, New york.)
(3) Hunter's Point South Rezoning and Related Actions;(FEIS), 2008 (CEQR No. 08DME006Q)

Table 5: Transportation Demand Forecast, No-Action Condition

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Bicycle	Walk	Total	Auto	Taxi	Delivery	Total
Local Retail	Weekday AM	In	1	1	4	4	0	0	33	44	1	2	0	3
		Out	1	1	4	4	0	0	33	44	1	2	0	3
		Total	2	3	9	9	0	0	65	87	1	4	0	5
	Weekday Midday	In	6	8	28	28	0	0	207	276	3	12	0	15
		Out	6	8	28	28	0	0	207	276	3	12	0	15
		Total	11	17	55	55	0	0	414	552	7	24	1	31
	Weekday PM	In	3	4	15	15	0	0	109	145	2	6	0	8
		Out	3	4	15	15	0	0	109	145	2	6	0	8
		Total	6	9	29	29	0	0	218	290	4	12	0	16
	Saturday Midday	In	3	5	17	17	0	0	127	170	2	7	0	9
		Out	3	5	17	17	0	0	127	170	2	7	0	9
		Total	7	10	34	34	0	0	255	340	4	15	0	19
Community Facility	Weekday AM	In	3	0	7	1	0	0	14	25	2	0	0	2
		Out	0	0	0	0	0	0	1	2	0	0	0	0
		Total	3	0	8	1	0	0	15	27	2	0	0	3
	Weekday Midday	In	1	0	3	0	0	0	7	12	1	0	0	1
		Out	2	0	4	0	0	0	8	15	1	0	0	2
		Total	3	0	7	1	0	0	15	26	2	0	0	3
	Weekday PM	In	2	0	4	0	0	0	7	13	1	0	0	1
		Out	2	0	5	0	0	0	10	18	1	0	0	2
		Total	4	0	9	1	0	0	18	31	2	0	0	3
	Saturday Midday	In	1	0	3	0	0	0	7	12	1	0	0	1
		Out	2	0	4	0	0	0	8	15	1	0	0	1
		Total	3	0	7	1	0	0	15	26	2	0	0	2
Residential (DU)	Weekday AM	In	11	0	19	3	1	0	2	35	9	1	1	2
		Out	61	1	105	15	4	2	9	198	53	1	1	2
		Total	72	1	124	18	5	3	11	233	62	2	2	4
	Weekday Midday	In	18	0	31	4	1	1	3	58	16	1	1	17
		Out	18	0	31	4	1	2	3	60	16	1	1	17
		Total	36	1	62	9	2	3	6	118	31	1	2	34
	Weekday PM	In	55	1	96	14	4	2	9	180	48	1	0	49
		Out	24	0	41	6	2	1	4	77	20	1	0	22
		Total	79	1	136	20	5	3	12	257	68	3	0	71
	Saturday Midday	In	34	1	59	9	2	1	5	111	30	1	0	31
		Out	34	1	59	9	2	1	5	111	30	1	0	31
		Total	68	1	118	17	5	2	11	222	59	2	0	61
Total	Weekday AM	In	15	2	30	8	1	0	49	104	12	3	1	16
		Out	62	2	110	20	4	2	43	244	53	3	1	58
		Total	77	4	140	27	5	3	92	347	65	6	3	74
	Weekday Midday	In	25	9	62	32	1	1	216	346	20	13	1	34
		Out	25	9	63	32	1	2	218	350	20	13	1	34
		Total	50	17	125	65	2	3	434	696	40	25	2	67
	Weekday PM	In	60	6	114	29	4	2	125	338	51	8	0	59
		Out	29	5	60	21	2	1	123	240	24	8	0	32
		Total	88	10	174	49	5	3	248	578	74	15	0	90
	Saturday Midday	In	39	6	79	26	2	1	140	293	33	9	0	41
		Out	39	6	80	26	2	1	141	295	33	9	0	41
		Total	78	12	159	52	5	2	281	588	65	17	0	82

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 6: Transportation Demand Forecast, With-Action Condition

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Bicycle	Walk	Total	Auto	Taxi	Delivery	Total
Local Retail	Weekday AM	In	0	1	2	2	0	0	13	18	0	1	0	1
		Out	0	1	2	2	0	0	13	18	0	1	0	1
		Total	1	1	4	4	0	0	27	36	0	2	0	2
	Weekday Midday	In	2	3	11	11	0	0	85	114	1	5	0	6
		Out	2	3	11	11	0	0	85	114	1	5	0	6
		Total	5	7	23	23	0	0	171	228	3	10	0	13
	Weekday PM	In	1	2	6	6	0	0	45	60	1	3	0	3
		Out	1	2	6	6	0	0	45	60	1	3	0	3
		Total	2	4	12	12	0	0	90	120	1	5	0	7
	Saturday Midday	In	1	2	7	7	0	0	53	70	1	3	0	4
		Out	1	2	7	7	0	0	53	70	1	3	0	4
		Total	3	4	14	14	0	0	105	140	2	6	0	8
Community Facility	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0
Residential (DU)	Weekday AM	In	21	0	36	5	1	1	3	68	18	2	2	22
		Out	118	2	205	30	8	4	18	385	102	2	2	107
		Total	139	3	241	35	9	5	22	453	121	4	4	129
	Weekday Midday	In	35	1	60	9	2	1	5	113	30	1	2	33
		Out	35	1	60	9	2	1	5	113	30	1	2	33
		Total	69	1	120	17	5	2	11	227	60	2	3	66
	Weekday PM	In	107	2	185	27	7	4	17	349	93	2	0	96
		Out	46	1	79	11	3	2	7	149	40	2	0	43
		Total	153	3	265	38	10	5	24	498	133	5	1	138
	Saturday Midday	In	66	1	115	17	4	2	10	215	57	2	0	59
		Out	66	1	115	17	4	2	10	215	57	2	0	59
		Total	132	2	229	33	9	5	21	431	115	4	0	119
Total	Weekday AM	In	21	1	38	7	1	1	17	86	18	3	2	23
		Out	118	3	207	31	8	4	32	403	103	3	2	108
		Total	140	4	244	38	9	5	49	489	121	6	4	131
	Weekday Midday	In	37	4	72	20	2	1	91	227	32	6	2	39
		Out	37	4	72	20	2	1	91	227	32	6	2	39
		Total	74	8	143	40	5	2	182	454	63	12	3	78
	Weekday PM	In	108	4	191	33	7	4	62	409	94	5	0	99
		Out	47	3	85	17	3	2	52	209	40	5	0	46
		Total	155	6	277	50	10	5	114	618	134	10	1	145
	Saturday Midday	In	67	3	122	24	4	2	63	286	58	5	0	63
		Out	67	3	122	24	4	2	63	286	58	5	0	63
		Total	135	7	243	47	9	5	126	571	116	10	0	127

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 7: Transportation Demand Forecast, Net Incremental (With-Action minus No-Action)

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Bicycle	Walk	Total	Auto	Taxi	Delivery	Total
Local Retail	Weekday AM	In	-1	-1	-3	-3	0	0	-19	-26	0	-1	0	-2
		Out	-1	-1	-3	-3	0	0	-19	-26	0	-1	0	-2
		Total	-1	-2	-5	-5	0	0	-38	-51	-1	-2	0	-3
	Weekday Midday	In	-3	-5	-16	-16	0	0	-121	-162	-2	-7	0	-9
		Out	-3	-5	-16	-16	0	0	-121	-162	-2	-7	0	-9
		Total	-6	-10	-32	-32	0	0	-243	-324	-4	-14	0	-18
	Weekday PM	In	-2	-3	-9	-9	0	0	-64	-85	-1	-4	0	-5
		Out	-2	-3	-9	-9	0	0	-64	-85	-1	-4	0	-5
		Total	-3	-5	-17	-17	0	0	-128	-170	-2	-7	0	-9
	Saturday Midday	In	-2	-3	-10	-10	0	0	-75	-100	-1	-4	0	-6
		Out	-2	-3	-10	-10	0	0	-75	-100	-1	-4	0	-6
		Total	-4	-6	-20	-20	0	0	-150	-200	-2	-9	0	-11
Community Facility	Weekday AM	In	-3	0	-7	-1	0	0	-14	-25	-2	0	0	-2
		Out	0	0	0	0	0	0	-1	-2	0	0	0	0
		Total	-3	0	-8	-1	0	0	-15	-27	-2	0	0	-3
	Weekday Midday	In	-1	0	-3	0	0	0	-7	-12	-1	0	0	-1
		Out	-2	0	-4	0	0	0	-8	-15	-1	0	0	-2
		Total	-3	0	-7	-1	0	0	-15	-26	-2	0	0	-3
	Weekday PM	In	-2	0	-4	0	0	0	-7	-13	-1	0	0	-1
		Out	-2	0	-5	0	0	0	-10	-18	-1	0	0	-2
		Total	-4	0	-9	-1	0	0	-18	-31	-2	0	0	-3
	Saturday Midday	In	-1	0	-3	0	0	0	-7	-12	-1	0	0	-1
		Out	-2	0	-4	0	0	0	-8	-15	-1	0	0	-1
		Total	-3	0	-7	-1	0	0	-15	-26	-2	0	0	-2
Residential (DU)	Weekday AM	In	10	0	18	3	1	0	2	33	9	1	1	11
		Out	57	1	99	14	4	2	9	187	50	1	1	52
		Total	67	1	117	17	4	2	11	220	58	2	2	63
	Weekday Midday	In	17	0	29	4	1	1	3	55	15	1	1	16
		Out	17	0	29	4	1	-1	3	53	15	1	1	16
		Total	34	1	58	8	2	0	5	108	29	1	1	32
	Weekday PM	In	52	1	90	13	3	2	8	169	45	1	0	46
		Out	22	0	39	6	1	1	3	72	19	1	0	21
		Total	74	1	128	19	5	3	12	242	64	2	0	67
	Saturday Midday	In	32	1	56	8	2	1	5	104	28	1	0	29
		Out	32	1	56	8	2	1	5	104	28	1	0	29
		Total	64	1	111	16	4	2	10	209	56	2	0	58
Total	Weekday AM	In	7	-1	8	-1	1	0	-32	-18	6	0	1	7
		Out	57	0	96	12	4	2	-11	160	49	0	1	50
		Total	63	-1	104	11	4	2	-43	142	56	0	1	57
	Weekday Midday	In	12	-5	10	-12	1	1	-126	-119	12	-7	0	6
		Out	12	-5	9	-12	1	-1	-127	-123	11	-7	0	5
		Total	24	-9	19	-24	2	0	-253	-242	23	-13	1	11
	Weekday PM	In	49	-2	78	4	3	2	-63	71	43	-3	0	40
		Out	18	-2	25	-3	1	1	-71	-31	17	-3	0	14
		Total	67	-4	103	1	5	3	-134	40	60	-5	0	55
	Saturday Midday	In	29	-3	42	-2	2	1	-77	-7	26	-3	0	22
		Out	28	-3	41	-2	2	1	-78	-10	25	-3	0	22
		Total	57	-5	84	-4	4	2	-155	-17	51	-7	0	44

Note: In and Out volumes may not sum to Total volumes due to rounding.

Traffic

As presented in Table 7, the With-Action Condition would result in approximately 57, 11, 55 and 44 incremental vehicle trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. The net incremental vehicle trips during the weekday AM and PM analysis peak hours exceeds the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-

ends); therefore, a Level 2 screening assessment for potential project-generated vehicular trips was conducted for these two peak hours.

Transit

The Project Site is well-served by New York City Transit (NYCT) bus lines, which include the Q47 line that runs north-south on 69th Street; the Q60 line that runs east-west on Queens Boulevard; and the Q18 line that runs on 65th Place, three blocks west of the Proposed Development Site. The northbound Q47 bus and eastbound Q60 bus stop on the northwestern corner of the Project Site at the intersection of 69th Street and Queens Boulevard. The Project Site is also served by NYCT subway, including the No. 7 subway line (69 St–Fisk Av Station), approximately 0.5 miles to the north on Roosevelt Avenue and 69th Street; and the E, F, M. R. and 7 subway lines (Jackson Heights–Roosevelt Av / 74 St–Broadway station complex), approximately 0.7 miles to the north on Roosevelt Avenue and 74th Street. In addition, the Woodside stop of the LIRR is approximately 0.7 miles to the northwest of the Project Site.

As shown in Table J-4, the With-Action Condition would result in approximately 104, 19, 103, and 84 incremental subway trips and 11, -124, 1, and -4 incremental bus trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Combining the subway and bus trips would result in total incremental transit trips of 115, -105, 104, and 80 during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Since the transit trips do not exceed the CEQR Level 1 trip generation threshold of 200 or more peak hour transit trips during the four analysis peak hours; no further transit analysis is warranted. Therefore, the Proposed Actions would not result in significant adverse transit impacts.

Pedestrians

As shown in Table 7, the With-Action Condition would result in approximately 142, -242, 40 and -17 net incremental person trips in the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Since the pedestrian trips do not exceed the CEQR Level 1 trip generation threshold of 200 or more peak hour pedestrian trips during the four analysis peak hours; no further pedestrian analysis is warranted. Therefore, the Proposed Actions would not result in significant adverse pedestrian impacts.

Level 2 (Project Generated Trip Assignment) Screening Assessment

A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network, pedestrian elements and transit facilities, and the identification of specific locations where the incremental increase in demand may potentially exceed *CEQR Technical Manual* analysis thresholds, and therefore could require a quantitative analysis.

Traffic

As shown in Table 7, the With-Action Condition would result in approximately 57, 11, 55 and 44 incremental vehicle trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. The net incremental vehicle trips during the weekday AM and PM analysis

peak hours exceed the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends); therefore, a Level 2 screening assessment for potential project-generated vehicular trips was conducted.

There are multiple routes from nearby highway, major arterial and collector roads available to access/egress the Project Site via 69th Street which would serve as the primary access/egress route. For this Level 2 assessment, project generated vehicle trips were assigned through various intersections in the study area (as per the *CEQR Technical Manual* guidelines) to the proposed parking garage entrance on 69th Street. Based on trip distribution and traffic assignment patterns, none of the intersections on 69th Street would experience 50 or more peak hour project generated vehicle trips (see Figures 4 and 5). Therefore, the Proposed Action would not result in any potential significant adverse traffic impacts at the study area intersections.

APPENDIX G: AIR QUALITY DATA

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MEMORANDUM

DATE:	2017-07-06	**RWDI REFERENCE #:** 1601755
TO:	Ronald Ying and Mauricio Garcia, New York City Department of City Planning	**EMAIL:** RYING@planning.nyc.gov; MGARCIA@planning.nyc.gov; AMEUNIER@planning.nyc.gov
FROM:	Aimee Smith, M.Eng., P.Eng	**EMAIL:** aimee.smith@rwdi.com
	Sharon Schajnoha, B.Sc., P.Eng.	**EMAIL:** sharon.schajnoha@rwdi.com
RE:	**Modeling Protocol – Air Quality Analysis** **69-02 Queens Boulevard, Woodside, Block 2432, Lots 1, 41, 44, 50**	

The purpose of this memorandum is to describe the City Environmental Quality Review (CEQR) air quality analysis approach for the proposed development project at 69-02 Queens Boulevard.

1.0 AIR QUALITY ANALYSIS

This section presents a summary of the methodology and assumptions to be used for both the mobile and stationary source air quality analyses of the Proposed Action.

1.1 Background Concentrations

Background concentrations will be added to modeling results for mobile and stationary sources to obtain total pollutant concentrations at an analysis site and/or receptor location. The background concentrations used in the mobile source analysis will be in the statistical format of the NAAQS, as provided in the 2014 *CEQR Technical Manual*. These represent the most recent 3-year average for 24-hour average $PM_{2.5}$ and 1-hour average NO_2 and SO_2, the highest value from the three most recent years of data available for PM_{10}, and the highest value from the five most recent years of data available for all other pollutant and averaging period combinations. These background values will be obtained from the New York State Department of Environmental Conservation (NYSDEC).

1.2 MOBILE SOURCE ANALYSIS

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To help determine if any roadway intersections are to be evaluated, *CEQR Technical Manual* describes a screening evaluation based on predicted incremental traffic counts determined from a separate traffic study. For the project site, the increments are 160 or more automobile trips in the peak hour for CO. For $PM_{2.5}$ several numbers of incremental peak hour trips for heavy duty diesel vehicles (HDDV) are specified depending on the type of roadway. It is anticipated that a detailed microscale analysis of mobile source emissions will not be required at any of the affected intersections. This screening will be performed to confirm.

1.2.2 PARKING GARAGE ANALYSIS

The proposed development project would include a one-story parking garage with stackers. Based on parking garage location and size, an analysis of CO and PM emissions will be performed. The analysis will use the procedures outlined in the *CEQR Technical Manual* for assessing potential air quality impacts from proposed parking garage.

Receptor locations will be placed as described in the procedure outlined in Section 321.2 of the CEQR Technical Manual.

1.3 STATIONARY SOURCE ANALYSIS

1.3.1 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) SYSTEMS

The analysis of the proposed development project's heating, ventilating, and air conditioning (HVAC) system(s) will consider impacts following the screening procedures outlined in the *CEQR Technical Manual.* The potential for impacts on existing sensitive receptors surrounding the Project Site, "project-on-project impacts," and cumulative impacts will be assessed. The nearest existing sensitive receptors and/or projected development(s) of a similar or greater height will be analyzed as potential receptors. Because information on the HVAC systems' design is not available at this time, it will be assumed that exhaust stacks would be located 3 feet above roof height, in accordance with the CEQR Technical Manual, and that No. 2 fuel oil may be utilized.

The screening and refined analyses will be conducted in accordance with the following steps until a passing result is obtained:

1. Fuel oil operation using the graphical screening procedure for fuel oil firing;
2. Refined analysis using Fuel Oil No. 2 (ultra-low sulfur);

3. Natural gas operation using the graphical screening procedure for natural gas firing;
4. Refined analysis for natural gas operation;
5. Further refined analysis for natural gas using a taller stack or increased setback; and
6. Further analysis for natural gas using a low NO_x (natural gas) boiler.

If the results indicate that the first two steps using fuel oil are not adequate, then an E-designation would be required outlining the use of natural gas and possibly the need for a taller stack, increased setback and/or low NO_x boiler. If the results for Steps 1 and 2 demonstrate compliance, then the Proposed Action would result in no potential significant adverse air quality impacts using No. 2 fuel oil or natural gas.

Refined Dispersion Analysis for Individual HVAC Systems

If the screening analysis demonstrates the potential for an air quality impact, a refined modeling analysis will be performed using the latest version of the AERMOD model. Concentrations of nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter (PM_{10} and $PM_{2.5}$) will be determined at off-site receptors sites. Receptors will be situated at both pedestrian level (1.8 m height) and elevated receptors that could represent operable windows and outside air intakes. Pedestrian level receptors will be spaced at approximately 60 foot increments in areas not occupied by buildings or roadways, up to about 400 feet from the source, beyond which larger increments (e.g. 150 feet) will be used to approximately 1,000 feet from the Project Site.

Fuel consumption will be estimated based on procedures outlined in the *CEQR Technical Manual*. Emission factors from the fuel oil and natural gas combustion sections of the U.S. EPA's AP-42 will be used to calculate emission rates for the proposed development's heat and hot water system. The SO_2 emissions rates will be calculated based on a maximum fuel oil sulfur content of 0.0015 percent (based on use of ultra-low sulfur No. 2 oil) the fuel using the appropriate AP-42 formula. Annual NO_2 concentrations from heating and hot water sources will be estimated using a NO_2 to NO_x ratio of 0.75, as described in the EPA's Guideline on Air Quality Models at 40 CFR part 51 Appendix W, Section 5.2.4.10

One-hour average NO_2 concentrations associated with the proposed development's hot water systems will be estimated using AERMOD model's Plume Volume Molar Ratio Method (PVMRM) module to analyze chemical transformation within the model. An initial NO_2 to NO_x ratio of ten percent at the source exhaust stack will be assumed, which is considered

representative for boilers.

For the refined dispersion analysis, five years of meteorological data (2012-2016) from La Guardia International Airport and concurrent upper air data from Brookhaven, New York, will be utilized for the simulation program. Predicted values will be compared with National Ambient Air Quality Standards (NAAQS) for NO_2, SO_2 and PM_{10}, and the CEQR *de minimis* criteria for $PM_{2.5}$. In the event that exceedances are predicted, an air quality E-designation would be proposed for the Project Site that would describe the fuel and/or HVAC exhaust stack restrictions that would be required to avoid a significant adverse air quality impact.

Cumulative Impact from HVAC Systems (Cluster Analysis)

For potential cumulative HVAC impacts resulting from project-on-existing developments, Figure 17-7 from the Air Quality Appendix of the *CEQR Technical Manual* will be applied in the assessment based on natural gas and a residential building.

1.3.2 INDUSTRIAL SOURCE ANALYSIS

A field survey was conducted to determine if there are any existing industrial facilities within 400 feet of the Project Site. The survey identified three lots categorized as industrial/manufacturing:

- Block 2432, Lots 41, 44
- Block 2431, Lot 33
- Block 2433, Lots 1, 46, 45
- Block 2434, Lot 1, 20
- Block 2444, Lot 1

A review of the New York City Department of Environmental Protection (DEP) Clean Air Tracking System (CATS) will be performed to determine if there are any current permits associated with the above sites.

Based on this review of existing permits, if any industrial sources are identified for assessment, the procedure outlined below will be followed.

AERMOD dispersion modeling will be used to determine the potential impacts on the Project Site. Discrete receptors will be placed on the potentially affected site.

Predicted concentrations of the identified industrial compounds will be compared to NYSDEC DAR-1 guideline values for short-term (SGC) and annual (AGC) averaging periods. A cumulative impact analysis will also be performed for multiple sources that emit the same air contaminant. In the event that exceedances of the guidelines are predicted, measures to reduce pollutant levels to within guideline values will be examined.

Potential cumulative impacts of multiple air contaminants will be determined based on EPA's Hazard Index Approach for non-carcinogenic compounds and using EPA's Unit Risk Factors for carcinogenic compounds. Both methods are based on equations that use EPA health risk information (established for individual compounds with known health effects) to determine the level of health risk posed by specific ambient concentrations of that compound. The derived values of health risk are additive and can be used to determine the total risk posed by multiple air contaminants. For non-carcinogenic compounds, EPA considers a concentration-to-reference dose level ratio of less than 1.0 to be acceptable. For carcinogenic compounds, the EPA unit risk factors represent the concentration at which an excess cancer risk of one in one million is predicted.

1.3.3 LARGE OR MAJOR SOURCES

A review of existing large and major sources of emissions (i.e., sources having a Title V or State Facility Air Permit) within 1,000 feet of the Project Site will be performed to assess potential effects on Project Site. A search for Title V and State Facility Air Permits will be conducted using registration lists maintained by NYSDEC. Criteria pollutant concentrations will be predicted using the AERMOD dispersion model compared with NAAQS for NO_2, SO_2, and PM_{10}, as well as the *de minimis* criteria for $PM_{2.5}$.

69-02 Queens Boulevard
Build Conditions
24-Hour Parking Accumulation

Daily 232 1,205

Time period	Local Retail Component			Residential Component			Weekday Parking Accumulation			
	In	Out	Accum.	In	Out	Accum.	In	Out	*Total*	Accum.
Overnight			0			226				226
12:00 AM -- 1:00 AM	0	0	0	2	2	226	2	2	*4*	226
1:00 AM -- 2:00 AM	0	0	0	2	2	226	2	2	*4*	226
2:00 AM -- 3:00 AM	0	0	0	2	2	226	2	2	*4*	226
3:00 AM -- 4:00 AM	0	0	0	2	2	226	2	2	*4*	226
4:00 AM -- 5:00 AM	0	0	0	2	2	226	2	2	*4*	226
5:00 AM -- 6:00 AM	0	0	0	4	13	218	4	13	*17*	218
6:00 AM -- 7:00 AM	0	0	0	10	36	192	10	36	*47*	192
7:00 AM -- 8:00 AM	0	0	0	13	37	167	13	37	*50*	167
8:00 AM -- 9:00 AM	3	3	0	18	102	83	22	106	*127*	83
9:00 AM -- 10:00 AM	4	2	2	24	30	77	28	32	*60*	79
10:00 AM -- 11:00 AM	9	6	6	22	38	61	31	43	*74*	67
11:00 AM -- 12:00 PM	9	9	6	23	32	53	32	41	*73*	58
12:00 PM -- 1:00 PM	22	22	6	30	30	53	52	52	*104*	58
1:00 PM -- 2:00 PM	11	9	8	31	31	52	42	40	*82*	60
2:00 PM -- 3:00 PM	11	7	11	32	31	54	43	38	*81*	65
3:00 PM -- 4:00 PM	9	9	11	46	28	72	55	37	*92*	83
4:00 PM -- 5:00 PM	9	9	11	78	45	105	87	54	*141*	116
5:00 PM -- 6:00 PM	12	12	11	93	40	158	104	51	*156*	169
6:00 PM -- 7:00 PM	6	11	6	56	35	179	62	46	*108*	185
7:00 PM -- 8:00 PM	6	9	2	55	24	210	60	33	*94*	212
8:00 PM -- 9:00 PM	4	4	2	32	19	224	36	23	*59*	225
9:00 PM -- 10:00 PM	2	2	2	10	12	222	12	14	*26*	224
10:00 PM -- 11:00 PM	0	0	2	7	7	222	7	7	*14*	224
11:00 PM -- 12:00 AM	0	0	2	6	4	224	6	4	*10*	226

Notes: Temporal distribution based on:
1. 2014 CEQR Technical Manual.
2. Astoria Cove Development FEIS (CEQR No. 13DCP127Q).

APPENDIX H: NOISE

Longman Lindsey

Paul Montgomery
Associate Partner

June 16th, 2017

Ms. Annabelle Meunier
NYC Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Ref: 69-02 Queens Blvd – Measurement Procedure
LL Project #TBD

Dear Ms. Meunier:

The following outlines our proposed measurement procedure for the project at 69-02 Queens Boulevard based on a June 15th conference call with the NYC Department of City Planning. The results of this study will be incorporated into the site's Environmental Assessment States.

The proposed project consists of two residential towers within Block 2432 in Queens, Lots 8, 9, 21, 41, 44, and 50. The project site consists of most of this block with portions of the proposed façade facing Queens Blvd, 69th Street, 70th Street, and 47th Street. Elevated Long Island Rail Road tracks (Port Washington Branch) are immediately to the southwest of the site. A previous review of the project site in March of 2016 confirmed that the major noise sources within the neighborhood are vehicular traffic along Queens Boulevard, which has 8 lanes of traffic, and the elevated commuter train tracks.

For the noise analysis for this project site, we are proposing the following measurement locations:

- One 24-hr measurement atop the building on Lot 50, a two story building within close proximity and direct line-of-sight to the elevated railroad tracks (about 55 ft. between the south east corner of the building to the nearest track).
- 20-min spot measurements at ground level along Queens Boulevard, proposed north façade.
- 20-min spot measurements at ground level along 69th Street, proposed west façade.
- 20-min spot measurements at ground level along 70th Street, proposed east façade.
- 20-min spot measurements at ground level along 47th Avenue, proposed south façade.

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Each 20-min spot measurement will be performed during peak AM rush hours (7:15 AM to 9:15 AM), at midday (12 PM to 2 PM), and during PM peak rush hours (4 PM to 6 PM), while the 24-hr measurement is collecting hourly data. The microphone will be situated no less than 5 ft. above grade/rooftop for each measurement.

Measurements will be conducted using ANSI S1.4-1938 (R2006) type-1 sound level meters and microphones, calibrated before and after each measurement session (spot measurements and 24-hr measurements), also in accordance to ANSI S1.4. Each sound level meter will have laboratory calibration dates within one year of the date of all measurements.

All sound level meters recording data will provide L_{max}, L_{min}, L_{01}, L_{10}, L_{50}, L_{90}, and L_{EQ} statistical noise levels in overall A-weighted decibels and 1/3-octave bands from 6.3 Hz to 20,000 Hz. For the 24-hr measurement, these values will be recorded hourly.

During spot measurements, a basic vehicle count will be taken categorizing each instance of buses (MTA buses frequent 69th Street and Queens Blvd), heavy trucks (cargo vehicles with three or more axles and a gross vehicle weight more than 26,400 lbs), medium trucks (cargo vehicles with two axles and six tiers and a gross vehicle weight more than 9,900 lbs), and passenger vehicles or light trucks. The number of train passes will also be noted while taking spot measurements, when possible, noting direction and approximate speed.

Longman Lindsey

The above summarizes our proposed measurement procedure at this time. Upon review, please do not hesitate to contact us with any comments or questions.

Very truly yours,



Paul Montgomery, Jr.
Associate Partner

cc: Ronald Ying / DCP
Mauricio Garcia / DCP
Robert Dobruskin / DCP
Zach Kadden / MRC
Michael Keane / LANGAN
Stephen Lindsey / LL
Tom Ouellette / LL

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CITY OF NEW YORK

OFFICE OF THE CHAIR

January 23, 2006

NEGATIVE DECLARATION

Project Identification
CEQR No 06DCP065Q
ULURP No 060294 ZMQ
SEQRA Classification Type I

Lead Agency
City Planning Commission
22 Reade Street
New York, NY 10007
Contact Robert Dobruskin
(212) 720-3423

Name, Description and Location of Proposal

Maspeth Woodside Rezoning
The New York City Department of City Planning (DCP) is proposing zoning changes for approximately 69 whole and 65 partial blocks (134 blocks) in the Maspeth and Woodside neighborhoods located in Queens Community Districts 5 and 2 The Maspeth Woodside Rezoning is comprised of two components A lower density and contextual rezoning of the neighborhoods' residential blocks which would rezone significant portions of the Maspeth and Woodside neighborhoods from R4, R5, R5B, R6, and R6B to lower density or contextual zoning districts (R4-1, R4B, R5, and R5B), and a higher density and contextual rezoning along the area's central corridor which would rezone portions within the Queens Boulevard Corridor and at the Queens Boulevard/Roosevelt Avenue Junction from R4/C2-2, R5/C2-2, C8-1, and M1-1 to higher density or contextual zoning districts (R6/C2-3 and R7X/C2-3) The proposed rezoning area is generally bounded by Roosevelt Avenue and Woodside Avenue on the north, the LIRR rail cut, 74th Street and 73rd Place on the east, Grand Avenue, 57th Avenue and the Queens Midtown Expressway on the south, and 50th Street, 58th Street, Tyler Avenue and Maurice Avenue on the west

The amendments to the Zoning Map are as follows

- a change from an R4 district to an R4-1 district,
- a change from an R5 district to an R4-1 district,
- a change from an R5B district to an R4-1 district,

Amanda M Burden, AICP, *Chair*
22 Reade Street, New York, N Y 10007-1216
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nyc gov/planning

Maspeth Woodside Rezoning
CEQR No 06DCP065Q
Page 2

- a change from an R4 district to an R4B district,
- a change from an R6B district to an R5B district,
- a change from an R6 district to an R5 district,
- a change from an M1-1 district to an district to an R6/C2-3,
- a change from an R4/C2-2 district to an R7X/C2-3 district,
- a change from an R5/C2-2 district to an R7X/C2-3 district,
- a change from an R6/C2-2 district to an R7X/C2-3 district,
- a change from an R7X/C2-2 district to an R7X/C2-3 district,
- a change from a C8-1 district to an R7X/C2-3 district,
- a change from an M1-1 district to an R7X/C2-3 district

The proposed rezoning responds to strong community concerns relating to issues of out-of-character new residential developments in areas of Maspeth and Woodside with significant mismatches between the type of housing permitted by the current zoning and the prevailing built character Additionally, the proposal responds to an area-wide housing demand by creating new higher density residential development opportunities on underutilized sites along Queens Boulevard, one of the Borough's prime corridors served by public transportation

The proposed action would result in additional residential development along the Queens Boulevard/Roosevelt Avenue corridor A total of 33 projected and potential development sites have been identified in this area Of the 33 development sites, 4 have been identified as projected development sites and 29 have been identified as potential sites

Without the proposed action, the existing zoning would be retained Along the Queens Boulevard/Roosevelt Avenue Junction, it is expected that the remaining light industrial and predominant automotive-related uses, which are consistent with current zoning districts (M1-1 and C8-1), are likely to continue exhibiting shifts from light industrial and automotive uses to more commercial and automotive-dependent retail uses It is expected that the four projected development sites would generate an additional 40,320 square feet of residential development yielding approximately 40 dwelling units It is also expected that without the proposed action a total of 52,000 square feet of retail space, 31,863 square feet of community facility space, and 23,900 square feet of commercial space would be developed

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As a result of the proposed rezoning action, it is expected that residential and mixed use development would increase significantly With the proposed action it is expected that the four projected development sites would generate an additional approximate total of 269,656 square feet of residential development yielding approximately 269 dwelling units It is also expected that the proposed action would result in a total of 10,000 additional square feet of retail space Furthermore, community facility space would remain essentially the same (with an increase of 137 square feet), and there would be a projected decrease of 23,900 square feet of new commercial development that would result from new development with the proposed action as compared with new development under the existing zoning

As a result of the proposed action, residential development could occur within the Queens Boulevard Corridor and at the Queens Boulevard/Roosevelt Avenue Junction As a result of the environmental review, (E) designations have been mapped on selected development sites in order to preclude future hazardous materials, air quality, and noise impacts which could occur as a result of the proposed action

To avoid the potential for hazardous materials impacts, the proposed zoning map amendment includes (E) designations for hazardous materials on the following properties

Block 1319,	Lots 1, 21
Block 1320,	Lots 12, 33, 37, 47 and 51
Block 1321,	Lot 1, 41, 42, 43
Block 1322,	Lots 1, 2, 3, 39
Block 1323,	Lots 42, 44, 52
Block 1329,	Lots 1 and 4
Block 1330,	Lots 1 and 34
Block 1334	Lot 1
Block 1338	Lot 1
Block 1341	Lot 77
Block 1343	Lot 1
Block 1348	Lots 40 and 53
Block 1351	Lot 82
Block 1352	Lots 6, 22, 23, 25, 32, 36, 46, 49, 51, 52, 53, 73, 121, 125, and 131
Block 2324	Lot 39
Block 2325	Lots 30 and 32
Block 2392	Lots 20, 22, and 23
Block 2420	Lots 13 and 19
Block 2431	Lots 33 and 54
Block 2432	Lots 9, 21, 23, 26 and 34
Block 2444	Lots 40, 51 53, 55 and 57

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The text of the (E) designation for hazardous materials for the above properties is as follows

Task 1-Sampling Protocol

A. Petroleum

A soil, soil gas, and groundwater testing protocol (including a description of methods), and a site map with all sampling location represented clearly and precisely, must be submitted to the NYCDEP by the fee owner(s) of the lot which is restricted by this (E) designation, for review and approval

A site map with the sampling locations clearly identified and a testing protocol with a description of methods, for soil, soil gas, and groundwater, must be submitted by the fee owner(s), of the lot which is restricted by the (E) designation, to the NYCDEP for review and approval.

B. Non-Petroleum

The fee owner(s) of the lot restricted by this (E) designation will be required to prepare a scope of work for any sampling and testing needed to determine if contamination exists and to what extent remediation may be required. The scope of work will include all relevant supporting documentation, including site plans and sampling locations. This scope of work will be submitted to NYCDEP for review and approval prior to implementation. It will be reviewed to ensure that an adequate number of samples will be collected and that appropriate parameters are selected for laboratory analysis. For all non-petroleum (E) designated sites, the three generic NYCDEP soil and ground-water sampling protocols should be followed.

A scope of work for any sampling and testing to be completed, which will determine the extent of on-site contamination and the required remediation, must be prepared by the fee owner(s) of the lot restricted by this (E) designation. The scope of work will include the following: site plans, sampling locations, and all other relevant supporting documentation. The scope of work must be submitted to the NYCDEP for review and confirmation that an adequate testing protocol (i.e., number of samples collected, appropriate parameters for laboratory analysis) has been prepared. The NYCDEP must approve the scope of work before it can be implemented.

For non-petroleum (E) designated sites, one of the three generic soil and groundwater sampling protocols prepared by the NYCDEP should be followed

The protocols are based on three types of releases to soil and groundwater sampling protocols prepared by the NYCDEP should be followed.

The protocols are based on three types of releases to soil and groundwater, including: the release of a solid hazardous material to ground surface; the release of a liquid hazardous material to the ground surface; and the release of a hazardous material to the subsurface (i.e., storage tank or piping) The type of release defines the areas of soil to be sampled from surface, near-surface, to subsurface. Additionally, it determines the need for groundwater sampling.

A written approval of the sampling protocol must be received from the NYCDEP before commencement of sampling activities. Sample site quantity and location should be determined so as to adequately characterize the site, the source of contamination, and the condition of the remainder of the site. After review of the sampling data, the characterization should b\have been complete enough to adequately determine what remediation strategy (if any) is necessary. Upon request, NYCDEP will provide guidelines and criteria for choosing sampling sites and performing sampling.

Finally, a Health and Safety Plan must be devised and approved by the NYCDEP before the commencement on any on-site activities

Task 2-Remediation Determination and Protocol

After sample collection and laboratory analysis have been completed on the soil and/or groundwater samples collected in Task 1, a summary of the data and findings in the form of a written report must be presented to the NYCDEP for review and approval. The NYCDEP will provide a determination as to whether remediation is necessary.

If it is determined that no remediation activities are necessary, a written notice will be released to that effect. However, if it is the NYCDEP's determination that remediation is necessary the fee owner(s) of the lot restricted by the (E) designation must submit a proposed remediation plan to the NYCDEP for review and approval.

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Once approval has been obtain, and the work completed, the fee owner(s) of the lot restricted by the (E) designation must provide proof to the NYCDEP that the work has been completed satisfactorily.

To preclude the potential for significant adverse air quality impacts related to HVAC emissions, an (E) designation would be incorporated into the rezoning proposal for each of the following properties

Block 1319, Lots 1, 21
Block 1320, Lots 12, 33, 37
Block 1321, Lots 1, 41, 42 and 43
Block 1322, Lots 1, 2, 3 and 39
Block 1323, Lots 42, 44 and 52
Block 1329, Lots 1, 4
Block 1330, Lots 1, 34
Block 1334, Lots 1
Block 1352, Lots 6, 22, 23, 25, 32, 36, 46, 49, 51, 52, 53, 73, 121, 125 and 131
Block 2324, Lots 39
Block 2325, Lots 30, 32
Block 2420, Lots 13, 19
Block 2432, Lots 9, 21, 23, 26 and 34

The text for the (E) designations is as follows

Block 1321, Lots 1, 41, 42, 43 (Projected Development Sites 1)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 75 feet from the lot line facing 52nd Street and 75 feet from the lot line facing 53rd Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1329, Lots 1, 4 (Projected Development Site 2)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 55 feet from the lot line facing 57th Street or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

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Block 2324, Lot 39 (Projected Development Site 3)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 65 feet from the lot line facing 64th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 2325, Lots 30, 32 (Potential Development Site 5)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 40 feet from the lot line facing 64th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1330, Lot 1 (Potential Development Site 11)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 65 feet from the lot line of the adjacent lot facing 58th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1330, Lot 34 (Potential Development Site 12)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 90 feet from the lot line of the adjacent lot on 57th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1334, Lot 1 (Potential Development Site 13)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 55 feet from the lot line facing 58th Street, or use natural gas as the type of fuel for space

heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts

Block 1320, Lot 12 (Potential Development Site 14)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 90 feet from the lot line of the adjacent lot facing 52nd Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1322, Lots 1, 2, 3, 39 (Potential Development Site 16)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 65 feet from the lot line facing 53rd Street and 65 feet from the lot line facing 54th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1323, Lots 42, 44, 52 (Potential Development Site 17)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 45 feet from the lot line facing 54th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 2420, Lot 13 (Potential Development Site 18)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 80 feet from the lot line of the adjacent lot facing 67th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 2420, Lot 19 (Potential Development Site 19)

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Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 90 feet from the lot line of the adjacent lot facing 66th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1352, Lots 22, 23 (Potential Development Site 22)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 70 feet from the lot lines of the adjacent lots facing Queens Boulevard between 73rd Street and the junction of Queens Boulevard and 45th Avenue, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1352, Lot 25 (Potential Development Site 23)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 95 feet from the adjacent lots facing Queens Boulevard between 73rd Street and the junction of Queens Boulevard and 45th Avenue, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1352, Lot 32 (Potential Development Site 24)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 70 feet from the adjacent lots facing Queens Boulevard between 73rd Street and the junction of Queens Boulevard and 45th Avenue, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1352, Lot 131 (Potential Development Site 25)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 110 feet from the

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adjacent lots facing Queens Boulevard between 73rd Street and the junction of Queens Boulevard and 45th Avenue, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 2432, Lots 9, 21, 23, 26, 34 (Potential Development Site 26)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 85 feet from the lot line facing 69th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1319, Lot 1 (Potential Development Site 27)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 100 feet from the adjacent lot facing 51st Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1319, Lot 21 (Potential Development Site 28)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 95 feet from the adjacent lot facing 50th Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1320, Lots 33, 37 (Potential Development Site 29)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 65 feet from the lot line of the adjacent lot facing 51st Street, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

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Block 1352, Lots 6, 36 (Potential Development Site 31)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 70 feet from the adjacent lot facing Queens Boulevard and between 73rd Street and the 45th Avenue Queens Boulevard Junction, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1352, Lots 46, 49, 51, 52, 53 (Potential Development Site 32)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 100 feet from the adjacent lot facing Queens Boulevard and between 73rd Street and the 45th Avenue Queens Boulevard Junction, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

Block 1352, Lots 73, 121, 125 (Potential Development Site 33)

Any new residential and/or commercial development on the above-referenced properties must ensure that the heating, ventilating and air conditioning stack(s) are located at least 185 feet from the adjacent lot facing Queens Boulevard and between 73rd Street and the 45th Avenue Queens Boulevard Junction, or use natural gas as the type of fuel for space heating and hot water (HVAC) systems, to avoid any potential significant air quality impacts.

With the placement of the (E) designations on the above blocks and lots, no impacts related to stationary source air quality would be expected

To preclude the potential for significant adverse industrial source air quality impacts at Potential Development Site 25, an (E) designation for air quality will be mapped as part of the rezoning proposal

Block 1352, Lot 131

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The text of the (E) designation for industrial sources for the above property is as follows

> **If the manufacturing/industrial emissions identified above continue at Block 1352, Lot 51 any new residential and/or commercial development, enlargement, or change of use on the above-referenced property must have inoperable windows and may not include air intakes on the east and north facades of the building.**

To preclude the potential for significant adverse industrial source air quality impacts at Potential Development Site 22, an (E) designation for air quality will be mapped as part of the rezoning proposal

> Block 1352, Lots 22 and 23

The text of the (E) designation for industrial sources for the above property is as follows

> **If the manufacturing/industrial emissions identified above continue at Block 1352, Lot 51, any new residential and/or commercial development, enlargement, or change of use on the above-referenced property must have inoperable windows and may not include air intakes on the west and north facades of the building.**

The procedures to be followed for satisfaction and removal of the (E) designations shall be as set forth in Section 11-15 of the New York City Zoning Resolution

As a result of the proposed action all 33 identified development sites (4 projected and 29 potential) would be mapped with an (E) designation for noise attenuation There are three levels of required noise attenuation depending on the ambient noise levels The three required levels of attenuation in order from highest to lowest levels are 45 dBA, 40 dBA, and 35 dBA The higher the relative ambient noise levels, the higher the required attenuation

The following sites require 45 dBA of noise attenuation in order to avoid the potential for significant adverse impacts related to noise The proposed action includes (E) designations on the following properties

Block 1320	Lot 12
Block 1319	Lot 1

> **In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition**

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with a minimum of 45 dB(A) window/wall attenuation in order to maintain an interior noise level of 45 dB(A). In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning or air conditioning sleeves containing air conditioners or HUD-approved fans.

The following sites require 40 dBA of noise attenuation in order to avoid the potential for significant adverse impacts related to noise The proposed action includes (E) designations on the following properties

Block 1319	Lot 21
Block 1320	Lots 33, 37
Block 1348	Lots 40, 53
Block 1352	Lots 73, 121 and 125
Block 2431	Lots 33, 54
Block 2432	Lots 9, 21, 23, 26 and 34

The text of the (E) designation for noise for the above properties is as follows

In order to ensure an acceptable interior noise environment, future residential uses on the above referenced properties must provide a closed window condition with a minimum of 40 dB(A) window/wall attenuation on all facades in order to maintain an interior noise level of 45 dB(A) In order to maintain a closed-window condition, an alternate means of ventilation would also have to be provided. Alternate means of ventilation would include, but would not be limited to, central air conditioning or air conditioning sleeves containing air conditioners or HUD-approved fans.

The following sites require 35 dBA of noise attenuation in order to avoid the potential for significant adverse impacts related to noise The proposed action includes (E) designations on the following properties

Block 1320	Lots 47, 51
Block 1321	Lots 1, 41, 42 and 43
Block 1322	Lots 1, 2, 3 and 39
Block 1323	Lots 42, 44 and 52
Block 1329	Lots 1, 4

Block 1330	Lots 1, 34
Block 1334	Lots 1
Block 1338	Lot 1
Block 1341	Lot 77
Block 1343	Lot 1
Block 1351	Lot 82
Block 1352	Lots 6, 22, 23, 25, 32, 36, 46, 49, 51, 52, 53, and 131
Block 2324	Lots 39
Block 2325	Lots 30, 32
Block 2392	Lots 20, 22 and 23
Block 2420	Lots 13, 19
Block 2444	Lots 40, 51, 53, 55 and 57

The text of the (E) designation for noise for the above properties is as follows

> **In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum of 35 dB(A) window/wall attenuation in order to maintain an interior noise level of 45 dB(A). In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning or air conditioning sleeves containing air conditioners or HUD-approved fans.**

With the implementation of the above (E) designations for the specified attenuation measures, no significant adverse impacts related to hazardous materials, air quality or noise would occur as a result of the proposed action

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Statement of No Significant Effect:

The Environmental Assessment and Review Division of the Department of City Planning, on behalf of the City Planning Commission, has **completed its technical review of the Environmental Assessment Statement dated January 20, 2006,** prepared in connection with the ULURP Application **(060294 ZMQ)** The City Planning Commission has determined that the proposed action will have no significant effect on the quality of the environment

Supporting Statement:

The above determination is based on an environmental assessment which finds that no significant effects on the environment which would require an Environmental Impact Statement are foreseeable

This Negative Declaration has been prepared in accordance with Article 8 of the Environmental Conservation Law 6NYCRR part 617

Should you have any questions pertaining to this Negative Declaration, you may contact Gwen Sheinfeld of the Department of City Planning at (212) 720-3419

Robert Dobruskin Date 1/20/06

Robert Dobruskin, Director
Environmental Assessment & Review Division
Department of City Planning

Date 1/23/06

Amanda M Burden, AICP, Chair
City Planning Commission

APPENDIX I: TECHNICAL MEMORANDUM 001

1) BACKGROUND

The Applicant (69-02 Queens Blvd Woodside, LLC) proposes to develop two predominantly residential buildings on the Development Site at 69-02 Queens Boulevard in the Woodside neighborhood of the Borough of Queens, Community District 2. The Development Site is generally bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; and 69th Street to the west. The elevated Long Island Rail Road (LIRR) tracks traverse the southwest corner of the site. To facilitate the proposed project, the Applicant requested approval of three discretionary actions: (i) a zoning map amendment to rezone Lot 1 and parts of Lots 41, 44, and 50 on Block 2432 ("Rezoning Area") from an M1-1 zoning district to an R7X zoning district with a C2-3 commercial overlay; (ii) a Large-Scale General Development (LSGD) Special Permit to modify building height requirements on Lots 9, 21, 41, 44, and 50 on Block 2432 ("Development Site"); and (iii) a zoning text amendment to Appendix F of the New York City Zoning Resolution (ZR) to designate a Mandatory Inclusionary Housing (MIH) area on the entirety of Block 2432 (Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, and 50). Collectively, the discretionary actions ("Proposed Actions") would affect Block 2432, Lots 1, 8, 9, 21, 23, 26, 34, 37, 39, 41, 44, and 50 ("Directly Affected Area").

The initial proposed development would include a total of 495,076 gross square feet (gsf), comprised of approximately 5,640 sf of ground floor retail use; approximately 561 dwelling units on the upper floors, of which approximately 30 percent (169 units) would be permanently affordable pursuant to Mandatory Inclusionary Housing (MIH) requirements; and approximately 33,106 gsf of at-grade parking (242 spaces) using stackers accessed via an existing curb cut on 69th Street.

The Department of City Planning (DCP) on behalf of the City Planning Commission (CPC) determined the development as described above, and contemplated in an Environmental Assessment Statement (EAS) dated April 6, 2018, would not have the potential to result in a significant adverse impact on the environment and issued a Negative Declaration on April 9, 2018. Subsequent to the issuance of the April 9 Negative Declaration, Lot 8 on Block 2432 was removed from the special permit (but remained part of the Directly Affected Area because of its continued inclusion in the designated MIH area) and a Revised EAS reflecting this change was issued on August 31, 2018 (the "August 31 EAS"). A Revised Negative Declaration was issued on September 5, 2018. The Proposed Actions were approved by the CPC on September 5, 2018 (see CPC Reports C 180265 ZMQ, N 180266 ZRQ, and C 180267 ZSQ).

The development contemplated in the August 31 EAS comprised approximately 456,330 gsf of mixed-income residential area (561 dwelling units), of which approximately 30 percent (169 dwelling units), would be allocated as permanently affordable for households with incomes at an average of 80 percent of the Area Median Income (AMI); approximately 5,907 gsf of ground floor retail space; an approximately 6,971-square-foot (0.16-acre) publicly accessible landscaped pedestrian walkway; and approximately 33,106 gsf of at-grade accessory parking (shared by both buildings with double stackers) that would be accessed by an existing curb cut on 69th Street (264 parking spaces).

During the Uniform Land Use Review Procedure (ULURP) process, in response to concerns raised by the Queens Borough President and the local councilmember, the Applicant revised the proposed project to include a school. No additional discretionary actions are required because the Proposed Actions approved by the CPC on September 5, 2018 allow for a school as-of-right in the R7X district.

During the ULURP process, the City Council proposed modifications which would reduce building heights. While the development footprint would remain the same, the West Tower was reduced from a 17-story (181.5-foot) building to a 15-story (161.5-foot) building and the East Tower was reduced from a 14-story (151.5-foot) building to a 12-story (140-foot) building. Additionally, the Modified Project would implement minor signal timing improvements at the intersections of Queens Boulevard and 69 Street and Queens Boulevard and 70 Street.[1] To facilitate such improvements, the DCP or the Applicant will inform the New York City Department of Transportation (DOT) in writing, six (6) months prior to completion and operation of the proposed project for the implementation of the proposed improvements. The Modified Project assessed below reflects all of the changes the project incurred throughout the ULURP process.

The actions approved on September 5, 2018 would facilitate the development of two buildings collectively containing approximately 493,791 gross square-foot (gsf) of mixed residential, commercial, community facility, and parking (the "Modified Project"). The Modified Project would comprise approximately 354,791 gsf of mixed-income residential floor area (approximately 431 dwelling units), of which approximately 30 percent (129 dwelling units), would be allocated as permanently affordable for households with incomes averaging 80 percent of the Area Median Income (AMI)[2]; approximately 12,787 gsf of commercial retail space; an approximately 79,702 gsf community facility (school); and approximately 46,511 gsf (217 parking spaces) of accessory parking using double stackers.

This Technical Memorandum analyzes the Modified Project as described above to determine if the addition of a school, and reduction in height, would result in any potential adverse environmental effects.

2) DESCRIPTION OF THE SURROUNDING AREA

As shown in Figure 1, the 400-foot radius surrounding the Directly Affected Area ("Study Area") is characterized by a mix of one- and two-family and multifamily walk-up residences to the north and southwest; commercial and industrial uses along Queens Boulevard and 47th Avenue to the southeast; and community facility uses to the south. Lots 23, 26, 34, and 37 on the northeast corner of Block 2432 are currently being developed with a nine-story residential building. A LIRR right-of-way runs adjacent to the Development Site on the southwestern corner of Block 2432 (Lot 1); Queens Boulevard runs east-west along the north side. The block to the southeast of the Development Site is occupied by Saint Mary's Church and includes the church, church rectory, a

[1] At the intersection of Queens Boulevard and 69 Street, minor signal timing improvements would be made during the weekday AM and weekday afternoon peak hours. At the intersection of Queens Boulevard and 70 Street, minor signal timing improvements would be made during the weekday AM peak hour.

[2] For the purpose of this analysis, development contemplated in the With-Action Condition would include 20 percent of the residential floor area (86 dwelling units) as affordable for families with incomes at or below 80 percent AMI.

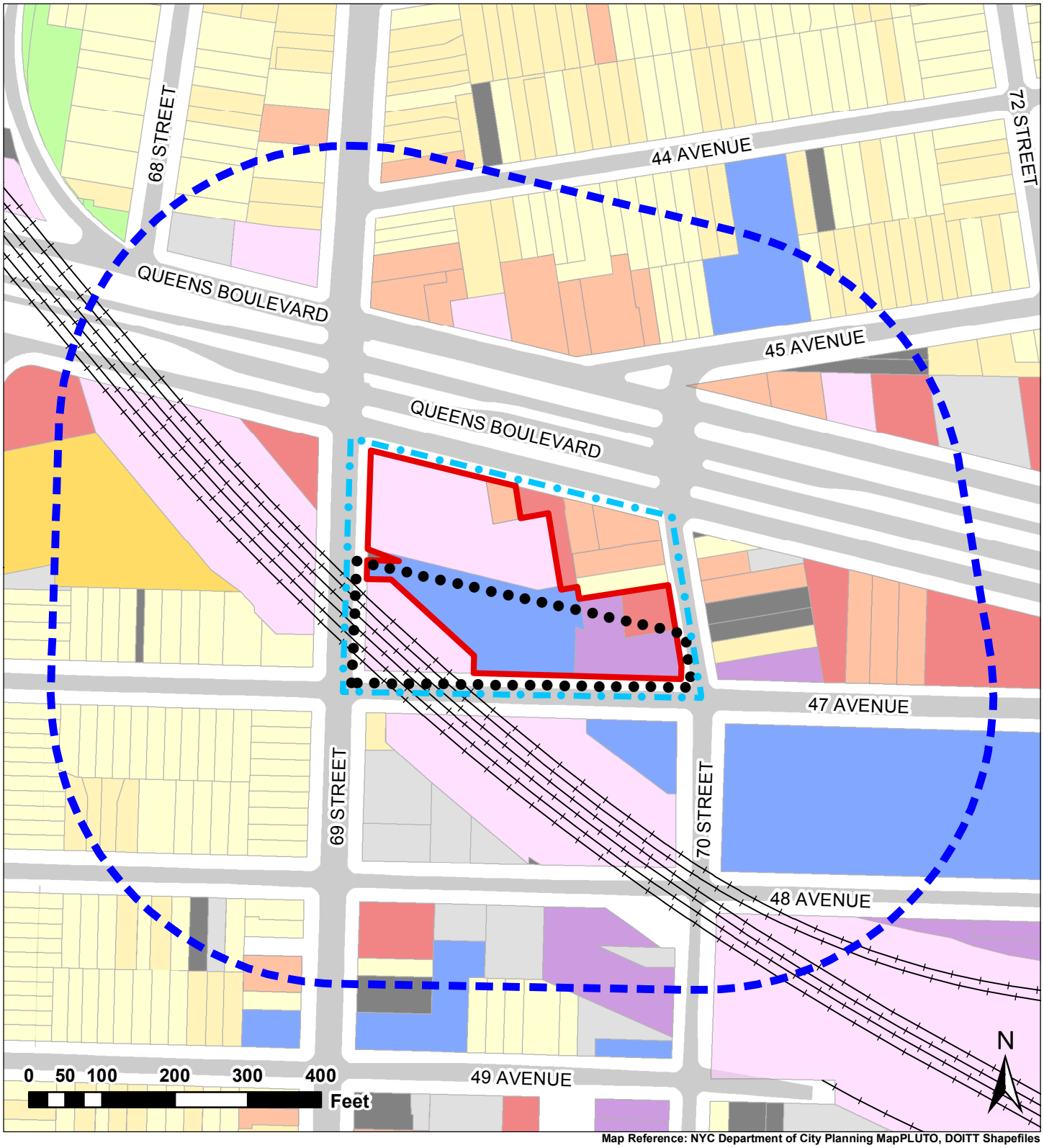
School for Language & Communication Development (an intermediate school), and SCO Family Services.

The predominant zoning classifications within the Study Area are residential zoning districts R4-1, R4, R5, and R7X. There is a C2-3 commercial overlay along Queens Boulevard and an M1-1 manufacturing zoning district to the south of the Development Site (Figure 2).

The Development Site is served by New York City Transit (NYCT) bus lines that include the Q47 running north-south on 69th Street, the Q60 and X63 running east-west on Queens Boulevard, and the Q18 running three blocks west of the Development Site on 65th Place. The northbound Q47 and eastbound Q60 stop on the northwestern corner of the Development Site. In addition, the LIRR Woodside Station is approximately 0.7 miles to the northwest of the Development Site.

69-02 QUEENS BOULEVARD

FIGURE 1
LAND USE MAP



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site
Study Area (400-foot radius)

Land Use

- One & Two Family Residences
- Multifamily Walkup Residences
- Multifamily Elevator Residences
- Mixed Residential/ Commercial
- Commercial Uses
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities/Institutions
- Open Space
- Parking
- Vacant Land

WOODSIDE, QUEENS, NY

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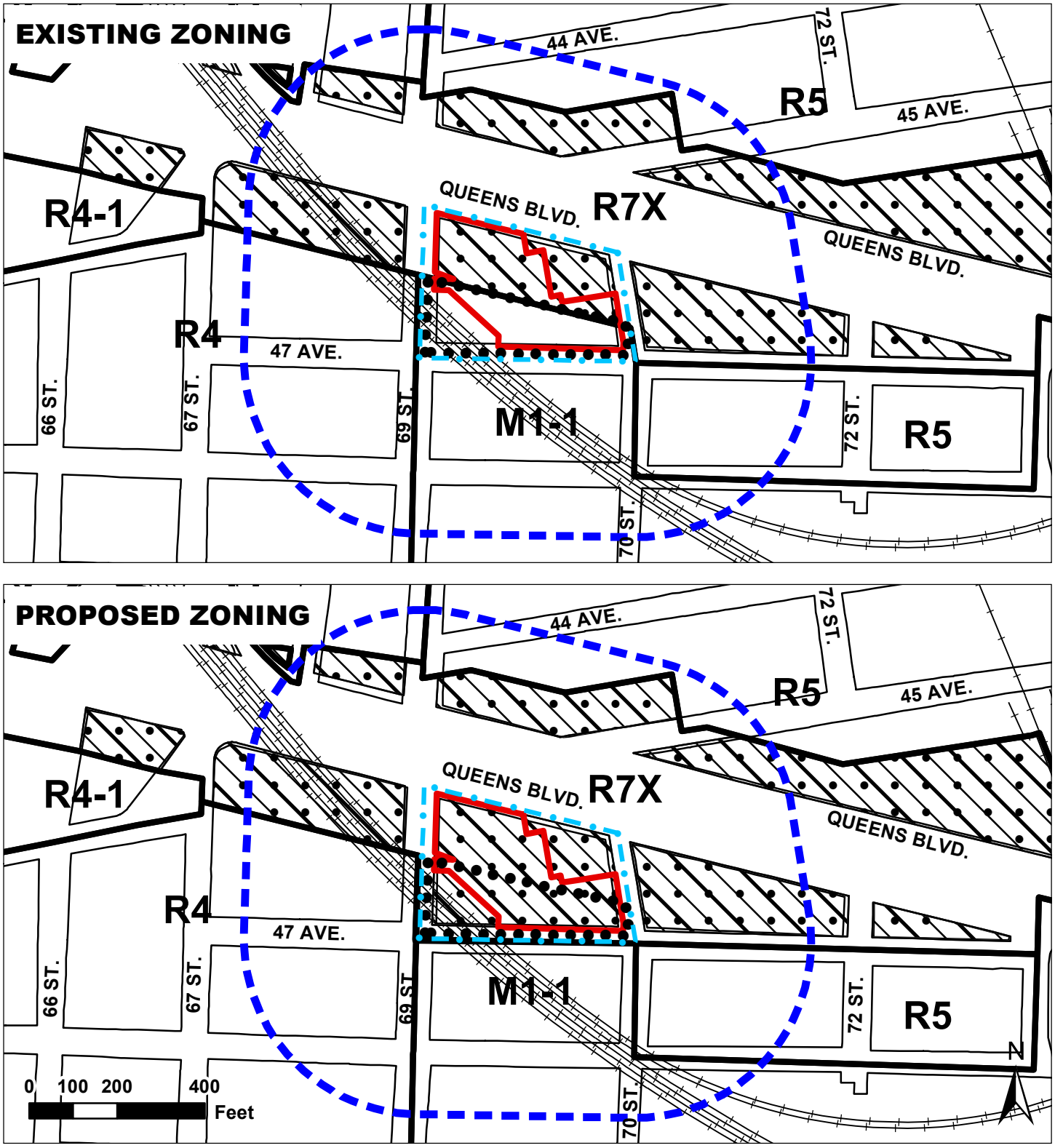
FIGURE 2

69-02 QUEENS BOULEVARD

EXISTING AND PROPOSED ZONING MAP



Map Reference: NYC Department of City Planning MapPLUTO, Zoning Boundary Shapefiles

Directly Affected Area
Proposed Rezoning Area
Development Site
Study Area (400-foot radius)
Zoning District
Commercial Overlay
C2-3

WOODSIDE, QUEENS, NY

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3) DESCRIPTION OF THE DEVELOPMENT SITE

The Development Site is located at 69-02 Queens Boulevard and comprises Block 2432, Lots 9, 21, 41, 44, and 50; these six tax lots have a total area of approximately 71,696 square feet (sf) (Figure 3). The Development Site is bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; elevated LIRR tracks to the southwest; and 69th Street to the west. Lots 9 and 21 comprise the northwestern part of the site. Lots 41, 44, and 50 comprise the southeastern part of the site. Lots 9 and 21 are mapped with an R7X zoning district and a C2-3 commercial overlay; and Lots 41, 44, and 50 are split zoning lots located partially in the R7X/C2-3 zoning district and partially in the M1-1 zoning district. The portion of the Development Site currently mapped with the R7X zoning district is also in an Inclusionary Housing (IH) designated area.

The northwestern part of the Development Site comprises Lots 9 and 21. Lot 9 is currently vacant and was previously improved with a one-story building used as a gas station/car wash and an auto repair shop; Lot 21 is improved with a vacant one-story building. The southwestern part of the Development Site comprises Lot 41, which is improved with a two-story commercial building; Lot 44, which is improved with a one-story warehouse building; and Lot 50, which is improved with a two-story community center and surface parking.

4) MODIFIED PROJECT

The Proposed Actions would facilitate the construction of one 15-story (161.5-foot) mixed residential/commercial building and one 12-story (140-foot) residential building, totaling approximately 493,791 gsf (the "Modified Project"). The Modified Project would comprise approximately 354,791 gsf of mixed-income residential area (431 dwelling units), of which approximately 30 percent (129 dwelling units) would be permanently affordable for families with incomes averaging 80 percent AMI pursuant to Option 2 of the MIH program; approximately 12,787 sf of ground floor retail space; an approximately 79,702 gsf community facility (school); an approximately 7,418-square-foot (0.17-acre) publicly accessible landscaped pedestrian walkway; and approximately 46,511 gsf of accessory parking (217 parking spaces)[3] using double stackers accessed by an existing curb cut on 69th Street. Additionally, the Modified Project would implement minor signal timing improvements at the intersections of Queens Boulevard and 69 Street and Queens Boulevard and 70 Street.[4] To facilitate such improvements, the DCP or the Applicant will inform the New York City Department of Transportation (DOT) in writing, six (6) months prior to completion and operation of the proposed project for the implementation of the proposed improvements.

[3] 19 spaces for income restricted units at 15 percent of the total affordable units (129 units) (ZR §25-251 and §36-33); and 151 spaces for market-rate units at 50 percent of the total market-rate units (302 units) (ZR §36-33 and §25-23); and 32 spaces for commercial use at 1 per 400 sf of commercial floor area (ZR §36-21).

[4] At the intersection of Queens Boulevard and 69 Street, minor signal timing improvements would be made during the weekday AM and weekday afternoon peak hours. At the intersection of Queens Boulevard and 70 Street, minor signal timing improvements would be made during the weekday AM peak hour.

The 15-story (161.5-foot) mixed residential/commercial building would front Queens Boulevard ("West Tower") and would include the following:

- Approximately 208,881 gsf of residential area (256 dwelling units) on floors 2 through 15. Approximately 77 dwelling units would be permanently affordable for families with incomes averaging 80 percent AMI; and[5]

- Approximately 12,787 gsf of retail space fronting Queens Boulevard.

The 12-story (140-foot) mixed residential/community facility building would front 47th Avenue ("East Tower") and would include the following:

- Approximately 145,910 gsf of residential use (175 dwelling units) on floors 1 through 12. Approximately 52 dwelling units would be permanently affordable for families with incomes averaging 80 percent AMI.[6]

- An approximately 79,702 gsf community facility (elementary/ intermediate school).

The Proposed Project would be developed in a single phase. Construction would commence as soon as the necessary discretionary approvals and building permits are granted. The Proposed Project would be complete and operational by the end of 2021 ("Build Year").

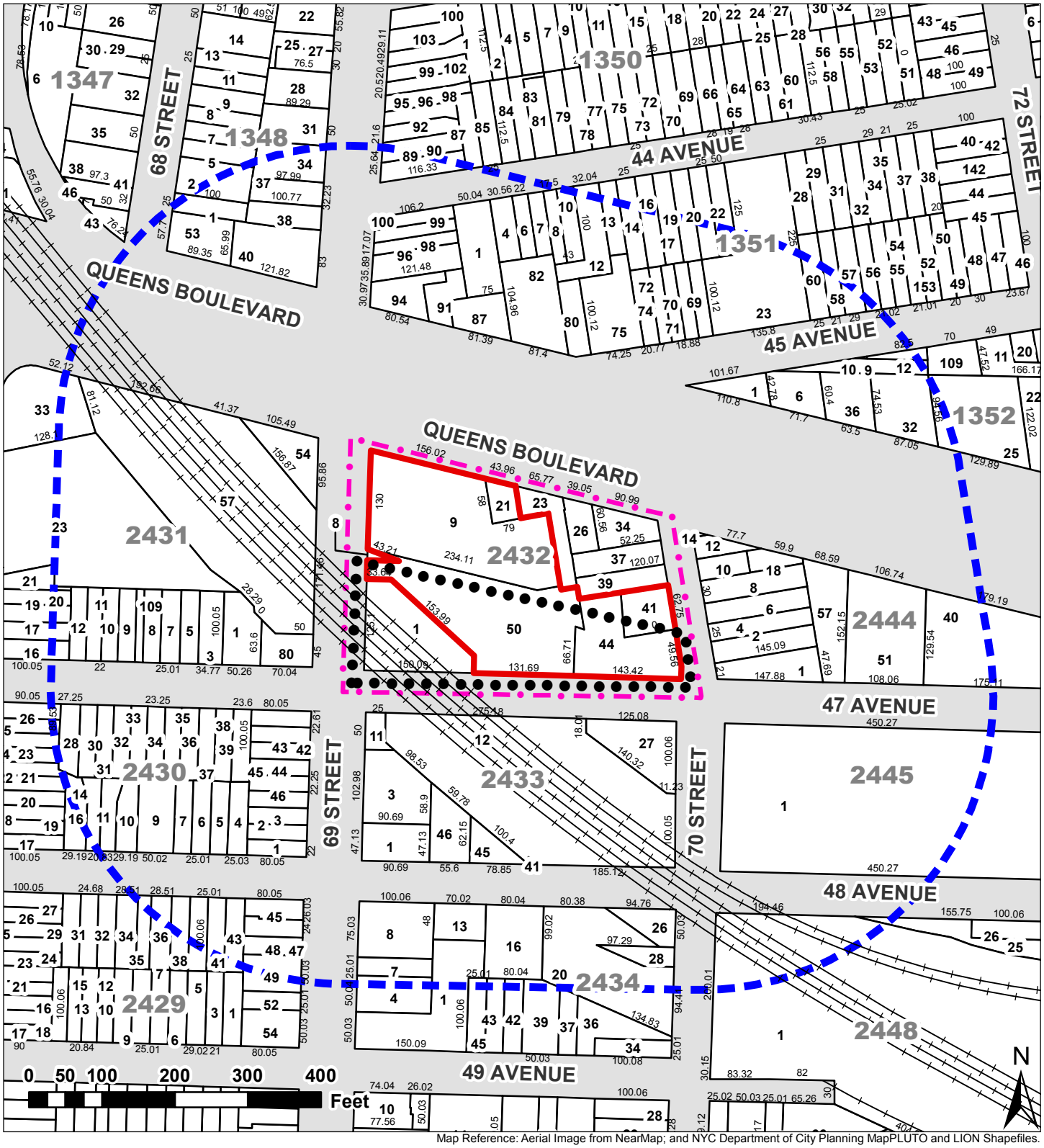
[5] For purposes of this environmental review, the With-Action Condition contemplates that 20 percent of the residential floor area in the West Tower (52 dwelling units) would be allocated as affordable for families with incomes at or below 80 percent AMI.

[6] For purposes of this environmental review, the With-Action Condition contemplates that 20 percent of the residential floor area in the East Tower (35 dwelling units) would be allocated as affordable for families with incomes at or below 80 percent AMI.

FIGURE 3

TAX MAP

69-02 QUEENS BOULEVARD



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Directly Affected Area
Proposed Rezoning Area
Development Site
2432 Tax Block
9 Tax Lot

WOODSIDE, QUEENS, NY

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Proposed Modifications

The building footprint of the Modified Project is identical to the building footprint of the development contemplated in the August 31 EAS. However, in contrast to the development contemplated in the August 31 EAS, the Modified Project would result in an increase of community facility floor area and a reduced residential component. The approximately 493,791 gsf mixed use Modified Project comprises approximately 354,791 gsf of residential floor area (431 dwelling units, of which, approximately 129 would be permanently affordable), 12,787 gsf of commercial floor area, an approximately 79,702 gsf community facility (school), and approximately 46,511 gsf of parking area (217 parking spaces).

As shown in Table 1, the Modified Project would result in a net *decrease* of approximately 101,539 gsf of residential area (130 total dwelling units, including 40 permanently affordable dwelling units), a net *increase* of approximately 6,880 gsf of commercial floor area, a net *increase* of approximately 79,702 gsf of community facility floor area (school), and a net *decrease* of approximately 25 parking spaces.

Table 1: Difference between the development in the August 31 EAS and the Modified Project

Land Use	August 31 EAS (GSF)	Modified Project (GSF)	Net Difference (GSF)
Residential	456,330	354,791	**-101,539**
Total Residential Units	561	431	**-130**
Affordable Residential Units	*169*	*129*	***-40***
Commercial	5,907	12,787	**+6,880**
Community Facility	0	79,702	**+79,702**
Accessory Parking	33,106 (242 spaces)	46,511 (217 spaces)	**+13,405 (-25 spaces)**
Building Height (feet)	West: 181.5 feet East: 151.5 feet	West: 161.5 feet East: 140 feet	**West: -20 feet** **East: - 11.5 feet**
TOTAL	**495,343**	**493,791**	**-1,552**

5) ASSESSMENT OF PROPOSED MODIFICATIONS

The Modified Project would result in a *decrease* in the number of residential dwelling units (431) compared to the development contemplated in the August 31 EAS (561 dwelling units). The Modified Project would result in an *increase* in commercial and community facility floor area compared to the development contemplated in the August 31 EAS. Specifically, the Modified Project includes an increase of approximately 6,880 gsf of commercial floor area and an increase of approximately 79,702 gsf of community facility floor area (school). These additional commercial and community facility uses were not assessed in the August 31 EAS.

Based on the August 31 EAS, no additional discretionary actions are necessary to facilitate the development of the Modified Project.

A. LAND USE, ZONING, AND PUBLIC POLICY

The August 31 EAS did not identify significant adverse impacts related to land use, zoning or public policy.

Land Use

The Study Area is characterized by a mix of one- and two-family and multifamily elevator residences to the north and southwest; commercial and industrial uses along Queens Boulevard and the LIRR train tracks; and institutional uses on the Development Site and to the southwest. The lots adjacent to and northeast of the Development Site on Block 2432 (Lots 23, 26, 34, and 37) are currently being redeveloped with a nine-story mixed residential and commercial building. Lot 39, fronting 70th Street, is occupied by a single-family residence with no current plans for redevelopment. Community facilities within the Study Area include: (1) Little Flock Church, at the northeast corner of Block 2433, and (2) St. Mary's Church, which occupies the entire block (Block 2445) southwest of the Development Site; St. Mary's houses a church, church rectory, a School for Language & Communication Development (intermediate school), and a SCO Family Services Center.

The Modified Project would be consistent with the existing residential and community facility uses within the Study Area. The proposed ground floor commercial use along Queens Boulevard would be similar to the existing ground floor commercial uses fronting Queens Boulevard. Active ground-floor retail uses would enhance the pedestrian experience along Queens Boulevard, as would the utilization of the partially vacant Development Site. The Modified Project would establish an approximately 0.17 acre public walkway on the Development Site adjacent to the Long Island Rail Road (LIRR) embankment between 69 Street and 47 Avenue, further enhancing the pedestrian experience. The proposed community facility use (school) in the East Tower would be consistent with existing community facility uses in the Study Area.

The Modified Project would introduce a mixed-use development and publicly-accessible open space, similar to the development analyzed in the August 31 EAS. However, the Modified Project would include an approximately 79,702 gsf community facility (school) that was not contemplated in the August 31 EAS. The community facility use introduced by the Modified Project would be consistent with the existing community facility uses in the Study Area. Therefore, the Modified

Project would not result in any new or different significant adverse impacts to land use, and the conclusions of the August 31 EAS would not change.

Zoning

As described in the August 31 EAS, the proposed R7X/C2-3 zoning district would be similar to the existing residential and commercial zoning districts identified within the Study Area. The Modified Project, that includes a zoning text amendment to designate a Mandatory Inclusionary Housing (MIH) area on the entirety of Block 2432, would provide benefits to the surrounding area including affordable housing, new commercial and community facility space, and new publicly-accessible open space. The Proposed Actions apply exclusively to the Directly Affected Area and would not modify zoning regulations outside of the Directly Affected Area.

The Modified Project would require the same modifications to the zoning that were contemplated in the August 31 EAS. Therefore, the Modified Project would not result in any new or different significant adverse impacts to zoning, and the conclusions of the August 31 EAS would not change.

Public Policy

As the August 31 EAS concludes, the development contemplated in the August 31 EAS would be consistent with the City's policy goals, including those outlined in *PlaNYC/OneNYC*. By creating substantial new housing opportunities for a range of incomes, including permanently affordable housing, and fostering job growth, the Modified Project would support the goals of "Housing" and "Thriving Neighborhoods" under Vision 1 of *OneNYC*. Additionally, the Proposed Project would be consistent with *Housing New York: A Five-Borough, Ten-Year Plan* and would result in the development of permanently affordable housing.

The Modified Project would retain the characteristics of the Proposed Project that made it consistent with the public policies within the Study Area. The Modified Project would designate approximately 30 percent (129 dwelling units) of the proposed residential floor area as permanently affordable for households with incomes averaging 80 percent AMI pursuant to Option 2 of the MIH program. Therefore, the Modified Project is anticipated to be consistent with the goals and objectives of *OneNYC* and *Housing New York*.

Based on this information, the Modified Project would not be anticipated to result in any new adverse environmental effects to public policy, and the conclusions of the August 31 EAS would not change.

B. SOCIOECONOMIC CONDITIONS

The August 31 EAS concluded that the 2.25 percent increase in population from the Proposed Actions (within the 0.5-mile Study Area) would not be large enough to result in indirect displacement of residents, or broadly affect real estate market conditions. Moreover, because the 2.25-percent increase in population accounts for less than five percent of the 0.5-mile Study Area population, and a percentage of the development in the With-Action Condition would be designated as permanently affordable, the Proposed Actions are unlikely to increase incomes in the Study Area to the extent that it would potentially displace a vulnerable population by adversely affecting the socioeconomic condition of the neighborhood. Compared to the development contemplated in the August 31 EAS, the Modified Project would result in the addition of approximately 6,880 sf of commercial floor area. Accordingly, the addition of approximately 6,880 sf of commercial floor area is not anticipated to result in the displacement of businesses.

The Modified Project would result in the development of approximately 130 fewer residential dwelling units than the development contemplated in the August 31 EAS. As a result, the Modified Project would be anticipated to result in the generation of fewer residents.

Based on this information, the Modified Project would introduce a comparatively smaller residential population and would not be anticipated to result in any new adverse environmental effects to socioeconomic conditions, and the conclusions of the August 31 EAS would not change.

C. COMMUNITY FACILITIES AND SERVICES

Public Schools

Elementary and Intermediate Schools

As disclosed in the August 31 EAS, in the With-Action Condition, elementary schools within Sub-district 2 of Community School District (CSD) 24 (the "School Study Area") would operate with a deficit of approximately 793 seats. The increase in the elementary school utilization rate from the future No-Action to the future With-Action condition would be approximately 1.65 percent. Intermediate schools within Sub-district 2 of CSD 24 would operate with a deficit of approximately 1,793 seats. The increase in the intermediate school utilization rate between the No-Action and With-Action Condition would be approximately 0.67 percent.

The August 31 EAS concluded that development in the With-Action Condition would result in a combined[7] elementary and intermediate school utilization rate (the "collective utilization rate") of approximately 127 percent. Compared to the No-Action Condition, the development in the With-Action Condition would result in an increased elementary school utilization rate of approximately 1.65 percent, and an increased intermediate school utilization rate of approximately 0.67 percent. Although elementary and intermediate schools within the School Study Area would continue to operate at a deficit (i.e., above their designed capacity) the increase in the collective utilization rates would be less than the threshold set forth by the *CEQR Technical Manual* (five (5) percent) representing the potential to result in an adverse environmental impact.

The distinction between the development contemplated in the August 31 EAS and the Modified Project is the inclusion of an approximately 79,702 sf community facility (school). The approximately 79,702 sf community facility (school) would be developed as a School Construction Authority (SCA) school with approximately 476 seats for kindergarten through fifth grade students.

According to the *CEQR Technical Manual,* only public schools operated by the DOE are included in the analysis, while private, parochial, and charter schools within the School Study Area are excluded. As a result, for the purposes of this assessment, only the proposed SCA school will be analyzed.

If the school were to proceed as a charter school, the additional capacity would not be included in the analysis, pursuant to *CEQR Technical Manual* guidance. The Modified Project would introduce fewer dwelling units than what was analyzed in the August 31 EAS, which would result in a decreased utilization rate. Therefore, the Modified Project (with a charter school) would not alter the conclusions of the August 31 EAS.

Existing Conditions

New York City elementary schools (P.S.) serve pre-kindergarten (Pre-K) or kindergarten through grade 5; intermediate schools (I.S.) serve grades 6 through 8; elementary/intermediate schools

[7] The average of the utilization rates of elementary and intermediate schools.

(P.S./I.S.) serve Pre-K or kindergarten through grade 8; and intermediate/high schools (I.S./H.S.) serve grades 6 through 12. In addition to these four categories, there are temporary buildings, transportable classroom units (TCUs), mini-schools, and annexes; however, because these are not permanent, based on *CEQR Technical Manual* guidance, their capacity is excluded from the assessment, but enrollment is included.

As described in the August 31 EAS, the ten elementary schools within the School Study Area have an existing utilization rate of approximately 116 percent, with a deficit of approximately 572 seats. The eight intermediate schools within the School Study Area have an existing utilization rate of approximately 124 percent, with a deficit of approximately 541 seats.

No-Action Condition

As shown in Table 2, elementary and intermediate schools in the School Study Area would operate beyond capacity in the 2021 No-Action Condition; elementary schools would have a deficit of approximately 748 seats (116 percent utilization), and intermediate schools would have a deficit of approximately 1,742 seats (136 percent utilization). Based on this information, schools in the No-Action Condition would have a collective utilization rate of approximately 126 percent.

Table 2: 2021 Estimated No-Action Public Elementary and Intermediate School: Enrollment, Capacity, and Utilization in the School Study Area

	Projected Enrollment 2021[1]	**No-Build Students[2]**	**No-Action Students on Development Site**	**Total No-Action Enrollment**	**Capacity**	**Available Seats**	**Utilization (%)**
Elementary Schools							
CSD 24, Sub-District 2	5,075	194	81	5,350	4,602	-748	116%
Intermediate Schools							
CSD 24, Sub-District 2	6,501	83	35	6,619	4,877	-1,742	136%
Totals							
TOTALS	11,576	277	116	11,968	9,479	-2,489	126%

Notes:
[1] The projected enrollment in the School Study Area in 2021 is based on DOE *Enrollment Projections* by *Statistical Forecasting (Actual 2015, Projected 2016-2025)* and SCA's Housing Pipeline for the 2015-2019 Capital Plan.
[2] The number of students expected to be generated by No-Build Projects.

With-Action Condition

The Modified Project would introduce approximately 431 residential dwelling units to the Study Area. Based on public school student multipliers provided in the *CEQR Technical Manual*, the Modified Project would generate approximately 121 elementary school students and approximately 52 intermediate school students by 2021, the project build year. The Modified Project would provide approximately 476 seats for kindergarten through fifth grade students.

As shown in Table 3, elementary and intermediate schools in the School Study Area would operate beyond capacity in the 2021 Modified Project Condition; elementary schools would have a deficit of approximately 311 seats (106 percent utilization), and intermediate schools would have a deficit of approximately 1,759 seats (136 percent utilization). Based on this information, schools in the With-Action Condition would have a collective utilization rate of approximately 121 percent.

Table 3: Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization in the Study Area (2021 Modified Project Condition)

	Projected 2021 Enrollment[1]	No-Build Students[2]	Modified Project Students	Total Enrollment (2021)	Capacity	Available Seats	Utilization (%)	Change in Utilization (%) from No-Action to Modified Project conditions
Elementary Schools								
CSD 24, Sub-District 2	5,075	194	121	5,389	5,078	-311	106%	-10.11%
Intermediate Schools								
CSD 24, Sub-District 2	6,501	83	52	6,636	4,877	-1,759	136%	0.35%
Totals								
TOTALS	11,576	277	172	12,025	9,955	-2,070	121%	-5.47%

Notes:
[1] The projected enrollment in the School Study Area in 2021 is based on DOE *Enrollment Projections (Actual 2015, Projected 2016-2025)* and SCA's Housing Pipeline for the 2015-2019 Capital Plan.
[2] The number of students expected to be generated by No-Build Projects.

In the With-Action Condition, it is anticipated that both elementary and intermediate schools would continue to operate at collective utilization rates greater than 100 percent. Due to the addition of a school in the Modified Project, the elementary school utilization rate would *decrease* by approximately 10.11 percent and the intermediate school utilization rate would *increase* by approximately 0.35 percent, compared to the No-Action Condition. It should be noted that the project analyzed in the August 31 EAS did not cause a significant adverse impact on schools.

Conclusion

Based on the assessment above, the Modified Project would result in a collective utilization rate of approximately 121 percent. The decrease in the collective utilization rate would represent an approximately 5.47 percent *decrease* compared to the development in the No-Action Condition. Although elementary and intermediate schools within the School Study Area would continue to operate beyond their designed capacity, the Modified Project would alleviate capacity restraints and reduce the collective utilization rate.

Based on this information, the Modified Project is not anticipated to result in any adverse environmental effects to community facilities and services, therefore no further analysis is warranted, and the conclusions of the August 31 EAS would not change.[8]

Child Care Centers

The Modified Project would result in a decrease of approximately 40 low- to moderate-income units beyond what was assessed in the August 31 EAS. Based on this information, the number of project-generated children under the age of six who would be eligible for publicly funded child care programs would not increase beyond what was assessed in the August 31 EAS. Therefore, the Modified Project would not result in any new adverse environmental effects to publicly funded child care programs, and the conclusions of the August 31 EAS would not change.

Libraries

As concluded in the August 31 EAS, the development contemplated in the August 31 EAS would not result in a five percent or more increase in the ratio of residential units to library branches – the CEQR threshold for determining impacts to library services. The Modified Project would result in the development of approximately 130 fewer residential dwelling units than the development contemplated in the August 31 EAS. Therefore, the Modified Project would generate fewer residents than the project contemplated in the August 31 EAS, and thus, would not meet the threshold for library analysis.

Based on this information, the Modified Project would not result in any adverse environmental effects to libraries, and the conclusions of the August 31 EAS would not change.

Health Care Facilities

The Modified Project would not result in the development of a sizeable neighborhood where none existed before; thus, the Modified Project does not meet the threshold for analysis of health care facilities. Therefore, the Modified Project would not result in any new adverse environmental effects to health care facilities, and the conclusions of the August 31 EAS would not change.

Police Services

The Modified Project would neither result in direct effects on the physical operations of, or access to and from, any New York Police Department (NYPD) precinct house, nor result in a sizeable new neighborhood where none existed before. An assessment of the Modified Project as it relates to police services is not required. The Modified Project would not result in any new adverse environmental effects to police services; therefore, the conclusions of the August 31 EAS would not change.

[8] The development contemplated in the August 31 EAS would not have been anticipated to result in adverse environmental effects to community facilities and services.

Fire Protection

The Modified Project would neither result in direct effects on the physical operations of, or access to and from, any Fire Department of the City of New York (FDNY) facility, nor result in a sizeable new neighborhood where none existed before; therefore, a detailed assessment of fire protection services is not required. The Modified Project would not result in any new adverse environmental effects to fire protection services, and the conclusions of the August 31 EAS would not change.

D. OPEN SPACE

As described in the August 31 EAS, no open space resources would be physically displaced as a result of the Proposed Actions. Similarly, the Modified Project is anticipated to retain the same building footprint that was contemplated in the August 31 EAS. Therefore, no analysis of the Modified Project's direct effects on open space is warranted.

The 0.5-mile Open Space Study Area contains approximately 5.45 acres of publicly accessible open space. Open space resources within the Open Space Study Area include Big Bush Park (2.5 acres), Hart Playground (0.90 acres), Nathan Weidenbaum Park (0.73 acres), Spargo Park (0.38 acres), Sherry Park/Dog Run (0.35 acres), Winfield Plaza (0.09 acres), Pigeon Plaza (0.07 acres), Crosson Green (0.06 acres), Latham Park (0.03 acres), and P.S. 12 Playground (0.34 acres). According to the 2012-2016 American Community Survey (ACS) 5-Year Population Estimates, the Open Space Study Area (Census Tracts 243, 245, 247, 263, 265, 483, 485, 489, and 493.01) has a residential population of approximately 37,536. The existing Open Space Ratio (OSR) in the Study Area is approximately 0.145.

No-Action Condition

The development in the No-Action Condition is anticipated to result in the development of approximately 289 dwelling units (approximately 1,055 residents). Additionally, three No-Build development projects have been identified within the Open Space Study Area. Collectively, the No-Build developments are anticipated to generate approximately 692 residents. Combined, the population for the Open Space Study Area in the No-Action Condition would be approximately 39,283. The development in the No-Action Condition would result in an OSR of approximately 0.139.

With-Action Condition

In the With-Action Condition, it is anticipated that the Modified Project would result in a net increase of approximately 142 dwelling units (approximately 518 residents), and a net increase of approximately 208 workers. According to the *CEQR Technical Manual*, in areas that are neither well-served nor underserved by open space, the threshold for assessment is more than 200 residents or 500 employees.

In the With-Action Condition, an approximately 0.17 acre public walkway will be constructed adjacent to the Long Island Rail Road (LIRR) embankment at the southwest corner of the Development Site. The new 0.17 acre publicly accessible walkway would result in approximately 5.62 acres of open space within a 0.5-mile radius of the Development Site. Based on the total With-Action Condition residential population of 39,801, the Modified Project would result in an OSR of approximately 0.141 acres per 1,000 residents. The OSR in the With-Action Condition would represent an approximately 1.78 percent increase compared to the OSR in the No-Action Condition (Table 4).

Table 4: Residential Open Space Calculations

Existing Residential Population within 0.5 miles	37,536
Total Open Space within 0.5 miles (*acres*)	5.45
Existing OSR[1] (*Acres per 1,000 residents*)	0.145
No-Action Residential Population within 0.5 miles	39,283
Total No-Action Open Space within 0.5 miles (*acres*)	5.45
No-Action OSR (*Acres per 1,000 residents*)	0.139
With-Action Residential Population within 0.5 miles	39,801
Modified Project With-Action Open Space within 0.5 miles (*acres*)	5.62
Modified Project With-Action OSR (*Acres per 1,000 residents*)	0.141
Change in Open Space Ratio (%)	**+1.78%**

Source**:** *Existing Population Sources: 2012-2016 American Community Survey (ACS) 5-Year Estimates for Selected Census Tract(s): 243, 245, 247, 263, 265, 483, 485, 489 and 493.01); Existing open space acreage derived from NYC DCP MapPluto Data.*

Notes:

[1] Open Space Ratio (OSR) = Acres of Open Space per 1,000 residents.

As described above, neither the development in the No-Action Condition nor the development in the With-Action Condition would result in the physical loss or alteration of a public open space; therefore, an analysis of direct open space effects was not warranted.

While the With-Action OSR would remain below the planning goals defined in the *CEQR Technical Manual*, the Modified Project results in a 1.78 percent increase in OSR compared to the development in the No-Action Condition.

The deficiency of open space resources within the Open Space Study Area is partly offset by six publicly accessible parks within a quarter mile of the Study Area boundary totaling approximately 14.78 acres. In addition, the Modified Project would include an approximately 14,342 square-foot on-site open space area that would be accessible to the development's residents and workers. It is anticipated that this privately-held open space would offset a portion of any potential project-generated indirect effects on the existing open space in the Study Area.

Based on the analysis of project-generated *indirect effects* on open space above, the Proposed Actions are not anticipated to result in any potentially significant adverse impacts to open space; therefore, no further analysis is necessary. The Modified Project would not result in any new or different significant adverse impacts to open space, and the conclusions of the August 31 EAS would not change.

E. SHADOWS

The Modified Project would consist of two buildings: (i) a 15-story (161.5-foot) mixed residential and commercial building in the northwestern part of the Development Site, with frontage along Queens Boulevard and 69th Street ("West Tower"), and (ii) a 12-story (140-foot) mixed residential and community facility building in the southeastern part of the Development Site, with frontage along 47th Avenue and 70th Street ("East Tower"). The Modified Project building height is reduced compared to the development contemplated in the August 31 EAS while the footprint remains identical.

As disclosed in the August 31 EAS, projected shadows cast from the proposed development would fall on one sunlight sensitive resource on the December 21 analysis day. However, the anticipated shadow would be short in duration; would cover relatively small areas of the resource; would occur during times of low utilization; would occur during the season when existing vegetation is dead or dormant; and would not pose a threat to habitats supported by the resource. Therefore, there would be no significant adverse impacts to the public's enjoyment of these resources, their usability, or the viability of their vegetation.

The Modified Project would not result in a building height or footprint that exceeds or differs substantially from what was analyzed in the August 31 EAS. Based on this information, the Modified Project would not result in any new or different significant adverse shadow impacts, and the conclusions of the August 31 EAS would not change.

F. HISTORIC RESOURCES

According to the New York City Zoning and Land Use (ZoLa) database and State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS), the Development Site and 400-foot Study Area do not contain any State or National Register (S/NR)-listed or Landmarks Preservation Commission (LPC)-designated historic resources. As described in the August 31 EAS, an environmental review request was sent to LPC for comment on the architectural and archaeological significance of the Development Site and 400-foot Study Area. In its determination letter dated August 15, 2017, LPC confirmed that there are no architectural or archaeological sensitive resources within the Project Area. All correspondence with LPC is included in Appendix E of the August 31 EAS, "Agency Correspondence."

The Modified Project would be developed on the same development site that was contemplated in the August 31 EAS. Based on this information, the Modified Project would not result in any new or different significant adverse shadow impacts, and the conclusions of the August 31 EAS would not change.

G. URBAN DESIGN

As described in the August 31 EAS, the development contemplated in the August 31 EAS would conform to the lot line and provide a continuous street wall along all perimeter street frontages. The development would further provide streetscape improvements including street trees and pedestrian features along segments of the four perimeter streets, as well as a landscaped walkway between the LIRR right-of-way and the Development Site. In addition, the proposed ground floor commercial uses would activate a segment of Queens Boulevard with enhanced pedestrian activity.

The Modified Project would not result in a building height or footprint that exceeds or differs substantially from what was assessed in the August 31 EAS. Based on this information, the Modified Project would not result in any new of different significant adverse impacts related to urban design; the conclusions of the August 31 EAS would not change.

H. HAZARDOUS MATERIALS

The two Phase I Environmental Site Assessments (ESAs) assessed in the August 31 EAS identified potential subsurface recognized environmental conditions (RECs) at the Development Site relating to historical uses. The January 2016 Phase I ESA report (Lots 9 and 21) identified six (6) RECs: (i) the presence of VOCs in soil vapor beneath the site; (ii) the presence of active Spill No. 9304343; (iii) the presence of historic fill material; (iv) the presence of an (E) Designation (E-163) for Hazardous Materials; (v) the anticipated presence of lead-based peeling paint; and (vi) the presence of a suspected UST. The July 2017 Phase I ESA report (Lots 41, 44, and 50) identified three (3) RECs: (i) the potential presence of undocumented USTs; (ii) the manufacturing and industrial uses that previously occurred on site; and (iii) the presence of active Spill No. 9304343 (Lot 9).

Given these conditions, an (E) designation for hazardous materials would be mapped on the Development Site. By placing an (E) designation on the project site, where confirmed RECs have been identified relating to soil, groundwater and soil vapor, the potential for an adverse impact to human health and the environment resulting from the proposed project would be avoided. With the (E) designation, OER would provide the regulatory oversight of any required supplemental sampling; including environmental scope, investigation, and potential remedial action during this process. Building permits are not issued by the DOB without prior OER approval of the investigation and/or remediation pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements).

With the inclusion of the remedial measures described above, which involve the mapped (E) designation (E-472) on the development site, the Modified Project would not result in any significant adverse impacts related to hazardous materials.

The Modified Project would not result in a building footprint that exceeds what was analyzed in the August 31 EAS, and thus would not require subsurface disturbance in new areas of the Development Site. Therefore, with the implementation of the measures described in the August 31 EAS, the Modified Project would not result in any new or different significant adverse impacts to hazardous materials, and the conclusions of the August 31 EAS would not change.

I. TRANSPORTATION

Introduction

The objective of the transportation analysis is to determine whether the proposed could result in significant adverse impacts on traffic operations; public transportation facilities and services; pedestrian elements and flow; roadway user safety (pedestrians, bicyclists, and vehicles); and on-and-off-street parking. The transportation assessment presented herein provides a discussion of planning assumptions and subsequent analyses for the "Modified Project" contemplated for the proposed 69-02 development.

Analysis Framework

The Modified Project analyzed herein is different than the development analyzed in the 2018 69-02 Queens Boulevard EAS (CEQR No. 18DCP132Q). Primary differences include the introduction of a 500-seat school and a decrease in the number of residential units. To assess the potential effects of this change, a RWCDS was developed for both the Future without the Proposed Actions (the "No-Action Condition") and the Future with the Proposed Actions with Project Components Related to the Environment (the "With-Action Condition with PCRE") for the 2021 Build Year. The incremental difference between the No-Action and With-Action with PCRE Conditions serves as the basis for assessing the potential transportation impacts of the Proposed Actions. The development program used for the transportation analyses in the No-Action and With-Action with PCRE Conditions is discussed in detail in the subsequent sections.

No-Action Condition

The No-Action Condition would include a new 12-story building that would occupy part of the Project Site currently zoned R7X/C2-3 (Lots 9, 21, p/o 41, p/o 44 and p/o 50). Lot 9 is currently vacant; and the existing one-story restaurant on Lot 21 and the two-story commercial building on Lot 41 would be demolished. Only a small portion of the existing one-story commercial warehouse building on Lot 44 would be demolished to accommodate the new building. The existing community facility building, along with the accessory parking lot on Lot 50 would remain unchanged. The new development in the No-Action Condition would be built pursuant to the underlying R7X/C2-3 zoning regulations with the As-of-Right (AOR) residential FAR bonus under the Inclusionary Housing (IH) program.

Pursuant to the underlying zoning regulations, Lots 9, 21, p/o 41, p/o 44, and p/o 50 would be developed with a 12-story, approximately 311,596 gross square feet (gsf), mixed-use building. As shown in Table 5, the proposed building would include: (i) approximately 5,460 gsf of local retail space on the ground floor fronting Queens Boulevard; (ii) approximately 226,840 gsf of residential space (289 dwelling units, of which 58 units would be affordable); and (iii) approximately 79,296 gsf of accessory parking spaces (124 spaces). The No-Action Condition would also include the existing one-story, approximately 8,700 gsf warehouse building on Lot 44, and the existing two-story, approximately 10,943 gsf community center and surface parking (25 spaces) on Lot 50. The detailed building program in the No-Action Condition is shown in Table 5.

Table 5: Development Program - No-Action Condition

Component	Local Retail (gsf)	Community Facility (gsf)	Residential Units (785 gsf/unit)	Parking Spaces
(New AOR Uses) Lot 9, 21, 41	5,460	0	289	124
(Existing Uses) Lot 44, 50	8,700	10,943	0	25
TOTAL	**14,160**	**10,943**	**289**	**149**

In addition, there are three potential No-Action developments proposed within the Study Area by 2021, including:

1. A 9-story, mixed-use building at 46-02 70th Street (Block 2432, Lot 23);
2. A 7-story, mixed-use building at 70-09 45th Avenue (Block 1351, Lot 75); and
3. A 9-story, mixed-use building at 70-40 45th Avenue (Block 1352, Lots 9, 10, 25 & 32).

With-Action Condition

Two separate schemes, one providing a 500-seat Charter School, and the other providing a 500-seat Public School, were evaluated to estimate project trip generation for the Modified Project. These schemes, along with the mixed-use development proposed for the site, are shown in Table 6 and are discussed as follows:

Scheme 1: Charter School

This scheme would include a 15-story mixed-use building on Lots 9, and 21; and a 12-story residential building on Lots 41, 44, and 50 totaling approximately 493,791 gsf. These two buildings combined would provide 431 dwelling units, approximately 12,787 gsf of ground floor and cellar retail space, and an approximately 79,702 gsf (476-seat) K-8 charter school. In addition, the buildings would provide approximately 217 parking spaces for residential, commercial, and school uses.

Scheme 2: Public School

Under this scheme, the two buildings combined would provide 431 dwelling units, approximately 12,787 gsf of ground floor and cellar retail space, and approximately 79,702 gsf (476-seat) K-5 public school. In addition, the buildings would provide approximately 217 parking spaces for residential, commercial, and school uses.

Table 6: Development Program - With-Action Condition with PCRE

Development Program	Component	School			Local Retail (gsf)	Community Facility (gsf)	Residential Units (785 gsf/unit)	Parking Spaces
		Students (Grades K-5)	Students (Grades 6-8)	Staff				
Scheme 1: Charter School	West Tower (Lots 9, 21)	0	0	0	12,787	0	290	132
	East Tower (Lots 41,44, 50)	333	167	44	0	0	218	132
	TOTAL	**333**	**167**	**44**	**12,787**	**0**	**508**	**264**
Scheme 2: Public School	West Tower (Lots 9, 21)	0	0	0	12,787	0	290	121
	East Tower (Lots 41,44, 50)	500	0	44	0	0	193	121
	TOTAL	**500**	**0**	**44**	**12,787**	**0**	**483**	**242**

Analysis Methodology

For transportation analysis purposes, the incremental difference in trip generation between the No-Action and With-Action with PCRE Conditions provides the basis for assessing transportation conditions in the Study Area. As shown in Table 7, compared to the No-Action Condition, under Scheme 1: Charter School, there would be a net increase of 142 dwelling units; a net increase of 476 seats of school space (317 seats to Grades K-5 and 159 seats to Grades 6-8) and; a net decrease of 1,373 gsf of commercial facility space; a net decrease of 10,943 gsf of community facility space; and a net increase of 68 parking spaces. Similarly, under Scheme 2: Public School, there would be a net increase of 142 dwelling units; a net increase of 476 seats of school space (all seats to Grades K-5); a net decrease of 1,373 gsf of commercial facility space; a net decrease of 10,943 gsf of community facility space; and a net increase of 68 parking spaces.

Table 7: Comparison of Development Program (No-Action vs. With-Action Conditions with PCRE Condition)

Development Program	Component	School			Local Retail (gsf)	Community Facility (gsf)	Residential Units (785 gsf/unit)	Parking Spaces
		Students (Grades K-5)	Students (Grades 6-8)	Staff				
Scheme 1: Charter School	No-Action Condition	0	0	0	14,160	10943	289	149
	With-Action Condition with PCRE	317	159	42	12,787	0	431	217
	INCREMENT	**317**	**159**	**42**	**-1,373**	**-10,943**	**142**	**68**
Scheme 2: Public School	No-Action Condition	0	0	0	14,160	10943	289	149
	With-Action Condition with PCRE	476	0	42	12,787	0	431	217
	INCREMENT	**476**	**0**	**42**	**-1,373**	**-10,943**	**142**	**68**

Transportation Screening Assessment

The 2014 City Environmental Quality Review Technical Manual ("CEQR Technical Manual") describes a two-tier screening process to determine if quantified analyses of transportation conditions are warranted. The preliminary assessment begins with a trip generation analysis (Level 1) to estimate person and vehicle trips that would result from the Proposed Actions. According to the CEQR Technical Manual, a project that is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips does not warrant further quantified analyses. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Actions could generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses of transportation conditions may be warranted.

Level 1 (Trip Generation) Screening Assessment

A Level 1 trip generation analysis was conducted for the weekday AM, midday, afternoon, PM, and Saturday midday peak hours. Trip estimates were developed for the school, commercial/local retail, community facility, and residential components for the No-Action and With-Action with PCRE Conditions. Travel Demand Factors for school, local retail, community facility, and residential uses are summarized in Table 8. These factors are based on information provided in the CEQR Technical Manual, 2011-2015 U.S. Census Bureau's American Community Survey (ACS) database, 10th Edition

of the ITE Trip General Manual (ITE Trip Generation Manual), and other recently approved transportation studies with similar characteristics, such as the 2016 East New York Rezoning Proposal FEIS (CEQR No. 15DCP102K), 2017 600 East 156th Street EAS (CEQR No. 17DCP025X), 2008 Hunter's Point South Rezoning and Related Actions FEIS (CEQR No. 08DME006Q), 2013 Willets Point Development Plan FSEIS (CEQR No. 07DME014Q) and the PS 35Q Elementary School Addition EA Study provided by NYCDOT..

School Facility

Students

A daily person trip generation rate of 2 trips per student for weekday was obtained from the CEQR Technical Manual. Students are assumed to be evenly distributed among all grades, and a 10 percent absentee rate is applied to the trip generation estimates, as per the PS 35Q Elementary School Addition EA Study. Directional distributions and modal splits for the weekday AM, midday, afternoon, PM, and Saturday peak hours were also obtained from the PS 35Q Elementary School Addition EA Study. Vehicle occupancies of 1.44 per auto, 1.3 per taxi, and 6.25 per school bus during the weekday AM, midday, PM and Saturday midday peak hours; and, 1.55 per auto, 1.3 per taxi, and 7.25 per school bus for the weekday afternoon peak hour were also obtained from the PS 35Q Elementary School Addition EA Study.

For the Public School Scheme, temporal distributions of 47.2 percent for the weekday AM peak hour and 49.3 percent for the weekday afternoon peak hour for the Public School students were obtained from the PS 35Q Elementary School Addition EA Study. It was assumed that the remaining 3.5 percent would occur during the weekday PM peak hour, while weekday midday and Saturday midday will have no student trip activity.

For the Charter School Scheme, temporal distributions were modified during the weekday afternoon and PM peak hours to account for a higher percentage of after-school activities. As per guidance from NYCDOT, temporal distributions of 44.3 percent and 8.5 percent were assumed during the weekday afternoon and PM peak hours, respectively..

Staff

Daily person trip generation rates of 2 trips per staff for weekday and 0 trips per staff for Saturday were obtained from the CEQR Technical Manual. A student-to-staff ratio of 11.4 students per staff member was obtained from the East New York Rezoning Proposal FEIS. Temporal distributions of 40.3 percent for the weekday AM peak hour and 28.4 percent for the weekday afternoon peak hour were obtained from the PS 35Q Elementary School Addition EA Study. It was assumed that the remaining 31.3 percent would occur during the weekday PM peal hour, while weekday midday and Saturday midday will have no school staff trip activity. Directional distributions for the weekday AM, midday, afternoon, PM, and Saturday peak hours were also obtained from the PS 35Q Elementary School Addition EA Study. Modal splits of 91 percent by auto, 0 percent by taxi, 0 percent by subway, 3 percent by bus, 3 percent by other (bike), and 3 percent by walk only were also obtained from the PS 35Q Elementary School Addition EA Study. Vehicle occupancies of 1.20 per auto and 1.20 per taxi were obtained from the PS 35Q Elementary School Addition EA Study..

Parents

Daily person trip generation rates of 4 trips per parent for weekday and 0 trips per parent for Saturday were obtained from the CEQR Technical Manual. Student-to-parent ratios of 1 student per 0.51 parents for grades K-5 was applied to all student trips via the walk-only transportation mode, as per the *PS 35Q Elementary School Addition EA Study*. Students in grades 6-8 were assumed not be accompanied by a parent/guardian. Temporal distributions of 23.6 percent for the weekday AM peak hour and 24.7 percent for the weekday afternoon peak hour were obtained from the *PS 35Q Elementary School Addition EA Study*. It was assumed that the remaining 1.7 percent would occur during the weekday PM peak hour, while weekday midday and Saturday midday will have no parent trip activity. Directional distributions for the weekday AM, midday, afternoon, PM, and Saturday peak hours were obtained from the *East New York Rezoning Proposal FEIS*.

Deliveries

For truck deliveries, daily trip generation rates and temporal and directional distributions were obtained from the *East New York Rezoning Proposal FEIS*. It was assumed that the weekday afternoon temporal for delivery trips would be similar to that of the weekday midday.

Local Retail

Daily person trip generation rates of 205 person trips per 1,000 square feet for weekday and 240 person trips per 1,000 square feet for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 3 percent for the weekday AM peak hour, 19 percent for the weekday midday peak hour, 10 percent for the weekday PM peak hour, and 10 percent for the Saturday peak hour were also obtained from the *CEQR Technical Manual*. A temporal distribution of 6.2 percent was assumed for the weekday afternoon peak hour. Directional distributions for the weekday AM, midday, PM, and Saturday peak hours were obtained from the *Hunter's Point South Rezoning and Related Actions FEIS*. Modal splits of 29 percent by auto, 0 percent by taxi, 0 percent by subway, 7 percent by bus, and 64 percent by walk; and vehicle occupancies of 1.50 per auto and 1.60 per taxi were obtained from NYCDOT's "*Queens - Non-Transit Zone*" modal choice study.

For truck deliveries, daily trip generation rates of 0.35 trips per 1,000 square feet for weekday and 0.04 trips per 1,000 square feet for Saturday were obtained from the *CEQR Technical Manual*. Temporal and directional distribution factors for truck deliveries were also obtained from the *CEQR Technical Manual*. It was assumed that the weekday afternoon temporal for delivery trips would be similar to that of the weekday midday.

Community Facility

Based on guidance provided by NYCDOT and NYCDCP, daily person trip generation rates of 103.4 person trips per 1,000 square feet for weekday and 62.1 person trips per 1,000 square feet for Saturday were obtained from the *NYCDOT Trip Generation and Mode Choice Survey - Medical Office*. Temporal distributions were also obtained from the *NYCDOT Trip Generation and Mode Choice Survey - Medical Office*. A temporal split of 7.1 percent was assumed for the weekday afternoon peak hour. Directional distributions for the weekday AM, midday, PM, and Saturday peak hours were obtained from the *Hunter's Point South Rezoning and Related Actions FEIS*. Modal splits of 66.3

percent by auto, 0 percent by taxi, 12.4 percent by subway, 10.0 percent by bus, 1.1 percent by bike and 10.2 percent by walk only were obtained from the U.S. Census Bureau's *Reverse Journey to Work, 2006-2010 Census Transportation Planning Products*. Vehicle occupancies of 1.77 per auto and 1.40 per taxi were based on *69-02 Queens Boulevard EAS* (CEQR No. 18DCP132Q).

For truck deliveries, weekday trip generation rate of 0.38 trips per 1,000 square feet was obtained from the Willets Point Development Plan FSEIS and the Saturday trip generation rate of 0.04 trips per 1,000 square feet for Saturday was obtained from the CEQR Technical Manual, Local Retail land use. Temporal and directional distribution factors were obtained from the Hunter's Point South Rezoning and Related Actions FEIS and the CEQR Technical Manual. It was assumed that the weekday afternoon temporal distribution would be similar to the weekday midday conditions for the delivery trips.

Residential

Daily person trip generation rates of 8.075 person trips per dwelling unit for weekday and 9.60 person trips per dwelling unit for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 10 percent for the weekday AM peak hour, 5 percent for the weekday midday peak hour, 11 percent for the weekday PM peak hour, and 8 percent for the Saturday peak hour were also obtained from the *CEQR Technical Manual*. A temporal distribution of 5.2 percent for the weekday afternoon peak hour was obtained from the 600 East 156th Street EAS. Directional distributions for the weekday AM, midday, afternoon, PM, and Saturday peak hours were obtained from the *600 East 156th Street EAS*. Modal splits of 30.7 percent by auto, 0.6 percent by taxi, 53.2 percent by subway, 7.7 percent by bus, 2.0 percent by railroad, and 5.9 percent by walk were obtained from the U.S. Census Bureau's *Journey to Work, 2011-2015 American Community Survey*. Vehicle occupancies of 1.15 per auto and 1.17 per taxi were obtained from the U.S. Census Bureau's Journey to Work, *2011-2015 American Community Survey* and from the *Hunter's Point South Rezoning and Related Actions FEIS*, respectively.

For truck deliveries, daily trip generation rates of 0.06 trips per dwelling unit for weekday and 0.02 trips per dwelling unit for Saturday were obtained from the *CEQR Technical Manual*. Temporal and directional distribution factors for truck deliveries were obtained from the *CEQR Technical Manual* and from the *Willets Point Development Plan FSEIS*. It was assumed that the weekday afternoon temporal for delivery trips would be similar to that of the weekday midday..

Net Incremental Trips

Trip generation forecasts for the No-Action Condition vs. the With-Action with PCRE Condition are summarized in Tables 9 through 11. The resulting net incremental trips for both the Charter and Public School Schemes are shown in Tables 12 and 13.

As summarized in Table 12, the Charter School Scheme would generate approximately 617, -143, 574, 94 and -33 net incremental person trips, and 180, -48, 112, 35 and -17 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Similarly, as summarized in Table 13, the Public School Scheme would generate approximately 710, -143, 699, 72 and -33 net incremental person trips, and 180, -48, 120, 24 and -17 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively.

Table 8: Transportation Planning Assumptions and Demand Estimates

Use	(17) Public School Students (Grades K-5)					(17) Charter School Students (Grades K-5)					(17) Charter School Students (Grades 6-8)					(12) School Staff				
Total Daily Person Trip	(1)(7) Weekday 2.0 Trips/student				SAT 0.0	(1)(7) Weekday 2.0 Trips/student				SAT 0.0	(1)(7) Weekday 2.0 Trips/student				SAT 0.0	(1) Weekday 2.0 Trips/staff				SAT 0.0
Trip Linkage	0%					0%					0%					0%				
Net Daily Person Trip	Weekday 2.0 Trips/student				SAT 0.0	Weekday 2.0 Trips/student				SAT 0.0	Weekday 2.0 Trips/student				SAT 0.0	Weekday 2.0 Trips/staff				SAT 0.0
Temporal	(6)(8)					(6)(8)(11)					(6)(8)					(6)				
	AM	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**
	47.2%	0%	49.3%	3.5%	0%	47.2%	0%	44.3%	8.5%	0%	47.2%	0%	49.3%	3.5%	0%	40.3%	0%	28.4%	31.3%	0%
Direction	(6)					(6)					(6)					(6)				
In	100%	50%	0%	0%	50%	100%	50%	0%	0%	50%	100%	50%	0%	0%	50%	100%	50%	0%	0%	50%
Out	0%	50%	100%	100%	50%	0%	50%	100%	100%	50%	0%	50%	100%	100%	50%	0%	50%	100%	100%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(6)(10)					(6)(10)					(6)(10)					(6)				
	AM	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**
Auto	28.5%	28.5%	20.5%	28.5%	20.5%	28.5%	28.5%	20.5%	28.5%	20.5%	28.5%	28.5%	20.5%	28.5%	20.5%	91%	91%	91%	91%	91%
Taxi	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Subway	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bus	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	3%	3%	3%
School Bus	4.0%	4.0%	4.5%	4.0%	4.5%	4.0%	4.0%	4.5%	4.0%	4.5%	4.0%	4.0%	4.5%	4.0%	4.5%	0%	0%	0%	0%	0%
Others (Bike)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	3%	3%	3%
Walk (only)	67.5%	67.5%	75.0%	67.5%	75.0%	67.5%	67.5%	75.0%	67.5%	75.0%	67.5%	67.5%	75.0%	67.5%	75.0%	3%	3%	3%	3%	3%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(6)					(6)					(6)					(6)				
	AM	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**
Auto	1.44	1.44	1.55	1.44	1.44	1.44	1.44	1.55	1.44	1.44	1.44	1.44	1.55	1.44	1.44	1.20	1.20	1.20	1.20	1.20
Taxi	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.20	1.20	1.20	1.20	1.20
School Bus	6.25	6.25	7.25	6.25	6.25	6.25	6.25	7.25	6.25	6.25	6.25	6.25	7.25	6.25	6.25	N/A	N/A	N/A	N/A	N/A
Daily Delivery Trip Generation Rate	(20) Weekday 0.03 Delivery Trips/student				SAT 0.03	(20) Weekday 0.03 Delivery Trips/student				SAT 0.03	(20) Weekday 0.03 Delivery Trips/student				SAT 0.03	(20) Weekday N/A Delivery Trips/staff				SAT N/A
Delivery Temporal	(16)(20)					(16)(20)					(16)(20)					(16)(20)				
	AM	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**
	9.6%	11.0%	11.0%	1.0%	0.0%	9.6%	11.0%	11.0%	1.0%	0.0%	9.6%	11.0%	11.0%	1.0%	0.0%	N/A	N/A	N/A	N/A	N/A
Delivery Direction	(16)(20)					(16)(20)					(16)(20)					(16)(20)				
In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	N/A	N/A	N/A	N/A	N/A
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	N/A	N/A	N/A	N/A	N/A
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	N/A	N/A	N/A	N/A	N/A

Notes

(1) 2014 CEQR Technical Manual

(2) Journey to Work, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates (using weighted average of Census Tracts 243, 479, 483, 485, and 489 of Queens County, NY).

(3) Reverse Journey to Work, U.S. Census Bureau, 2006-2010 Census Transportation Planning Products (using weighted average of Census Tracts 243, 479, 483, 485, and 489 of Queens County, NY).

(4) NYCDOT Trip Generation and Mode Choice Survey - Medical office.

(5) "Queens - Non-Transit Zone" factors provided by NYCDOT.

(6) PS 35Q Elementary School Addition EA Study (provided by NYCDOT).

(7) Assumes a 10% absentee rate will be applied in the trip generation estimates, as per the PS 35Q Elementary School Addition EA Study (provided by NYCDOT).

(8) All school trips that do not occur during the AM and Afternoon peak hours are assumed to occur during the PM peak hour.

(9) For all non-auto and school bus trips, assumes a student-to-parent ratio of 1-to-0.51 for students in Grade 5 or lower, as per the PS 35Q Elementary School Addition EA Study (provided by NYCDOT).

(10) The modal splits for Grades K-5 and 6-8 are based on the modal splits from the PS 35Q EA Elementary School Study.

(11) To account for the higher percentage of after-school activities for the charter school, the temporal distribution for the PM peak hour is increased by 5%.

(12) Assumes 11.4 students per staff member, based on the East New York Rezoning Proposal FEIS, 2016 (CEQR No. 15DCP102K).

(13) 600 East 156th Street EAS, 2017 (CEQR No. 17DCP025X).

(14) Hunter's Point South Rezoning and Related Actions FEIS, 2008 (CEQR No. 08DME006Q).

(15) Willets Point Development Plan FSEIS, 2013 (CEQR No. 07DME014Q),

(16) When not available, afternoon factors were assumed to match midday factors.

(17) Students are assumed to be evenly distributed among all grades.

(18) Afternoon temporal splits for the community facility and local retail is based on a uniform distribution of trips taking place during all hours of operation other than the AM, midday, and PM peak hours for a 14 hour day.

(19) Community Facility Saturday Daily Delivery Trip Generation Rate and Temporal Split is based on the Daily Delivery Trip Generation Rate and Temporal Split of Local Retail, as per the 2014 CEQR Technical Manual.

(20) East New York Rezoning Proposal FEIS, 2016 (CEQR No. 15DCP102K).

(21) ITE Trip Generation Manual, 10th Edition, Recreational Community Facility, with adjustments, provided by NYCDOT and NYCDCP.

Table 8 (cont.): Transportation Planning Assumptions and Demand Estimates

Use	(9) School Parents						Community Facility						Local Retail						Residential					
	(1)(7)						(4)						(1)						(1)					
Total Daily Person Trip	**Weekday** 4.0 Trips/parent				**SAT** 0.0		**Weekday** 103.4 Trips/KSF				**SAT** 62.1		**Weekday** 205.0 Trips/KSF				**SAT** 240.0		**Weekday** 8.1 Trips/DU				**SAT** 9.6	
Trip Linkage	0%						0%						0%						0%					
Net Daily Person Trip	**Weekday** 4.0 Trips/parent				**SAT** 0.0		**Weekday** 103.4 Trips/KSF				**SAT** 62.1		**Weekday** 205.0 Trips/KSF				**SAT** 240.0		**Weekday** 8.1 Trips/DU				**SAT** 9.6	
Temporal	(6)(8)						(4)(18)						(1)(18)						(1)(13)					
	AM	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**	
	23.6%	0%	24.7%	1.7%	0%		10.0%	13.0%	7.1%	9.0%	16.0%		3%	19%	6.2%	10%	10%		10%	5%	5.2%	11%	8%	
Direction	(6)						(14)						(14)						(13)					
In	100%	100%	100%	100%	100%		94%	45%	45%	42%	45%		50%	50%	50%	50%	50%		15%	50%	65%	70%	50%	
Out	100%	100%	100%	100%	100%		6%	55%	55%	58%	55%		50%	50%	50%	50%	50%		85%	50%	35%	30%	50%	
Total	200%	200%	200%	200%	200%		100%	100%	100%	100%	100%		100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	
Modal Split	(6)						(2)						(14)						(2)					
	AM	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**	
Auto	0%	0%	0%	0%	0%		66.3%	66.3%	66.3%	66.3%	66.3%		29%	29%	29%	29%	29%		30.7%	30.7%	30.7%	30.7%	30.7%	
Taxi	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0.6%	0.6%	0.6%	0.6%	0.6%	
Subway	0%	0%	0%	0%	0%		12.4%	12.4%	12.4%	12.4%	12.4%		0%	0%	0%	0%	0%		53.2%	53.2%	53.2%	53.2%	53.2%	
Bus	0%	0%	0%	0%	0%		10.0%	10.0%	10.0%	10.0%	10.0%		7%	7%	7%	7%	7%		7.7%	7.7%	7.7%	7.7%	7.7%	
School Bus	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	
Others (Bike)	0%	0%	0%	0%	0%		1.1%	1.1%	1.1%	1.1%	1.1%		0%	0%	0%	0%	0%		2.0%	2.0%	2.0%	2.0%	2.0%	
Walk (only)	100%	100%	100%	100%	100%		10.2%	10.2%	10.2%	10.2%	10.2%		64%	64%	64%	64%	64%		5.9%	5.9%	5.9%	5.9%	5.9%	
Total	100%	100%	100%	100%	100%		100%	100%	100%	100%	100%		100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	
Vehicle Occupancy	(6)						(21)						(5)						(2)(14)					
	AM	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**	
Auto	N/A	N/A	N/A	N/A	N/A		1.77	1.77	1.77	1.77	1.77		1.50	1.50	1.50	1.50	1.50		1.15	1.15	1.15	1.15	1.15	
Taxi	N/A	N/A	N/A	N/A	N/A		1.40	1.40	1.40	1.40	1.40		1.60	1.60	1.60	1.60	1.60		1.17	1.17	1.17	1.17	1.17	
School Bus	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	
Daily Delivery Trip Generation Rate	(20) Weekday N/A Delivery Trips/parent				SAT N/A		(1)(15)(19) Weekday 0.38 Delivery Trips/ KSF				SAT 0.04		(1) Weekday 0.35 Delivery Trips/ KSF				SAT 0.04		(1) Weekday 0.06 Delivery Trips/ DU				SAT 0.02	
Delivery Temporal	(16)(20)						(14)(19)						(1)(16)						(1)(16)					
	AM	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**	
	N/A	N/A	N/A	N/A	N/A		6.6%	11.0%	11.0%	1.0%	11.0%		8%	11%	11%	2%	11%		12%	9%	9%	2%	9%	
Delivery Direction	(16)(20)						(14)						(1)						(1)					
In	N/A	N/A	N/A	N/A	N/A		50%	50%	50%	50%	50%		50%	50%	50%	50%	50%		50%	50%	50%	50%	50%	
Out	N/A	N/A	N/A	N/A	N/A		50%	50%	50%	50%	50%		50%	50%	50%	50%	50%		50%	50%	50%	50%	50%	
Total	N/A	N/A	N/A	N/A	N/A		100%	100%	100%	100%	100%		100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	

Notes

(1) 2014 CEQR Technical Manual

(2) Journey to Work, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates (using weighted average of Census Tracts 243, 479, 483, 485, and 489 of Queens County, NY).

(3) Reverse Journey to Work, U.S. Census Bureau, 2006-2010 Census Transportation Planning Products (using weighted average of Census Tracts 243, 479, 483, 485, and 489 of Queens County, NY).

(4) NYCDOT Trip Generation and Mode Choice Survey - Medical office.

(5) "Queens - Non-Transit Zone" factors provided by NYCDOT.

(6) PS 35Q Elementary School Addition EA Study (provided by NYCDOT).

(7) Assumes a 10% absentee rate will be applied in the trip generation estimates, as per the PS 35Q Elementary School Addition EA Study (provided by NYCDOT).

(8) All school trips that do not occur during the AM and Afternoon peak hours are assumed to occur during the PM peak hour.

(9) For all non-auto and school bus trips, assumes a student-to-parent ratio of 1-to-0.51 for students in Grade 5 or lower, as per the PS 35Q Elementary School Addition EA Study (provided by NYCDOT).

(10) The modal splits for Grades K-5 and 6-8 are based on the modal splits from the PS 35Q EA Elementary School Study.

(11) To account for the higher percentage of after-school activities for the charter school, the temporal distribution for the PM peak hour is increased by 5%.

(12) Assumes 11.4 students per staff member, based on the East New York Rezoning Proposal FEIS, 2016 (CEQR No. 15DCP102K).

(13) 600 East 156th Street EAS, 2017 (CEQR No. 17DCP025X).

(14) Hunter's Point South Rezoning and Related Actions FEIS, 2008 (CEQR No. 08DME006Q).

(15) Willets Point Development Plan FSEIS, 2013 (CEQR No. 07DME014Q),

(16) When not available, afternoon factors were assumed to match midday factors.

(17) Students are assumed to be evenly distributed among all grades.

(18) Afternoon temporal splits for the community facility and local retail is based on a uniform distribution of trips taking place during all hours of operation other than the AM, midday, and PM peak hours for a 14 hour day.

(19) Community Facility Saturday Daily Delivery Trip Generation Rate and Temporal Split is based on the Daily Delivery Trip Generation Rate and Temporal Split of Local Retail, as per the 2014 CEQR Technical Manual.

(20) East New York Rezoning Proposal FEIS, 2016 (CEQR No. 15DCP102K).

(21) ITE Trip Generation Manual, 10th Edition, Recreational Community Facility, with adjustments, provided by NYCDOT and NYCDCP.

Table 9: Transportation Demand Forecast, No-Action Condition[9]

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Community Facility	Weekday AM	In	70	0	13	11	0	1	11	106	40	0	0	0	40
		Out	4	0	1	1	0	0	1	7	3	0	0	0	3
		Total	75	0	14	11	0	1	11	113	42	0	0	0	43
	Weekday Midday	In	44	0	8	7	0	1	7	66	25	0	0	0	25
		Out	54	0	10	8	0	1	8	81	30	0	0	0	31
		Total	97	0	18	15	0	2	15	147	55	0	0	0	56
	Weekday Afternoon	In	24	0	4	4	0	0	4	36	14	0	0	0	14
		Out	29	0	5	4	0	1	4	44	17	0	0	0	17
		Total	53	0	10	8	0	1	8	80	30	0	0	0	31
	Weekday PM	In	28	0	5	4	0	0	4	43	16	0	0	0	16
		Out	39	0	7	6	0	1	6	59	22	0	0	0	22
		Total	67	0	13	10	0	1	10	102	38	0	0	0	38
	Saturday Midday	In	32	0	6	5	0	1	5	49	18	0	0	0	18
		Out	40	0	7	6	0	1	6	60	22	0	0	0	22
		Total	72	0	14	11	0	1	11	109	41	0	0	0	41
Local Retail	Weekday AM	In	13	0	0	3	0	0	28	44	8	0	0	0	9
		Out	13	0	0	3	0	0	28	44	8	0	0	0	9
		Total	25	0	0	6	0	0	56	87	17	0	0	0	17
	Weekday Midday	In	80	0	0	19	0	0	176	276	53	0	0	0	54
		Out	80	0	0	19	0	0	176	276	53	0	0	0	54
		Total	160	0	0	39	0	0	353	552	107	0	0	1	107
	Weekday Afternoon	In	26	0	0	6	0	0	58	90	17	0	0	0	18
		Out	26	0	0	6	0	0	58	90	17	0	0	0	18
		Total	52	0	0	13	0	0	115	180	35	0	0	1	35
	Weekday PM	In	42	0	0	10	0	0	93	145	28	0	0	0	28
		Out	42	0	0	10	0	0	93	145	28	0	0	0	28
		Total	84	0	0	20	0	0	186	290	56	0	0	0	56
	Saturday Midday	In	49	0	0	12	0	0	109	170	33	0	0	0	33
		Out	49	0	0	12	0	0	109	170	33	0	0	0	33
		Total	99	0	0	24	0	0	217	340	66	0	0	0	66
Residential	Weekday AM	In	11	0	19	3	0	1	2	35	9	1	0	1	12
		Out	61	1	105	15	0	4	12	198	53	1	0	1	55
		Total	72	1	124	18	0	5	14	233	62	2	0	2	66
	Weekday Midday	In	18	0	31	4	0	1	3	58	16	1	0	1	17
		Out	18	0	31	4	0	1	3	58	16	1	0	1	17
		Total	36	1	62	9	0	2	7	117	31	1	0	2	34
	Weekday Afternoon	In	24	0	42	6	0	2	5	79	21	1	0	1	22
		Out	13	0	23	3	0	1	2	42	11	1	0	1	13
		Total	37	1	65	9	0	2	7	121	32	1	0	2	35
	Weekday PM	In	55	1	96	14	0	4	11	180	48	1	0	0	49
		Out	24	0	41	6	0	2	5	77	20	1	0	0	22
		Total	79	1	136	20	0	5	15	257	68	3	0	0	71
	Saturday Midday	In	34	1	59	9	0	2	7	111	30	1	0	0	31
		Out	34	1	59	9	0	2	7	111	30	1	0	0	31
		Total	68	1	118	17	0	5	13	222	59	2	0	1	62
Total	Weekday AM	In	94	0	32	16	0	2	41	185	58	1	0	1	60
		Out	78	1	106	19	0	4	40	249	64	1	0	1	66
		Total	172	1	138	35	0	6	81	434	121	2	0	3	126
	Weekday Midday	In	142	0	39	30	0	2	187	400	94	1	0	1	95
		Out	151	0	41	32	0	2	188	415	99	1	0	1	101
		Total	293	1	80	62	0	4	375	815	193	1	0	3	196
	Weekday Afternoon	In	74	0	46	16	0	2	66	205	52	1	0	1	54
		Out	68	0	28	14	0	1	65	177	45	1	0	1	47
		Total	143	1	75	30	0	3	130	382	97	1	0	3	101
	Weekday PM	In	126	1	101	28	0	4	108	368	92	1	0	0	93
		Out	105	0	48	22	0	2	103	281	71	1	0	0	72
		Total	230	1	149	50	0	6	211	649	163	3	0	0	166
	Saturday Midday	In	116	1	65	25	0	3	120	330	81	1	0	0	82
		Out	123	1	66	26	0	3	121	341	85	1	0	0	86
		Total	239	1	132	52	0	6	242	671	165	2	0	1	168

Note: In and Out volumes may not sum to Total volumes due to rounding.

[9] The No-Action Condition does not include a school component.

Table 10: Transportation Demand Forecast, With-Action Condition with PCRE - Charter School Scheme

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Students (Grades K-5)	Weekday AM	In	77	0	0	0	11	0	182	270	53	0	2	0	55
		Out	0	0	0	0	0	0	0	0	53	0	2	0	55
		Total	77	0	0	0	11	0	182	270	107	0	3	1	111
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	1	1
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	33	0	2	0	36
		Out	52	0	0	0	11	0	190	253	33	0	2	0	36
		Total	52	0	0	0	11	0	190	253	67	0	3	1	71
	Weekday PM	In	0	0	0	0	0	0	0	0	10	0	0	0	10
		Out	14	0	0	0	2	0	33	49	10	0	0	0	10
		Total	14	0	0	0	2	0	33	49	19	0	1	0	20
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Students (Grades 6-8)	Weekday AM	In	38	0	0	0	5	0	91	135	27	0	1	0	28
		Out	0	0	0	0	0	0	0	0	27	0	1	0	28
		Total	38	0	0	0	5	0	91	135	53	0	2	0	55
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	19	0	1	0	20
		Out	29	0	0	0	6	0	106	141	19	0	1	0	20
		Total	29	0	0	0	6	0	106	141	37	0	2	0	39
	Weekday PM	In	0	0	0	0	0	0	0	0	2	0	0	0	2
		Out	3	0	0	0	0	0	7	10	2	0	0	0	2
		Total	3	0	0	0	0	0	7	10	4	0	0	0	4
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	Weekday AM	In	31	0	0	1	0	1	1	34	26	0	0	0	26
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	31	0	0	1	0	1	1	34	26	0	0	0	26
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	22	0	0	1	0	1	1	24	18	0	0	0	18
		Total	22	0	0	1	0	1	1	24	18	0	0	0	18
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	24	0	0	1	0	1	1	26	20	0	0	0	20
		Total	24	0	0	1	0	1	1	26	20	0	0	0	20
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Parents	Weekday AM	In	0	0	0	0	0	0	93	93	0	0	0	0	0
		Out	0	0	0	0	0	0	93	93	0	0	0	0	0
		Total	0	0	0	0	0	0	186	186	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	97	97	0	0	0	0	0
		Out	0	0	0	0	0	0	97	97	0	0	0	0	0
		Total	0	0	0	0	0	0	194	194	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	7	7	0	0	0	0	0
		Out	0	0	0	0	0	0	7	7	0	0	0	0	0
		Total	0	0	0	0	0	0	13	13	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 10 (cont.): Transportation Demand Forecast, With-Action Condition with PCRE - Charter School Scheme

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Community Facility	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Retail	Weekday AM	In	11	0	0	3	0	0	25	39	8	0	0	0	8
		Out	11	0	0	3	0	0	25	39	8	0	0	0	8
		Total	23	0	0	6	0	0	50	79	15	0	0	0	16
	Weekday Midday	In	72	0	0	17	0	0	159	249	48	0	0	0	48
		Out	72	0	0	17	0	0	159	249	48	0	0	0	48
		Total	144	0	0	35	0	0	319	498	96	0	0	0	97
	Weekday Afternoon	In	24	0	0	6	0	0	52	81	16	0	0	0	16
		Out	24	0	0	6	0	0	52	81	16	0	0	0	16
		Total	47	0	0	11	0	0	104	163	31	0	0	0	32
	Weekday PM	In	38	0	0	9	0	0	84	131	25	0	0	0	25
		Out	38	0	0	9	0	0	84	131	25	0	0	0	25
		Total	76	0	0	18	0	0	168	262	51	0	0	0	51
	Saturday Midday	In	44	0	0	11	0	0	98	153	30	0	0	0	30
		Out	44	0	0	11	0	0	98	153	30	0	0	0	30
		Total	89	0	0	21	0	0	196	307	59	0	0	0	59
Residential	Weekday AM	In	16	0	28	4	0	1	3	52	14	2	0	2	17
		Out	91	2	157	23	0	6	17	296	79	2	0	2	82
		Total	107	2	185	27	0	7	20	348	93	3	0	3	99
	Weekday Midday	In	27	1	46	7	0	2	5	87	23	1	0	1	25
		Out	27	1	46	7	0	2	5	87	23	1	0	1	25
		Total	53	1	93	13	0	4	10	174	46	2	0	2	50
	Weekday Afternoon	In	36	1	63	9	0	2	7	118	31	1	0	1	33
		Out	19	0	34	5	0	1	4	63	17	1	0	1	19
		Total	55	1	96	14	0	4	11	181	48	2	0	2	52
	Weekday PM	In	82	2	142	21	0	5	16	268	71	2	0	0	73
		Out	35	1	61	9	0	2	7	115	31	2	0	0	33
		Total	117	2	204	29	0	8	23	383	102	4	0	1	106
	Saturday Midday	In	51	1	88	13	0	3	10	166	44	2	0	0	46
		Out	51	1	88	13	0	3	10	166	44	2	0	0	46
		Total	102	2	176	25	0	7	19	331	88	3	0	1	92
Total	Weekday AM	In	173	0	28	8	16	2	395	622	127	2	3	2	134
		Out	102	2	157	25	0	6	135	428	166	2	3	2	173
		Total	275	2	185	33	16	8	530	1050	293	3	5	5	307
	Weekday Midday	In	99	1	46	24	0	2	164	336	71	1	0	2	74
		Out	99	1	46	24	0	2	164	336	71	1	0	2	74
		Total	198	1	93	48	0	4	329	672	143	2	0	4	149
	Weekday Afternoon	In	60	1	63	15	0	2	156	296	99	1	2	2	105
		Out	145	0	34	11	18	2	449	659	103	1	2	2	108
		Total	205	1	96	26	18	4	605	955	202	2	5	4	213
	Weekday PM	In	120	2	142	30	0	5	106	406	108	2	0	0	111
		Out	114	1	61	19	2	3	138	337	87	2	0	0	90
		Total	234	2	204	49	2	9	244	743	196	4	1	1	201
	Saturday Midday	In	95	1	88	23	0	3	108	319	74	2	0	0	76
		Out	95	1	88	23	0	3	108	319	74	2	0	0	76
		Total	191	2	176	47	0	7	216	638	147	3	0	1	151

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 11: Transportation Demand Forecast, With-Action Condition with PCRE- Public School Scheme

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Students (Grades K-5)	Weekday AM	In	115	0	0	0	16	0	273	404	80	0	3	1	83
		Out	0	0	0	0	0	0	0	0	80	0	3	1	83
		Total	115	0	0	0	16	0	273	404	160	0	5	1	166
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	1	1
		Out	0	0	0	0	0	0	0	0	0	0	0	1	1
		Total	0	0	0	0	0	0	0	0	0	0	0	1	1
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	56	0	3	1	59
		Out	87	0	0	0	19	0	317	422	56	0	3	1	59
		Total	87	0	0	0	19	0	317	422	112	0	5	1	118
	Weekday PM	In	0	0	0	0	0	0	0	0	6	0	0	0	6
		Out	9	0	0	0	1	0	20	30	6	0	0	0	6
		Total	9	0	0	0	1	0	20	30	12	0	0	0	12
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Students (Grades 6-8)	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	Weekday AM	In	31	0	0	1	0	1	1	34	26	0	0	0	26
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	31	0	0	1	0	1	1	34	26	0	0	0	26
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	22	0	0	1	0	1	1	24	18	0	0	0	18
		Total	22	0	0	1	0	1	1	24	18	0	0	0	18
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	24	0	0	1	0	1	1	26	20	0	0	0	20
		Total	24	0	0	1	0	1	1	26	20	0	0	0	20
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Parents	Weekday AM	In	0	0	0	0	0	0	139	139	0	0	0	0	0
		Out	0	0	0	0	0	0	139	139	0	0	0	0	0
		Total	0	0	0	0	0	0	279	279	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	146	146	0	0	0	0	0
		Out	0	0	0	0	0	0	146	146	0	0	0	0	0
		Total	0	0	0	0	0	0	292	292	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	10	10	0	0	0	0	0
		Out	0	0	0	0	0	0	10	10	0	0	0	0	0
		Total	0	0	0	0	0	0	20	20	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 11 (cont.): Transportation Demand Forecast, With-Action Condition with PCRE– Public School Scheme

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Community Facility	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Retail	Weekday AM	In	11	0	0	3	0	0	25	39	8	0	0	0	8
		Out	11	0	0	3	0	0	25	39	8	0	0	0	8
		Total	23	0	0	6	0	0	50	79	15	0	0	0	16
	Weekday Midday	In	72	0	0	17	0	0	159	249	48	0	0	0	48
		Out	72	0	0	17	0	0	159	249	48	0	0	0	48
		Total	144	0	0	35	0	0	319	498	96	0	0	0	97
	Weekday Afternoon	In	24	0	0	6	0	0	52	81	16	0	0	0	16
		Out	24	0	0	6	0	0	52	81	16	0	0	0	16
		Total	47	0	0	11	0	0	104	163	31	0	0	0	32
	Weekday PM	In	38	0	0	9	0	0	84	131	25	0	0	0	25
		Out	38	0	0	9	0	0	84	131	25	0	0	0	25
		Total	76	0	0	18	0	0	168	262	51	0	0	0	51
	Saturday Midday	In	44	0	0	11	0	0	98	153	30	0	0	0	30
		Out	44	0	0	11	0	0	98	153	30	0	0	0	30
		Total	89	0	0	21	0	0	196	307	59	0	0	0	59
Residential	Weekday AM	In	16	0	28	4	0	1	3	52	14	2	0	2	17
		Out	91	2	157	23	0	6	17	296	79	2	0	2	82
		Total	107	2	185	27	0	7	20	348	93	3	0	3	99
	Weekday Midday	In	27	1	46	7	0	2	5	87	23	1	0	1	25
		Out	27	1	46	7	0	2	5	87	23	1	0	1	25
		Total	53	1	93	13	0	4	10	174	46	2	0	2	50
	Weekday Afternoon	In	36	1	63	9	0	2	7	118	31	1	0	1	33
		Out	19	0	34	5	0	1	4	63	17	1	0	1	19
		Total	55	1	96	14	0	4	11	181	48	2	0	2	52
	Weekday PM	In	82	2	142	21	0	5	16	268	71	2	0	0	73
		Out	35	1	61	9	0	2	7	115	31	2	0	0	33
		Total	117	2	204	29	0	8	23	383	102	4	0	1	106
	Saturday Midday	In	51	1	88	13	0	3	10	166	44	2	0	0	46
		Out	51	1	88	13	0	3	10	166	44	2	0	0	46
		Total	102	2	176	25	0	7	19	331	88	3	0	1	92
Total	Weekday AM	In	173	0	28	8	16	2	441	669	127	2	3	2	134
		Out	102	2	157	25	0	6	182	474	166	2	3	2	173
		Total	275	2	185	33	16	8	623	1143	293	3	5	5	307
	Weekday Midday	In	99	1	46	24	0	2	164	336	71	1	0	2	74
		Out	99	1	46	24	0	2	164	336	71	1	0	2	74
		Total	198	1	93	48	0	4	329	672	143	2	0	4	149
	Weekday Afternoon	In	60	1	63	15	0	2	205	345	103	1	3	2	109
		Out	151	0	34	11	19	2	519	736	106	1	3	2	112
		Total	211	1	96	26	19	4	724	1081	209	2	5	4	221
	Weekday PM	In	120	2	142	30	0	5	110	409	103	2	0	0	105
		Out	106	1	61	19	1	3	122	312	82	2	0	0	84
		Total	226	2	204	49	1	9	231	721	184	4	0	1	189
	Saturday Midday	In	95	1	88	23	0	3	108	319	74	2	0	0	76
		Out	95	1	88	23	0	3	108	319	74	2	0	0	76
		Total	191	2	176	47	0	7	216	638	147	3	0	1	151

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 12: Transportation Demand Forecast, Net Incremental Trips - Charter School Scheme

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Students (Grades K-5)	Weekday AM	In	77	0	0	0	11	0	182	270	53	0	2	0	55
		Out	0	0	0	0	0	0	0	0	53	0	2	0	55
		Total	77	0	0	0	11	0	182	270	107	0	3	1	111
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	1	1
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	33	0	2	0	36
		Out	52	0	0	0	11	0	190	253	33	0	2	0	36
		Total	52	0	0	0	11	0	190	253	67	0	3	1	71
	Weekday PM	In	0	0	0	0	0	0	0	0	10	0	0	0	10
		Out	14	0	0	0	2	0	33	49	10	0	0	0	10
		Total	14	0	0	0	2	0	33	49	19	0	1	0	20
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Students (Grades 6-8)	Weekday AM	In	38	0	0	0	5	0	91	135	27	0	1	0	28
		Out	0	0	0	0	0	0	0	0	27	0	1	0	28
		Total	38	0	0	0	5	0	91	135	53	0	2	0	55
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	19	0	1	0	20
		Out	29	0	0	0	6	0	106	141	19	0	1	0	20
		Total	29	0	0	0	6	0	106	141	37	0	2	0	39
	Weekday PM	In	0	0	0	0	0	0	0	0	2	0	0	0	2
		Out	3	0	0	0	0	0	7	10	2	0	0	0	2
		Total	3	0	0	0	0	0	7	10	4	0	0	0	4
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	Weekday AM	In	31	0	0	1	0	1	1	34	26	0	0	0	26
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	31	0	0	1	0	1	1	34	26	0	0	0	26
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	22	0	0	1	0	1	1	24	18	0	0	0	18
		Total	22	0	0	1	0	1	1	24	18	0	0	0	18
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	24	0	0	1	0	1	1	26	20	0	0	0	20
		Total	24	0	0	1	0	1	1	26	20	0	0	0	20
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Parents	Weekday AM	In	0	0	0	0	0	0	93	93	0	0	0	0	0
		Out	0	0	0	0	0	0	93	93	0	0	0	0	0
		Total	0	0	0	0	0	0	186	186	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	97	97	0	0	0	0	0
		Out	0	0	0	0	0	0	97	97	0	0	0	0	0
		Total	0	0	0	0	0	0	194	194	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	7	7	0	0	0	0	0
		Out	0	0	0	0	0	0	7	7	0	0	0	0	0
		Total	0	0	0	0	0	0	13	13	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 12 (cont.): Transportation Demand Forecast, Net Incremental Trips - Charter School Scheme

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Community Facility	Weekday AM	In	-70	0	-13	-11	0	-1	-11	-106	-40	0	0	0	-40
		Out	-4	0	-1	-1	0	0	-1	-7	-3	0	0	0	-3
		Total	-75	0	-14	-11	0	-1	-11	-113	-42	0	0	0	-43
	Weekday Midday	In	-44	0	-8	-7	0	-1	-7	-66	-25	0	0	0	-25
		Out	-54	0	-10	-8	0	-1	-8	-81	-30	0	0	0	-31
		Total	-97	0	-18	-15	0	-2	-15	-147	-55	0	0	0	-56
	Weekday Afternoon	In	-24	0	-4	-4	0	0	-4	-36	-14	0	0	0	-14
		Out	-29	0	-5	-4	0	-1	-4	-44	-17	0	0	0	-17
		Total	-53	0	-10	-8	0	-1	-8	-80	-30	0	0	0	-31
	Weekday PM	In	-28	0	-5	-4	0	0	-4	-43	-16	0	0	0	-16
		Out	-39	0	-7	-6	0	-1	-6	-59	-22	0	0	0	-22
		Total	-67	0	-13	-10	0	-1	-10	-102	-38	0	0	0	-38
	Saturday Midday	In	-32	0	-6	-5	0	-1	-5	-49	-18	0	0	0	-18
		Out	-40	0	-7	-6	0	-1	-6	-60	-22	0	0	0	-22
		Total	-72	0	-14	-11	0	-1	-11	-109	-41	0	0	0	-41
Local Retail	Weekday AM	In	-1	0	0	0	0	0	-3	-4	-1	0	0	0	-1
		Out	-1	0	0	0	0	0	-3	-4	-1	0	0	0	-1
		Total	-2	0	0	-1	0	0	-5	-8	-2	0	0	0	-2
	Weekday Midday	In	-8	0	0	-2	0	0	-17	-27	-5	0	0	0	-5
		Out	-8	0	0	-2	0	0	-17	-27	-5	0	0	0	-5
		Total	-16	0	0	-4	0	0	-34	-53	-10	0	0	0	-10
	Weekday Afternoon	In	-3	0	0	-1	0	0	-6	-9	-2	0	0	0	-2
		Out	-3	0	0	-1	0	0	-6	-9	-2	0	0	0	-2
		Total	-5	0	0	-1	0	0	-11	-17	-3	0	0	0	-3
	Weekday PM	In	-4	0	0	-1	0	0	-9	-14	-3	0	0	0	-3
		Out	-4	0	0	-1	0	0	-9	-14	-3	0	0	0	-3
		Total	-8	0	0	-2	0	0	-18	-28	-5	0	0	0	-5
	Saturday Midday	In	-5	0	0	-1	0	0	-11	-16	-3	0	0	0	-3
		Out	-5	0	0	-1	0	0	-11	-16	-3	0	0	0	-3
		Total	-10	0	0	-2	0	0	-21	-33	-6	0	0	0	-6
Residential	Weekday AM	In	5	0	9	1	0	0	1	17	5	1	0	1	6
		Out	30	1	52	7	0	2	6	97	26	1	0	1	27
		Total	35	1	61	9	0	2	7	115	31	1	0	1	33
	Weekday Midday	In	9	0	15	2	0	1	2	29	8	0	0	0	8
		Out	9	0	15	2	0	1	2	29	8	0	0	0	8
		Total	18	0	30	4	0	1	3	57	15	1	0	1	17
	Weekday Afternoon	In	12	0	21	3	0	1	2	39	10	0	0	0	11
		Out	6	0	11	2	0	0	1	21	6	0	0	0	6
		Total	18	0	32	5	0	1	4	60	16	1	0	1	17
	Weekday PM	In	27	1	47	7	0	2	5	88	23	1	0	0	24
		Out	12	0	20	3	0	1	2	38	10	1	0	0	11
		Total	39	1	67	10	0	3	7	126	34	1	0	0	35
	Saturday Midday	In	17	0	29	4	0	1	3	55	15	1	0	0	15
		Out	17	0	29	4	0	1	3	55	15	1	0	0	15
		Total	33	1	58	8	0	2	6	109	29	1	0	0	30
Total	Weekday AM	In	79	0	-4	-9	16	0	354	438	69	1	3	1	74
		Out	24	1	51	7	0	2	95	179	103	1	3	1	107
		Total	104	1	47	-2	16	2	450	617	172	1	5	2	180
	Weekday Midday	In	-43	0	7	-6	0	0	-22	-64	-22	0	0	1	-21
		Out	-53	0	5	-8	0	0	-24	-79	-28	0	0	1	-27
		Total	-95	0	12	-14	0	-1	-46	-143	-50	1	0	2	-48
	Weekday Afternoon	In	-15	0	16	-1	0	0	90	91	47	0	2	1	51
		Out	77	0	6	-3	18	1	384	483	57	0	2	1	61
		Total	62	0	22	-4	18	1	475	574	105	1	5	2	112
	Weekday PM	In	-5	1	42	2	0	1	-1	38	16	1	0	0	17
		Out	9	0	13	-3	2	1	34	56	17	1	0	0	18
		Total	4	1	54	-2	2	2	33	94	33	1	1	0	35
	Saturday Midday	In	-20	0	23	-2	0	1	-12	-11	-7	1	0	0	-6
		Out	-28	0	22	-3	0	0	-13	-22	-11	1	0	0	-10
		Total	-48	1	44	-5	0	1	-26	-33	-18	1	0	0	-17

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 13: Transportation Demand Forecast, Net Incremental Trips - Public School Scheme

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Students (Grades K-5)	Weekday AM	In	115	0	0	0	16	0	273	404	80	0	3	1	83
		Out	0	0	0	0	0	0	0	0	80	0	3	1	83
		Total	115	0	0	0	16	0	273	404	160	0	5	1	166
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	1	1
		Out	0	0	0	0	0	0	0	0	0	0	0	1	1
		Total	0	0	0	0	0	0	0	0	0	0	0	1	1
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	56	0	3	1	59
		Out	87	0	0	0	19	0	317	422	56	0	3	1	59
		Total	87	0	0	0	19	0	317	422	112	0	5	1	118
	Weekday PM	In	0	0	0	0	0	0	0	0	6	0	0	0	6
		Out	9	0	0	0	1	0	20	30	6	0	0	0	6
		Total	9	0	0	0	1	0	20	30	12	0	0	0	12
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Students (Grades 6-8)	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	Weekday AM	In	31	0	0	1	0	1	1	34	26	0	0	0	26
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	31	0	0	1	0	1	1	34	26	0	0	0	26
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	22	0	0	1	0	1	1	24	18	0	0	0	18
		Total	22	0	0	1	0	1	1	24	18	0	0	0	18
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	24	0	0	1	0	1	1	26	20	0	0	0	20
		Total	24	0	0	1	0	1	1	26	20	0	0	0	20
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Parents	Weekday AM	In	0	0	0	0	0	0	139	139	0	0	0	0	0
		Out	0	0	0	0	0	0	139	139	0	0	0	0	0
		Total	0	0	0	0	0	0	279	279	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	146	146	0	0	0	0	0
		Out	0	0	0	0	0	0	146	146	0	0	0	0	0
		Total	0	0	0	0	0	0	292	292	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	10	10	0	0	0	0	0
		Out	0	0	0	0	0	0	10	10	0	0	0	0	0
		Total	0	0	0	0	0	0	20	20	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 13 (cont.): Transportation Demand Forecast, Net Incremental Trips - Public School Scheme

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Railroad	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Community Facility	Weekday AM	In	-70	0	-13	-11	0	-1	-11	-106	-40	0	0	0	-40
		Out	-4	0	-1	-1	0	0	-1	-7	-3	0	0	0	-3
		Total	-75	0	-14	-11	0	-1	-11	-113	-42	0	0	0	-43
	Weekday Midday	In	-44	0	-8	-7	0	-1	-7	-66	-25	0	0	0	-25
		Out	-54	0	-10	-8	0	-1	-8	-81	-30	0	0	0	-31
		Total	-97	0	-18	-15	0	-2	-15	-147	-55	0	0	0	-56
	Weekday Afternoon	In	-24	0	-4	-4	0	0	-4	-36	-14	0	0	0	-14
		Out	-29	0	-5	-4	0	-1	-4	-44	-17	0	0	0	-17
		Total	-53	0	-10	-8	0	-1	-8	-80	-30	0	0	0	-31
	Weekday PM	In	-28	0	-5	-4	0	0	-4	-43	-16	0	0	0	-16
		Out	-39	0	-7	-6	0	-1	-6	-59	-22	0	0	0	-22
		Total	-67	0	-13	-10	0	-1	-10	-102	-38	0	0	0	-38
	Saturday Midday	In	-32	0	-6	-5	0	-1	-5	-49	-18	0	0	0	-18
		Out	-40	0	-7	-6	0	-1	-6	-60	-22	0	0	0	-22
		Total	-72	0	-14	-11	0	-1	-11	-109	-41	0	0	0	-41
Local Retail	Weekday AM	In	-1	0	0	0	0	0	-3	-4	-1	0	0	0	-1
		Out	-1	0	0	0	0	0	-3	-4	-1	0	0	0	-1
		Total	-2	0	0	-1	0	0	-5	-8	-2	0	0	0	-2
	Weekday Midday	In	-8	0	0	-2	0	0	-17	-27	-5	0	0	0	-5
		Out	-8	0	0	-2	0	0	-17	-27	-5	0	0	0	-5
		Total	-16	0	0	-4	0	0	-34	-53	-10	0	0	0	-10
	Weekday Afternoon	In	-3	0	0	-1	0	0	-6	-9	-2	0	0	0	-2
		Out	-3	0	0	-1	0	0	-6	-9	-2	0	0	0	-2
		Total	-5	0	0	-1	0	0	-11	-17	-3	0	0	0	-3
	Weekday PM	In	-4	0	0	-1	0	0	-9	-14	-3	0	0	0	-3
		Out	-4	0	0	-1	0	0	-9	-14	-3	0	0	0	-3
		Total	-8	0	0	-2	0	0	-18	-28	-5	0	0	0	-5
	Saturday Midday	In	-5	0	0	-1	0	0	-11	-16	-3	0	0	0	-3
		Out	-5	0	0	-1	0	0	-11	-16	-3	0	0	0	-3
		Total	-10	0	0	-2	0	0	-21	-33	-6	0	0	0	-6
Residential	Weekday AM	In	5	0	9	1	0	0	1	17	5	1	0	1	6
		Out	30	1	52	7	0	2	6	97	26	1	0	1	27
		Total	35	1	61	9	0	2	7	115	31	1	0	1	33
	Weekday Midday	In	9	0	15	2	0	1	2	29	8	0	0	0	8
		Out	9	0	15	2	0	1	2	29	8	0	0	0	8
		Total	18	0	30	4	0	1	3	57	15	1	0	1	17
	Weekday Afternoon	In	12	0	21	3	0	1	2	39	10	0	0	0	11
		Out	6	0	11	2	0	0	1	21	6	0	0	0	6
		Total	18	0	32	5	0	1	4	60	16	1	0	1	17
	Weekday PM	In	27	1	47	7	0	2	5	88	23	1	0	0	24
		Out	12	0	20	3	0	1	2	38	10	1	0	0	11
		Total	39	1	67	10	0	3	7	126	34	1	0	0	35
	Saturday Midday	In	17	0	29	4	0	1	3	55	15	1	0	0	15
		Out	17	0	29	4	0	1	3	55	15	1	0	0	15
		Total	33	1	58	8	0	2	6	109	29	1	0	0	30
Total	Weekday AM	In	79	0	-4	-9	16	0	401	484	69	1	3	1	74
		Out	24	1	51	7	0	2	142	226	103	1	3	1	107
		Total	104	1	47	-2	16	2	542	710	172	1	5	2	180
	Weekday Midday	In	-43	0	7	-6	0	0	-22	-64	-22	0	0	1	-21
		Out	-53	0	5	-8	0	0	-24	-79	-28	0	0	1	-27
		Total	-95	0	12	-14	0	-1	-46	-143	-50	1	0	2	-48
	Weekday Afternoon	In	-15	0	16	-1	0	0	139	140	51	0	3	1	55
		Out	83	0	6	-3	19	1	454	560	61	0	3	1	65
		Total	68	0	22	-4	19	1	593	699	112	1	5	2	120
	Weekday PM	In	-5	1	42	2	0	1	2	41	11	1	0	0	12
		Out	1	0	13	-3	1	1	18	31	11	1	0	0	12
		Total	-5	1	54	-2	1	2	20	72	22	1	0	0	24
	Saturday Midday	In	-20	0	23	-2	0	1	-12	-11	-7	1	0	0	-6
		Out	-28	0	22	-3	0	0	-13	-22	-11	1	0	0	-10
		Total	-48	1	44	-5	0	1	-26	-33	-18	1	0	0	-17

Note: In and Out volumes may not sum to Total volumes due to rounding.

Traffic

As presented in Table 12, the Charter School Scheme would result in approximately 180, -48, 112, 35 and -17 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Similarly, as presented in Table 13, the Public School Scheme would result in approximately 180, -48, 120, 24 and -17 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Under the Charter School Scheme, the net incremental vehicle trips during the weekday AM and afternoon peak hours would exceed the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends); and similarly, under the Charter School Scheme the net incremental vehicle trips during the weekday AM and afternoon peak hours would exceed the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends). Therefore, a Level 2 screening was conducted for the weekday AM and afternoon peak hours under the Public School Scheme.

Transit

The Project Site is well-served by New York City Transit (NYCT) bus lines, which include the Q47 line that runs north-south on 69th Street; the Q60 line that runs east-west on Queens Boulevard; and the Q18 line that runs on 65th Place, three blocks west of the Proposed Development Site. The Project Site is also served by NYCT subway, including the No. 7 subway line (69 St–Fisk Av Station) located approximately 0.5 miles to the north on Roosevelt Avenue and 69th Street; and the E, F, M, R and 7 subway lines (Jackson Heights–Roosevelt Av / 74 St–Broadway station complex) located approximately 0.7 miles to the north on Roosevelt Avenue and 74th Street. In addition, the Woodside LIRR Station is located approximately 0.7 miles from the Project Site.

As shown in Table 12, the Charter School Scheme would result in approximately 47, 12, 22, 54 and 44 incremental subway trips and -2, -14, -4, -2 and -5 incremental bus trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Combining the subway and bus trips would result in total incremental transit trips of 45, -2, 18, 52 and 39 incremental transit trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Similarly, as shown in Table 13, the Public School Scheme would result in approximately 47, 12, 22, 54 and 44 incremental subway trips and -2, -14, -4, -2 and -5 incremental bus trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Combining the subway and bus trips would result in total incremental transit trips of 45, -2, 18, 53 and 40 incremental transit trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively.

Since the incremental transit trips generated under the two schemes would not exceed the CEQR Level 1 trip generation threshold of 200 or more peak hour transit trips during any of the analysis peak hours, no further transit analysis is warranted. Therefore, the Modified Project would not adversely affect transit operations.

Pedestrians

As shown in Table 12, the Charter School Scheme would result in approximately 617, -143, 574, 94 and -33 net incremental person trips in the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Similarly, as shown in Table 13, the Public School Scheme would result in approximately 710, -143, 699, 72 and -33 net incremental person trips in the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Under both schemes, the net incremental person trips during the weekday AM and afternoon analysis peak hours would exceed the CEQR Level 1 trip generation threshold (200 peak hour pedestrian trips). Therefore, a Level 2 screening assessment for potential project-generated pedestrian trips was conducted for these two peak hours under the Public School Scheme.

Level 2 (Project-Generated Trip Assignment) Screening Assessment

A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network, pedestrian elements and transit facilities, and the identification of specific locations where the incremental increase in demand may potentially exceed CEQR Technical Manual analysis thresholds. If these thresholds are exceeded, quantitative analyses would be required to identify any adverse impacts that result from the Proposed Actions.

Traffic

As presented in Table 12, the Charter School Scheme would result in approximately 180, -48, 112, 35 and -17 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Similarly, as presented in Table 13, the Public School Scheme would result in approximately 180, -48, 120, 24 and -17 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. The net incremental vehicle trips during the weekday AM and afternoon peak hours exceed the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends). Therefore, a Level 2 screening assessment for potential project-generated vehicular trips was conducted for these two peak hours.

There are multiple routes from nearby highway, major arterial and collector roads available to access/egress the Project Site. The two primary access/egress routes are: 69th Street, which would serve as the primary access/egress route to/from the garage, and 47th Avenue, which would serve as the primary access/egress route for the school pick-up/drop-off zone. Project-generated vehicle trips were assigned through various intersections in the study area based on the CEQR Technical Manual guidelines, prevailing travel patterns, and the existing roadway configuration. Traffic assignments for autos, taxis, school buses, and deliveries for individual development program components are discussed as follows

Autos

*School: S*tudent auto trips were assigned within study area via direct routes to the school's main drop-off/pick-up area on 47th Avenue west of 70th Street. The student auto trip distribution is discussed as follows:

1. From the North (20 percent):

Approximately 20 percent of the inbound project-generated vehicle trips were assumed to originate north of the Project Site. These trips would approach the study area via the Brooklyn-Queens Expressway (BQE). Of this 20 percent, half were assumed to take Exit 40 towards southbound 69th Street, and the remaining half were assumed to take Exit 39E towards 61st Street.

2. From the South (30 percent):

Approximately 30 percent of the inbound project-generated vehicle trips were assumed to originate south of the Project Site. These trips would approach the study area via Exit 39 of the BQE. Of this 30 percent, two-thirds were assumed to travel on northbound 67th Street and eastbound Queens Boulevard, while the remaining one-third were assumed to travel south on local roads towards 48th Avenue.

3. From the West (15 percent):

Approximately 15 percent of the inbound project-generated vehicle trips were assumed to originate west of the Project Site. These trips would approach the study area via Queens Boulevard.

4. Eastern Outlying Areas (15 percent):

Approximately 15 percent of the inbound project-generated vehicle trips were assumed to originate east of the Project Site. These trips would approach the study area via Queens Boulevard.

5. Local Trips (20 percent):

Approximately 20 percent of the inbound project-generated vehicle trips were assumed to originate locally. These trips were assumed to access the Project Site equally from all directions.

Residential: Vehicular trips for the residential component were assigned to study area roadways based on guidance from Origin/Destination (O/D) patterns and direct routes to/from the site. These trips were assigned to the on-site garage entrance/exit on 69th Street north of 47th Avenue.

Community Facility, Local Retail, and School Staff: Vehicular trips for community facility, local retail, and school staff were assigned to study area roadways based on direct routes to/from the site. These trips were assigned to the garage entrance/exit on 69th Street north of 47th Avenue.

School Buses

School bus trips were assigned to pick up and drop off at the main school entrance on 47th Avenue west of 70th Street. Overall, the school bus trips were distributed to the study area streets/ roadways following the same distribution pattern as school auto trips.

Deliveries

Truck delivery trips for all land uses were assigned to NYCDOT-designated truck routes. Trucks were assigned to the study area from regional origins via the BQE, 61st Street, and Queens Boulevard.

Using these distribution patterns, the project-generated peak hour incremental vehicle trips were assigned to the study area intersections for the weekday AM and afternoon peak hours as presented in Appendix A, Figures A1 and A2. The following four study area intersections could experience 50 or more peak hour vehicle trips during the weekday AM and afternoon peak hours.

1. Queens Boulevard and 69th Street;
2. 47th Avenue and 69th Street;
3. Queens Boulevard and 70th Street; and
4. 47th Avenue and 70th Street; and

In addition, the intersection of Queens Boulevard and 65th Place could experience up to 48 peak hour vehicle trips during the weekday AM peak hour. Therefore, this intersection was also selected along with the above four intersections for the detailed traffic analysis. In summary, these five intersections were selected for detailed traffic analysis during the weekday AM and afternoon peak hours, as shown in Figure 4.

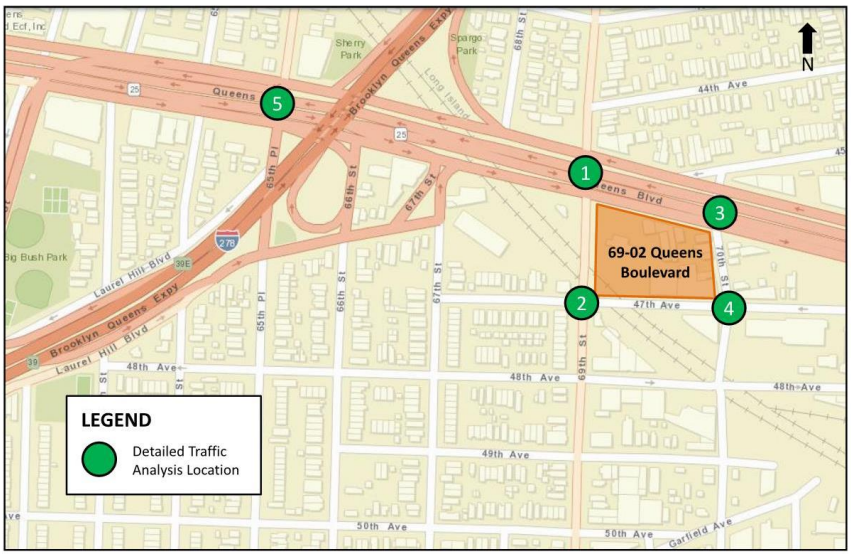

Figure 4: Detailed Traffic Analysis Locations

Pedestrians

As shown in Table 12, the Charter School Scheme would result in approximately 617, -143, 574, 94 and -33 net incremental person trips in the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Similarly, as shown in Table 13, the Public School Scheme would result in approximately 710, -143, 699, 72 and -33 net incremental person trips in the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Under both Schemes, the net incremental person trips during the weekday AM and afternoon analysis peak hours exceeds the CEQR Level 1 trip generation threshold (200 peak hour pedestrian trips). Therefore, a Level 2 screening assessment for project-generated pedestrian trips was conducted for these two peak hours.

The pedestrian trips were assigned based on the location of key transportation elements near the Project Site, including transit stations/stops, parking facilities, and school pick-up/drop-off area..

Autos and School Buses

School: Auto and school bus generated student trips were assigned to the school pick-up/drop-off area on 47th Avenue west of 70th Street, which provides direct access/egress to the school via the north sidewalk of 47th Avenue.

Residential, Community Facility, Local Retail, and School Staff: Auto and taxi generated residential, community facility, local retail, and school staff trips were assigned to the Garage Entrance/Exit on 69th Street north of 47th Avenue, which provides a direct access/egress to the proposed development without the need to use sidewalks, crosswalks, or corners.

Subway

Subway riders would predominantly use the 69th Street (Fisk Avenue) Station on the No. 7 Subway Line. These pedestrians would use the sidewalks, crosswalks, and corners on 69th Street between the subway station and the Project Site.

Bus

Bus riders would use the stops along 69th Street and Queens Boulevard. These pedestrians would use the sidewalks, crosswalks, and corners between the bus stops and the Project Site.

Railroad

Railroad riders would use the Woodside LIRR Train Station. These pedestrians would use the sidewalks, crosswalks, and corners between the station and the Project Site.

Walk Trips

Local walk trips to and from the Project Site were based on the location of adjacent land uses, transit facilities, and existing travel patterns.

Using these distribution patterns, the project-generated peak hour incremental pedestrian trips were assigned to the study area sidewalks, crosswalks, and corners as presented in Appendix B, Figures B1 and B2. Based on the pedestrian trip distribution and assignments, the north sidewalk of 47th Avenue west of 70th Street, the northeast corner of 47th Avenue and 69th Street, and the southeast corner of Queens Boulevard and 69th Street (shown in Figure 2) could experience more than 200 pedestrian trips during the weekday AM and afternoon peak hours.

In addition, the northwest corner of the intersection of 47th Avenue and 70th Street could also experience more than 200 incremental pedestrian peak hour trips, given that the proposed school entrance would be located in close proximity to this pedestrian element. However, since this intersection is unsignalized, the crosswalks and corners at this intersection would not warrant detailed pedestrian analysis..

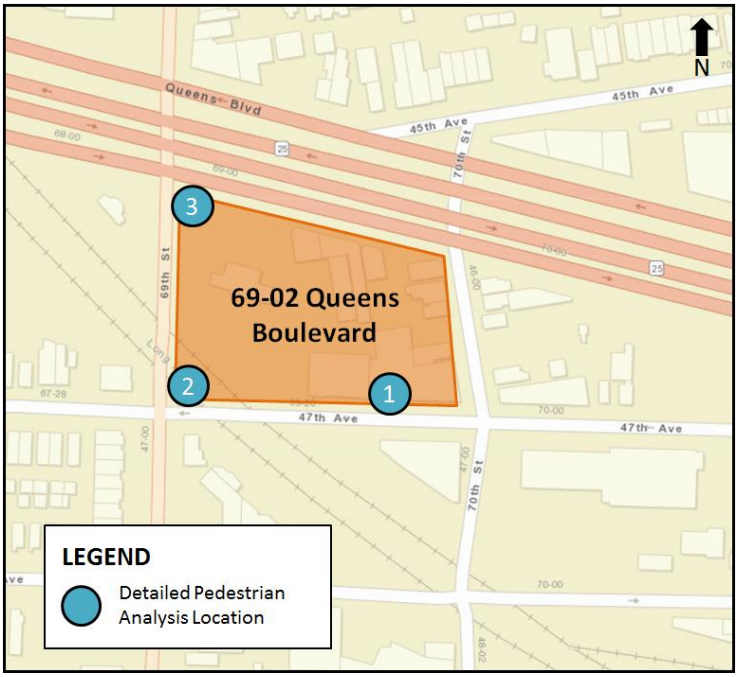

Figure 5: Detailed Pedestrian Analysis Locations

Transportation Analyses Methodologies

Traffic

The traffic capacity analyses are based on methodologies presented in the Highway Capacity Manual (HCM) using the Highway Capacity Software (HCS+) 5.5 model. The HCM methodology produces a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the ratio of traffic volume on an approach to the approach's carrying capacity. A v/c ratio of less than 0.90 is generally considered indicative of non-congested conditions in dense urban areas; when higher than this value, the ratio reflects increasing congestion. At a v/c ratio between 0.95 and 1.0, near-capacity conditions are reached and delays can become substantial. Ratios of greater than 1.0 indicate saturated conditions with queuing. The HCM methodology also expresses the quality of traffic flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. The LOS scale ranges from A, representing minimal delay (10 seconds or less per vehicle), to F, which represents long delays (greater than 80 seconds per vehicle). For un-signalized intersections, the HCM methodology generally assumes that traffic on major street is not affected by traffic flows on minor street. Left turns from a major street are assumed to be affected by the opposing, or oncoming, traffic flow on that major street. Traffic on minor streets is affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of traffic flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. LOS definitions used to characterize traffic flows at unsignalized intersections differ somewhat from those used for signalized intersections, primarily because drivers anticipate different levels of performance from the two different kinds of intersections.

For unsignalized intersections, LOS ranges from A, representing minimal delay (10 seconds or less per vehicle, as it is for signalized intersections), to F, which represents long delays (greater than 50 seconds per vehicle, compared to greater than 80 seconds per vehicle for signalized intersections).

Table 14 shows the LOS/delay relationship for signalized and unsignalized intersections using the HCM methodology. LOS A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E is considered to be the limit of acceptable delay, and LOS F is considered to be unacceptable to most drivers..

Table 14: Intersection LOS Criteria based on HCM Methodology

LOS	Average Control Delay (seconds/vehicle)	
	Signalized Intersection	**Unsignalized Intersection**
A	Less than or equal to 10.0	Less than or equal to 10.0
B	10.0 to 20.0	10.0 to 15.0
C	20.0 to 35.0	15.0 to 25.0
D	35.0 to 55.0	25.0 to 35.0
E	55.0 to 80.0	35.0 to 50.0
F	Greater than 80.0	Greater than 50.0

Significant Impact Criteria

The *CEQR Technical Manual* identifies mid-level LOS D or better as an acceptable LOS for a signalized and unsignalized intersections. The *CEQR Technical Manual* also indicates that potential significant adverse traffic impacts could occur at signalized and unsignalized intersections if the Proposed Action results in any of the following:

- A lane group that operates at LOS A through C in the No-Action Condition and deteriorates under the With-Action condition with PCRE to worse than mid-LOS D (greater than 45.0 and 30.0 seconds/vehicle of delay for signalized and unsignalized intersections, respectively);
- A lane group that operates at LOS D in the No-Action Condition and is projected to have a delay increase of 5.0 seconds/vehicle or more if the With-Action with PCRE delay exceeds mid-LOS D;
- For a lane group that operates at LOS E in the No-Action Condition, a delay increase of 4.0 seconds or more; and
- For a lane group that operates at LOS F in the No-Action Condition, a delay increase of 3.0 seconds or more.

Pedestrians

The adequacy of study area's crosswalks, corners, sidewalk capacities in relation to the projected demand is evaluated based on the methodologies presented in the 2010 HCM, pursuant to procedures detailed in the *CEQR Technical Manual*.

idewalks are analyzed in terms of pedestrian space, expressed as square feet per pedestrian (ft^2/p). The determination of walkway LOS is dependent on whether the pedestrian flow being analyzed is best described as "non-platoon" or "platoon." Non-platoon flow occurs when pedestrian volume within the peak 15-minute period is relatively uniform, whereas, platoon flow occurs when pedestrian volumes vary significantly with the peak 15-minute period. Such variation typically occurs near bus stops, subway stations, and/or where adjacent crosswalks account for much of the walkway's pedestrian volume. The LOS standards for sidewalks are summarized in Table 15 based on HCM methodology.

Table 15: Sidewalk/Walkway LOS for Non-Platoon and Platoon Conditions

LOS	Non-Platoon Flow	Platoon Flow
LOS A	>60 ft^2/p	>530 ft^2/p
LOS B	>40-60 ft^2/p	>90-530 ft^2/p
LOS C	>24-40 ft^2/p	>40-90 ft^2/p
LOS D	>15-24 ft^2/p	>23-40 ft^2/p
LOS E	>8-15 ft^2/p	>11-23 ft^2/p
LOS F	≤8 ft^2/p	≤11 ft^2/p

Crosswalks and street corners are not easily measured in terms of free pedestrian flow, as they are influenced by the effects of traffic signals. Street corners must be able to provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the street or moving around the corner). The HCM methodologies apply a measure of time and space availability based on the area of the corner, the timing of the intersection signal, and the estimated space used by circulating pedestrians.

The total "time-space" available for these activities, expressed in square feet-second, is calculated by multiplying the net area of the corner (in square feet) by the signal's cycle length. The analysis then determines the total circulation time for all pedestrian movements at the corner per signal cycle (expressed as pedestrians per second). The ratio of net time-space divided by the total pedestrian circulation volume per signal cycle provides the LOS measurement of square feet per pedestrian (SFP)..

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet-second. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the total crosswalk pedestrian occupancy time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk. The *CEQR Technical Manual* specifies acceptable LOS in Non-Central Business District (Non-CBD) areas is LOS C or better.

Table 16 defines the LOS criteria for pedestrian crosswalk/corner areas based on HCM methodology.

Table 16: Corner/Crosswalk LOS Pedestrian Space

LOS	Average Pedestrian Space
LOS A	>60 ft^2/p
LOS B	>40-60 ft^2/p
LOS C	>24-40 ft^2/p
LOS D	>15-24 ft^2/p
LOS E	>8-15 ft^2/p
LOS F	≤8 ft^2/p

Significant Impact Criteria

The determination of significant pedestrian impacts considers the level of predicted deterioration in pedestrian flow or decrease in pedestrian space between the No-Action and With-Action with PCRE Conditions. For different pedestrian elements, flow conditions, and area types, the *CEQR Technical Manual* procedure for impact determination corresponds with various sliding-scale formulas, as further detailed below.

Sidewalks

The criterion for determination of significant impacts of sidewalks varies by type of pedestrian flow (*i.e.*, non-platoon or platoon) and the type of area (CBD or non-CBD).

For analysis purposes, the non-CBD and platoon flow criteria have been used. Under these conditions, average pedestrian space under the With-Action Condition with PCRE deteriorating within acceptable LOS (LOS C or better) should generally not be considered a significant impact. If the pedestrian space available under the With-Action Condition with PCRE deteriorates to LOS C or worse, then the determination whether the impact is significant or not is based on a sliding scale. The sliding scale varies within the range of average pedestrian space available under the No-Action Condition. Determination of significant impacts for sidewalks with platoon flow in a non-CBD area is summarized as follows:

- If the average pedestrian space under the No-Action Condition is greater than 44.3 ft^2/p, then a decrease in pedestrian space under the With-Action Condition with PCRE to 40.0 ft^2/p or less (LOS D or worse) should be considered a significant impact. If the average pedestrian space under the With-Action Condition with PCRE is greater than 40.0 ft^2/p (LOS C or better), the impact should not be considered significant.
- If the average pedestrian space under the No-Action condition is between 6.4 and 44.3 ft^2/p, a decrease in pedestrian space under the With-Action Condition with PCRE should be considered significant using the sliding scale formula in the equation below or using Table 17:

$Y \geq X / (9.5\text{-}0.321)$
Where:
Y = decrease in pedestrian space in ft^2/p to be considered a potential significant impact
X = No-Action Condition pedestrian space in ft^2/p

Table 17: Significant Impact Guidance for Sidewalks Platooned flow, Non-CBD Location

No-Action Condition Ped Space (ft^2/p)	With-Action Condition with PCRE Ped Space Reduction to be considered significant impact (ft^2/p)
44.3	With-Action Condition ≤ 40.0
43.5	Reduction ≥ 4.3
42.5	Reduction ≥ 4.2
41.6	Reduction ≥ 4.1
40.6	Reduction ≥ 4.0
39.7	Reduction ≥ 3.9
38.7	Reduction ≥ 3.8
37.8	Reduction ≥ 3.7
36.8	Reduction ≥ 3.6
35.9	Reduction ≥ 3.5
34.9	Reduction ≥ 3.4
34	Reduction ≥ 3.3
33	Reduction ≥ 3.2
32.1	Reduction ≥ 3.1
31.1	Reduction ≥ 3
30.2	Reduction ≥ 2.9
29.2	Reduction ≥ 2.8
28.3	Reduction ≥ 2.7
27.3	Reduction ≥ 2.6
26.4	Reduction ≥ 2.5
25.4	Reduction ≥ 2.4
24.5	Reduction ≥ 2.3
23.5	Reduction ≥ 2.2
22.6	Reduction ≥ 2.1
21.6	Reduction ≥ 2
20.7	Reduction ≥ 1.9
19.7	Reduction ≥ 1.8
18.8	Reduction ≥ 1.7
17.8	Reduction ≥ 1.6
16.9	Reduction ≥ 1.5
15.9	Reduction ≥ 1.4
15	Reduction ≥ 1.3
14	Reduction ≥ 1.2
13.1	Reduction ≥ 1.1
12.1	Reduction ≥ 1
11.2	Reduction ≥ 0.9

10.2	Reduction ≥ 0.8
9.3	Reduction ≥ 0.7
8.3	Reduction ≥ 0.6
7.4	Reduction ≥ 0.5
6.4	Reduction ≥ 0.4
6.4	Reduction ≥ 0.3

Corners and Crosswalks

The criterion for determination of significant corner and crosswalk impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.3$, where Y is the decrease in pedestrian space in SFP and X is the No-Action Condition pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, this formula would apply only if the With-Action Condition with PCRE pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. Determination of significant impacts for corners and crosswalks in a non-CBD area is summarized as follows:

- If the average pedestrian space under the No-Action Condition is greater than 26.6 ft^2/p, then a decrease in pedestrian space under the With-Action Condition with PCRE to less than 24.0 ft^2/p (worse than LOS C) should be considered a significant impact. If the pedestrian space under the With-Action Condition with PCRE is greater than or equal to 19.5 ft^2/p (LOS C or better), the impact should not be considered significant.
- If the average pedestrian space under the No-Action Condition is between 5.1 and 26.6 ft^2/p, a decrease in pedestrian space under the With-Action Condition with PCRE should be considered significant according to the sliding scale formula in Equation discussed above or using Table 18

Table 18: Significant Impact Guidance for Corners and Crosswalks, Non-CBD Location

No-Action Condition Pedestrian Space (ft^2/p)	With-Action Condition with PCRE Pedestrian Space Reduction to be considered a significant impact (ft^2/p)
>26.6	With-Action Condition ≤ 24.0
25.8 to 26.6	Reduction ≥ 2.6
24.9 to 25.7	Reduction ≥ 2.5
24.0 to 24.8	Reduction ≥ 2.4
23.1 to 23.9	Reduction ≥ 2.3
22.2 to 23.0	Reduction ≥ 2.2
21.3 to 22.1	Reduction ≥ 2.1
20.4 to 21.2	Reduction ≥ 2.0
19.5 to 20.3	Reduction ≥ 1.9
18.6 to 19.4	Reduction ≥ 1.8
17.7 to 18.5	Reduction ≥ 1.7
16.8 to 17.6	Reduction ≥ 1.6
15.9 to 16.7	Reduction ≥ 1.5
15.0 to 15.8	Reduction ≥ 1.4
14.1 to 14.9	Reduction ≥ 1.3
13.2 to 14.0	Reduction ≥ 1.2
12.3 to 13.1	Reduction ≥ 1.1
11.4 to 12.2	Reduction ≥ 1.0
10.5 to 11.3	Reduction ≥ 0.9
9.6 to 10.4	Reduction ≥ 0.8
8.7 to 9.5	Reduction ≥ 0.7
7.8 to 8.6	Reduction ≥ 0.6
6.9 to 7.7	Reduction ≥ 0.5
6.0 to 6.8	Reduction ≥ 0.4
5.1 to 5.9	Reduction ≥ 0.3
<5.1	Reduction ≥ 0.2

Vehicular and Pedestrian Safety Evaluation

In conjunction with a Detailed Traffic and/or Pedestrian Analysis, an assessment of vehicular and pedestrian safety is considered to be appropriate. The key element for vehicular and pedestrian safety analyses is the extent to which vehicular and pedestrian exposure to crashes may reasonably be expected to increase with the Proposed Actions in place. Under *CEQR Technical Manual* guidelines, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as locations with 48 or more total reportable (involving fatality, injury, or more than $1,000 in property damage) and non-reportable crashes or where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, crash trends would be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the type of area where the Directly Affected Area is located, traffic and pedestrian volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with DOT.

Parking

The parking analysis identifies the supply of on-street and off-street public parking near a project area and determines the extent to which the supply is utilized in existing conditions and in the future without and with a Proposed Action. The analysis considers anticipated changes in the study area's parking supply and demand, and compares project-generated parking demand with future parking availability to determine if a parking shortfall is likely to result.

Detailed Traffic Analysis

Baseline Conditions (2018)

Study Area Street Network

The traffic study area is bordered by Queens Boulevard to the north, 47th Avenue to the south, 70th Street to the east and 65th Place to the west. Major highways/expressways providing access to the study area are Brooklyn-Queens Expressway (I-278) from the north and south, and Long Island Expressway (I-495) from the east and west. Truck access in the study area is provided primarily via Queens Boulevard which is an official NYCDOT designated through truck route.

In terms of lane configuration, Queens Boulevard operates with a mainline, an eastbound service road and a westbound service road. The Queens Boulevard mainline generally operates with two westbound and two eastbound through lanes. The exception is its intersection with 65th Place, where Queens Boulevard mainline operates with three additional westbound lanes and one additional eastbound lane. The Queens Boulevard eastbound and westbound service roads operate with two lanes in each direction.

In terms of local streets, both 65th Place and 69th Street operates with two northbound lanes and one southbound lane; whereas, 70th Street operates with one northbound and one southbound lane with parking on both sides.

Baseline traffic volumes for the study area intersections were determined based on the data collected in June 2017 and August 2018. The data collection included Turning Movement Counts (TMC), Automatic Traffic Recorder (ATR) counts, vehicle classification counts, and field observations. In coordination with NYCDOT, the two sets of traffic counts were compared to obtain the baseline traffic volumes for the study area intersections using the following methodology:

- For the intersections of Queens Boulevard at 69th and 70th Streets, and 47th Avenue at 69th and 70th Streets, the 2017 TMC (which were higher compared to the 2018 data) were used as baseline for the weekday AM peak hour.
- For the intersections of Queens Boulevard at 65th Place, 69th Street and 70th Street, the 2018 TMC were increased by 8 percent to obtain the baseline traffic volumes for these intersections during the weekday afternoon peak hour.
- For the intersections of 47th Avenue at 69th and 70th Streets, the 2018 TMC were increased by 9 percent to obtain the baseline traffic volumes for these intersections during the weekday afternoon peak hour.

In addition to the traffic counts, physical inventories—including the number of traffic lanes, lane widths, pavement markings, turn prohibitions, bus stops, and typical parking regulations—were conducted for the study area intersections and pedestrian elements. Official signal timing plans were obtained from NYCDOT for operational analysis. The Baseline Conditions traffic volumes for the weekday AM and afternoon peak hours are shown in Appendix A, Figures A3 and A4.

The v/c ratios, delays and LOS for study area intersections are shown in Table 19. As shown in Table 19, of the 41 lane-groups/approaches in the study area, 18 and 15 operate at congested levels (mid-LOS D or worse) during the weekday AM and afternoon peak hours, respectively.

Table 19: Baseline Conditions - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Afternoon		
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1A	Queens Boulevard South Service Road & 69th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.23	19.4	B	0.62	26.6	C
			69th Street	NB	TR	0.83	73.7	E	0.92	84.2	F
				SB	L	0.25	56.1	E	0.29	56.9	E
					T	0.67	68.1	E	0.69	69.0	E
1B	Queens Boulevard & 69th Street	SIGNAL	Queens Boulevard	EB	T	0.22	19.3	B	0.79	32.2	C
				WB	T	0.85	35.7	D	0.40	22.0	C
			69th Street	NB	LTR	0.87	76.9	E	0.82	72.4	E
				SB	LTR	0.74	67.5	E	0.95	88.3	F
1C	Queens Boulevard North Service Road & 69th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.73	30.0	C	0.49	23.7	C
			69th Street	NB	L	0.88	92.5	F	0.81	82.5	F
					T	0.55	63.4	E	0.61	66.0	E
				SB	TR	0.76	68.2	E	0.93	85.3	F
2	47th Avenue & 69th Street	SIGNAL	47th Avenue	WB	LTR	0.17	9.8	A	0.09	9.2	A
			69th Street	NB	LT	0.74	24.7	C	0.71	23.2	C
				SB	TR	0.51	18.1	B	0.68	22.4	C
3A	Queens Boulevard South Service Road & 70th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.24	23.3	C	0.63	35.2	D
			70th Street	NB	TR	0.56	42.7	D	0.42	38.7	D
				SB	LT	0.96	78.0	E	0.49	29.3	C
3B	Queens Boulevard & 70th Street	SIGNAL	Queens Boulevard	EB	L	0.73	112.3	F	0.65	83.4	F
					T	0.24	23.3	C	1.01	69.1	E
				WB	L	1.04	177.1	F	0.25	65.9	E
					T	0.83	38.6	D	0.41	30.0	C
			70th Street	NB	LTR	0.73	51.1	D	0.46	40.0	D
				SB	LTR	0.93	74.8	E	1.05	106.7	F
3C	Queens Boulevard North Service Road & 70th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.58	29.6	C	0.46	31.2	C
			70th Street	NB	LT	1.03	93.6	F	0.70	37.8	D
				SB	T	0.69	47.7	D	0.74	50.4	D
					R	0.29	36.6	D	0.26	35.9	D
4	47th Avenue & 70th Street	AWSC[1]	47th Avenue	WB	LTR	0.10	8.6	A	0.10	8.2	A
			70th Street	NB	LT	0.42	10.6	B	0.31	9.3	A
				SB	TR	0.32	9.4	A	0.20	8.5	A
5A	Queens Boulevard South Service Road & 65th Place	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.36	18.3	B	0.79	29.1	C
			65th Place	NB	TR	0.81	52.4	D	1.05	90.1	F
				SB	LT	1.05	110.0	F	1.05	116.7	F
5B	Queens Boulevard & 65th Place	SIGNAL	Queens Boulevard	EB	T	0.14	15.5	B	0.49	20.2	C
				WB	T	0.34	17.6	B	0.30	17.2	B
			65th Place	NB	DefL	0.81	72.7	E	0.76	50.0	D
					TR	0.49	42.2	D			
				SB	LTR	0.47	40.2	D	0.50	41.4	D
5C	Queens Boulevard North Service Road & 65th Place	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.47	20.0	C	0.67	24.7	C
			65th Place	NB	LT	0.30	37.3	D	0.50	41.5	D
				SB	TR	0.44	39.6	D	0.34	37.8	D

Note:
1. All-Way Stop-Controlled intersection

No-Action Condition (2021)

The future No-Action Condition traffic volumes were determined for the 2021 analysis year (the estimated time of completion for the Modified Project). Per the *CEQR Technical Manual*, a compounded annual background growth rate of 0.50 percent was applied to the baseline traffic volumes for three years from 2018 to 2021. In addition, trips expected to be generated by the three background development projects were incorporated in the No Action Condition traffic volumes. The No-Action Condition traffic volumes during weekday AM and afternoon peak hours are shown in Appendix A, Figures A5 and A6.

The intersection capacity analysis results for the future No-Action Condition are shown in Table 20. As shown in Table 20, of the 42 lane-groups/approaches in the study area, 18 and 15 operate at mid-LOS D or worse during the weekday AM and afternoon peak hours, respectively.

Table 20: No-Action Condition - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Afternoon		
						No-Action Condition			No-Action Condition		
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1A	Queens Boulevard South Service Road & 69th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.26	19.9	B	0.65	20.4	C
			69th Street	NB	TR	0.90	75.7	E	0.97	87.3	F
				SB	L	0.27	55.1	E	0.31	54.4	D
					T	0.74	65.5	E	0.74	60.1	E
1B	Queens Boulevard & 69th Street	SIGNAL	Queens Boulevard	EB	T	0.24	19.5	B	0.81	24.7	C
				WB	T	0.88	25.2	C	0.42	22.2	C
			69th Street	NB	LTR	0.99	77.9	E	0.87	64.7	E
				SB	LTR	0.79	64.9	E	0.93	64.7	E
1C	Queens Boulevard North Service Road & 69th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.79	23.5	C	0.52	24.2	C
			69th Street	NB	L	1.03	94.4	F	0.90	77.2	E
					T	0.56	58.0	E	0.53	58.5	E
				SB	TR	0.83	74.2	E	1.02	106.2	F
2	47th Avenue & 69th Street	SIGNAL	47th Avenue	EB	LR	0.06	9.0	A	0.07	9.0	A
				WB	LTR	0.16	9.7	A	0.11	9.3	A
			69th Street	NB	LT	0.75	25.2	C	0.73	24.2	C
				SB	TR	0.54	17.6	B	0.71	20.8	C
3A	Queens Boulevard South Service Road & 70th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.26	23.7	C	0.63	29.9	C
			70th Street	NB	TR	0.60	43.9	D	0.44	39.4	D
				SB	LT	1.04	67.9	E	0.52	27.7	C
3B	Queens Boulevard & 70th Street	SIGNAL	Queens Boulevard	EB	L	0.84	127.6	F	0.75	78.9	E
					T	0.24	23.3	C	1.03	59.9	E
				WB	L	1.14	204.9	F	0.32	67.7	E
					T	0.84	32.4	D	0.41	30.1	C
			70th Street	NB	LTR	0.78	52.0	D	0.49	40.5	D
				SB	LTR	1.08	105.5	F	1.08	105.0	F
3C	Queens Boulevard North Service Road & 70th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.62	24.7	C	0.50	32.0	C
			70th Street	NB	LT	1.10	108.2	F	0.75	39.1	D
				SB	T	0.74	50.6	D	0.76	51.8	D
					R	0.36	38.2	D	0.32	37.4	D
4	47th Avenue & 70th Street	AWSC[1]	47th Avenue	WB	LTR	0.09	8.6	A	0.09	8.2	A
			70th Street	NB	LT	0.44	10.8	B	0.33	9.4	A
				SB	TR	0.34	9.6	A	0.22	8.6	A
5A	Queens Boulevard South Service Road & 65th Place	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.36	18.3	B	0.74	18.6	B
			65th Place	NB	TR	0.83	53.3	D	0.87	56.1	E
				SB	LT	1.01	97.1	F	1.01	101.1	F
5B	Queens Boulevard & 65th Place	SIGNAL	Queens Boulevard	EB	T	0.15	15.5	B	0.50	13.5	B
				WB	T	0.36	11.5	B	0.20	15.9	B
			65th Place	NB	DefL	0.78	56.4	E	0.51	40.4	D
					TR	0.50	40.9	D			
				SB	LTR	0.47	40.3	D	0.42	39.3	D
5C	Queens Boulevard North Service Road & 65th Place	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.48	13.4	B	0.46	19.8	B
			65th Place	NB	LT	0.27	36.7	D	0.31	37.4	D
				SB	TR	0.45	39.7	D	0.35	37.9	D

Note:
1. All-Way Stop-Controlled

With-Action Condition with PCRE (2021)

The future With-Action Condition with PCRE traffic volumes were estimated by overlaying the incremental vehicle trips on the No-Action Condition volumes. To account for the maximum trip activities, the Public School Scheme incremental vehicle trips were used in the analyses for the weekday AM and afternoon peak hours. The With-Action Condition with PCRE traffic volumes during weekday AM and afternoon peak hours are presented in Appendix A, Figures A7 and A8.

As part of the With-Action Condition with PCRE, minor signal timing improvements were incorporated in the analyses. With the PCRE in place, the existing signal timing plans at the intersections of Queens Boulevard at 69th and 70th Streets will be modified. The proposed traffic improvements are discussed as follows:

Queens Boulevard and 69 Street:

Minor Signal Retiming:

- During the weekday AM peak hour, shift 4 seconds of green time from the eastbound/westbound phase to the northbound phase.

- During the weekday afternoon peak hour, remove 4 seconds of green time from the eastbound/westbound phase and add 3 seconds to the northbound phase and 1 second to the southbound phase.

Queens Boulevard and 70 Street:

Minor Signal Retiming:

- During the weekday AM peak hour, shift 1 second of green time from the eastbound/westbound phase to the eastbound/westbound exclusive left-turn-only phase.

The intersection capacity analysis results for the With-Action Condition with PCRE are shown in Table 21. Based on the analysis results, with the signal timing improvements in place, all intersection approaches will operate with service conditions similar to the No-Action Condition without any significant increase in delays. Therefore, the Modified Project in the With-Action Condition with PCRE would not adversely affect the future traffic operating conditions in the study area and would operate at acceptable service levels, as per CEQR criteria

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Table 21: With-Action Condition with PCRE - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Afternoon		
						With-Action Condition with PCRE			With-Action Condition with PCRE		
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1A	Queens Boulevard South Service Road & 69th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.30	22.6	C	0.71	25.0	C
			69th Street	NB	TR	0.92	74.8	F	0.97	85.8	F
				SB	L	0.34	56.3	E	0.35	54.5	D
					T	0.74	65.6	E	0.71	59.7	E
1B	Queens Boulevard & 69th Street	SIGNAL	Queens Boulevard	EB	T	0.25	21.8	C	0.85	29.9	C
				WB	T	0.92	31.0	C	0.44	24.8	C
			69th Street	NB	LTR	0.99	68.7	E	0.87	60.3	E
				SB	LTR	0.82	65.6	E	0.93	64.1	E
1C	Queens Boulevard North Service Road & 69th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.83	28.3	C	0.55	27.1	C
			69th Street	NB	L	1.04	87.6	F	0.89	66.9	E
					T	0.51	53.9	D	0.49	54.6	D
				SB	TR	0.86	77.0	E	1.02	104.7	F
2	47th Avenue & 69th Street	SIGNAL	47th Avenue	EB	LR	0.07	9.0	A	0.07	9.1	A
				WB	LTR	0.33	11.4	B	0.22	10.4	B
			69th Street	NB	LT	0.75	25.1	C	0.73	24.2	C
				SB	TR	0.55	18.1	B	0.72	21.3	C
3A	Queens Boulevard South Service Road & 70th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.26	23.7	C	0.68	31.0	C
			70th Street	NB	TR	0.60	43.9	D	0.44	39.4	D
				SB	LT	1.04	67.9	E	0.54	28.2	C
3B	Queens Boulevard & 70th Street	SIGNAL	Queens Boulevard	EB	L	0.84	127.6	F	0.75	79.0	E
					T	0.24	23.3	C	1.03	60.0	E
				WB	L	1.14	204.9	F	0.37	69.3	E
					T	0.84	32.4	D	0.41	30.1	C
			70th Street	NB	LTR	0.78	52.0	D	0.49	40.5	D
				SB	LTR	1.08	105.5	F	1.09	106.5	F
3C	Queens Boulevard North Service Road & 70th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.62	24.7	C	0.49	31.8	C
			70th Street	NB	LT	1.10	108.2	F	0.75	39.0	D
				SB	T	0.74	50.6	D	0.76	51.8	D
					R	0.36	38.2	D	0.32	37.4	D
4	47th Avenue & 70th Street	AWSC[1]	47th Avenue	WB	LTR	0.10	8.9	A	0.09	8.3	A
			70th Street	NB	LT	0.47	11.5	B	0.36	9.8	A
				SB	TR	0.42	10.5	B	0.27	8.9	A
5A	Queens Boulevard South Service Road & 65th Place	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.36	18.3	B	0.74	18.6	B
			65th Place	NB	TR	0.83	53.3	D	0.87	56.1	E
				SB	LT	1.01	97.1	F	1.01	100.9	F
5B	Queens Boulevard & 65th Place	SIGNAL	Queens Boulevard	EB	T	0.15	15.6	B	0.51	13.5	B
				WB	T	0.36	11.6	B	0.20	16.0	B
			65th Place	NB	DefL	0.78	56.0	E	0.51	40.4	D
					TR	0.50	40.8	D			
				SB	LTR	0.47	40.3	D	0.42	39.3	D
5C	Queens Boulevard North Service Road & 65th Place	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.48	13.4	B	0.46	19.8	B
			65th Place	NB	LT	0.27	36.7	D	0.31	37.4	D
				SB	TR	0.45	39.7	D	0.35	37.9	D

Notes:
1. All-Way Stop-Controlled

Pedestrian Analyses

Baseline Conditions

Baseline pedestrian levels in the study area were determined based on pedestrian counts conducted in June 2017 and August 2018. Per guidance from NYCDOT, the two sets of pedestrian counts were compared to obtain the baseline pedestrian volumes using the following methodology:

- For the intersections of Queens Boulevard at 69th and 70th Streets, and 47th Avenue at 69th and 70th Streets, TMC were conducted in June 2017 during the weekday AM and PM peak hours. As such, these higher 2017 TMC counts were used as baseline traffic volumes for these intersections during the weekday AM peak hour.
- For the intersections of Queens Boulevard at 65th Place, 69th Street and 70th Street, TMC were conducted in August 2018 during the weekday afternoon peak hour. These TMC were

increased by 8 percent to obtain the baseline traffic volumes for these intersections during the weekday afternoon peak hour.

- For the intersections of 47th Avenue at 69th and 70th Streets, TMC were conducted in August 2018 during the weekday afternoon peak hour. These TMC were increased by 9 percent to obtain the baseline traffic volumes for these intersections during the weekday afternoon peak hour.

As per coordination with NYCDCP and NYCDOT, the Baseline Conditions pedestrian volumes at the three analysis locations were determined using the following methodology:

- At the intersection of Queens Boulevard at 69th Street crosswalk and sidewalk counts conducted in June 2017 were used as baseline pedestrian volumes during the weekday AM peak hour. For the corner elements, counts conducted in August 2018 were increased by 11 percent to be used as baseline pedestrian volumes during the weekday AM peak hour.
- At the intersection of Queens Boulevard at 69th Street, crosswalk, corner and sidewalk counts conducted in August 2018 were used as baseline pedestrian volumes during the weekday afternoon peak hour.
- At the intersection of 47th Avenue at 69th Street, crosswalk and sidewalk counts conducted in June 2017 were used as baseline pedestrian volumes during the weekday AM peak hour. For the corner elements, counts conducted in August 2018 were increased by 11 percent to be used as baseline pedestrian volumes during the weekday AM peak hour.
- At the intersection of 47th Avenue at 69th Street, crosswalk, corner and sidewalk counts conducted in August 2018 were increased by 11 percent to be used as baseline pedestrian volumes during the weekday afternoon peak hour.
- At the intersection of 47th Avenue at 70th Street, sidewalk counts conducted in June 2017 were used as baseline pedestrian volumes during the weekday AM peak hour. These sidewalk counts increased by 11 percent to be used as baseline pedestrian volumes during the weekday afternoon peak hour.

Baseline Conditions pedestrian volumes for the weekday AM and afternoon peak hours are shown in Appendix B, Figures B3 and B4.

As shown in Tables 22 and 23, all pedestrian elements in the pedestrian study area operate at acceptable service conditions during the weekday AM and afternoon peak hours.

Table 22: Baseline Conditions Sidewalk Analysis

Location	Corner	Sidewalk Movement	Weekday AM Peak Hour					Weekday Afternoon Peak Hour				
			Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS	Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS
47th Avenue betw. 69th Street and 70th Street	Mid-block	East-West	8.0	23	0.58	1,620	A	8.0	24	0.79	2,133	A

Table 23: Baseline Conditions Corner Analysis

Location	Corner	Weekday AM Peak Hour			Weekday Afternoon Peak Hour		
		Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
69th Street and 47th Avenue	North-East	3	2,260.2	A	2	3,131.6	A
69th Street and EB Queens Boulevard South Service Road	South-East	3	1,002.7	A	9	1,725.8	A

No-Action Condition (2021)

The No-Action Condition pedestrian volumes were determined for the 2021 analysis year (the estimated time of completion for the Proposed Actions). Per the CEQR Technical Manual, a compounded annual background growth rate of 0.50 percent was applied to the baseline pedestrian volumes for three years (from 2018 to 2021). In addition, trips expected to be generated by the three background development projects were incorporated in the No Action Condition pedestrian volumes. The No-Action Condition pedestrian volumes during the weekday AM and afternoon peak hours are shown in Appendix B, Figures B5 and B6.

As shown in Tables 24 and 25, all pedestrian elements in the study area operate at acceptable service conditions during the weekday AM and afternoon peak hours.

Table 24: No-Action Condition Sidewalk Analysis

Location	Corner	Sidewalk Movement	Weekday AM Peak Hour					Weekday Afternoon Peak Hour				
			Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS	Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS
47th Avenue betw. 69th Street and 70th Street	Mid-block	East-West	8.0	80	0.58	465.7	B	8.0	88	0.79	575.1	A

Table 25: No-Action Condition Corner Analysis

Location	Corner	Weekday AM Peak Hour			Weekday Afternoon Peak Hour		
		Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
69th Street and 47th Avenue	North-East	39	672.5	A	29	725.6	A
69th Street and EB Queens Boulevard South Service Road	South-East	25	450.3	A	37	731.2	A

With-Action Condition with PCRE (2021)

The future With-Action Condition with PCRE pedestrian volumes were estimated by overlaying the incremental pedestrian trips on the No-Action Condition volumes. To account for the maximum trip activities, the Public School Scheme incremental pedestrian trips were used in the analyses for the weekday AM and afternoon peak hours, respectively. The With-Action Condition with PCRE pedestrian volumes for the weekday AM and afternoon peak hours are presented in Appendix B, Figures B7 and B8.

As shown in Tables 26 and 27, the pedestrian elements in the study area will operate at acceptable service conditions the weekday AM and afternoon peak hours. Therefore, the Modified Project would not adversely affect pedestrian operations in the study area.

Table 26: With-Action Condition with PCRE Sidewalk Analysis

Location	Corner	Sidewalk Movement	Weekday AM Peak Hour					Weekday Afternoon Peak Hour				
			Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS	Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS
47th Avenue betw. 69th Street and 70th Street	Mid-block	East-West	13.0	665	0.58	102.5	B	13.0	505	0.79	185.7	B

Table 27: With-Action Condition with PCRE Corner Analysis

Location	Corner	Weekday AM Peak Hour			Weekday Afternoon Peak Hour		
		Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
69th Street and 47th Avenue	North-East	181	205.8	A	191	214.4	A
69th Street and EB Queens Boulevard South Service Road	South-East	42	276.2	A	67	378.4	A

Parking

Baseline Conditions (2018)

A detailed parking inventory of the area surrounding the project site was conducted during a typical weekday overnight period. There are no available off-street parking facilities within a ¼-mile radius of the project site. Therefore, an overnight on-street parking utilization survey within a ¼-mile radius of the project site was conducted.

As shown in Figure 6, the ¼-mile radius study area is generally bounded by Woodside Avenue to the north, 65th Place to the west, 74th Street to the east and 51st Avenue to the south. On-street parking regulations, capacity, and occupancy were inventoried for the study areas on a block-by-block basis and are shown in Tables 28 and 29.

Table 28 presents the on-street parking occupancy within a ¼-mile of the project site for the Baseline Conditions. There are approximately 2,005 legal on-street parking spaces within a ¼-mile of the project site with a utilization rate of 93 percent during the overnight hours. In total, there are approximately 147 legal on-street parking spaces available during the overnight hours within ¼-mile radius of the project site.

Figure 6: Parking Regulations within a ¼-Mile of the Project Site

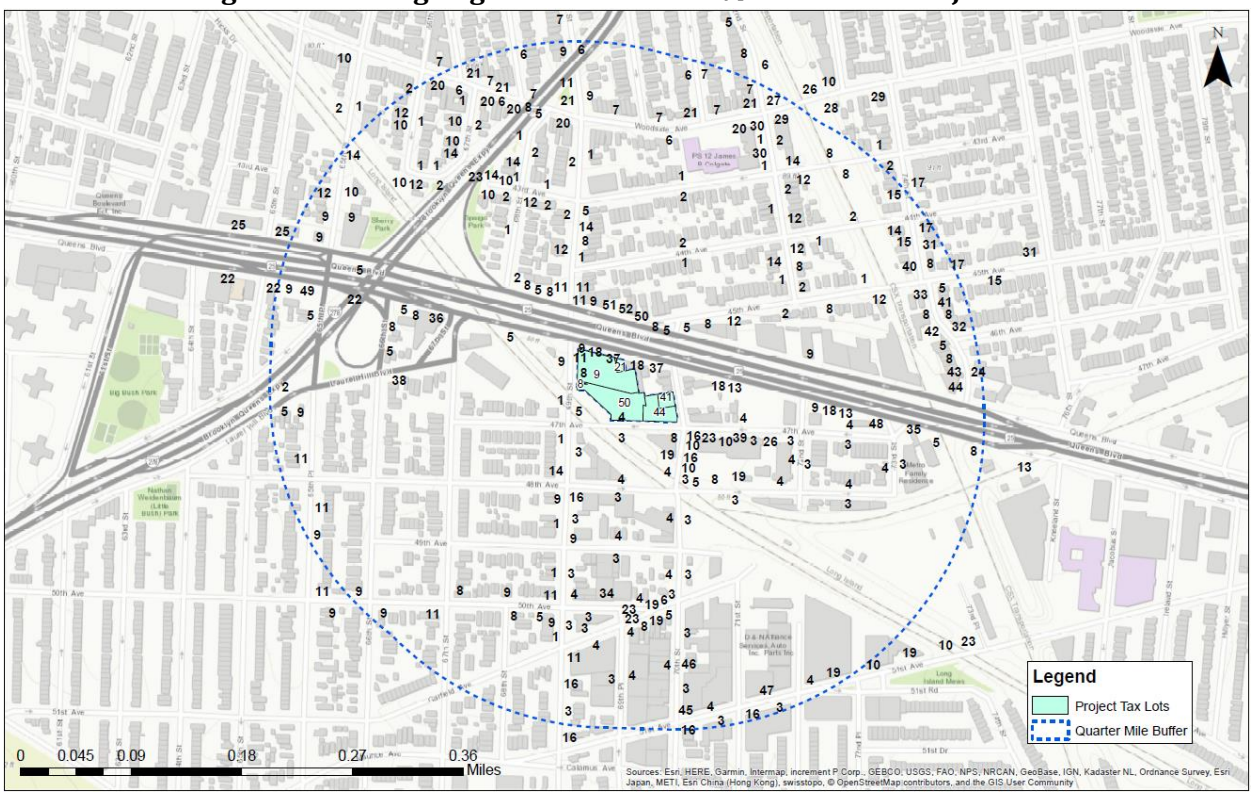


Table 28: Baseline Conditions On-Street Parking Utilization

Study Area	Capacity	Occupied Spaces	Available Spaces	Parking Utilization (%)
¼-Mile Radius	2,005	1,858	147	93%

Table 29: Parking Regulations within a ¼-Mile of the Project Site

Index	Regulation
1	NO PARKING THURSDAY 11AM-12:30PM (DOUBLE ARROW)
2	NO PARKING FRIDAY 11AM-12:30PM (DOUBLE ARROW)
3	NO PARKING TUESDAY FRIDAY MIDNIGHT-3AM (DOUBLE ARROW)
4	NO PARKING MONDAY THURSDAY MIDNIGHT-3AM (DOUBLE ARROW)
5	NO STANDING ANYTIME (DOUBLE ARROW)
6	NO PARKING FRIDAY 9AM-10:30AM (DOUBLE ARROW)
7	NO PARKING THURSDAY 9AM-10:30AM (DOUBLE ARROW)
8	NO STANDING ANYTIME (SINGLE ARROW)
9	NO STANDING BUS STOP (SINGLE ARROW)
10	NO PARKING ANYTIME (SINGLE ARROW)
11	NO STANDING BUS STOP (DOUBLE ARROW)
12	NO PARKING FRIDAY 11AM-12:30PM (SINGLE ARROW)
13	NO PARKING MONDAY TUESDAY THURSDAY FRIDAY 7:30AM-8AM (DOUBLE ARROW)
14	NO PARKING THURSDAY 11AM-12:30PM (SINGLE ARROW)
15	NO PARKING MONDAY 9:30AM-11AM (DOUBLE ARROW)
16	NO PARKING TUESDAY FRIDAY MIDNIGHT-3AM (SINGLE ARROW)
17	NO PARKING TUESDAY 9:30AM-11AM (DOUBLE ARROW)
18	NO STANDING MONDAY-FRIDAY 3PM-7PM (DOUBLE ARROW)
19	NO PARKING MONDAY THURSDAY MIDNIGHT-3AM (SINGLE ARROW)
20	NO PARKING FRIDAY 9AM-10:30AM (SINGLE ARROW)
21	NO PARKING 9AM-10:30AM (SINGLE ARROW)
22	NO STOPPING ANYTIME (DOUBLE ARROW)
23	NO PARKING ANYTIME (DOUBLE ARROW)
24	NO PARKING MONDAY 11:30AM-1PM (DOUBLE ARROW)
25	NO STANDING 7AM-10AM 4PM-6PM EXCEPT SUNDAY (DOUBLE ARROW)
26	NO STANDING 7AM-4PM SCHOOL DAYS (SINGLE ARROW)
27	NO PARKING MONDAY 8:30AM-10AM (DOUBLE ARROW)
28	NO PARKING TUESDAY 8:30AM-10AM (DOUBLE ARROW)
29	NO PARKING TUESDAY 8:30AM-10AM (SINGLE ARROW)
30	NO STANDING 7AM-4PM SCHOOL DAYS EXCEPT SCHOOL BUSES (DOUBLE ARROW)
31	NO PARKING TUESDAY 9:30AM-11AM (SINGLE ARROW)
32	NO PARKING TUESDAY 11:30AM-1PM (DOUBLE ARROW)
33	NO STANDING MONDAY-FRIDAY 7AM-9AM (DOUBLE ARROW)
34	NO PARKING 8AM-6PM EXCEPT SUNDAY (SINGLE ARROW)
35	NO PARKING FRIDAY 11AM-2PM (DOUBLE ARROW)
36	AMBULETTE ONLY (DOUBLE ARROW)
37	NO PARKING 7AM-7:30AM EXCEPT SUNDAY (DOUBLE ARROW)
38	NO PARKING MONDAY-FRIDAY 7AM-7PM (SINGLE ARROW)
39	NO STANDING 7AM-4PM SCHOOL DAYS (DOUBLE ARROW)
40	NO PARKING MONDAY 9:30AM-11AM (SINGLE ARROW)
41	NO PARKING TUESDAY 11:30AM-1PM (SINGLE ARROW)
42	NO STANDING MONDAY-FRIDAY 7AM-9AM (SINGLE ARROW)
43	NO PARKING 7AM-7:30AM EXCEPT SUNDAY (SINGLE ARROW)
44	2-HOUR METERED PARKING 7:30AM-7PM EXCEPT SUNDAY (SINGLE ARROW)
45	TRUCK LOADING ONLY MONDAY-FRIDAY 7AM-4PM (DOUBLE ARROW)
46	TRUCK LOADING ONLY MONDAY-FRIDAY 7AM-4PM (SINGLE ARROW)
47	NO PARKING MONDAY 9AM-10:30AM (DOUBLE ARROW)
48	NO PARKING THURSDAY 11AM-2PM(DOUBLE ARROW)
49	NO STOPPING ANYTIME (SINGLE ARROW)
50	NO STANDING MONDAY-FRIDAY 4PM-7PM (DOUBLE ARROW)
51	PAY-BY-CELL LOCATOR NUMBER
52	2-HOUR METERED PARKING 9AM-4PM EXCEPT SUNDAY (DOUBLE ARROW)

No-Action Condition (2021)

As recommended by the *2014 CEQR Technical Manual*, a compounded annual background growth rate of 0.50 percent was applied to the existing occupied parking spaces for three years (2018 to 2021). Adjustments were made to the No Action Condition on street parking occupancies to incorporate the three background development projects in the study area that are anticipated for completion by Build Year 2021.

Table 30 presents the on-street parking occupancy within a ¼-mile of the project site in the future No-Action Condition. As indicated in the table, there are approximately 2,005 legal on-street parking spaces within a ¼-mile of the project site, 95 percent of which are anticipated to be utilized during the overnight hours. In total, there would be approximately 110 legal on-street parking spaces available during the overnight hours within ¼-mile radius of the project site in the future No-Action conditions.

Table 30: No-Action Condition On-Street Parking Utilization

Study Area	Capacity	Occupied Spaces	Available Spaces	Parking Utilization (%)
¼-Mile Radius	2,005	1,895	110	95%

With-Action Condition with PCRE (2021)

In the future With-Action Condition with PCRE, the Modified Project would provide 217 parking spaces for residential, commercial, and school uses under both Schemes. The 24-hour parking accumulation for the Modified Project is presented in Table 31. Based on the *2012-2016 American Community Survey (ACS)*, the average vehicle ownership rate per household for the study area is approximately 0.53 vehicles per renter occupied unit. The Modified Project would provide 431 rental units, generating a weekday overnight demand for 230 parking spaces based on the ACS data. This demand would result in a shortfall of approximately 13 spaces during the overnight period.

Table 31: Charter School Scheme - Hourly Parking Accumulation

Time period	School Staff Component			Local Retail Component			Residential Component			Weekday Parking Accumulation		
	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.
Overnight			0			0			230			230
12:00 AM -- 1:00 AM	0	0	0	0	0	0	3	3	230	3	3	230
1:00 AM -- 2:00 AM	0	0	0	0	0	0	3	3	230	3	3	230
2:00 AM -- 3:00 AM	0	0	0	0	0	0	0	0	230	0	0	230
3:00 AM -- 4:00 AM	0	0	0	0	0	0	0	0	230	0	0	230
4:00 AM -- 5:00 AM	0	0	0	0	0	0	0	0	230	0	0	230
5:00 AM -- 6:00 AM	0	0	0	0	0	0	1	5	226	1	5	226
6:00 AM -- 7:00 AM	0	0	0	3	0	3	6	19	214	9	19	216
7:00 AM -- 8:00 AM	26	0	26	8	8	3	14	79	149	21	86	177
8:00 AM -- 9:00 AM	6	0	32	8	5	5	25	47	127	33	52	164
9:00 AM -- 10:00 AM	0	0	32	18	11	13	16	28	115	34	38	160
10:00 AM -- 11:00 AM	0	0	32	18	18	13	13	21	107	31	39	151
11:00 AM -- 12:00 PM	0	0	32	48	48	13	23	23	107	71	71	151
12:00 PM -- 1:00 PM	0	0	32	23	21	16	17	17	107	40	38	154
1:00 PM -- 2:00 PM	0	0	32	23	18	21	17	17	107	41	35	159
2:00 PM -- 3:00 PM	0	18	14	16	16	21	31	17	121	47	33	156
3:00 PM -- 4:00 PM	0	0	14	21	21	21	32	21	132	52	42	166
4:00 PM -- 5:00 PM	0	14	0	25	25	21	71	31	172	97	56	193
5:00 PM -- 6:00 PM	0	0	0	16	23	13	39	23	188	55	46	201
6:00 PM -- 7:00 PM	0	0	0	13	21	5	47	24	212	60	45	217
7:00 PM -- 8:00 PM	0	0	0	8	13	0	35	17	230	43	30	230
8:00 PM -- 9:00 PM	0	0	0	5	5	0	26	26	230	32	32	230
9:00 PM -- 10:00 PM	0	0	0	0	0	0	17	17	230	17	17	230
10:00 PM -- 11:00 PM	0	0	0	0	0	0	12	13	230	12	13	230
11:00 PM -- 12:00 AM	0	0	0	0	0	0	12	13	230	12	13	230

Notes:

1. In/Out and Temporal Distributions for the School Staff, Local Retail and Residential components during the AM, MD, Afternoon, PM and SAT MD peak hours are based on the transportation planning assumptions and demand estimates shown in Table 4.
2. Temporal Distribution for the Residential component during the remaining hours of the 24-hr profile are based on the *NYCDOT Residential 24-Hour Parking Accumulation - Queens* .
3. In/Out Distribution for the Residential component during the remaining hours of the 24-hr profile are based on the East *126th Street Bus Depot Memorial & Mixed-Use Project GEIS, 2016* (CEQR No. 16DME011M), as per DCP guidance.
4. In/Out and Temporal Distributions for the Local Retail component during the remaining hours of the 24-hr profile are based on the *East 126th Street Bus Depot Memorial & Mixed-Use Project GEIS, 2016* (CEQR No. 16DME011M), as per DCP guidance.

As shown in Table 32, the available on-street parking spaces within a ¼-mile of the Project Site would accommodate the demand for 13 parking spaces. Therefore, the Modified Project would not result in parking shortfall in the study area

Table 32: With-Action Condition with PCRE On-Street Parking Utilization within a ¼-mile of the Project Site

Scheme	Capacity	Occupied Spaces	Available Spaces	Parking Utilization (%)
¼-Mile Radius	2,005	1,899	106	95%

Vehicular and Pedestrian Safety Evaluation

Crash data for the study area intersection were obtained from New York State Department of Transportation (NYSDOT) for the time period between January 9, 2015 and December 30, 2017. Table 33 summarizes the total number of reportable crashes, fatalities, and injuries during the study period, as well as a yearly breakdown of vehicular crashes with pedestrians and bicycles at each location. Based on this information, the intersection of Queens Boulevard and 69th Street is identified as a high-crash location, with six total bicycle and pedestrian injury crashes from the consecutive 12 month period beginning in May 2016 and ending in April 2017.

Table 33: Crash Data Analysis Summary

Intersection ID	Intersection Name	Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Bicycle + Pedestrian Injury Crashes Combined			Motorist Injury Crashes			Total Crashes (Reportable + Non-Reportable)		
		2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
1	Queens Boulevard and 69th Street	1	2	3	0	3	1	1	5	4	9	11	10	10	16	14
2	Queens Boulevard and 70th Street	0	0	0	0	1	0	0	1	0	0	1	2	0	2	2
3	47th Avenue and 69th Street	0	1	1	0	0	0	0	1	1	8	3	10	8	4	11
4	47th Avenue and 70th Street	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
5	45th Avenue and 70th Street	1	1	2	0	2	2	1	3	4	13	10	17	14	13	21
6	Queens Boulevard and 45th Avenue	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
7	47th Avenue and 70th Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	45th Avenue and 70th Street	0	0	0	0	0	2	0	0	2	1	2	1	1	2	3
9	Queens Boulevard and 45th Avenue	0	1	0	0	0	0	0	1	0	1	1	3	1	2	3

Table 34 shows a detailed description of each pedestrian/bicyclist-related crash at the intersection of Queens Boulevard and 69th Street during the three year period.

Table 34: Vehicle and Pedestrian/Bicyclist Crash Details

Intersection	Date	Crash Class			Action of Vehicle	Action of Pedestrian/ Bicyclist	Cause of Crash			
		Type	Injured	Killed			Left/ Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
Queens Boulevard and 69th Street	5/31/2015	Collision with Pedestrian	X		Unknown	Unknown				Not entered
	5/10/2016	Collision with Bicyclist	X		Going straight - North	Going straight - North				Passing too closely
	5/11/2016	Collision with Pedestrian	X		Making left turn - North	Crossing with signal	X		X	
	9/30/2016	Collision with Pedestrian	X		Making left turn - West	Crossing with signal	X			Failure to yield right of way
	11/7/2016	Collision with Bicyclist	X		Going straight - East	Going straight - South				Traffic control devices disregarded
	11/17/2016	Collision with Bicyclist	X		Making left turn - North	Going straight - South	X		X	
	3/10/2017	Collision with Pedestrian	X		Making right turn - Northwest	Crossing with signal	X		X	
	5/7/2017	Collision with Pedestrian	X		Unknown - West	Emerge from front/behind parked vehicle		X		
	5/14/2017	Collision with Bicyclist	X		Going Straight - South	Not Applicable			X	
	9/7/2017	Collision with Pedestrian	X		Making right turn - North	Crossing no signal or crosswalk	X	X	X	

Queens Boulevard and 69 Street

Based on the review of the crash history at the intersection of Queens Boulevard and 69th Street, prevailing trends with regard to geometric deficiencies were not identified as the primary causes of recorded crashes. With respect to geometric deficiencies that could potentially cause safety hazards, the intersection of Queens Boulevard and 69th Street is signalized and provides four school crosswalks. In addition, pedestrian safety signs are installed at the eastbound and westbound approaches. Based on the review of crash history data, most of the pedestrian/bicyclist crashes were caused by vehicles making a left or right-turn. In addition, some of these accidents were also caused by driver inattention. With the Modified Project, this intersection could experience approximately 286 and 284 incremental peak hour project generated pedestrian trips (combined for all crosswalks) during the weekday AM and afternoon peak hours, respectively.

To improve safety conditions at this intersection, additional measures can be implemented. These measures could include restriping partially faded crosswalks, installing school crossing signs at the northbound and southbound approaches and on the center medians on Queens Boulevard, and installing pedestrian countdown signals to inform pedestrians about the impending expiration of walk-time indication. These additional safety measures, coupled with the proposed initiatives identified as part of the Vision Zero Queens Pedestrian Safety Action Plan and the Vision Zero: Great Streets Capital Project, are expected to enhance pedestrian safety at this location.

J. AIR QUALITY

As discussed in the August 31 EAS, the development contemplated in the August 31 EAS would not result in any significant adverse mobile or stationary source air quality impacts. The Modified Project would result in the generation of approximately 180 vehicles, which is above the 170 vehicle threshold. However, no single intersection would experience an increase of 170 vehicles or more during one peak period; therefore, no mobile source AQ analysis is required. The Modified Project is anticipated to result in a maximum of seven peak hour heavy duty diesel vehicles (HDDVs). Accordingly, a screening assessment was performed using the Equivalent Truck Calculation spreadsheet. The results of the screening indicate the Modified Project would pass the Particulate Matter (PM) 2.5 screen on all road types.

Although the inclusion of a school would be anticipated to result in an increase of peak hour trips, the Modified Project would not result in traffic that would trigger *CEQR* thresholds requiring additional mobile source air quality analysis. An analysis of the development in the With-Action Condition indicated no anticipated adverse stationary source air quality effects on existing nearby buildings of equal or greater height.

To prevent any potential project-on-project air quality impacts from stationary sources, an (E) Designation (E-472) for air quality would be assigned to Lots 41, 44, and 50 (East Tower) and Lots 9 and 21 (West tower). By placing (E) designations on sites where there is a known or potential environmental concern, the potential for a significant adverse impact to human health and the environment resulting from the Proposed Actions would be avoided.

As discussed in the August 31 EAS, to preclude the potential for significant adverse impacts related to air quality, an (E) designation **(E-472)** would be incorporated into the Proposed Actions for

Block 2432, Lots 9, 21, 41, 44, and 50. The requirements of (E) Designation (E-472) would be as follows as set forth in the September 5, 2018 negative declaration:

> **East Tower: Block 2432, Lots 41, 44 and 50: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating, and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least 155 feet above grade and at a setback distance of at least 126 feet from the West Tower to avoid any potential significant adverse air quality impacts.**
>
> **West Tower: Block 2432, Lots 9 and 21: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least 185 feet above grade to avoid any potential significant adverse air quality impacts.**

The Modified Project would result in reduced building heights compared to the project contemplated in the August 31 EAS. Accordingly, HVAC stack heights would be required to be located at the highest tier, or at least 164.5 feet above grade, and 143 feet above grade for the West and East Tower, respectively. The footprint of the Modified Project would not differ from the footprint of the development contemplated in the August 31 EAS, therefore, HVAC stack location on the East Tower would be required to be setback at least 126 feet from the West Tower. This would require a modification of the (E) designation for stack height requirements. The revised text of the (E) designation would be:

> **East Tower: Block 2432, Lots 41, 44 and 50: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating, and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least *143* feet above grade and at a setback distance of at least 126 feet from the West Tower to avoid any potential significant adverse air quality impacts.**
>
> **West Tower: Block 2432, Lots 9 and 21: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least *164.5* feet above grade to avoid any potential significant adverse air quality impacts.**

Based on this information, with the implementation of the measures described in the August 31 EAS and September 5, 2018 negative declaration, the Modified Project would not result in any new or different significant adverse impacts to air quality, and the conclusions of the August 31 EAS would remain valid.

K. NOISE

According to the *CEQR Technical Manual*, an initial noise assessment on vehicular traffic noise is necessary if a proposed project would (i) generate or reroute traffic or (ii) introduce a new receptor near a heavily trafficked thoroughfare. In order for a detailed analysis on train noise to be warranted the proposed project must (i) be located within 1,500 feet of existing rail activity and have a direct line of sight to that rail facility or (ii) add rail activity to existing or new rail lines within 1,500 feet and have a direct line of site to a receptor.

As discussed in the August 31 EAS, the Development Site is within 1,500 feet of the existing elevated rail tracks and will have a direct line of site to the receptor; therefore, a detailed train noise assessment was performed. The attenuation requirements derived from the noise assessment are displayed in Table 35 and Table 36.

Table 35: West Tower Façade Attenuation Requirements

Façade	Elevation	*CEQR* Required Attenuation	Comment
North	1st to 9th Floor 10th Floor and Up	33 dBA 31 dBA	Traffic noise along QB major noise source – no exposure to LIRR
West	1st Floor 2nd to 11th Floor 12th Floor and Up	33 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
South	1st Floor 2nd to 11th Floor 12th Floor and Up	31 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
East	1st Floor 2nd to 11th Floor 12th Floor and Up	28 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have some exposure to LIRR at higher elevations.

Table 36: East Tower Façade Attenuation Requirements

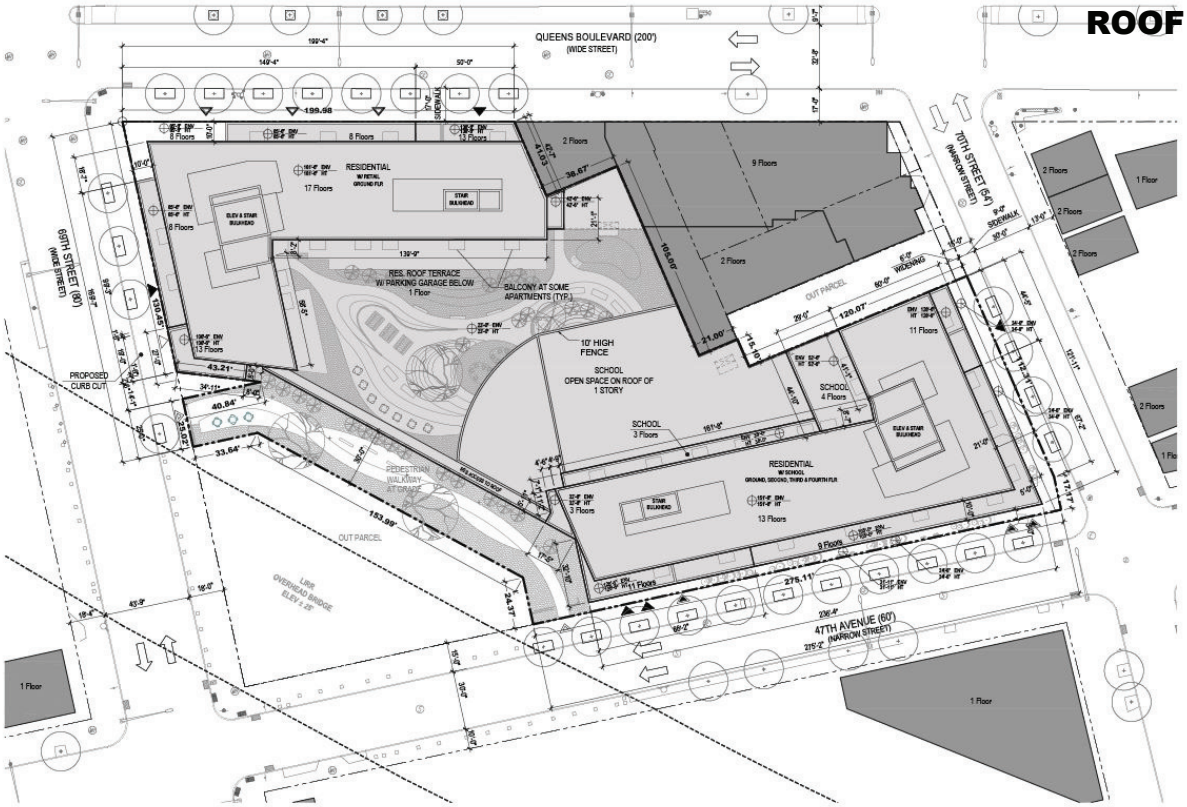
Façade	Elevation	*CEQR* Required Attenuation	Comment
North	1st to 9th Floor 10th Floor and Up	33 dBA 31 dBA	Traffic noise along QB major noise source – no exposure to LIRR
West	1st Floor 2nd to 11th Floor 12th Floor and Up	33 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
South	1st Floor 2nd to 11th Floor 12th Floor and Up	31 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
East	All Floors	28 dBA	Based on 20-min spot meas. – façade not anticipated to be impacted by LIRR

As described in Section I, "Transportation," due to the inclusion of the approximately 79,702 gsf community facility (school), the Modified Project would be anticipated to increase vehicle traffic volumes along 47 Avenue between 70 Street and 69 Street during weekday AM and afternoon peak hours. Additionally, the school would include an approximately 10,466 sf open space area on the roof of the first floor facing the interior of the Development Site (Figure 7). Therefore, the Modified Project would be anticipated to increase noise levels on the south facing façades that were not contemplated in the August 31 EAS.

69-02 QUEENS BOULEVARD

FIGURE 7
SITE AND ROOF PLAN

ROOF PLAN



SITE PLAN

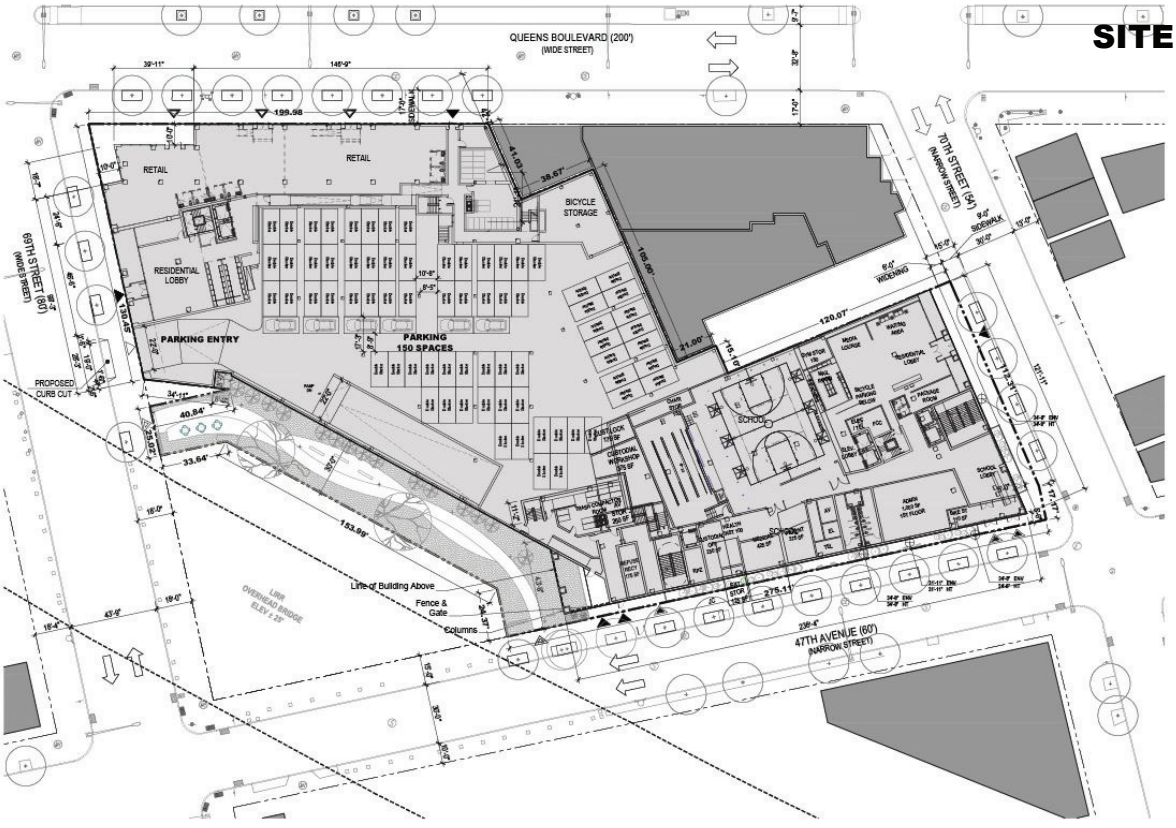


Image Source: Perkins Eastman Architects
For Illustrative Purposes Only

WOODSIDE, QUEENS, NY

LANGAN

As discussed in the August 31 EAS, to preclude the potential for significant adverse impacts related to noise, an (E) designation **(E-472)** would be incorporated into the Proposed Actions for Block 2432, Lots 9, 21, 41, 44, and 50.[10] The requirements of (E) designation **(E-472)** would be as follows:

Block 2432, Lots 9. 21, 41, 44, and 50 (Development Site)

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with minimum attenuation of 37 dB(A) window/wall attenuation on western, eastern and southern facades and a minimum attenuation of 33 dB(A) window/wall attenuation on northern façades for the first 100 ft. above the appropriate noise source elevation in order to maintain an interior noise level of 45 dB(A). To achieve 37 dB(A) or 33 dB(A) of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specially designed windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.

The attenuation requirements for the south facing façade, where the Modified Project is anticipated to increase vehicle traffic volumes, were initially designed to satisfy indoor residential dB(A) requirements based on the project contemplated in the August 31 EAS. These attenuation requirements were determined as result of existing noise levels generated predominantly from the elevated rail adjacent to the Project Site. Pursuant to the *CEQR Technical Manual*, the attenuation requirement for schools is the same as the attenuation requirement for residences. As a result, the attenuation requirement proposed in the (E) Designation (E-472) to satisfy indoor residential dB(A) requirements would therefore also satisfy the dB(A) requirements of the approximately 79,702 gsf community facility (school).

Playground Noise Analysis

Pursuant to CEQR Technical Manual guidelines, noise generated by children in playgrounds or people using parks is considered stationary source noise. For locations adjacent to playgrounds or parks, absent data for comparable facilities, based upon noise measurements made at ten school playground sites in 1987, it may be assumed that Leq(1) noise levels at the boundary would be 75 dB(A), 15 feet from the boundary would be 73 dB(A), 30 feet from the boundary would be 70 dB(A), and the noise level would decrease by 4.5 dB(A) per doubling of distance beyond 30 feet. In some situations, these values may overestimate playground noise levels. It is prudent to consult with New York City Department of Environmental Protection (DEP) to see if updated information is available prior to using these screening values.

Due to the inclusion of the approximately 10,466 sf school open space, the requirements of the (E) Designation would be revised to account for the potential noise that could be generated by children

[10] There is an existing (E) Designation (E-163) for noise on Lots 9 and 21, which was assigned as part of the 2006 Maspeth Woodside Rezoning (CEQR No. 06DCP065Q). The (E) Designation (E-472) proposed in the With-Action Condition would supersede the requirements of E-163.

utilizing the space. Accordingly, a portion of the southern interior façade across from the northwest corner of the open space area would be required to be rated for 38dB(A) because it exists within 15 feet of the school open space boundary. At this rating, acoustic performance becomes a greater function of the specific window design, rather than the specifics of the class. Therefore, lab tests would be required to substantiate the ability of window design to achieve such attenuation requirements. The results of lab tests would subsequently be reviewed by OER to satisfy the requirements of the (E) Designation. The revised text of the (E) designation would be:

East Tower: Block 2432, Lots 41, 44 and 50: In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with a minimum attenuation of 33 dB(A) window/wall attenuation on the interior southern and eastern façades facing the playground, and a minimum attenuation of 37 dB(A) window/wall attenuation on all other façades in order to maintain an interior noise level of 45 dB(A).

West Tower: Block 2432, Lots 9 and 21: In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with minimum attenuation of 37 dB(A) window/wall attenuation on western, eastern and southern facades and a minimum attenuation of 33 dB(A) window/wall attenuation on northern façades for the first 100 ft. above the appropriate noise source elevation in order to maintain an interior noise level of 45 dB(A).

Based on this information, with the implementation of the measures described in the August 31 EAS, the Modified Project would not result in any new or different significant adverse impacts to noise, and the conclusions of the August 31 EAS would not change.

L. NEIGHBORHOOD CHARACTER

As described in the August 31 EAS, of the relevant technical areas specified in the *CEQR Technical Manual*, the Proposed Actions would not result in adverse environmental effects to land use, zoning, and public policy, socioeconomic conditions, open space, shadows, historic and cultural resources, urban design and visual resources, transportation, or noise. In addition, the technical areas that contribute to a neighborhood's character would not, either individually or in combination, result in a moderate adverse impact on neighborhood character.

The modifications to the type and amount of commercial and community facility floor area associated with the Modified Project would not result in any changes to the neighborhood character of the study area that were not already assessed in the August 31 EAS. Consistent with what was contemplated in the August 31 EAS, the Modified Project would be consistent with the Study Area's mixed-use character and would provide new ground floor commercial uses and mixed-income housing. The Modified Project would also provide streetscape improvements including street trees and pedestrian features along segments of the four perimeter streets, as well as a landscaped pathway between the LIRR right-of-way and the new development.

Based on this information, the Modified Project would not result in any new or different significant adverse impacts to neighborhood character, and the conclusions of the August 31 EAS would not change.

The change to the Modified Project would not substantively change or affect the characteristics of the Modified Project upon which the conclusions above are based. Therefore, the conclusions above would remain valid, and the change would not result in any new adverse environmental effects on neighborhood character.

M. CONSTRUCTION

Based on the known development schedule of the Modified Project, an anticipated construction schedule was created for the Development Site. The schedule anticipates that construction of the Modified Project would not exceed 24 months. Because construction of the Modified Project would not exceed 24 months, and because 50 or more PCEs (passenger car equivalents) would not be generated during peak traffic hours as a result of construction, the Proposed Actions are not anticipated to result in significant adverse impacts related to construction activities.

Based on this information, the Modified Project would not result in any new or different significant adverse impacts to construction, and the conclusions of the August 31 EAS would not change.

The change to the Modified Project would not substantively change or affect the characteristics of the Modified Project upon which the conclusions above are based. Therefore, the conclusions above would remain valid, and the change would not result in any new adverse environmental effects on construction.

6) CONCLUSION

The purpose of this technical memorandum is to determine whether the Modified Project would result in any new adverse environmental effects compared to development project contemplated in the August 31 EAS. The Modified Project would result in a decrease of residential floor area and dwelling units and would include an approximately 79,702 gsf community facility (school).

Compared to the project contemplated in the August 31 EAS, the reduced dwelling unit count, building height, residential generation, and traffic generation and improvements would indicate the Modified Project would not have the potential to result in adverse environmental effects to Land Use, Zoning, and Public Policy, Socioeconomic Conditions, Community Facilities and Services, Open Space, Shadows, Historic Resources, Urban Design, Hazardous Materials, Transportation, Neighborhood Character, or Construction. The additional modifications would however have implications on the (E) designation language proposed to preclude the potential for adverse environmental effects on Air Quality and Noise. The implications of the modifications on the (E) Designation were presented in “Section J, Air Quality” and “Section K, Noise” and would be anticipated to preclude the potential for significant adverse impacts related to air quality.

As demonstrated herein, the Modified Project would not result in any new environmental effects that had not been previously disclosed in the August 31 EAS.

APPENDICES

APPENDIX A

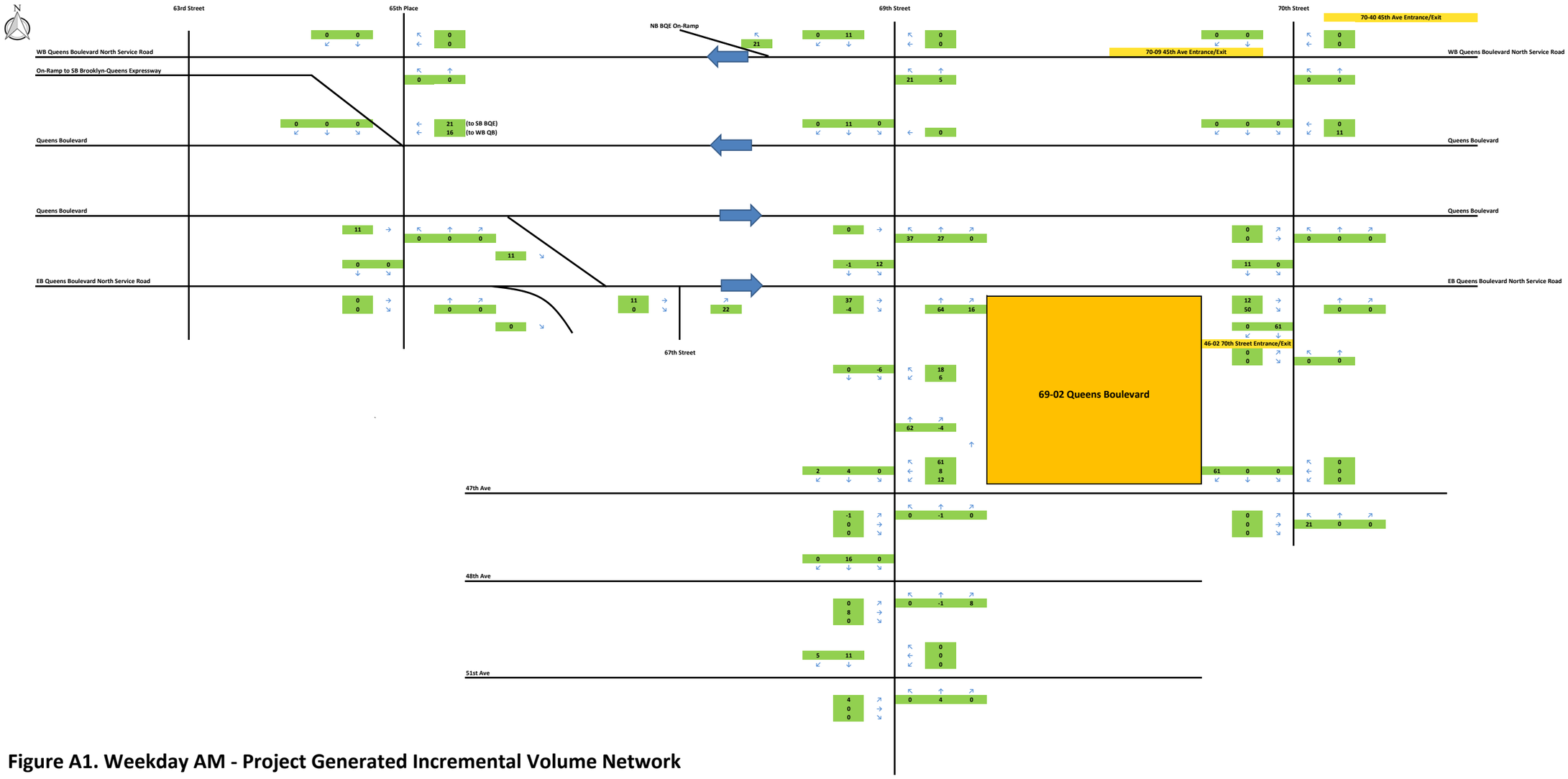


Figure A1. Weekday AM - Project Generated Incremental Volume Network

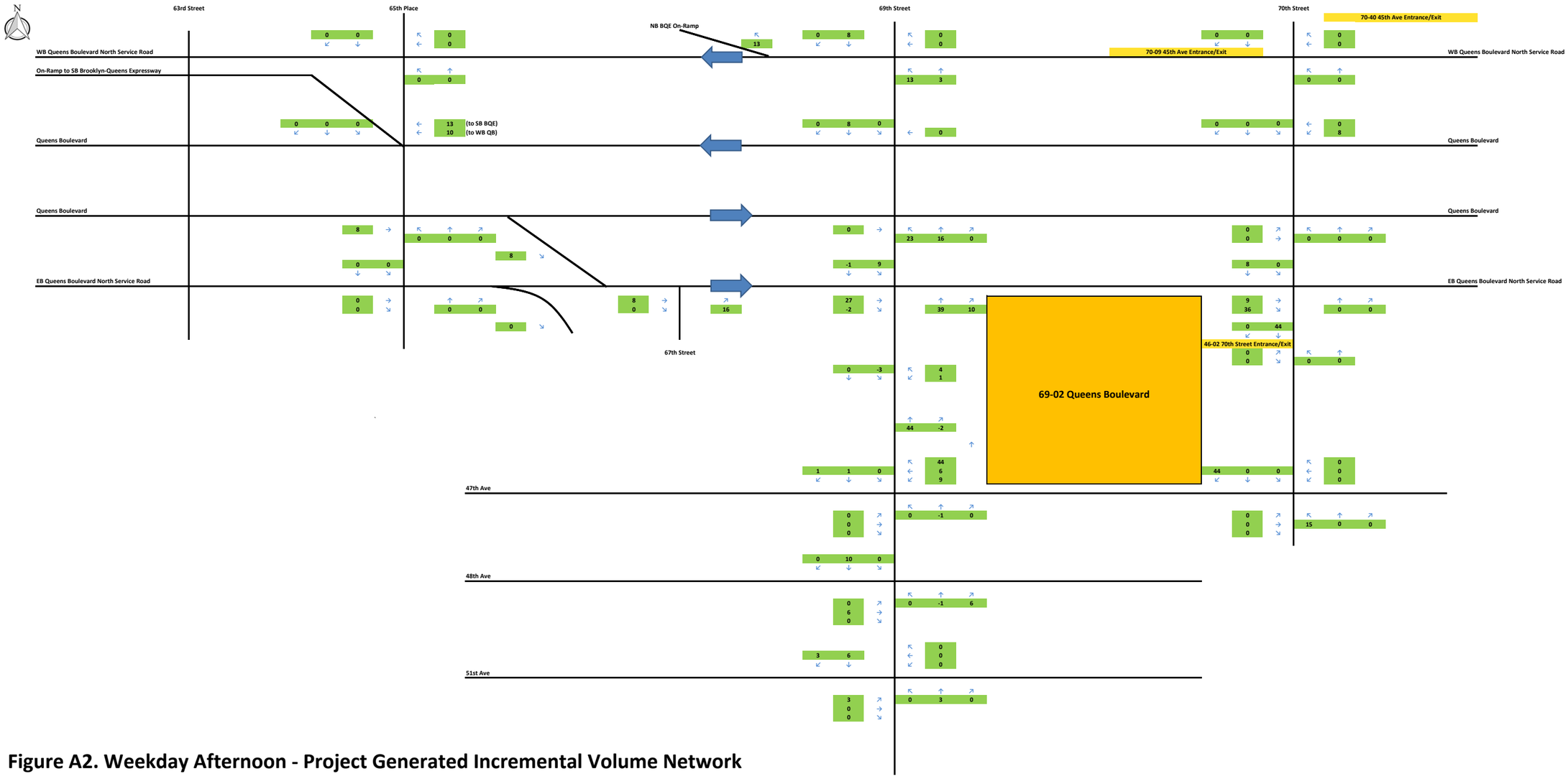


Figure A2. Weekday Afternoon - Project Generated Incremental Volume Network

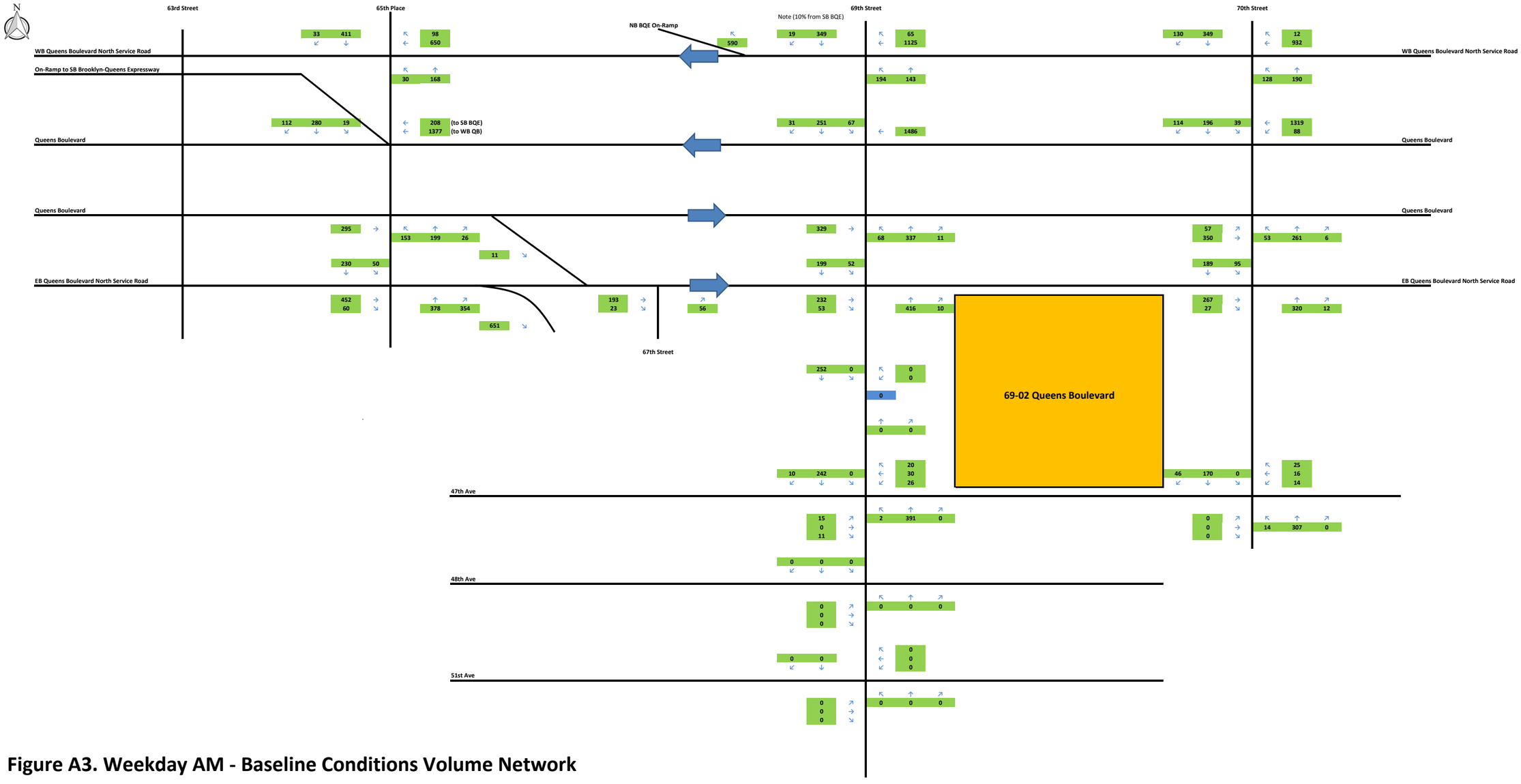


Figure A3. Weekday AM - Baseline Conditions Volume Network

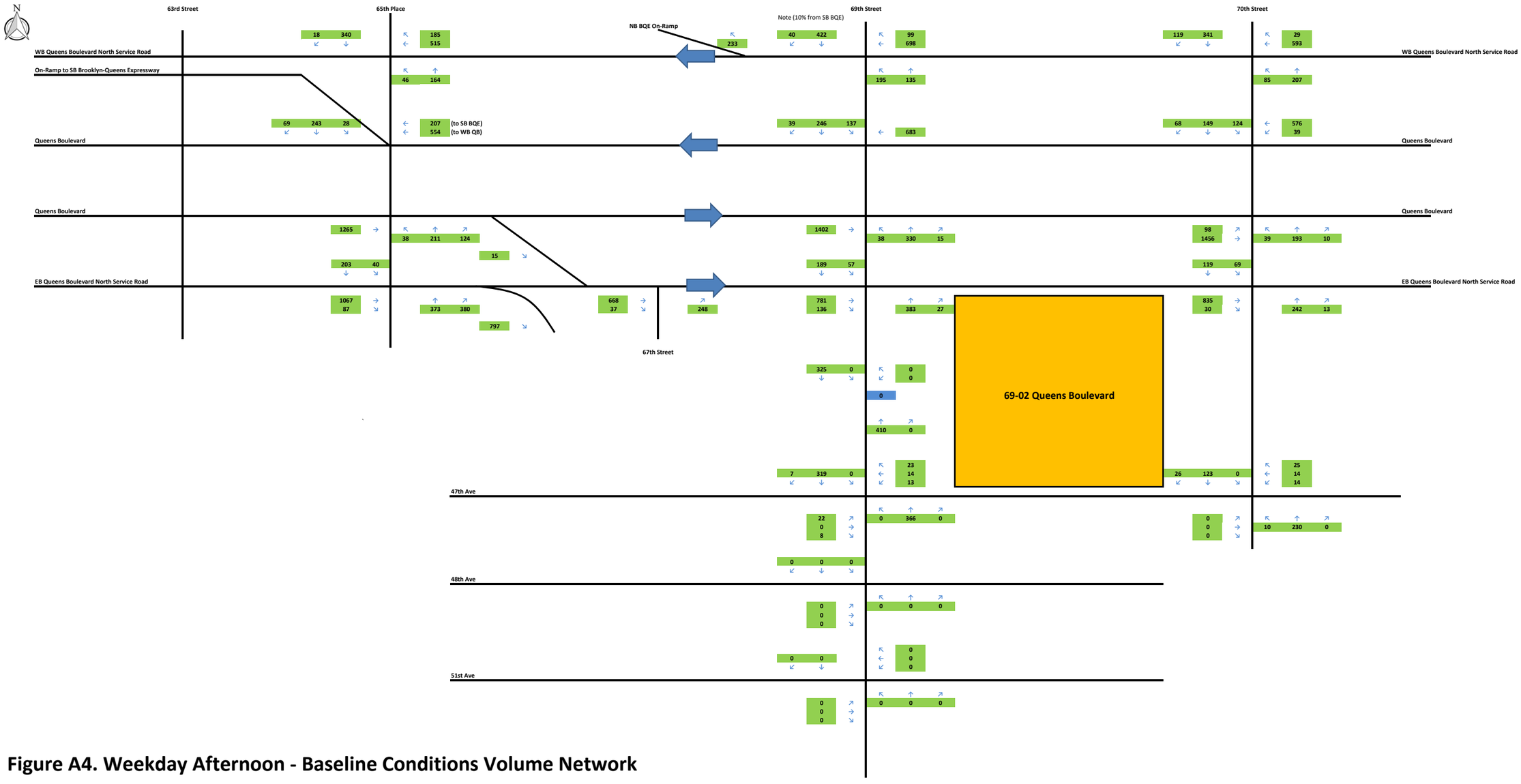


Figure A4. Weekday Afternoon - Baseline Conditions Volume Network

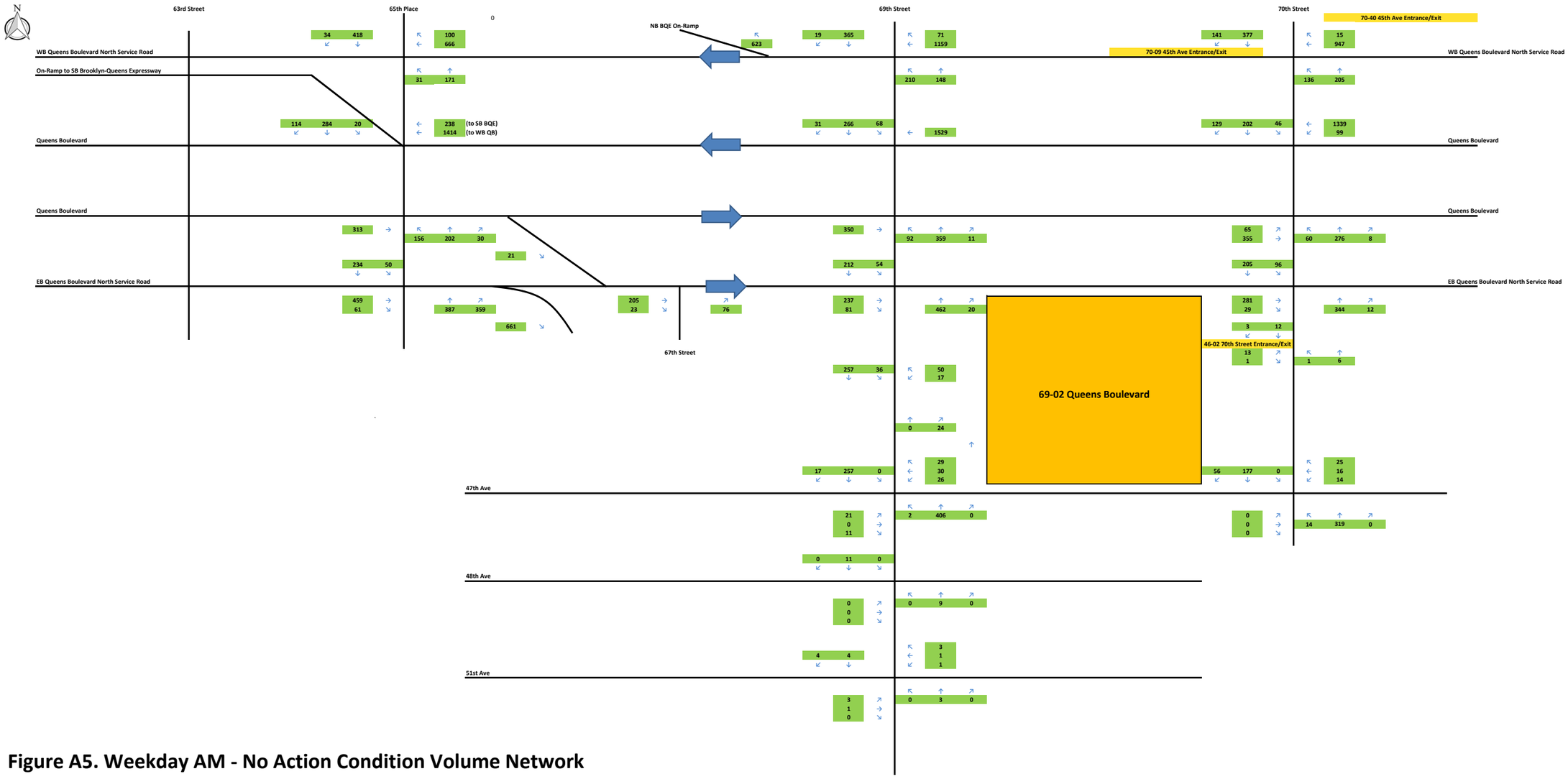


Figure A5. Weekday AM - No Action Condition Volume Network

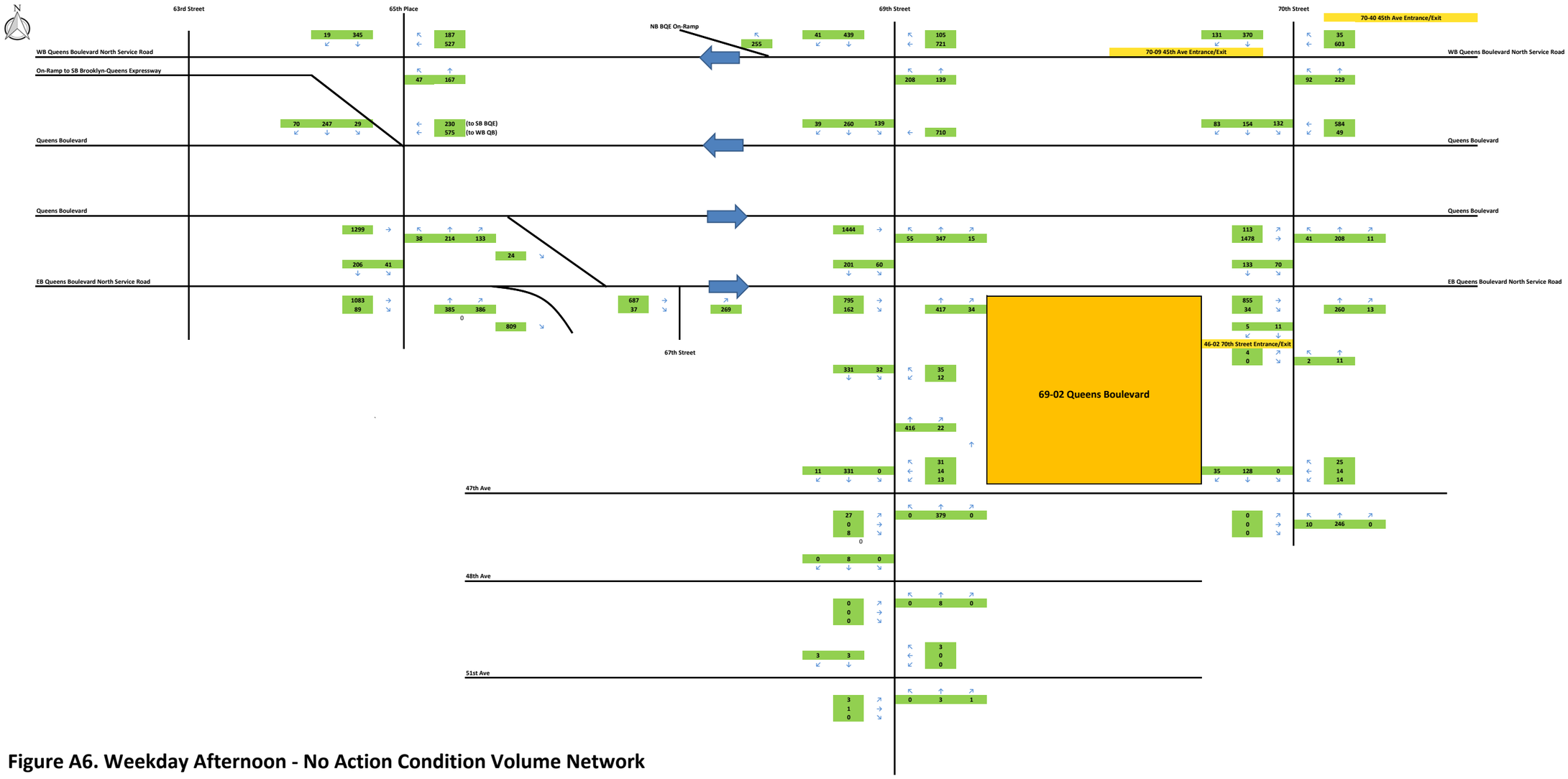


Figure A6. Weekday Afternoon - No Action Condition Volume Network

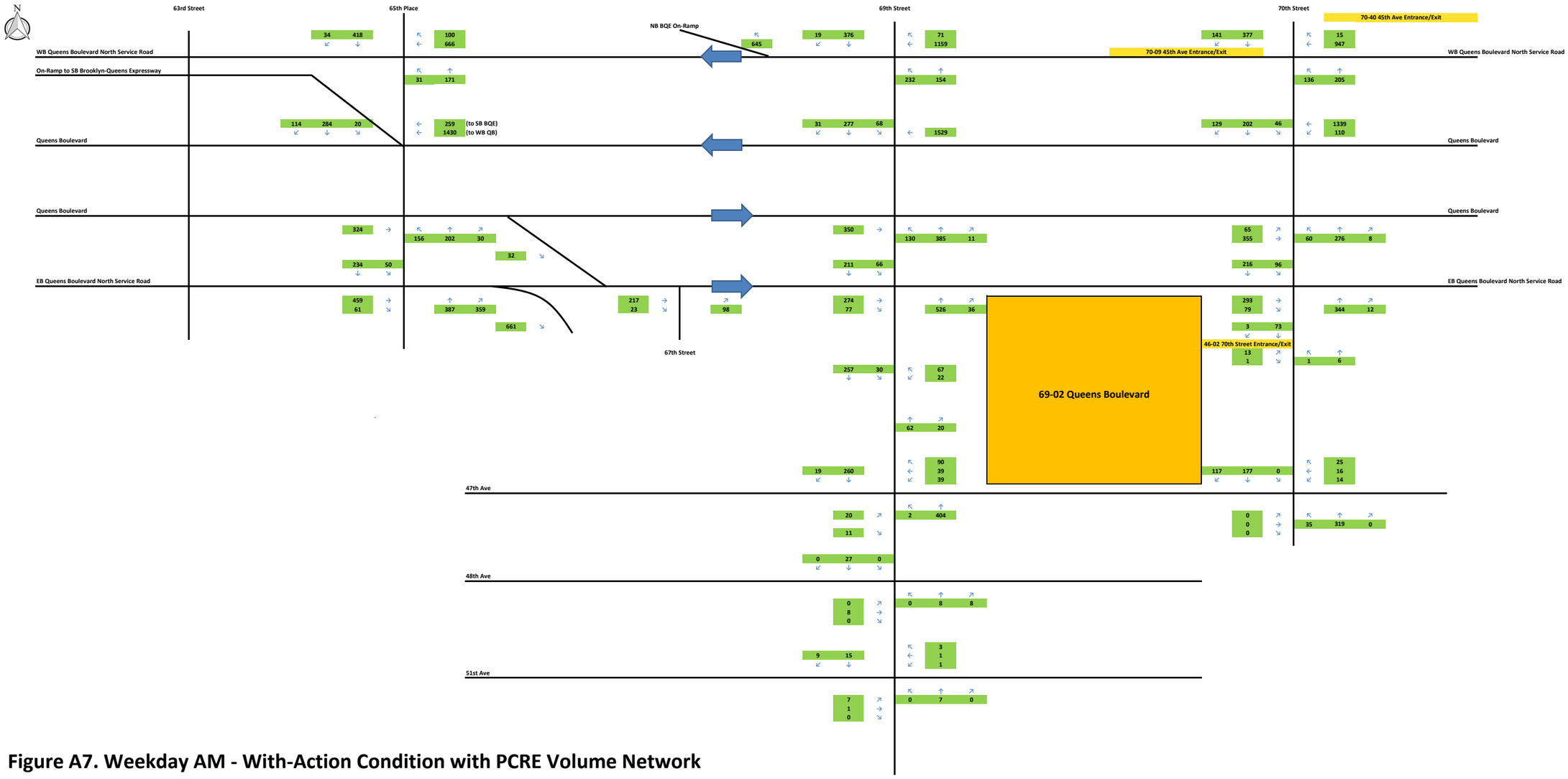


Figure A7. Weekday AM - With-Action Condition with PCRE Volume Network

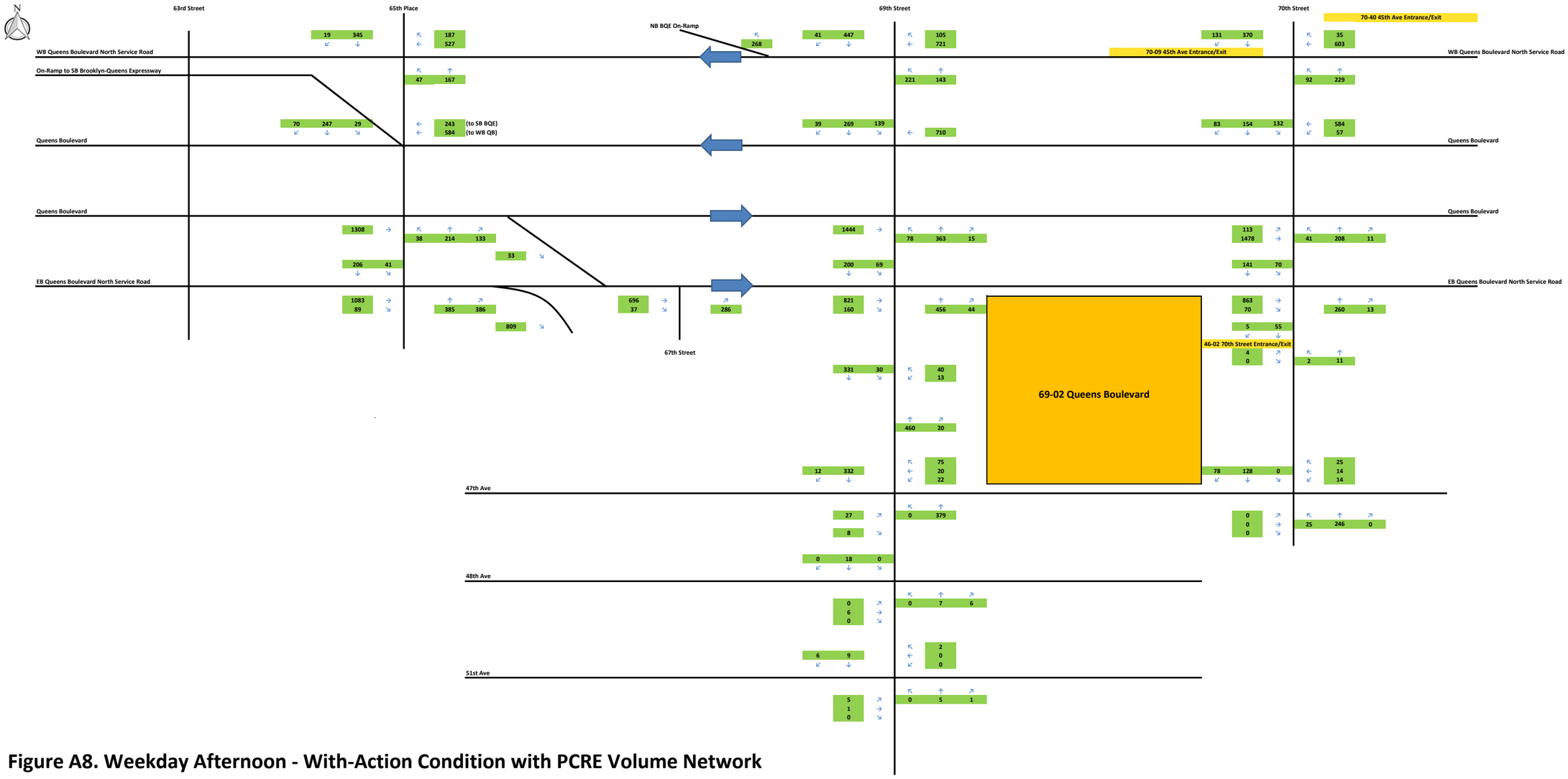


Figure A8. Weekday Afternoon - With-Action Condition with PCRE Volume Network

APPENDIX B

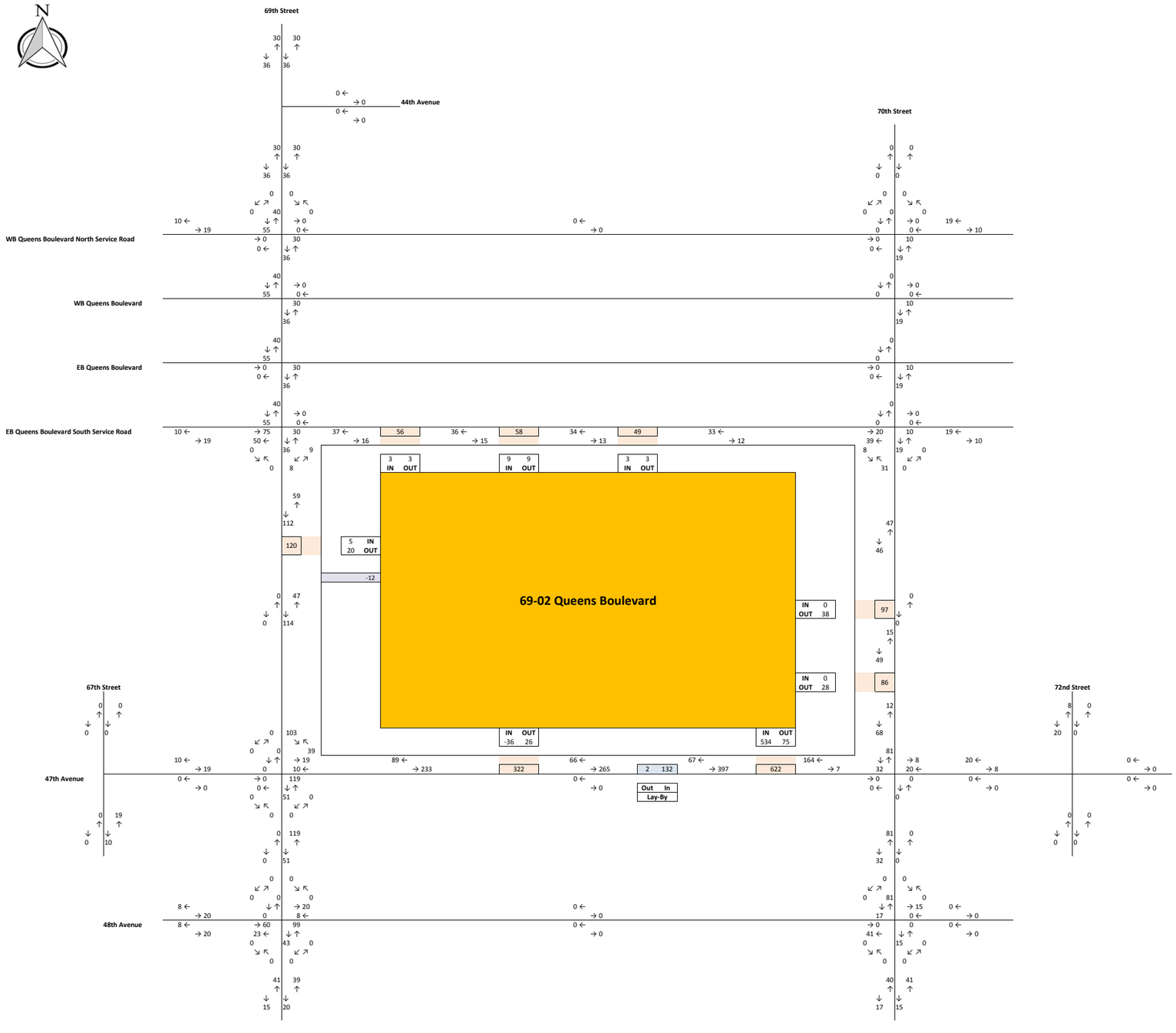


Figure B1. Weekday AM Peak Hour - Incremental Pedestrian Trips

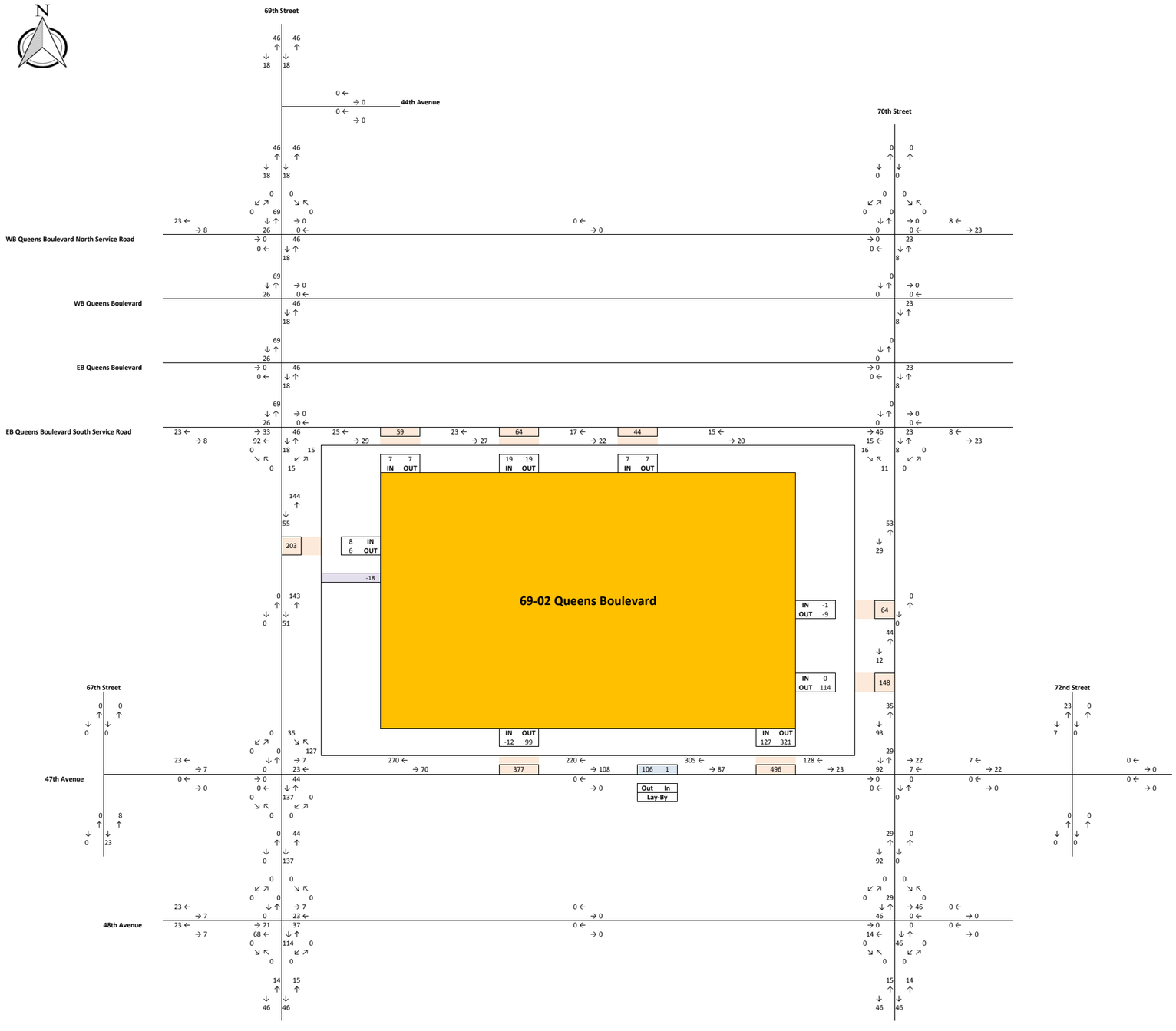


Figure B2. Weekday Afternoon Peak Hour - Incremental Pedestrian Trips

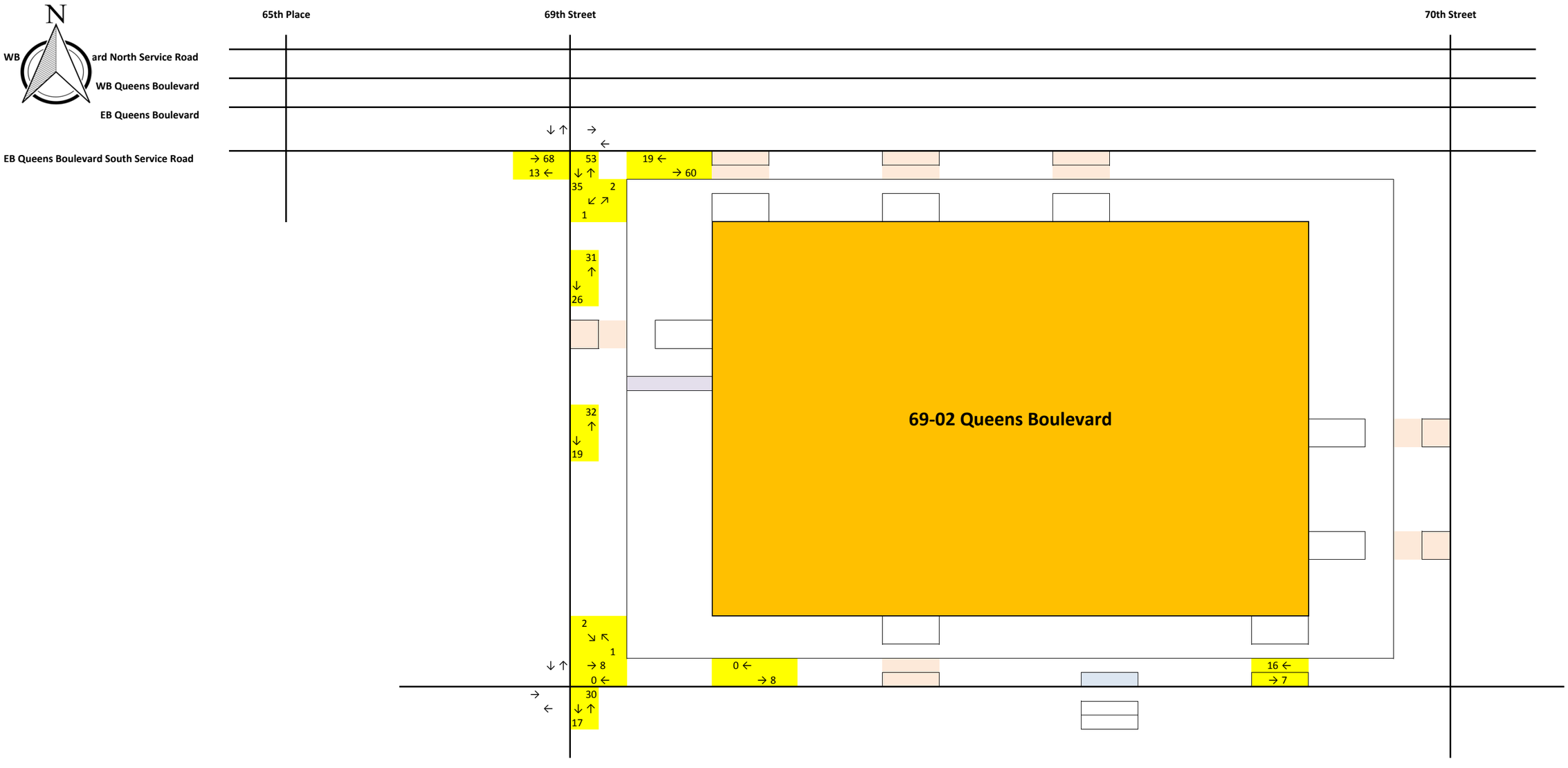


Figure B3. Weekday AM Peak Hour - Baseline Conditions Pedestrian Trips

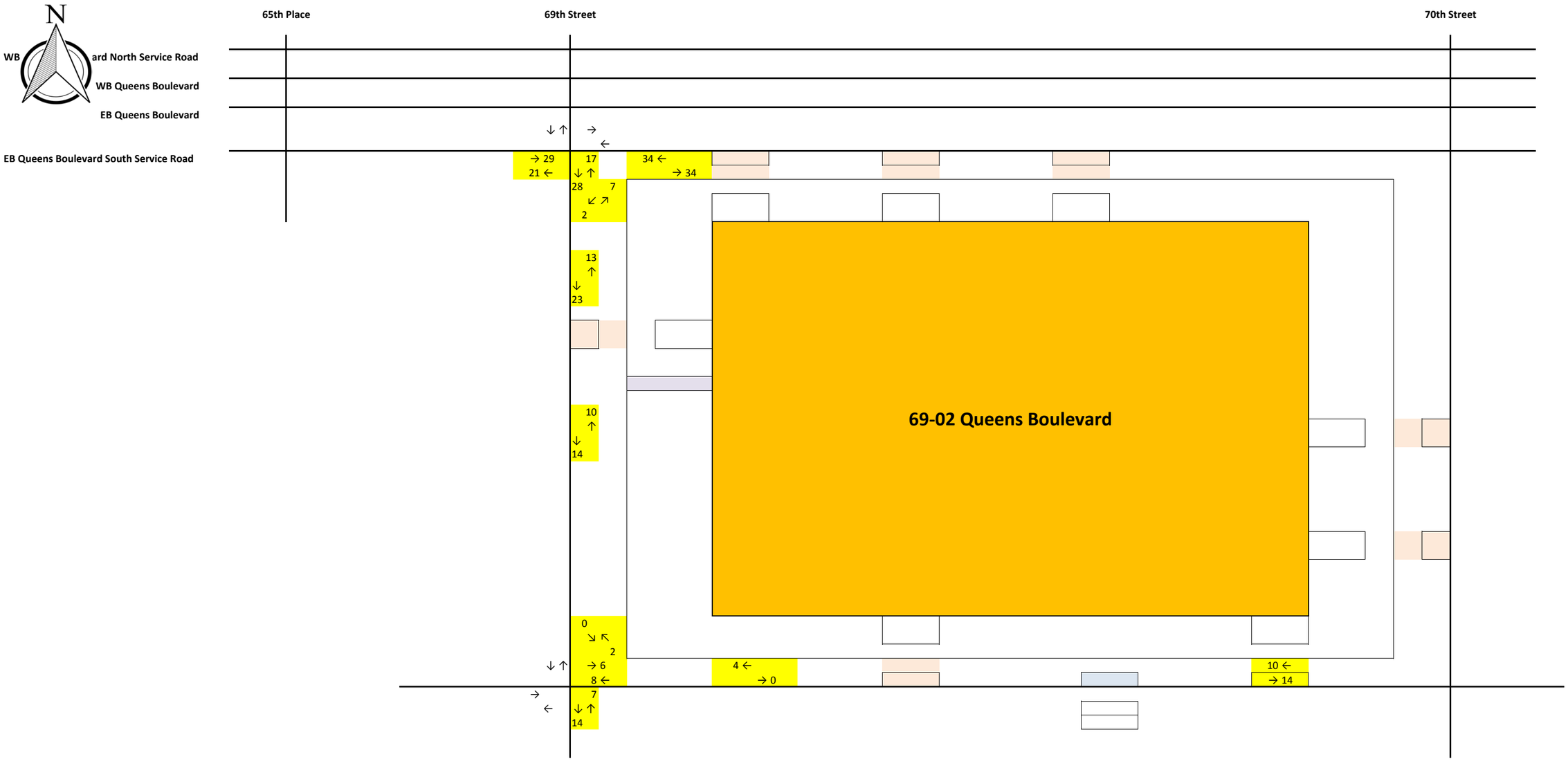


Figure B4. Weekday Afternoon Peak Hour - Baseline Conditions Pedestrian Trips

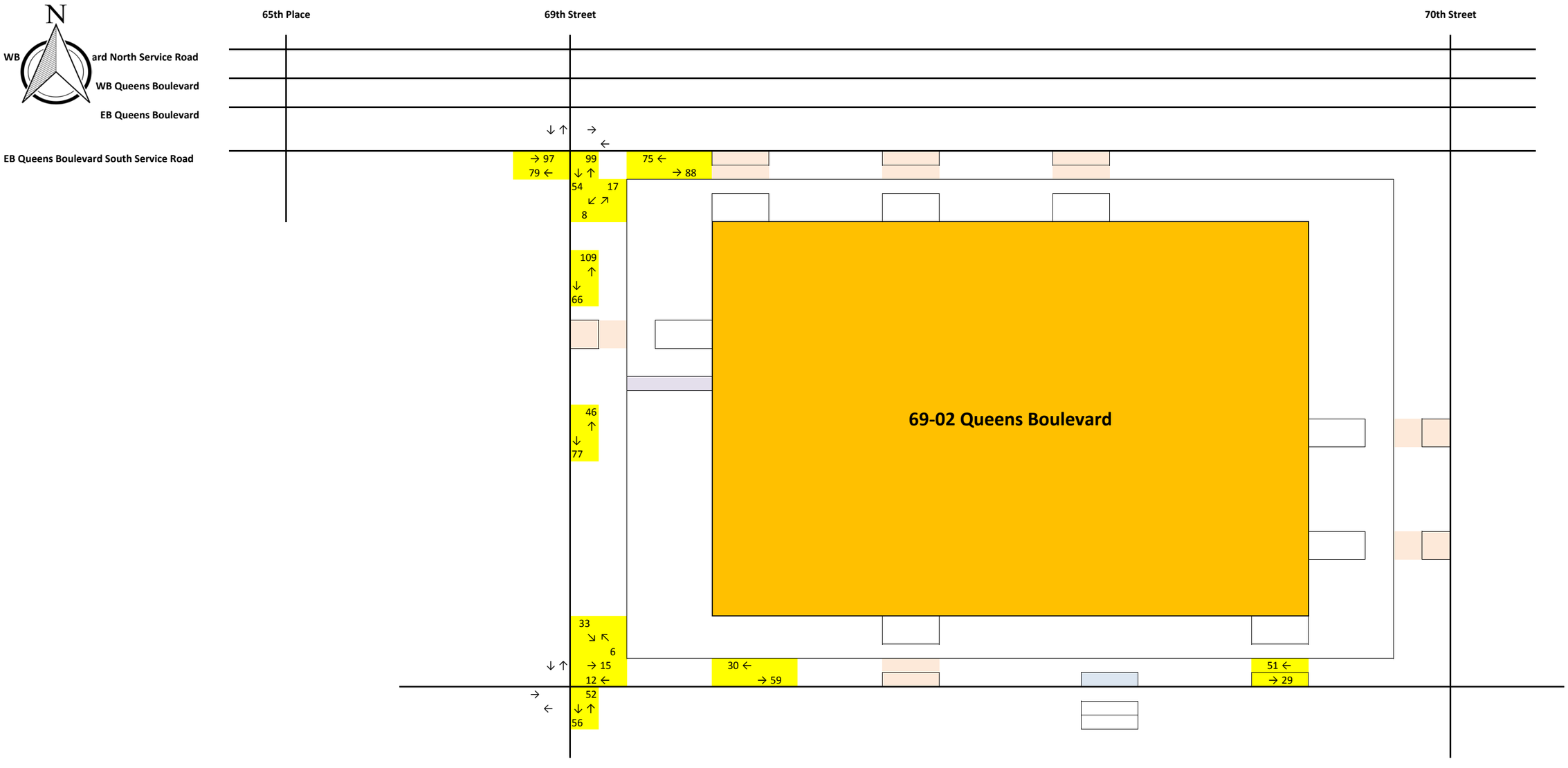


Figure B5. Weekday AM Peak Hour - No-Action Condition Pedestrian Trips

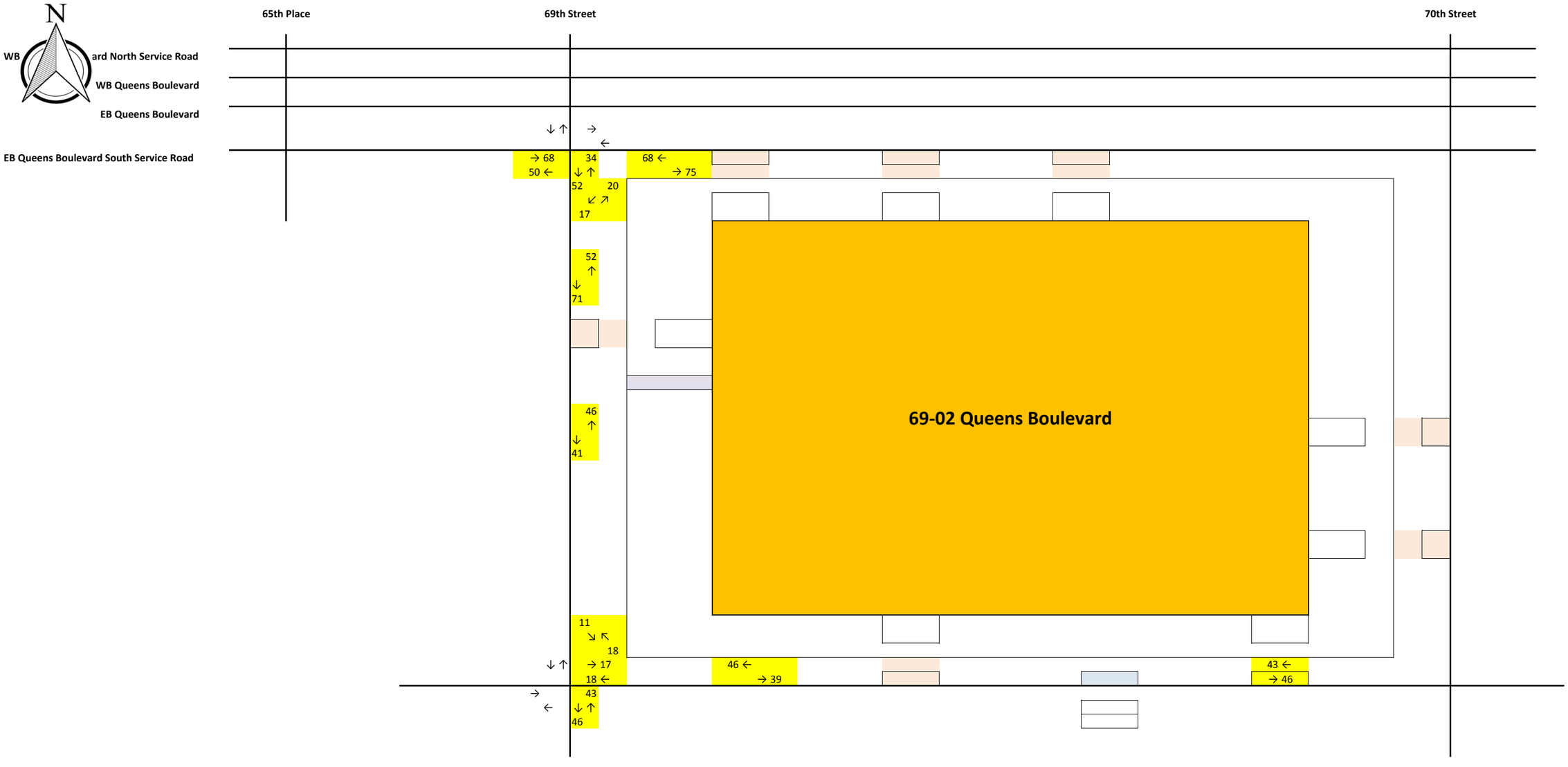


Figure B6. Weekday Afternoon Peak Hour - No-Action Condition Pedestrian Trips

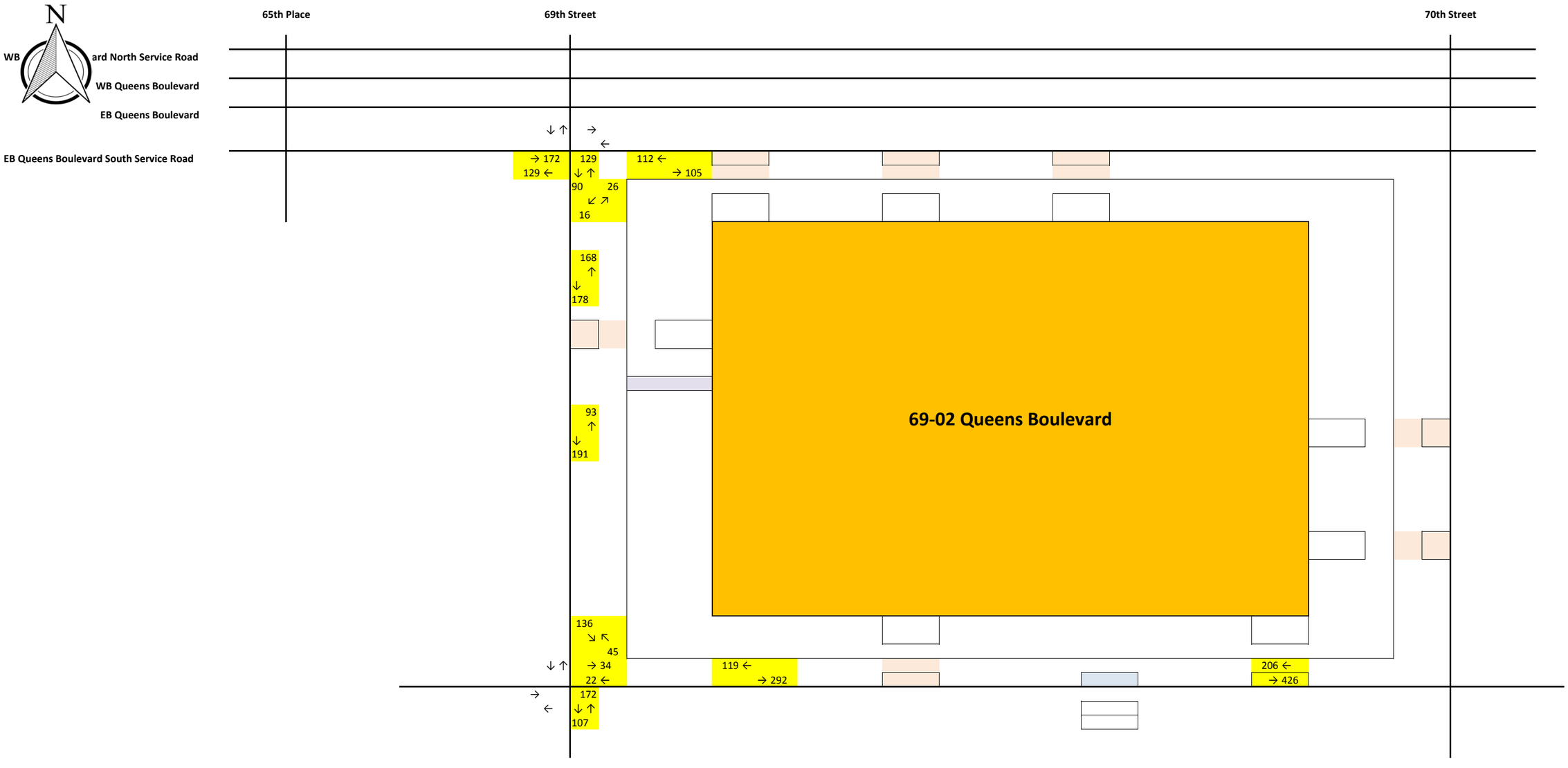


Figure B7. Weekday AM Peak Hour - With-Action Condition with PCRE Pedestrian Trips

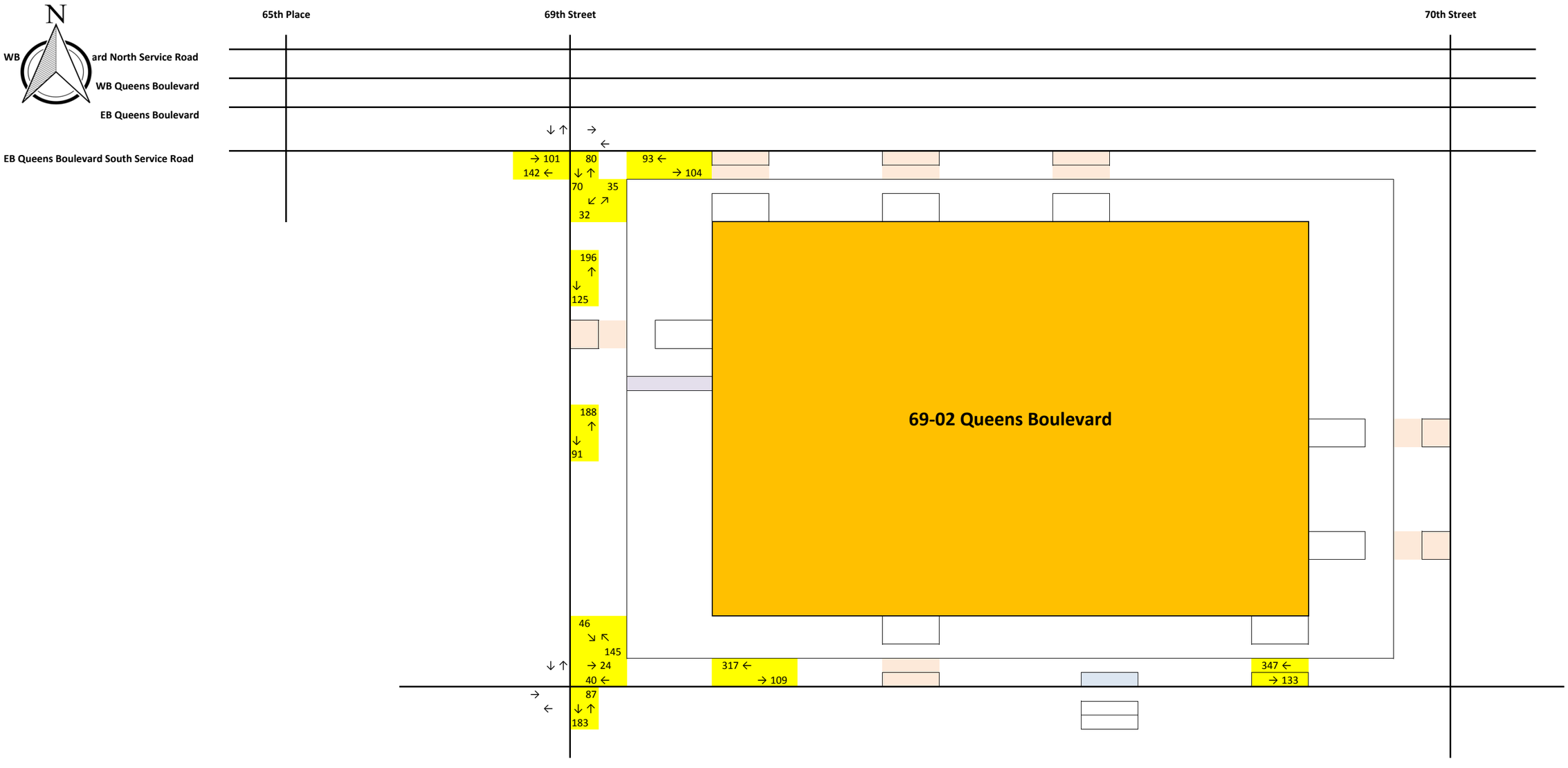


Figure B8. Weekday Afternoon Peak Hour - With-Action Condition with PCRE Pedestrian Trips

APPENDIX C

NEW YORK CITY DOT

Department of Transportation

POLLY TROTTENBERG, Commissioner

To: Olga Abinader, Acting Director
Environmental Assessment and Review Division
New York City Department of City Planning

From: Naim Rasheed, Senior Director
Traffic Engineering and Planning

Re: 69-02 Queens Boulevard, Queens
CEQR No.: 18DCP132Q

Date: October 30, 2018

The Department of City Planning (DCP), on behalf of 69-02 Queens Boulevard Woodside LLC., is proposing the development of two mixed-use buildings (493,791 gross square foot) consisting of a 476-seat SCA School, 431 dwelling units and 217 accessory parking spaces. The Build year is 2021.

Traffic and pedestrian levels of service (LOS) analyses were conducted for the weekday AM and afternoon peak hours at five intersections, one sidewalk and two corners. As a result, the following project-related improvements have been identified for the weekday AM and afternoon peak hours:

Queens Boulevard and 69th Street

- Reallocate four seconds of green time from the eastbound/westbound phase to northbound phase during the AM peak hour; and
- Reallocate three seconds of green time from the eastbound/westbound phase to northbound phase and one second of green time from eastbound/westbound to southbound phase during afternoon peak hour.

Queens Boulevard and 70th Street

- Reallocate one second of green time from the eastbound/westbound phase to eastbound/westbound left-turn phase during the AM peak hour.

The pedestrian LOS analysis determined that with the projected number of pedestrians, the sidewalk and corners would operate at an acceptable LOS in the Build year.

As part of the modification of the project to include a school, DOT will implement the proposed signal timing improvements in the vicinity of the school as part of the approved project before the school begins operation. DCP or the Applicant will inform DOT in writing, six months prior to completion and operation of the proposed project for the implementation of the proposed improvements.

Should you have any questions or need additional information, please call me at (212) 839-7710 or Aziz Mian at (212) 839-7739.

c: D/C E. Beaton, B/C N. Garcia, E. Athanailos, F. Tunnah, S. Dolgoff, T. Gurung, S. Shellooe (DCP), M. Amjadi, D. Nguyen, S. Ahmed, H. Colon, A. Mian, File

E:\TE&P\CEQR\Queens\69-02 Queens Boulevard\DOT Sign Off Letter

NYC Department of Transportation
Division of Transportation Planning & Management
55 Water Street, 6th Floor, New York, NY 10041
T:212- 839-7710 F: 212-839-7777
www.nyc.dot.gov

APPENDIX J:TECHNICAL MEMORANDUM 002

1) BACKGROUND

The purpose of Technical Memorandum 002 is to assess the environmental effects of the inclusion of Block 2432 Lot 8 into the Development Site (Block 2432, Lots 9, 21, 41, 44, and 50) and the changes to the project footprint and lot coverage that would occur as a result. Additionally, Technical Memorandum 002 will assess the change in programming compared to the development assessed in Technical Memorandum 001 and the Revised Environmental Assessment Statement (EAS).

The Applicant (QB Development Owner, LLC) proposes to develop two predominantly residential buildings on the Development Site at 69-02 Queens Boulevard in the Woodside neighborhood of the Borough of Queens, Community District 2. The site is generally bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; and 69th Street to the west. The elevated Long Island Rail Road (LIRR) tracks traverse the southwest corner of the site. To facilitate the development, the Applicant requested approval of three discretionary actions: (i) a zoning map amendment to rezone Lot 1 and parts of Lots 41, 44, and 50 on Block 2432 ("Rezoning Area") from an M1-1 zoning district to an R7X zoning district with a C2-3 commercial overlay; (ii) a Large-Scale General Development (LSGD) Special Permit to modify building height requirements on the Development Site; and (iii) a zoning text amendment to Appendix F of the New York City Zoning Resolution (ZR) to designate a Mandatory Inclusionary Housing (MIH) area on the entirety of Block 2432 (Lots 1, 8, 9, 21, 23, 39, 41, 44, and 50). Collectively, the discretionary actions ("Approved Actions") affected Block 2432, Lots 1, 8, 9, 21, 23, 39, 41, 44, and 50 ("Directly Affected Area").

The initial proposed development would include a total of 495,076 gross square feet (gsf), comprised of approximately 5,640 sf of ground floor retail use; approximately 561 dwelling units on the upper floors, of which approximately 30 percent (169 units) would be permanently affordable pursuant to Mandatory Inclusionary Housing (MIH) requirements; and approximately 33,106 gsf of at-grade parking (242 spaces) using stackers accessed via an existing curb cut on 69th Street.

The Department of City Planning (DCP) on behalf of the City Planning Commission (CPC) determined the development as described above, and contemplated in an Environmental Assessment Statement (EAS) dated April 6, 2018, would not have the potential to result in a significant adverse impact on the environment and issued a Negative Declaration on April 9, 2018. Subsequent to the issuance of the April 9 Negative Declaration, Lot 8 on Block 2432 was removed from the special permit (but remained part of the Directly Affected Area because of its continued inclusion in the designated MIH area) and a Revised EAS reflecting this change was issued on August 31, 2018 (the "August 31 EAS"). A Revised Negative Declaration was issued on September 5, 2018. The Proposed Actions were approved by the CPC on September 5, 2018 (see CPC Reports C 180265 ZMQ, N 180266 ZRQ, and C 180267 ZSQ).

The development contemplated in the August 31 EAS comprised approximately 456,330 gsf of mixed-income residential area (561 dwelling units), of which approximately 30 percent (169 dwelling units), would be allocated as permanently affordable for households with incomes at an average of 80 percent of the Area Median Income (AMI); approximately 5,907 gsf of ground floor retail space; an approximately 6,971-square-foot (0.16-acre) publicly accessible landscaped pedestrian walkway; and approximately 33,106 gsf of at-grade accessory parking (shared by both

buildings with double stackers) that would be accessed by an existing curb cut on 69th Street (264 parking spaces).

During the Uniform Land Use Review Procedure (ULURP) process, in response to concerns raised by the Queens Borough President and the local councilmember, the Applicant revised the proposed project to include a school. No additional discretionary actions are required because the Proposed Actions approved by the CPC on September 5, 2018 allow for a school as-of-right in the R7X district.

During the ULURP process, the City Council proposed modifications that would reduce building heights. While the development footprint would remain the same, the West Tower was reduced from a 17-story (181.5-foot) building to a 15-story (161.5-foot) building and the East Tower was reduced from a 14-story (151.5-foot) building to a 12-story (140-foot) building. Additionally, the development would implement minor signal timing improvements at the intersections of Queens Boulevard and 69 Street and Queens Boulevard and 70 Street.[1] To facilitate such improvements, the DCP or the Applicant will inform the New York City Department of Transportation (DOT) in writing, six (6) months prior to completion and operation of the proposed project for the implementation of the proposed improvements. In response to the City Council proposed modifications, a supplementary assessment of the potential environmental effects of the inclusion of the school and reduced building heights was performed, and is detailed in Technical Memorandum 001.

As assessed in Technical Memorandum 001, the actions approved on September 5, 2018 would facilitate the development of two buildings collectively containing approximately 493,791 gross square-foot (gsf) of mixed residential, commercial, community facility, and parking. The development assessed in Technical Memorandum 001 would comprise approximately 354,791 gsf of mixed-income residential floor area (approximately 431 dwelling units), of which approximately 30 percent (129 dwelling units), would be allocated as permanently affordable for households with incomes averaging 80 percent of the Area Median Income (AMI); approximately 12,787 gsf of commercial retail space; an approximately 79,702 gsf community facility (school); and approximately 46,511 gsf (217 parking spaces) of accessory parking using double stackers.

On October 31, 2018 the City Council approved the development assessed in Technical Memorandum 001 (henceforth referred to as the "Approved Project"). The Applicant now seeks approval of certain minor modifications to the Approved Project, approved by the City Planning Commission on September 5, 2018 and approved with modifications by the City Council on October 31, 2018. The requested minor modifications would (i) reinstate Block 2432, Lot 8, into the Development Site resulting in an increased lot area from approximately 71,696 square feet to 71,907 square feet and (ii) slightly alter the building footprints of the West and East Towers (resulting in an increase in lot coverage from 47.1 percent to 51.3 percent) so that all available floor area would be utilized.

[1] At the intersection of Queens Boulevard and 69 Street, minor signal timing improvements would be made during the weekday AM and weekday afternoon peak hours. At the intersection of Queens Boulevard and 70 Street, minor signal timing improvements would be made during the weekday AM peak hour.

The requested site plan minor modifications would facilitate the development of two buildings, collectively containing approximately 548,620 gsf of mixed residential, commercial, community facility, and parking (the "Modified Project"). The Modified Project would comprise approximately 405,848 gsf of mixed-income residential floor area (approximately 505 dwelling units), of which approximately 30 percent (152 dwelling units), would be allocated as permanently affordable for households with incomes averaging 80 percent of the AMI;[2] approximately 15,033 gsf of commercial retail space; an approximately 81,484 gsf community facility (school); and approximately 46,255 (238 parking spaces) of accessory parking using double stackers.

2) DESCRIPTION OF THE SURROUNDING AREA

As shown in Figure 1, the 400-foot radius surrounding the Directly Affected Area ("Study Area") is characterized by a mix of one- and two-family and multifamily walk-up residences to the north and southwest; commercial and industrial uses along Queens Boulevard and 47th Avenue to the southeast; and community facility uses to the south. Lots 23, 26, 34, and 37 on the northeast corner of Block 2432 are currently being developed with a nine-story residential building. A LIRR right-of-way runs adjacent to the Development Site on the southwestern corner of Block 2432 (Lot 1); Queens Boulevard runs east-west along the north side. The block to the southeast of the Development Site is occupied by Saint Mary's Church and includes the church, church rectory, a School for Language & Communication Development (an intermediate school), and SCO Family Services.

The predominant zoning classifications within the Study Area are residential zoning districts R4-1, R4, R5, and R7X. There is a C2-3 commercial overlay along Queens Boulevard and an M1-1 manufacturing zoning district to the south of the Development Site (Figure 2).

The Development Site is served by New York City Transit (NYCT) bus lines that include the Q47 running north-south on 69th Street, the Q60 and X63 running east-west on Queens Boulevard, and the Q18 running three blocks west of the Development Site on 65th Place. The northbound Q47 and eastbound Q60 stop on the northwestern corner of the Development Site. In addition, the LIRR Woodside Station is approximately 0.7 miles to the northwest of the Development Site.

[2] For the purpose of this analysis, development contemplated in the With-Action Condition would include 20 percent of the residential floor area (101 dwelling units) as affordable for families with incomes at or below 80 percent AMI.

69-02 QUEENS BOULEVARD

FIGURE 1
LAND USE MAP



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site
Study Area (400-foot radius)
Directly Affected Area

Land Use

- One & Two Family Residences
- Multifamily Walkup Residences
- Multifamily Elevator Residences
- Mixed Residential/ Commercial
- Commercial Uses
- Industrial/Manufacturing
- Transportation/Utility
- Public Facilities/Institutions
- Open Space
- Parking
- Vacant Land

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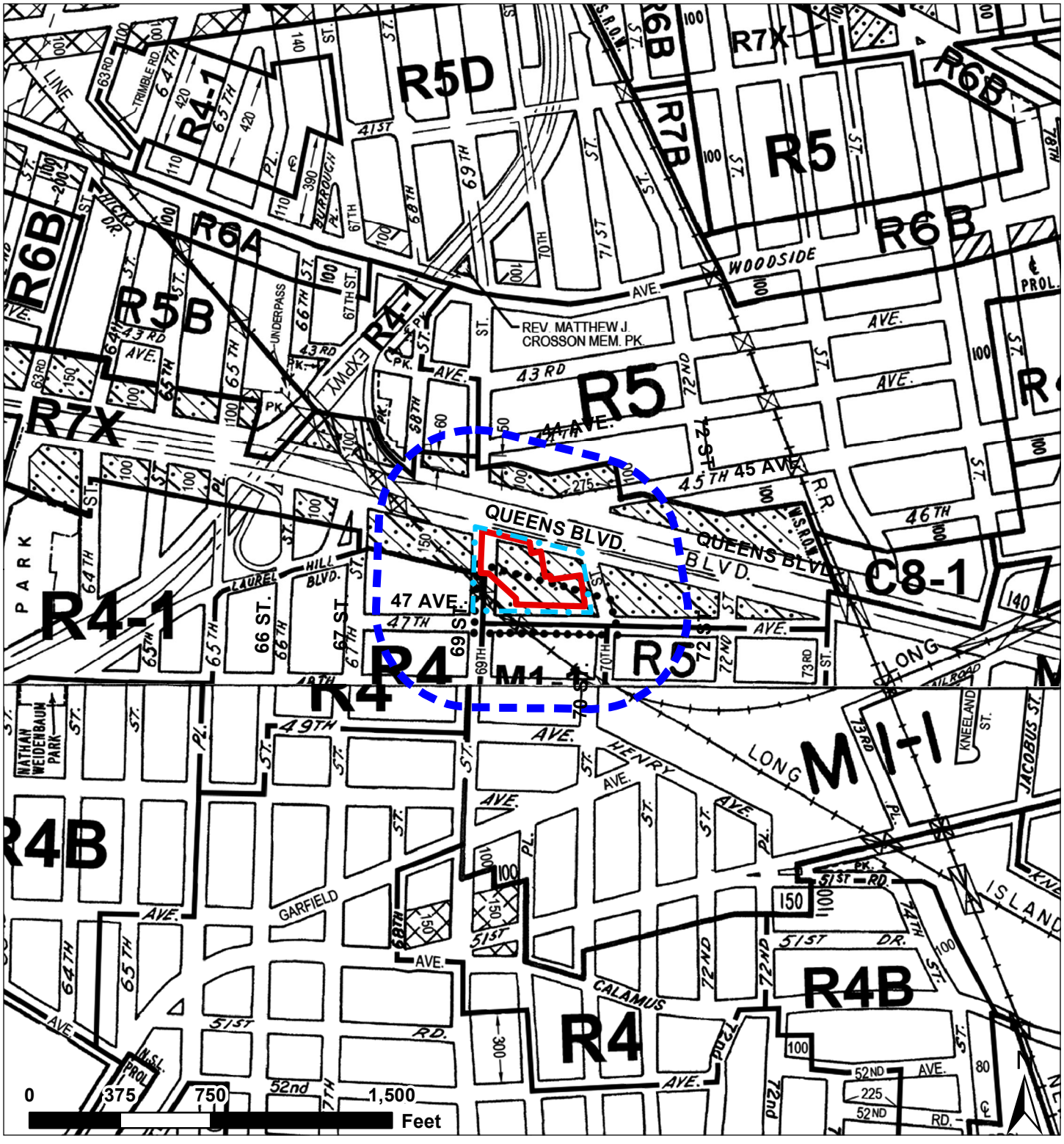
FIGURE 2

EXISTING ZONING MAP

69-02 QUEENS BOULEVARD



Map Reference: NYC Department of City Planning MapPLUTO, Zoning Boundary Shapefiles

Directly Affected Area
Study Area (400-foot radius)
Development Site
Commercial Overlay
Zoning District

WOODSIDE, QUEENS, NY

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3) DESCRIPTION OF THE DEVELOPMENT SITE

The Development Site is located at 69-02 Queens Boulevard and comprises Block 2432, Lots 8, 9, 21, 41, 44, and 50; these seven tax lots have a total area of approximately 71,907 square feet (sf) (Figure 3). The Development Site is bounded by Queens Boulevard to the north; 70th Street to the east; 47th Avenue to the south; elevated LIRR tracks to the southwest; and 69th Street to the west. Lots 8, 9 and 21 comprise the northwestern part of the site. Lots 41, 44, and 50 comprise the southeastern part of the site. As a result of the approval of the Proposed Actions on October 31, 2018, the entire Development Site is mapped with an R7X zoning district and a C2-3 commercial overlay and falls within a designated Mandatory Inclusionary Housing (MIH) area.

The northwestern part of the Development Site comprises Lots 8, 9 and 21. Lot 9 is currently vacant and was previously improved with a one-story building used as a gas station/car wash and an auto repair shop; Lots 8 and 21 are currently vacant. The southwestern part of the Development Site comprises Lots 41 and 50, which are currently vacant, and Lot 44, which is improved with a one-story warehouse building occupied by a floral decorating business.

4) MODIFIED PROJECT

The requested site plan minor modification would facilitate the construction of one 15-story (161.5-foot) mixed residential/commercial building and one 12-story (140-foot) residential building, totaling approximately 548,620 gsf (the "Modified Project"). The Modified Project would comprise approximately 405,848 gsf of mixed-income residential area (505 dwelling units), of which approximately 30 percent (152 dwelling units) would be permanently affordable for families with incomes averaging 80 percent AMI pursuant to Option 2 of the MIH program; approximately 15,033 sf of ground floor retail space; an approximately 81,484 gsf community facility (school); an approximately 7,293-square-foot (0.17-acre) publicly accessible landscaped pedestrian walkway; and approximately 46,255 gsf of accessory parking (238 parking spaces)[3] using double stackers accessed by an existing curb cut on 69th Street. Additionally, the Modified Project would implement the same minor signal timing improvements at the intersections of Queens Boulevard and 69 Street and Queens Boulevard and 70 Street as were described in Technical Memorandum 001.[4] To facilitate such improvements, the DCP or the Applicant will inform the New York City Department of Transportation (DOT) in writing, six (6) months prior to completion and operation of the proposed project for the implementation of the proposed improvements.

[3] 23 spaces for income restricted units at 15 percent of the total affordable units (152 units) (ZR §25-251 and §36-33); and 177 spaces for market-rate units at 50 percent of the total market-rate units (354 units) (ZR §36-33 and §25-23); and 38 spaces for commercial use at 1 per 400 sf of commercial floor area (ZR §36-21).

[4] At the intersection of Queens Boulevard and 69 Street, minor signal timing improvements would be made during the weekday AM and weekday afternoon peak hours. At the intersection of Queens Boulevard and 70 Street, minor signal timing improvements would be made during the weekday AM peak hour.

The 15-story (161.5-foot) mixed residential/commercial building would front Queens Boulevard ("West Tower") and would include the following:

- Approximately 243,520 gsf of residential area (314 dwelling units) on floors 2 through 15. Approximately 94 dwelling units would be permanently affordable for families with incomes averaging 80 percent AMI; and[5]

- Approximately 15,033 gsf of retail space fronting Queens Boulevard.

The 12-story (140-foot) mixed residential/community facility building would front 47th Avenue ("East Tower") and would include the following:

- Approximately 162,326 gsf of residential use (191 dwelling units) on floors 1 through 12. Approximately 57 dwelling units would be permanently affordable for families with incomes averaging 80 percent AMI.[6]

- An approximately 81,484 gsf community facility (elementary/ intermediate school).

The Modified Project would be developed in a single phase. Construction would commence as soon as the requested site plans and building permits are granted. The Modified Project would be constructed over an approximately 22 month period by the end of 2021, and the residential and commercial portions would be anticipated to be operational by the end of 2021. However, as a result of the site selection period and fit out process for the proposed elementary/intermediate school, the build year for the purposes of this assessment would be 2025.

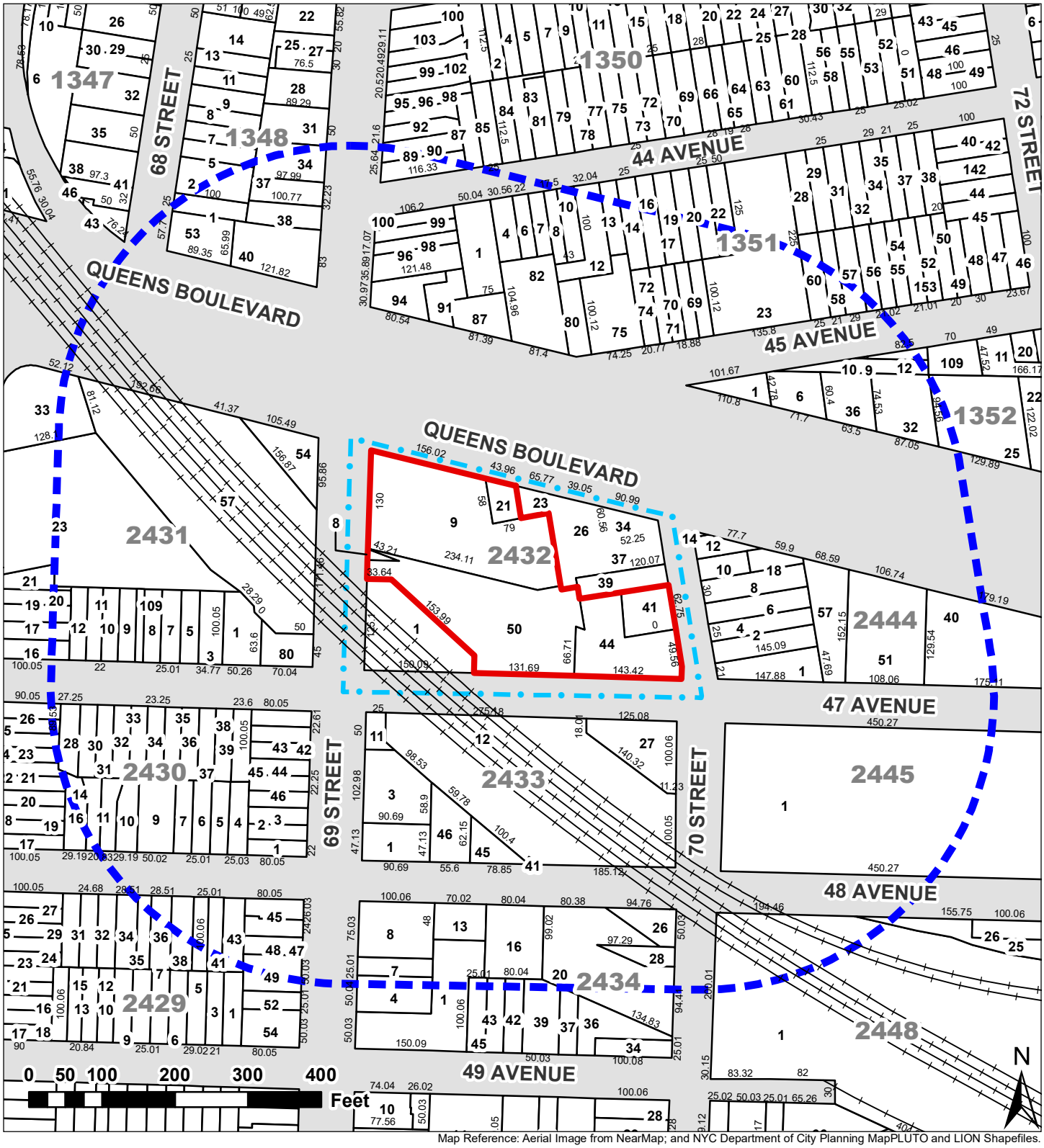
As stated in the August 31 EAS, in the No-Action Condition, Lots 9, 21, and 41 would be developed with a 12-story, approximately 311,596-gross-square-foot (gsf) mixed residential/commercial building. Development in the No-Action Condition would include (i) approximately 5,460 sf of commercial space on the ground floor fronting Queens Boulevard; (ii) approximately 226,840 gsf of residential space (289 dwelling units, of which 58 units would be affordable); and (iii) approximately 79,296 gsf of at-grade and below-grade parking (124 spaces). The No-Action Condition would also include the existing two-story, approximately 10,943-gsf community center and surface parking (25 spaces) on Lot 50. A portion of the existing one-story commercial warehouse on Lot 44 would be demolished to accommodate the development in the No-Action Condition; the remaining portion of the existing warehouse would continue to operate as a warehouse facility.

[5] For purposes of this environmental review, the Modified Project contemplates that 20 percent of the residential floor area in the West Tower (63 dwelling units) would be allocated as affordable for families with incomes at or below 80 percent AMI.

[6] For purposes of this environmental review, the Modified Project contemplates that 20 percent of the residential floor area in the East Tower (38 dwelling units) would be allocated as affordable for families with incomes at or below 80 percent AMI.

69-02 QUEENS BOULEVARD

FIGURE 3
TAX MAP



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Directly Affected Area | Development Site | 2432 Tax Block | 9 Tax Lot

WOODSIDE, QUEENS, NY

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Proposed Minor Modifications

The Modified Project would not result in a building footprint that exceeds or differs substantially from what was assessed in the August 31 EAS or Technical Memorandum 001. However, the Development Site would be expanded to include Block 2432 Lot 8. In contrast to the development contemplated in the August 31 EAS, the Modified Project would result in an increase of community facility floor area and a reduced residential component. The approximately 548,620 gsf mixed use Modified Project comprises approximately 405,848 gsf of residential floor area (505 dwelling units, of which, approximately 152 would be permanently affordable), 15,033 gsf of commercial floor area, an approximately 81,484 gsf community facility (school), and approximately 46,255 gsf of parking area (238 parking spaces).

As shown in Table 1, the Modified Project would result in a net *decrease* of approximately 50,482 gsf of residential area (56 total dwelling units, including 17 permanently affordable dwelling units), a net *increase* of approximately 9,126 gsf of commercial floor area, a net *increase* of approximately 81,484 gsf of community facility floor area (school), and a net *decrease* of approximately four (4) parking spaces.

Compared to the development in the No-Action Condition, as shown in Table 1A, the Modified Project would result in a net *increase* of approximately 179,008 gsf of residential area (216 total dwelling units, including 94 permanently affordable dwelling units), a net *increase* of approximately 873 gsf of commercial floor area, a net *increase* of approximately 70,541 gsf of community facility floor area (school), and a net *increase* of approximately 89 parking spaces.

Table 1: Difference between the development in the August 31 EAS and the Modified Project

Land Use	August 31 EAS (GSF)	Approved Project (GSF)	Modified Project (GSF)	Difference between *EAS and Modified Project*	Difference between *Approved Project and Modified Project*
Residential	456,330	354,791	405,848	**-50,482**	**+ 51,057**
Total Residential Units	561	431	505	**-56**	**+ 74**
Affordable Residential Units	*169*	*129*	*152*	***-17***	**+ 23**
Commercial	5,907	12,787	15,033	**+9,126**	**+ 2,246**
Community Facility	0	79,702	81,484	**+81,484**	**+ 1,782**
Accessory Parking	33,106 (242 spaces)	46,511 (217 spaces)	46,255 (238 spaces)	**+13,149 (-4 spaces)**	**-256 (+21 spaces)**
Building Height (feet)	West: 181.5 feet East: 151.5 feet	West: 161.5 feet East: 140 feet	West: 161.5 feet East: 140 feet	**West: -20 feet** **East: - 11.5 feet**	West: 0 feet East: 0 feet
TOTAL	**495,343**	**493,791**	**548,620**	**+53,277**	**+54,829**

Table 1A: Incremental difference between No-Action Condition and the Modified Project

Land Use	No-Action Condition	Modified Project (GSF)	No-Action Increment
Residential	226,840	405,848	**179,008**
Total Residential Units	289	505	**216**
Affordable Residential Units	*58*	*152*	***94***
Commercial	14,160	15,033	**873**
Community Facility	10,943	81,484	**+70,541**
Accessory Parking	94,296 (149 spaces)	46,255 (238 spaces)	**-48,041 (+89 spaces)**
Building Height (feet)	West: 125 feet	West: 161.5 feet East: 140 feet	**West: +36.5 feet** **East: +140 feet**
TOTAL	**346,239**	**548,620**	**+202,381**

5) ASSESSMENT OF PROPOSED MODIFICATIONS

The Modified Project would result in a *decrease* in the number of residential dwelling units (505) compared to the development contemplated in the August 31 EAS (561 dwelling units). The Modified Project would result in an *increase* in commercial and community facility floor area compared to the development contemplated in the August 31 EAS. Specifically, the Modified Project includes an increase of approximately 9,126 gsf of commercial floor area and an increase of approximately 81,484 gsf of community facility floor area (school). These additional commercial and community facility uses were not assessed in the August 31 EAS, but were assessed in Technical Memorandum 001.

Compared to the Approved Project, the Modified project would result in an *increase* of approximately 74 dwelling units, an *increase* of 2,246 gsf of commercial space, and an *increase* of 1,782 gsf of community facility area. The Modified Project would also result in an *increase* of approximately 21 parking spaces compared to the Approved Project. However, the building heights of the Modified Project would remain the same as the Approved Project.

A. LAND USE, ZONING, AND PUBLIC POLICY

The August 31 EAS and Technical Memorandum 001 did not identify significant adverse impacts related to land use, zoning or public policy.

Land Use

The Study Area is characterized by a mix of one- and two-family and multifamily elevator residences to the north and southwest; commercial and industrial uses along Queens Boulevard and the LIRR train tracks; and institutional uses on the Development Site and to the southwest. The lots adjacent to and northeast of the Development Site on Block 2432 (Lots 23, 26, 34, and 37) are currently being redeveloped with a nine-story mixed residential and commercial building. Lot 39, fronting 70th Street, is occupied by a single-family residence with no current plans for redevelopment. Community facilities within the Study Area include: (1) Little Flock Church, at the northeast corner of Block 2433, and (2) St. Mary's Church, which occupies the entire block (Block 2445) southwest of the Development Site; St. Mary's houses a church, church rectory, a School for Language & Communication Development (intermediate school), and a SCO Family Services Center.

The Modified Project would be consistent with the existing residential and community facility uses within the Study Area. The proposed ground floor commercial use along Queens Boulevard would be similar to the existing ground floor commercial uses fronting Queens Boulevard. Active ground-floor retail uses would enhance the pedestrian experience along Queens Boulevard, as would the utilization of the partially vacant Development Site. The Modified Project would establish an approximately 0.17 acre public walkway on the Development Site adjacent to the Long Island Rail Road (LIRR) embankment between 69 Street and 47 Avenue, further enhancing the pedestrian experience. The proposed community facility use (school) in the East Tower would be consistent with existing community facility uses in the Study Area.

The Modified Project would consist of a mixed-use development and publicly-accessible open space, similar to the development analyzed in the August 31 EAS. The Modified Project would include an approximately 81,484 gsf community facility (school) that was not contemplated in the August 31 EAS; however, the Approved Project contemplated an approximately 79,702 gsf community facility (school). While the area of the community facility (school) contemplated in the Approved Project was slightly smaller, in both the Modified and Approved Project, the school would contain approximately 476 seats for kindergarten through fifth grade students. Accordingly, consistent with Technical Memorandum 001, the community facility use introduced by the Modified Project would be consistent with the existing community facility uses in the Study Area. Therefore, the Modified Project would not result in any new or different significant adverse impacts to land use, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

Zoning

As described in the August 31 EAS, the approved R7X/C2-3 zoning district would be similar to the existing residential and commercial zoning districts identified within the Study Area. The Modified Project does not include any changes to the zoning approved on October 31, 2018; therefore, the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

Public Policy

As the August 31 EAS concludes, the development contemplated in the August 31 EAS would be consistent with the City's policy goals, including those outlined in *PlaNYC/OneNYC*. By creating substantial new housing opportunities for a range of incomes, including permanently affordable housing, and fostering job growth, the Modified Project would support the goals of "Housing" and "Thriving Neighborhoods" under Vision 1 of *OneNYC*. Additionally, the Modified Project would be consistent with *Housing New York: A Five-Borough, Ten-Year Plan* and would result in the development of permanently affordable housing.

The Modified Project would retain the characteristics of the development contemplated in the August 31 EAS that made it consistent with the public policies within the Study Area. The Modified Project would designate approximately 30 percent (152 dwelling units) of the proposed residential floor area as permanently affordable for households with incomes averaging 80 percent AMI pursuant to Option 2 of the MIH program. Therefore, the Modified Project is anticipated to be consistent with the goals and objectives of *OneNYC* and *Housing New York*.

Based on this information, the Modified Project would not be anticipated to result in any new adverse environmental effects to public policy, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

B. SOCIOECONOMIC CONDITIONS

The August 31 EAS concluded that the 2.25 percent increase in population from the Approved Actions (within the 0.5-mile Study Area) would not be large enough to result in indirect displacement of residents, or broadly affect real estate market conditions. Moreover, because the 2.25-percent increase in population accounts for less than five percent of the 0.5-mile Study Area population, and a percentage of the development in the With-Action Condition would be designated as permanently affordable, the Approved Actions are unlikely to increase incomes in the Study Area to the extent that it would potentially displace a vulnerable population by adversely affecting the socioeconomic condition of the neighborhood. Compared to the development contemplated in the August 31 EAS, the Modified Project would result in the addition of approximately 9,126 sf of commercial floor area. Accordingly, the addition of approximately 9,126 sf of commercial floor area is not anticipated to result in the indirect displacement of businesses.

The Modified Project would result in the development of approximately 56 fewer residential dwelling units than the development contemplated in the August 31 EAS. As a result, the Modified Project would be anticipated to result in the generation of fewer residents.

Based on this information, the Modified Project would introduce a comparatively smaller residential population and would not be anticipated to result in any new adverse environmental effects to socioeconomic conditions, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

C. COMMUNITY FACILITIES AND SERVICES

Public Schools

While the Modified Project would result in fewer dwelling units than what was assessed in the August 31 EAS, because the build year has been extended to 2025, a revised community facilities assessment is warranted.

Elementary and Intermediate Schools

As disclosed in the August 31 EAS, in the With-Action Condition, elementary schools within Sub-district 2 of Community School District (CSD) 24 (the "School Study Area") would operate with a deficit of approximately 793 seats. The increase in the elementary school utilization rate from the future No-Action to the future With-Action condition would be approximately 1.65 percent. Intermediate schools within Sub-district 2 of CSD 24 would operate with a deficit of approximately 1,793 seats. The increase in the intermediate school utilization rate between the No-Action and With-Action Condition would be approximately 0.67 percent.

The August 31 EAS concluded that development in the With-Action Condition would result in a combined[7] elementary and intermediate school utilization rate (the "collective utilization rate") of approximately 127 percent. Compared to the No-Action Condition, the development in the With-Action Condition would result in an increased elementary school utilization rate of approximately 1.65 percent, and an increased intermediate school utilization rate of approximately 0.67 percent. Although elementary and intermediate schools within the School Study Area would continue to operate at a deficit (i.e., above their designed capacity) the increase in the collective utilization rates would be less than the threshold set forth by the *CEQR Technical Manual* (five (5) percent) representing the potential to result in an adverse environmental impact.

The distinction between the development contemplated in the August 31 EAS and the Modified Project is the inclusion of an approximately 81,484 sf community facility (school). The approximately 81,484 sf community facility (school) would be developed as a School Construction Authority (SCA) school with approximately 476 seats for kindergarten through fifth grade students (Appendix B). While the area of the community facility (school) contemplated in the Approved Project was slightly smaller, in both the Modified and Approved Project, the school would contain approximately 476 seats for kindergarten through fifth grade students.

According to the *CEQR Technical Manual,* only public schools operated by the DOE are included in the analysis, while private, parochial, and charter schools within the School Study Area are excluded. As a result, for the purposes of this assessment, only the proposed SCA school will be analyzed.

Existing Conditions

New York City elementary schools (P.S.) serve pre-kindergarten (Pre-K) or kindergarten through grade 5; intermediate schools (I.S.) serve grades 6 through 8; elementary/intermediate schools (P.S./I.S.) serve Pre-K or kindergarten through grade 8; and intermediate/high schools (I.S./H.S.)

[7] The average of the utilization rates of elementary and intermediate schools.

serve grades 6 through 12. In addition to these four categories, there are temporary buildings, transportable classroom units (TCUs), mini-schools, and annexes; however, because these are not permanent, based on *CEQR Technical Manual* guidance, their capacity is excluded.

The seven elementary schools within the School Study Area have an existing utilization rate of approximately 119 percent, with a deficit of approximately 812 seats. The seven intermediate schools within the School Study Area have an existing utilization rate of approximately 106 percent, with a deficit of approximately 316 seats.

No-Action Condition

As shown in Table 2, elementary schools in the School Study Area would operate beyond capacity, while intermediate schools in the School Study Area would operate within capacity in the 2025 No-Action Condition. Elementary schools would have a deficit of approximately 751 seats (118 percent utilization), and intermediate schools would have a surplus of approximately 933 seats (85 percent utilization). Based on this information, schools in the No-Action Condition would have a collective utilization rate of approximately 102 percent.

Table 2: 2025 Estimated No-Action Public Elementary and Intermediate School: Enrollment, Capacity, and Utilization in the School Study Area

	Projected 2025 Enrollment	**Students Introduced by No-Action Residential Development**	**Total No-Action Enrollment**	**Capacity**	**Available Seats**	**Utilization (%)**
Elementary Schools						
CSD 24, Sub-District 2	4,783	201	4,984	4,233	-751	118%
Intermediate Schools						
CSD 24, Sub-District 2	5,375	88	5,463	6,396	933	85%
Notes: *Primary and intermediate school enrollment and projections determined using the CEQR App.*						

With-Action Condition

The Modified Project would introduce approximately 505 residential dwelling units to the Study Area. Based on public school student multipliers provided by the SCA, the Modified Project would generate an additional 50 elementary school students and 22 intermediate school students compared to the development in the No-Action Condition by the 2025 build year. The Modified Project would provide approximately 476 seats for kindergarten through fifth grade students.

As shown in Table 3, elementary schools in the School Study Area would operate beyond capacity, while intermediate schools in the School Study Area would operate within capacity in the 2025 Modified Project Condition. Elementary schools would have a deficit of approximately 325 seats (107 percent utilization), and intermediate schools would have a surplus of approximately 911 seats (86 percent utilization). Based on this information, schools in the Modified Project Condition would have a collective utilization rate of approximately 96 percent.

Table 3: 2025 Estimated Modified Project Public Elementary and Intermediate School: Enrollment, Capacity, and Utilization in the School Study Area

	Projected 2025 Enrollment	Students Generated by Project[1]	Projected Enrollment with Project	Projected Capacity	Available Seats	Utilization (%) with Project	Change in Utilization (%) from No-Action
Elementary Schools							
CSD 24, Sub-District 2	4,984	50	5,034	4,709	-325	107%	-10.84%
Intermediate Schools							
CSD 24, Sub-District 2	5,463	22	5,485	6,396	911	86%	0.35%

Notes:
Primary and intermediate school enrollment and projections determined using the CEQR App.
[1] Projected number of students generated from new housing in Queens CSD 24 determined using multipliers provided by the SCA.

Due to the addition of a school in the Modified Project, the elementary school utilization rate would *decrease* by approximately 10.84 percent and the intermediate school utilization rate would *increase* by approximately 0.35 percent, compared to the No-Action Condition. Neither the project analyzed in the August 31 EAS, nor the Approved Project analyzed in Technical Memorandum 001, resulted in a significant adverse impact on schools.

Conclusion

Based on the assessment above, the Modified Project would result in a collective utilization rate of approximately 96 percent. The decrease in the collective utilization rate is comprised of a -10.84 percent decrease in primary school utilization and a 0.35 percent increase in intermediate school utilization. Although elementary schools within the School Study Area would continue to operate beyond their designed capacity, the Modified Project would alleviate capacity restraints. Intermediate schools in the School Study Area would operate with a surplus of approximately 911 seats in the Modified Project Condition.

Based on this information, the Modified Project is not anticipated to result in any adverse environmental effects to community facilities and services, therefore no further analysis is warranted, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.[8]

[8] The development contemplated in the August 31 EAS would not have been anticipated to result in adverse environmental effects to community facilities and services.

Child Care Centers

The Modified Project would result in a decrease of approximately 17 low- to moderate-income units beyond what was assessed in the August 31 EAS. Based on this information, the number of project-generated children under the age of six who would be eligible for publicly funded child care programs would not increase beyond what was assessed in the August 31 EAS. Therefore, the Modified Project would not result in any new adverse environmental effects to publicly funded child care programs, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

Libraries

As concluded in the August 31 EAS, the development contemplated in the August 31 EAS would not result in a five percent or more increase in the ratio of residential units to library branches – the CEQR threshold for determining impacts to library services. The Modified Project would result in the development of approximately 56 fewer residential dwelling units than the development contemplated in the August 31 EAS. Therefore, the Modified Project would generate fewer residents than the project contemplated in the August 31 EAS, and thus, would not meet the threshold for library analysis.

Based on this information, the Modified Project would not result in any adverse environmental effects to libraries, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

Health Care Facilities

The Modified Project would not result in the development of a sizeable neighborhood where none existed before; thus, the Modified Project does not meet the threshold for analysis of health care facilities. Therefore, the Modified Project would not result in any new adverse environmental effects to health care facilities, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

Police Services

The Modified Project would neither result in direct effects on the physical operations of, or access to and from, any New York Police Department (NYPD) precinct house, nor result in a sizeable new neighborhood where none existed before. An assessment of the Modified Project as it relates to police services is not required. The Modified Project would not result in any new adverse environmental effects to police services; therefore, the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

Fire Protection

The Modified Project would neither result in direct effects on the physical operations of, or access to and from, any Fire Department of the City of New York (FDNY) facility, nor result in a sizeable new neighborhood where none existed before; therefore, a detailed assessment of fire protection services is not required. The Modified Project would not result in any new adverse environmental effects to fire protection services, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

D. OPEN SPACE

As described in the August 31 EAS, no open space resources would be physically displaced as a result of the Approved Actions. Similarly, the Modified Project would not physically displace any open space resources. Therefore, no analysis of the Modified Project's direct effects on open space is warranted.

The 0.5-mile Open Space Study Area contains approximately 5.45 acres of publicly accessible open space. Open space resources within the Open Space Study Area include Big Bush Park (2.5 acres), Hart Playground (0.90 acres), Nathan Weidenbaum Park (0.73 acres), Spargo Park (0.38 acres), Sherry Park/Dog Run (0.35 acres), Winfield Plaza (0.09 acres), Pigeon Plaza (0.07 acres), Crosson Green (0.06 acres), Latham Park (0.03 acres), and P.S. 12 Playground (0.34 acres). According to the 2012-2016 American Community Survey (ACS) 5-Year Population Estimates, the Open Space Study Area (Census Tracts 243, 245, 247, 263, 265, 483, 485, 489, and 493.01) has a residential population of approximately 37,536. The existing Open Space Ratio (OSR) in the Study Area is approximately 0.145.

No-Action Condition

The development in the No-Action Condition is anticipated to result in the development of approximately 289 dwelling units (approximately 1,055 residents). Additionally, three No-Build development projects have been identified within the Open Space Study Area. Collectively, the No-Build developments are anticipated to generate approximately 692 residents. Combined, the population for the Open Space Study Area in the No-Action Condition would be approximately 39,283. The development in the No-Action Condition would result in an OSR of approximately 0.139.

Modified Project

The Modified Project would result in a net increase of approximately 216 dwelling units (approximately 788 residents), and a net increase of approximately 223 workers. According to the *CEQR Technical Manual*, in areas that are neither well-served nor underserved by open space, the threshold for assessment is more than 200 residents or 500 employees.

The Modified Project would result in the development of an approximately 0.17 acre public walkway will be constructed adjacent to the Long Island Rail Road (LIRR) embankment at the southwest corner of the Development Site. The new 0.17 acre publicly accessible walkway would result in approximately 5.62 acres of open space within a 0.5-mile radius of the Development Site. Based on the total residential population (including the Modified Project) of 40,071, the Modified Project would result in an OSR of approximately 0.140 acres per 1,000 residents. The OSR in the With-Action Condition would represent an approximately 1.04 percent increase compared to the OSR in the No-Action Condition (Table 4).

Table 4: Residential Open Space Calculations

Existing Residential Population within 0.5 miles	37,536
Total Open Space within 0.5 miles (*acres*)	5.45
Existing OSR[1] (*Acres per 1,000 residents*)	0.145
No-Action Residential Population within 0.5 miles	39,283
Total No-Action Open Space within 0.5 miles (*acres*)	5.45
No-Action OSR (*Acres per 1,000 residents*)	0.139
With-Action Residential Population within 0.5 miles	40,071
Modified Project With-Action Open Space within 0.5 miles (*acres*)	5.62
Modified Project With-Action OSR (*Acres per 1,000 residents*)	0.140
Change in Open Space Ratio (%)	**+1.04%**

***Source*:** *Existing Population Sources: 2012-2016 American Community Survey (ACS) 5-Year Estimates for Selected Census Tract(s): 243, 245, 247, 263, 265, 483, 485, 489 and 493.01); Existing open space acreage derived from NYC DCP MapPluto Data*.

Notes:

[1] Open Space Ratio (OSR) = Acres of Open Space per 1,000 residents.

As described above, neither the development in the No-Action Condition nor the development of the Modified Project would result in the physical loss or alteration of a public open space; therefore, an analysis of direct open space effects was not warranted.

While the OSR including the residential population generated from the Modified Project would remain below the planning goals defined in the *CEQR Technical Manual*, the Modified Project results in a 1.04 percent increase in OSR compared to the development in the No-Action Condition.

The deficiency of open space resources within the Open Space Study Area is partly offset by six publicly accessible parks within a quarter mile of the Study Area boundary totaling approximately 14.78 acres. In addition, the Modified Project would include rooftop open space area that would be accessible to the development's residents and workers. It is anticipated that this privately-held open space would offset a portion of any potential project-generated indirect effects on the existing open space in the Study Area.

Based on the analysis of project-generated *indirect effects* on open space above, the Modified Project would not be anticipated to result in any potentially significant adverse impacts to open space; therefore, no further analysis is necessary. The Modified Project would not result in any new or different significant adverse impacts to open space, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

E. SHADOWS

The Modified Project would consist of two buildings: (i) a 15-story (161.5-foot) mixed residential and commercial building in the northwestern part of the Development Site, with frontage along Queens Boulevard and 69th Street ("West Tower"), and (ii) a 12-story (140-foot) mixed residential and community facility building in the southeastern part of the Development Site, with frontage along 47th Avenue and 70th Street ("East Tower"). The Modified Project building height is reduced compared to the development contemplated in the August 31 EAS.

As disclosed in the August 31 EAS, projected shadows cast from the proposed development would fall on one sunlight sensitive resource on the December 21 analysis day. However, the anticipated shadow would be short in duration; would cover relatively small areas of the resource; would occur during times of low utilization; would occur during the season when existing vegetation is dead or dormant; and would not pose a threat to habitats supported by the resource. Therefore, there would be no significant adverse impacts to the public's enjoyment of these resources, their usability, or the viability of their vegetation.

The Modified Project would not result in any changes in building heights or changes in footprints that differ substantially from what was assessed in the August 31 EAS. Based on this information, the Modified Project would not result in any new or different significant adverse shadow impacts, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

F. HISTORIC RESOURCES

According to the New York City Zoning and Land Use (ZoLa) database and State Historic Preservation Office (SHPO) Cultural Resource Information System (CRIS), the Development Site and 400-foot Study Area do not contain any State or National Register (S/NR)-listed or Landmarks Preservation Commission (LPC)-designated historic resources. As described in the August 31 EAS, an environmental review request was sent to LPC for comment on the architectural and archaeological significance of the Development Site and 400-foot Study Area. In its determination letter dated August 15, 2017, LPC confirmed that there are no architectural or archaeological sensitive resources within the Project Area. All correspondence with LPC is included in Appendix E of the August 31 EAS, "Agency Correspondence."

The Modified Project would be developed on the same development site that was contemplated in the August 31 EAS. Based on this information, the Modified Project would not result in any new or different significant adverse shadow impacts, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

G. URBAN DESIGN

As described in the August 31 EAS, the development contemplated in the August 31 EAS would conform to the lot line and provide a continuous street wall along all perimeter street frontages. The development would further provide streetscape improvements including street trees and pedestrian features along segments of the four perimeter streets, as well as a landscaped walkway between the LIRR right-of-way and the Development Site. In addition, the proposed ground floor commercial uses would activate a segment of Queens Boulevard with enhanced pedestrian activity.

The Modified Project would not result in a building height or footprint that exceeds or differs substantially from what was assessed in the August 31 EAS. Based on this information, the Modified Project would not result in any new of different significant adverse impacts related to urban design; the conclusions of the August 31 EAS and/or Technical Memorandum would not change.

H. HAZARDOUS MATERIALS

The two Phase I Environmental Site Assessments (ESAs) assessed in the August 31 EAS identified potential subsurface recognized environmental conditions (RECs) at the Development Site relating to historical uses. The January 2016 Phase I ESA report (Lots 9 and 21) identified six (6) RECs: (i) the presence of VOCs in soil vapor beneath the site; (ii) the presence of active Spill No. 9304343; (iii) the presence of historic fill material; (iv) the presence of an (E) Designation (E-163) for Hazardous Materials; (v) the anticipated presence of lead-based peeling paint; and (vi) the presence of a suspected UST. The July 2017 Phase I ESA report (Lots 41, 44, and 50) identified three (3) RECs: (i) the potential presence of undocumented USTs; (ii) the manufacturing and industrial uses that previously occurred on site; and (iii) the presence of active Spill No. 9304343 (Lot 9).

Given these conditions, as part of the Approved Actions, an (E) designation for hazardous materials was mapped on the Development Site. By placing an (E) designation on the Development Site, where confirmed RECs have been identified relating to soil, groundwater and soil vapor, the potential for an adverse impact to human health and the environment resulting from the Modified Project would be avoided (C180265ZMQ). With the (E) designation, OER would provide the regulatory oversight of any required supplemental sampling; including environmental scope, investigation, and potential remedial action during this process. Building permits are not issued by the DOB without prior OER approval of the investigation and/or remediation pursuant to the provisions of §11-15 of the Zoning Resolution (Environmental Requirements).

The Development Site for the Modified Project would include Block 2432, Lot 8, which was not contemplated in the August 31 EAS. However, due to its size and location within the Development Site, the Applicant would voluntarily adhere to and apply the same remedies described above as part of the (E) Designation on the Development Site to Block 2432, Lot 8 as part of the Modified Project. With the inclusion of the remedial measures described above, which involve the mapped (E) designation (E-472) on the Development Site, the Modified Project would not result in any significant adverse impacts related to hazardous materials.

Therefore, the Modified Project would not result in any new or different significant adverse impacts to hazardous materials, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

I. TRANSPORTATION

Introduction

The objective of the transportation analysis is to determine whether the proposed could result in significant adverse impacts on traffic operations; public transportation facilities and services; pedestrian elements and flow; roadway user safety (pedestrians, bicyclists, and vehicles); and on-and-off-street parking. The transportation assessment presented herein provides a discussion of planning assumptions and subsequent analyses for the "Modified Project" contemplated for the proposed 69-02 Queens Boulevard development.

Analysis Framework

The Modified Project analyzed herein is different than the development analyzed in the 2018 69-02 Queens Boulevard EAS (CEQR No. 18DCP132Q). Primary differences include the introduction of a 500-seat school and a decrease in the number of residential units. To assess the potential effects of this change, a RWCDS was developed for both the Future without the Proposed Actions (the "No-Action Condition") and the Future with the Proposed Actions with Project Components Related to the Environment (the "With-Action Condition with PCRE") for the 2025 Build Year. The incremental difference between the No-Action and With-Action with PCRE Conditions serves as the basis for assessing the potential transportation impacts of the Proposed Actions. The development program used for the transportation analyses in the No-Action and With-Action with PCRE Conditions is discussed in detail in the subsequent sections.

No-Action Condition

The No-Action Condition would include a new 12-story building that would occupy part of the Project Site currently zoned R7X/C2-3 (Lots 9, 21, p/o 41, p/o 44 and p/o 50). Lot 9 is currently vacant; and the existing one-story restaurant on Lot 21 and the two-story commercial building on Lot 41 would be demolished. Only a small portion of the existing one-story commercial warehouse building on Lot 44 would be demolished to accommodate the new building. The existing community facility building, along with the accessory parking lot on Lot 50 would remain unchanged. The new development in the No-Action Condition would be built pursuant to the underlying R7X/C2-3 zoning regulations with the As-of-Right (AOR) residential FAR bonus under the Inclusionary Housing (IH) program.

Pursuant to the underlying zoning regulations, Lots 9, 21, p/o 41, p/o 44, and p/o 50 would be developed with a 12-story, approximately 311,596 gross square feet (gsf), mixed-use building. As shown in Table 5, the proposed building would include: (i) approximately 5,460 gsf of local retail space on the ground floor fronting Queens Boulevard; (ii) approximately 226,840 gsf of residential space (289 dwelling units, of which 58 units would be affordable); and (iii) approximately 79,296 gsf of accessory parking spaces (124 spaces). The No-Action Condition would also include the existing one-story, approximately 8,700 gsf warehouse building on Lot 44, and the existing two-story, approximately 10,943 gsf community center and surface parking (25 spaces) on Lot 50. The detailed building program in the No-Action Condition is shown in Table 5.

Table 5: Development Program - No-Action Condition

Component	Local Retail (gsf)	Community Facility (gsf)	Residential Units (785 gsf/unit)	Parking Spaces
(New AOR Uses) Lot 9, 21, 41	5,460	0	289	124
(Existing Uses) Lot 44, 50	8,700	10,943	0	25
TOTAL	**14,160**	**10,943**	**289**	**149**

In addition, there are three potential No-Action developments proposed within the Study Area by 2025, including:

1. A 9-story, mixed-use building at 46-02 70th Street (Block 2432, Lot 23);
2. A 7-story, mixed-use building at 70-09 45th Avenue (Block 1351, Lot 75); and
3. A 9-story, mixed-use building at 70-40 45th Avenue (Block 1352, Lots 9, 10, 25 & 32).

With-Action Condition with PCRE

The Modified Project would include a 15-story mixed-use building on Lots 8, 9, and 21; and a 12-story residential building on Lots 41, 44, and 50 totaling approximately 548,620 gsf. These two buildings combined would provide 505 dwelling units, approximately 15,033 gsf of ground floor and cellar local retail space, and an approximately 81,484 gsf (476-seat) K-5 public school. In addition, the buildings would provide approximately 238 parking spaces for residential, local retail, and school uses in a shared podium. The detailed building program in the With-Action Condition with PCRE is shown in Table 6.

Table 6: Development Program - With-Action Condition with PCRE

Component	School			Local Retail (gsf)	Community Facility (gsf)	Residential Units (785 gsf/unit)	Parking Spaces
	Students	Staff	Parents				
West Tower (Lots 9, 21)	0	0	0	15,033	0	314	-
East Tower (Lots 41,44, 50)	476	42	164	0	0	191	
TOTAL	**476**	**42**	**164**	**15,033**	**0**	**505**	**238**

Analysis Methodology

For transportation analysis purposes, the incremental difference in trip generation between the No-Action and With-Action with PCRE Conditions provides the basis for assessing transportation conditions in the Study Area. As shown in Table 7, compared to the No-Action Condition, under the Modified Project, there would be a net increase of 216 dwelling units; a net increase of 873 gsf of local retail space; a net increase of 476 seats of school space; a net decrease of 10,943 gsf of community facility space; and a net increase of 89 parking spaces.

Table 7: Comparison of Development Program (No-Action vs. With-Action Conditions with PCRE Condition)

Component	School			Local Retail (gsf)	Community Facility (gsf)	Residential Units (785 gsf/unit)	Parking Spaces
	Students	Staff	Parents				
No-Action Condition	0	0	0	14,160	10,943	289	149
With-Action Condition with PCRE	476	42	164	15,033	0	505	238
INCREMENT	**476**	**42**	**164**	**873**	**-10,943**	**216**	**89**

Transportation Screening Assessment

The *2014 City Environmental Quality Review Technical Manual* ("*CEQR Technical Manual*") describes a two-tier screening process to determine if quantified analyses of transportation conditions are warranted. The preliminary assessment begins with a trip generation analysis (Level 1) to estimate person and vehicle trips that would result from the Proposed Actions. According to the CEQR Technical Manual, a project that is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips does not warrant further quantified analyses. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Actions could generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses of transportation conditions may be warranted.

Level 1 (Trip Generation) Screening Assessment

A Level 1 trip generation analysis was conducted for the weekday AM, midday, afternoon, PM, and Saturday midday peak hours. Trip estimates were developed for the school, commercial/local retail, community facility, and residential components for the No-Action and With-Action with PCRE Conditions. Travel Demand Factors for school, local retail, community facility, and residential uses are summarized in Table 8. These factors are based on information provided in the *CEQR Technical Manual*, *2011-2015 U.S. Census Bureau's American Community Survey (ACS) database*, *10th Edition of the ITE Trip Generation Manual* (*"ITE Trip Generation Manual"*), and other approved transportation studies with similar characteristics, such as the *2016 East New York Rezoning Proposal FEIS* (CEQR No. 15DCP102K), *2017 600 East 156th Street EAS* (CEQR No. 17DCP025X), *2008 Hunter's Point South Rezoning and Related Actions FEIS* (CEQR No. 08DME006Q), *2013 Willets Point Development Plan FSEIS* (CEQR No. 07DME014Q) and the *PS 35Q Elementary School Addition EA Study* provided by NYCDOT.

School Facility

Students

A daily person trip generation rate of 2 trips per student for weekday was obtained from the *CEQR Technical Manual*. Students are assumed to be evenly distributed among all grades, and a 10 percent absentee rate is applied to the trip generation estimates, as per the *PS 35Q Elementary School Addition*

EA Study. Temporal distributions of 47.2 percent for the weekday AM peak hour and 49.3 percent for the weekday afternoon peak hour for the school students were obtained from the *PS 35Q Elementary School Addition EA Study*. It was assumed that the remaining 3.5 percent would occur during the weekday PM peak hour, while weekday midday and Saturday midday will have no student trip activity. Directional distributions and modal splits for the weekday AM, midday, afternoon, PM, and Saturday peak hours were also obtained from the *PS 35Q Elementary School Addition EA Study*. Vehicle occupancies of 1.44 per auto, 1.30 per taxi, and 6.25 per school bus during the weekday AM, midday, PM and Saturday midday peak hours; and, 1.55 per auto, 1.30 per taxi, and 7.25 per school bus for the weekday afternoon peak hour were also obtained from the *PS 35Q Elementary School Addition EA Study*.

Staff

Daily person trip generation rates of 2 trips per staff for weekday and 0 trips per staff for Saturday were obtained from the CEQR Technical Manual. A student-to-staff ratio of 11.4 students per staff member was obtained from the *East New York Rezoning Proposal FEIS*. Temporal distributions of 40.3 percent for the weekday AM peak hour and 28.4 percent for the weekday afternoon peak hour were obtained from the *PS 35Q Elementary School Addition EA Study*. It was assumed that the remaining 31.3 percent would occur during the weekday PM peak hour, while weekday midday and Saturday midday will have no school staff trip activity. Directional distributions for the weekday AM, midday, afternoon, PM, and Saturday peak hours were also obtained from the *PS 35Q Elementary School Addition EA Study*. Modal splits of 91 percent by auto, 0 percent by taxi, 0 percent by subway, 3 percent by bus, 3 percent by other (bike), and 3 percent by walk only were also obtained from the *PS 35Q Elementary School Addition EA Study*. Vehicle occupancies of 1.20 per auto and 1.20 per taxi were obtained from the *PS 35Q Elementary School Addition EA Study*.

Parents

Daily person trip generation rates of 4 trips per parent for weekday and 0 trips per parent for Saturday were obtained from the *CEQR Technical Manual*. A student-to-parent ratio of 1 student per 0.51 parents was applied to all student trips via the walk-only transportation mode, as per the *PS 35Q Elementary School Addition EA Study*. Temporal distributions of 23.6 percent for the weekday AM peak hour and 24.7 percent for the weekday afternoon peak hour were obtained from the *PS 35Q Elementary School Addition EA Study*. It was assumed that the remaining 1.7 percent would occur during the weekday PM peak hour, while weekday midday and Saturday midday will have no parent trip activity. Directional distributions for the weekday AM, midday, afternoon, PM, and Saturday peak hours were obtained from the *East New York Rezoning Proposal FEIS*.

Deliveries

For truck deliveries, daily trip generation rates and temporal and directional distributions were obtained from the *East New York Rezoning Proposal FEIS*. It was assumed that the weekday afternoon temporal for delivery trips would be similar to that of the weekday midday.

Local Retail

Daily person trip generation rates of 205 person trips per 1,000 square feet for weekday and 240 person trips per 1,000 square feet for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 3 percent for the weekday AM peak hour, 19 percent for the weekday midday peak hour, 10 percent for the weekday PM peak hour, and 10 percent for the Saturday peak hour were also obtained from the *CEQR Technical Manual*. A temporal distribution of 6.2 percent was assumed for the weekday afternoon peak hour. Directional distributions for the weekday AM, midday, PM, and Saturday peak hours were obtained from the *Hunter's Point South Rezoning and Related Actions FEIS*. Modal splits of 29 percent by auto, 0 percent by taxi, 0 percent by subway, 7 percent by bus, and 64 percent by walk; and vehicle occupancies of 1.50 per auto and 1.60 per taxi were obtained from NYCDOT's "*Queens - Non-Transit Zone*" modal choice study.

For truck deliveries, daily trip generation rates of 0.35 trips per 1,000 square feet for weekday and 0.04 trips per 1,000 square feet for Saturday were obtained from the *CEQR Technical Manual*. Temporal and directional distribution factors for truck deliveries were also obtained from the *CEQR Technical Manual*. It was assumed that the weekday afternoon temporal for delivery trips would be similar to that of the weekday midday.

Community Facility

Based on guidance provided by NYCDOT and NYCDCP, daily person trip generation rates of 103.4 person trips per 1,000 square feet for weekday and 62.1 person trips per 1,000 square feet for Saturday were obtained from the *NYCDOT Trip Generation and Mode Choice Survey - Medical Office*. Temporal distributions were also obtained from the *NYCDOT Trip Generation and Mode Choice Survey - Medical Office*. A temporal split of 7.1 percent was assumed for the weekday afternoon peak hour. Directional distributions for the weekday AM, midday, PM, and Saturday peak hours were obtained from the *Hunter's Point South Rezoning and Related Actions FEIS*. Modal splits of 66.3 percent by auto, 0 percent by taxi, 13.6 percent by subway, 10.0 percent by bus, 0.2 percent by bike and 10.0 percent by walk only were obtained from the U.S. Census Bureau's *Reverse Journey to Work, 2006-2010 Census Transportation Planning Products*. Vehicle occupancies of 1.77 per auto and 1.40 per taxi were based on *69-02 Queens Boulevard EAS* (CEQR No. 18DCP132Q).

For truck deliveries, weekday trip generation rate of 0.38 trips per 1,000 square feet was obtained from the *Willets Point Development Plan FSEIS* and the Saturday trip generation rate of 0.04 trips per 1,000 square feet for Saturday was obtained from the *CEQR Technical Manual*, Local Retail land use. Temporal and directional distribution factors were obtained from the *Hunter's Point South Rezoning and Related Actions FEIS* and the *CEQR Technical Manual*. It was assumed that the weekday afternoon temporal distribution would be similar to the weekday midday conditions for the delivery trips.

Residential

Daily person trip generation rates of 8.075 person trips per dwelling unit for weekday and 9.60 person trips per dwelling unit for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 10 percent for the weekday AM peak hour, 5 percent for the weekday midday peak hour, 11 percent for the weekday PM peak hour, and 8 percent for the Saturday peak hour were also obtained from the *CEQR Technical Manual*. A temporal distribution of 5.2 percent for

the weekday afternoon peak hour was obtained from the *600 East 156th Street EAS*. Directional distributions for the weekday AM, midday, afternoon, PM, and Saturday peak hours were obtained from the *600 East 156th Street EAS*. Modal splits of 30.7 percent by auto, 0.6 percent by taxi, 55.2 percent by subway, 7.7 percent by bus, 1.1 percent by bike, and 4.8 percent by walk were obtained from the U.S. Census Bureau's *Journey to Work, 2011-2015 American Community Survey*. Vehicle occupancies of 1.15 per auto and 1.17 per taxi were obtained from the U.S. Census Bureau's Journey to Work, *2011-2015 American Community Survey* and from the *Hunter's Point South Rezoning and Related Actions FEIS*, respectively.

For truck deliveries, daily trip generation rates of 0.06 trips per dwelling unit for weekday and 0.02 trips per dwelling unit for Saturday were obtained from the *CEQR Technical Manual*. Temporal and directional distribution factors for truck deliveries were obtained from the *CEQR Technical Manual* and from the *Willets Point Development Plan FSEIS*. It was assumed that the weekday afternoon temporal for delivery trips would be similar to that of the weekday midday.

Net Incremental Trips

Trip generation forecasts for the No-Action Condition, With-Action Condition with PCRE and Net Incremental are summarized in Tables 9, 10 and 11, respectively. As summarized in Table 11, the Modified Project would generate approximately 814, -26, 791, 186 and 78 net incremental person trips, and 200, -22, 134, 51 and 9 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively.

Table 8: Transportation Planning Assumptions and Demand Estimates

Use	(15) School Students					(10) School Staff					(9) School Parents						Community Facility					Local Retail					Residential				
Total Daily Person Trip	(1)(7)					(1)					(1)(7)						(4)					(1)					(1)				
	Weekday				**SAT**	**Weekday**				**SAT**	**Weekday**				**SAT**		**Weekday**				**SAT**	**Weekday**				**SAT**	**Weekday**				**SAT**
	2.0				0.0	2.0				0.0	4.0				0.0		103.4				62.1	205.0				240.0	8.1				9.6
	Trips/student					Trips/staff					Trips/parent						Trips/KSF					Trips/KSF					Trips/DU				
Trip Linkage	0%					0%					0%						0%					0%					0%				
Net Daily Person Trip	**Weekday**				**SAT**	**Weekday**				**SAT**	**Weekday**				**SAT**		**Weekday**				**SAT**	**Weekday**				**SAT**	**Weekday**				**SAT**
	2.0				0.0	2.0				0.0	4.0				0.0		103.4				62.1	205.0				240.0	8.1				9.6
	Trips/student					Trips/staff					Trips/parent						Trips/KSF					Trips/KSF					Trips/DU				
Temporal	(6)(8)					(6)					(6)(8)						(4)(16)					(1)(16)					(1)(11)				
	AM	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**
	47.2%	0.0%	49.3%	3.5%	0.0%	40.3%	0.0%	28.4%	31.3%	0.0%	23.6%	0.0%	24.7%	1.7%	0.0%		10.0%	13.0%	7.1%	9.0%	16.0%	3.0%	19.0%	6.2%	10.0%	10.0%	10.0%	5.0%	5.2%	11.0%	8.0%
Direction	(6)					(6)					(6)						(12)					(12)					(11)				
In	100%	50%	0%	0%	50%	100%	50%	0%	0%	50%	100%	100%	100%	100%	100%		94%	45%	45%	42%	45%	50%	50%	50%	50%	50%	15%	50%	65%	70%	50%
Out	0%	50%	100%	100%	50%	0%	50%	100%	100%	50%	100%	100%	100%	100%	100%		6%	55%	55%	58%	55%	50%	50%	50%	50%	50%	85%	50%	35%	30%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	200%	200%	200%	200%	200%		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(6)					(6)					(6)						(2)					(12)					(2)				
	AM	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**
Auto	28.5%	28.5%	20.5%	28.5%	20.5%	91%	91%	91%	91%	91%	0%	0%	0%	0%	0%		66.3%	66.3%	66.3%	66.3%	66.3%	29.0%	29.0%	29.0%	29.0%	29.0%	30.7%	30.7%	30.7%	30.7%	30.7%
Taxi	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.6%	0.6%	0.6%	0.6%	0.6%
Subway	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		13.6%	13.6%	13.6%	13.6%	13.6%	0%	0%	0%	0%	0%	55.2%	55.2%	55.2%	55.2%	55.2%
Bus	0%	0%	0%	0%	0%	3%	3%	3%	3%	3%	0%	0%	0%	0%	0%		10.0%	10.0%	10.0%	10.0%	10.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.7%	7.7%	7.7%	7.7%	7.7%
School Bus	4.0%	4.0%	4.5%	4.0%	4.5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other (Bike)	0%	0%	0%	0%	0%	3%	3%	3%	3%	3%	0%	0%	0%	0%	0%		0.2%	0.2%	0.2%	0.2%	0.2%	0%	0%	0%	0%	0%	1.1%	1.1%	1.1%	1.1%	1.1%
Walk (only)	67.5%	67.5%	75.0%	67.5%	75.0%	3%	3%	3%	3%	3%	100%	100%	100%	100%	100%		10.0%	10.0%	10.0%	10.0%	10.0%	64.0%	64.0%	64.0%	64.0%	64.0%	4.8%	4.8%	4.8%	4.8%	4.8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(6)					(6)					(6)						(19)					(5)					(2)(12)				
	AM	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**
Auto	1.44	1.44	1.55	1.44	1.44	1.20	1.20	1.20	1.20	1.20	N/A	N/A	N/A	N/A	N/A		1.77	1.77	1.77	1.77	1.77	1.50	1.50	1.50	1.50	1.50	1.15	1.15	1.15	1.15	1.15
Taxi	1.30	1.30	1.30	1.30	1.30	1.20	1.20	1.20	1.20	1.20	N/A	N/A	N/A	N/A	N/A		1.40	1.40	1.40	1.40	1.40	1.60	1.60	1.60	1.60	1.60	1.17	1.17	1.17	1.17	1.17
School Bus	6.25	6.25	7.25	6.25	6.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Daily Delivery Trip Generation Rate	(18)					(18)					(18)						(1)(13)(17)					(1)					(1)				
	Weekday				SAT	Weekday				SAT	Weekday				SAT		Weekday				SAT	Weekday				SAT	Weekday				SAT
	0.0				0.0	N/A				N/A	N/A				N/A		0.38				0.04	0.4				0.0	0.1				0.0
	Delivery Trips/student					Delivery Trips/staff					Delivery Trips/parent						Delivery Trips/ KSF					Delivery Trips/ KSF					Delivery Trips/ DU				
Delivery Temporal	(14)(18)					(14)(18)					(14)(18)						(12)(17)					(1)					(1)				
	AM	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**		**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**	**AM**	**MD**	**After noon**	**PM**	**SAT**
	9.6%	11.0%	11.0%	1.0%	0.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		6.6%	11.0%	11.0%	1.0%	11.0%	8%	11%	11%	2%	11%	12%	9%	9%	2%	9%
Delivery Direction	(14)(18)					(14)(18)					(14)(18)						(12)					(1)					(1)				
In	50%	50%	50%	50%	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes

(1) 2014 CEQR Technical Manual
(2) Journey to Work, U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates (using weighted average of Census Tracts 243, 479, 483, 485, and 489 of Queens County, NY).
(3) Reverse Journey to Work, U.S. Census Bureau, 2006-2010 Census Transportation Planning Products (using weighted average of Census Tracts 243, 479, 483, 485, and 489 of Queens County, NY).
(4) NYCDOT Trip Generation and Mode Choice Survey - Medical office.
(5) "Queens - Non-Transit Zone" factors provided by NYCDOT.
(6) PS 35Q Elementary School Addition EA Study (provided by NYCDOT).
(7) Assumes a 10% absentee rate will be applied in the trip generation estimates, as per the PS 35Q Elementary School Addition EA Study (provided by NYCDOT).
(8) All school trips that do not occur during the AM and Afternoon peak hours are assumed to occur during the PM peak hour.
(9) For all non-auto and school bus trips, assumes a student-to-parent ratio of 1-to-0.51 for students, as per the PS 35Q Elementary School Addition EA Study (provided by NYCDOT).
(10) Assumes 11.4 students per staff member, based on the East New York Rezoning Proposal FEIS, 2016 (CEQR No. 15DCP102K).
(11) 600 East 156th Street EAS, 2017 (CEQR No. 17DCP025X).
(12) Hunter's Point South Rezoning and Related Actions FEIS, 2008 (CEQR No. 08DME006Q).
(13) Willets Point Development Plan FSEIS, 2013 (CEQR No. 07DME014Q),
(14) When not available, afternoon factors were assumed to match midday factors.
(15) Students are assumed to be evenly distributed among all grades.
(16) Afternoon temporal splits for the community facility and local retail is based on a uniform distribution of trips taking place during all hours of operation other than the AM, midday, and PM peak hours for a 14 hour day.
(17) Community Facility Saturday Daily Delivery Trip Generation Rate and Temporal Split is based on the Daily Delivery Trip Generation Rate and Temporal Split of Local Retail, as per the 2014 CEQR Technical Manual.
(18) East New York Rezoning Proposal FEIS, 2016 (CEQR No. 15DCP102K).
(19) ITE Trip Generation Manual, 10th Edition, Recreational Community Facility, with adjustments, provided by NYCDOT and NYCDCP.

Table 9: Transportation Demand Forecast, No-Action Condition[9]

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Bike	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Community Facility	Weekday AM	In	70	0	14	11	0	0	11	106	40	0	0	0	40
		Out	4	0	1	1	0	0	1	7	3	0	0	0	3
		Total	75	0	15	11	0	0	11	113	42	0	0	0	43
	Weekday Midday	In	44	0	9	7	0	0	7	66	25	0	0	0	25
		Out	54	0	11	8	0	0	8	81	30	0	0	0	31
		Total	97	0	20	15	0	0	15	147	55	0	0	0	56
	Weekday Afternoon	In	24	0	5	4	0	0	4	36	14	0	0	0	14
		Out	29	0	6	4	0	0	4	44	17	0	0	0	17
		Total	53	0	11	8	0	0	8	80	30	0	0	0	31
	Weekday PM	In	28	0	6	4	0	0	4	43	16	0	0	0	16
		Out	39	0	8	6	0	0	6	59	22	0	0	0	22
		Total	67	0	14	10	0	0	10	102	38	0	0	0	38
	Saturday Midday	In	32	0	7	5	0	0	5	49	18	0	0	0	18
		Out	40	0	8	6	0	0	6	60	22	0	0	0	22
		Total	72	0	15	11	0	0	11	109	41	0	0	0	41
Local Retail	Weekday AM	In	13	0	0	3	0	0	28	44	8	0	0	0	9
		Out	13	0	0	3	0	0	28	44	8	0	0	0	9
		Total	25	0	0	6	0	0	56	87	17	0	0	0	17
	Weekday Midday	In	80	0	0	19	0	0	176	276	53	0	0	0	54
		Out	80	0	0	19	0	0	176	276	53	0	0	0	54
		Total	160	0	0	39	0	0	353	552	107	0	0	1	107
	Weekday Afternoon	In	26	0	0	6	0	0	58	90	17	0	0	0	18
		Out	26	0	0	6	0	0	58	90	17	0	0	0	18
		Total	52	0	0	13	0	0	115	180	35	0	0	1	35
	Weekday PM	In	42	0	0	10	0	0	93	145	28	0	0	0	28
		Out	42	0	0	10	0	0	93	145	28	0	0	0	28
		Total	84	0	0	20	0	0	186	290	56	0	0	0	56
	Saturday Midday	In	49	0	0	12	0	0	109	170	33	0	0	0	33
		Out	49	0	0	12	0	0	109	170	33	0	0	0	33
		Total	99	0	0	24	0	0	217	340	66	0	0	0	66
Residential	Weekday AM	In	11	0	19	3	0	0	2	35	9	1	0	1	12
		Out	61	1	110	15	0	2	9	198	53	1	0	1	55
		Total	72	1	129	18	0	3	11	233	62	2	0	2	66
	Weekday Midday	In	18	0	32	4	0	1	3	58	16	1	0	1	17
		Out	18	0	32	4	0	1	3	58	16	1	0	1	17
		Total	36	1	64	9	0	1	6	117	31	1	0	2	34
	Weekday Afternoon	In	24	0	44	6	0	1	4	79	21	1	0	1	22
		Out	13	0	23	3	0	0	2	42	11	1	0	1	13
		Total	37	1	67	9	0	1	6	121	32	1	0	2	35
	Weekday PM	In	55	1	99	14	0	2	9	180	48	1	0	0	49
		Out	24	0	43	6	0	1	4	77	20	1	0	0	22
		Total	79	1	142	20	0	3	12	257	68	3	0	0	71
	Saturday Midday	In	34	1	61	9	0	1	5	111	30	1	0	0	31
		Out	34	1	61	9	0	1	5	111	30	1	0	0	31
		Total	68	1	123	17	0	2	11	222	59	2	0	1	62
Total	Weekday AM	In	94	0	34	16	0	1	40	185	58	1	0	1	60
		Out	78	1	110	19	0	2	38	249	64	1	0	1	66
		Total	172	1	144	35	0	3	78	434	121	2	0	3	126
	Weekday Midday	In	142	0	41	30	0	1	186	400	94	1	0	1	95
		Out	151	0	43	32	0	1	187	415	99	1	0	1	101
		Total	293	1	84	62	0	2	373	815	193	1	0	3	196
	Weekday Afternoon	In	74	0	48	16	0	1	65	205	52	1	0	1	54
		Out	68	0	29	14	0	1	64	177	45	1	0	1	47
		Total	143	1	78	30	0	1	129	382	97	1	0	3	101
	Weekday PM	In	126	1	105	28	0	2	106	368	92	1	0	0	93
		Out	105	0	51	22	0	1	102	281	71	1	0	0	72
		Total	230	1	156	50	0	3	208	649	163	3	0	0	166
	Saturday Midday	In	116	1	68	25	0	1	119	330	81	1	0	0	82
		Out	123	1	69	26	0	1	120	341	85	1	0	0	86
		Total	239	1	137	52	0	3	239	671	165	2	0	1	168

Note: In and Out volumes may not sum to Total volumes due to rounding.

[9] The No-Action Condition does not include a school component.

Table 10: Transportation Demand Forecast, With-Action Condition with PCRE

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Bike	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Students (Grades K-5)	Weekday AM	In	115	0	0	0	16	0	273	404	80	0	3	1	83
		Out	0	0	0	0	0	0	0	0	80	0	3	1	83
		Total	115	0	0	0	16	0	273	404	160	0	5	1	166
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	1	1
		Out	0	0	0	0	0	0	0	0	0	0	0	1	1
		Total	0	0	0	0	0	0	0	0	0	0	0	1	1
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	56	0	3	1	59
		Out	87	0	0	0	19	0	317	422	56	0	3	1	59
		Total	87	0	0	0	19	0	317	422	112	0	5	1	118
	Weekday PM	In	0	0	0	0	0	0	0	0	6	0	0	0	6
		Out	9	0	0	0	1	0	20	30	6	0	0	0	6
		Total	9	0	0	0	1	0	20	30	12	0	0	0	12
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	Weekday AM	In	31	0	0	1	0	1	1	34	26	0	0	0	26
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	31	0	0	1	0	1	1	34	26	0	0	0	26
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	22	0	0	1	0	1	1	24	18	0	0	0	18
		Total	22	0	0	1	0	1	1	24	18	0	0	0	18
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	24	0	0	1	0	1	1	26	20	0	0	0	20
		Total	24	0	0	1	0	1	1	26	20	0	0	0	20
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Parents	Weekday AM	In	0	0	0	0	0	0	155	155	0	0	0	0	0
		Out	0	0	0	0	0	0	155	155	0	0	0	0	0
		Total	0	0	0	0	0	0	309	309	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	162	162	0	0	0	0	0
		Out	0	0	0	0	0	0	162	162	0	0	0	0	0
		Total	0	0	0	0	0	0	324	324	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	11	11	0	0	0	0	0
		Out	0	0	0	0	0	0	11	11	0	0	0	0	0
		Total	0	0	0	0	0	0	22	22	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 10 (cont.): Transportation Demand Forecast, With-Action Condition with PCRE

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Bike	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Community Facility	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Retail	Weekday AM	In	13	0	0	3	0	0	30	46	9	0	0	0	9
		Out	13	0	0	3	0	0	30	46	9	0	0	0	9
		Total	27	0	0	6	0	0	59	92	18	0	0	0	18
	Weekday Midday	In	85	0	0	20	0	0	187	293	57	0	0	0	57
		Out	85	0	0	20	0	0	187	293	57	0	0	0	57
		Total	170	0	0	41	0	0	375	586	113	0	0	1	114
	Weekday Afternoon	In	28	0	0	7	0	0	61	96	18	0	0	0	19
		Out	28	0	0	7	0	0	61	96	18	0	0	0	19
		Total	55	0	0	13	0	0	122	191	37	0	0	1	38
	Weekday PM	In	45	0	0	11	0	0	99	154	30	0	0	0	30
		Out	45	0	0	11	0	0	99	154	30	0	0	0	30
		Total	89	0	0	22	0	0	197	308	60	0	0	0	60
	Saturday Midday	In	52	0	0	13	0	0	115	180	35	0	0	0	35
		Out	52	0	0	13	0	0	115	180	35	0	0	0	35
		Total	105	0	0	25	0	0	231	361	70	0	0	0	70
Residential	Weekday AM	In	19	0	34	5	0	1	3	61	16	2	0	2	20
		Out	106	2	191	27	0	4	17	347	92	2	0	2	96
		Total	125	2	225	31	0	4	19	408	108	4	0	4	116
	Weekday Midday	In	31	1	56	8	0	1	5	102	27	1	0	1	29
		Out	31	1	56	8	0	1	5	102	27	1	0	1	29
		Total	63	1	113	16	0	2	10	204	54	2	0	3	59
	Weekday Afternoon	In	42	1	76	11	0	2	7	138	37	1	0	1	39
		Out	23	0	41	6	0	1	4	74	20	1	0	1	22
		Total	65	1	117	16	0	2	10	212	56	2	0	3	61
	Weekday PM	In	96	2	173	24	0	3	15	314	84	2	0	0	86
		Out	41	1	74	10	0	1	6	135	36	2	0	0	38
		Total	138	3	248	34	0	5	21	449	119	4	0	1	124
	Saturday Midday	In	59	1	107	15	0	2	9	194	52	2	0	0	54
		Out	59	1	107	15	0	2	9	194	52	2	0	0	54
		Total	119	2	214	30	0	4	19	388	103	4	0	1	108
Total	Weekday AM	In	178	0	34	9	16	2	461	700	131	2	3	3	138
		Out	120	2	191	30	0	4	201	548	181	2	3	3	188
		Total	298	2	225	39	16	5	662	1248	312	4	5	5	326
	Weekday Midday	In	116	1	56	28	0	1	192	395	84	1	0	2	87
		Out	116	1	56	28	0	1	192	395	84	1	0	2	87
		Total	232	1	113	57	0	2	384	789	167	2	0	5	174
	Weekday Afternoon	In	70	1	76	17	0	2	230	395	111	1	3	2	117
		Out	159	0	41	13	19	2	544	778	112	1	3	2	118
		Total	229	1	117	30	19	3	774	1173	223	2	5	5	235
	Weekday PM	In	141	2	173	35	0	3	125	479	119	2	0	0	122
		Out	118	1	74	22	1	2	137	356	91	2	0	0	94
		Total	259	3	248	57	1	6	262	835	211	4	0	1	216
	Saturday Midday	In	112	1	107	28	0	2	125	374	86	2	0	0	89
		Out	112	1	107	28	0	2	125	374	86	2	0	0	89
		Total	224	2	214	55	0	4	249	749	173	4	0	1	178

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 11: Transportation Demand Forecast, Net Incremental Trips

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Bike	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Students (Grades K-5)	Weekday AM	In	115	0	0	0	16	0	273	404	80	0	3	1	83
		Out	0	0	0	0	0	0	0	0	80	0	3	1	83
		Total	115	0	0	0	16	0	273	404	160	0	5	1	166
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	1	1
		Out	0	0	0	0	0	0	0	0	0	0	0	1	1
		Total	0	0	0	0	0	0	0	0	0	0	0	1	1
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	56	0	3	1	59
		Out	87	0	0	0	19	0	317	422	56	0	3	1	59
		Total	87	0	0	0	19	0	317	422	112	0	5	1	118
	Weekday PM	In	0	0	0	0	0	0	0	0	6	0	0	0	6
		Out	9	0	0	0	1	0	20	30	6	0	0	0	6
		Total	9	0	0	0	1	0	20	30	12	0	0	0	12
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	Weekday AM	In	31	0	0	1	0	1	1	34	26	0	0	0	26
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	31	0	0	1	0	1	1	34	26	0	0	0	26
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	22	0	0	1	0	1	1	24	18	0	0	0	18
		Total	22	0	0	1	0	1	1	24	18	0	0	0	18
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	24	0	0	1	0	1	1	26	20	0	0	0	20
		Total	24	0	0	1	0	1	1	26	20	0	0	0	20
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Parents	Weekday AM	In	0	0	0	0	0	0	155	155	0	0	0	0	0
		Out	0	0	0	0	0	0	155	155	0	0	0	0	0
		Total	0	0	0	0	0	0	309	309	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0
	Weekday Afternoon	In	0	0	0	0	0	0	162	162	0	0	0	0	0
		Out	0	0	0	0	0	0	162	162	0	0	0	0	0
		Total	0	0	0	0	0	0	324	324	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	11	11	0	0	0	0	0
		Out	0	0	0	0	0	0	11	11	0	0	0	0	0
		Total	0	0	0	0	0	0	22	22	0	0	0	0	0
	Saturday Midday	In	0	0	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table 11 (cont.): Transportation Demand Forecast, Net Incremental

Use	Peak Hour	In/Out	Person Trips								Vehicle Trips				
			Auto	Taxi	Subway	Bus	School Bus	Bike	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Community Facility	Weekday AM	In	-70	0	-14	-11	0	0	-11	-106	-40	0	0	0	-40
		Out	-4	0	-1	-1	0	0	-1	-7	-3	0	0	0	-3
		Total	-75	0	-15	-11	0	0	-11	-113	-42	0	0	0	-43
	Weekday Midday	In	-44	0	-9	-7	0	0	-7	-66	-25	0	0	0	-25
		Out	-54	0	-11	-8	0	0	-8	-81	-30	0	0	0	-31
		Total	-97	0	-20	-15	0	0	-15	-147	-55	0	0	0	-56
	Weekday Afternoon	In	-24	0	-5	-4	0	0	-4	-36	-14	0	0	0	-14
		Out	-29	0	-6	-4	0	0	-4	-44	-17	0	0	0	-17
		Total	-53	0	-11	-8	0	0	-8	-80	-30	0	0	0	-31
	Weekday PM	In	-28	0	-6	-4	0	0	-4	-43	-16	0	0	0	-16
		Out	-39	0	-8	-6	0	0	-6	-59	-22	0	0	0	-22
		Total	-67	0	-14	-10	0	0	-10	-102	-38	0	0	0	-38
	Saturday Midday	In	-32	0	-7	-5	0	0	-5	-49	-18	0	0	0	-18
		Out	-40	0	-8	-6	0	0	-6	-60	-22	0	0	0	-22
		Total	-72	0	-15	-11	0	0	-11	-109	-41	0	0	0	-41
Local Retail	Weekday AM	In	1	0	0	0	0	0	2	3	1	0	0	0	1
		Out	1	0	0	0	0	0	2	3	1	0	0	0	1
		Total	2	0	0	0	0	0	3	5	1	0	0	0	1
	Weekday Midday	In	5	0	0	1	0	0	11	17	3	0	0	0	3
		Out	5	0	0	1	0	0	11	17	3	0	0	0	3
		Total	10	0	0	2	0	0	22	34	7	0	0	0	7
	Weekday Afternoon	In	2	0	0	0	0	0	4	6	1	0	0	0	1
		Out	2	0	0	0	0	0	4	6	1	0	0	0	1
		Total	3	0	0	1	0	0	7	11	2	0	0	0	2
	Weekday PM	In	3	0	0	1	0	0	6	9	2	0	0	0	2
		Out	3	0	0	1	0	0	6	9	2	0	0	0	2
		Total	5	0	0	1	0	0	11	18	3	0	0	0	3
	Saturday Midday	In	3	0	0	1	0	0	7	10	2	0	0	0	2
		Out	3	0	0	1	0	0	7	10	2	0	0	0	2
		Total	6	0	0	1	0	0	13	21	4	0	0	0	4
Residential	Weekday AM	In	8	0	14	2	0	0	1	26	7	1	0	1	9
		Out	45	1	82	11	0	2	7	148	39	1	0	1	41
		Total	53	1	96	13	0	2	8	174	46	2	0	2	50
	Weekday Midday	In	13	0	24	3	0	0	2	44	12	0	0	1	13
		Out	13	0	24	3	0	0	2	44	12	0	0	1	13
		Total	27	1	48	7	0	1	4	87	23	1	0	1	25
	Weekday Afternoon	In	18	0	33	5	0	1	3	59	16	0	0	1	17
		Out	10	0	18	2	0	0	2	32	8	0	0	1	9
		Total	28	1	50	7	0	1	4	91	24	1	0	1	26
	Weekday PM	In	41	1	74	10	0	1	6	134	36	1	0	0	37
		Out	18	0	32	4	0	1	3	58	15	1	0	0	16
		Total	59	1	106	15	0	2	9	192	51	2	0	0	53
	Saturday Midday	In	25	0	46	6	0	1	4	83	22	1	0	0	23
		Out	25	0	46	6	0	1	4	83	22	1	0	0	23
		Total	51	1	92	13	0	2	8	166	44	2	0	0	46
Total	Weekday AM	In	84	0	0	-7	16	1	421	515	73	1	3	1	78
		Out	42	1	81	11	0	2	163	299	117	1	3	1	122
		Total	126	1	81	3	16	3	584	814	191	2	5	3	200
	Weekday Midday	In	-26	0	15	-2	0	0	6	-6	-10	0	0	1	-8
		Out	-35	0	13	-4	0	0	5	-20	-15	0	0	1	-14
		Total	-61	1	28	-6	0	1	11	-26	-25	1	0	2	-22
	Weekday Afternoon	In	-4	0	28	1	0	1	165	190	59	0	3	1	63
		Out	90	0	12	-1	19	1	480	601	67	0	3	1	71
		Total	86	1	39	0	19	2	645	791	126	1	5	2	134
	Weekday PM	In	15	1	68	7	0	1	19	112	27	1	0	0	29
		Out	13	0	24	0	1	1	35	75	21	1	0	0	22
		Total	29	1	92	7	1	3	54	186	48	2	0	0	51
	Saturday Midday	In	-4	0	39	2	0	1	6	44	6	1	0	0	7
		Out	-11	0	38	1	0	1	5	34	2	1	0	0	3
		Total	-15	1	77	3	0	2	10	78	7	2	0	0	9

Note: In and Out volumes may not sum to Total volumes due to rounding.

Traffic

As presented in Table 11, the Modified Project would result in approximately 200, -22, 134, 51 and 9 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Under the Modified Project, the net incremental vehicle trips during the weekday AM, afternoon and PM peak hours would exceed the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends). Therefore, a Level 2 screening was conducted for these three peak hours.

Transit

The Project Site is well-served by New York City Transit (NYCT) bus lines, which include the Q47 line that runs north-south on 69th Street; the Q60 line that runs east-west on Queens Boulevard; and the Q18 line that runs on 65th Place, three blocks west of the Proposed Development Site. The Project Site is also served by NYCT subway, including the No. 7 subway line (69 St–Fisk Av Station) located approximately 0.5 miles to the north on Roosevelt Avenue and 69th Street; and the E, F, M, R and 7 subway lines (Jackson Heights–Roosevelt Av / 74 St–Broadway station complex) located approximately 0.7 miles to the north on Roosevelt Avenue and 74th Street. In addition, the Woodside LIRR Station is located approximately 0.7 miles from the Project Site.

As shown in Table 11, the Modified Project would result in approximately 81, 28, 39, 92 and 77 incremental subway trips and 3, -6, 0, 7 and 3 incremental bus trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Combining the subway and bus trips would result in total incremental transit trips of 84, 22, 39, 99 and 80 incremental transit trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Since the incremental transit trips generated by the Modified Project would not exceed the CEQR Level 1 trip generation threshold of 200 or more peak hour transit trips during any of the analysis peak hours, no further transit analysis is warranted. Therefore, the Modified Project would not adversely affect transit operations.

Pedestrians

As shown in Table 11, the Modified Project would result in approximately 814, -26, 791, 186 and 78 net incremental person trips in the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Under the Modified Project, the net incremental person trips during the weekday AM and afternoon analysis peak hours would exceed the CEQR Level 1 trip generation threshold (200 peak hour pedestrian trips). Therefore, a Level 2 screening assessment for potential project-generated pedestrian trips was conducted for these two peak hours.

Level 2 (Project-Generated Trip Assignment) Screening Assessment

A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network, pedestrian elements and transit facilities, and the identification of specific locations where the incremental increase in demand may potentially exceed CEQR Technical Manual analysis thresholds. If these thresholds are exceeded, quantitative analyses would be required to identify any adverse impacts that result from the Proposed Actions.

Traffic

As presented in Table 11, the Modified Project would result in approximately 200, -22, 134, 51 and 9 net incremental vehicle trips during the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. The net incremental vehicle trips during the weekday AM, afternoon and PM peak hours exceed the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends). Therefore, a Level 2 screening assessment for potential project-generated vehicular trips was conducted for these three peak hours.

There are multiple routes from nearby highway, major arterial and collector roads available to access/egress the Project Site. The two primary access/egress routes are: 69th Street, which would serve as the primary access/egress route to/from the garage, and 47th Avenue, which would serve as the primary access/egress route for the school pick-up/drop-off zone. Project-generated vehicle trips were assigned through various intersections in the study area based on the CEQR Technical Manual guidelines, prevailing travel patterns, and the existing roadway configuration. Traffic assignments for autos, taxis, school buses, and deliveries for individual development program components are discussed as follows.

Autos

*School: S*tudent auto trips were assigned within study area via direct routes to the school's main drop-off/pick-up area on 47th Avenue west of 70th Street. The student auto trip distribution is discussed as follows:

1. From the North (20 percent):

Approximately 20 percent of the inbound project-generated vehicle trips were assumed to originate north of the Project Site. These trips would approach the study area via the Brooklyn-Queens Expressway (BQE). Of this 20 percent, half were assumed to take Exit 40 towards southbound 69th Street, and the remaining half were assumed to take Exit 39E towards 61st Street.

2. From the South (30 percent):

Approximately 30 percent of the inbound project-generated vehicle trips were assumed to originate south of the Project Site. These trips would approach the study area via Exit 39 of the BQE. Of this 30 percent, two-thirds were assumed to travel on northbound 67th Street and eastbound Queens Boulevard, while the remaining one-third were assumed to travel south on local roads towards 48th Avenue.

3. From the West (15 percent):

Approximately 15 percent of the inbound project-generated vehicle trips were assumed to originate west of the Project Site. These trips would approach the study area via Queens Boulevard.

4. Eastern Outlying Areas (15 percent):

Approximately 15 percent of the inbound project-generated vehicle trips were assumed to originate east of the Project Site. These trips would approach the study area via Queens Boulevard.

5. Local Trips (20 percent):

Approximately 20 percent of the inbound project-generated vehicle trips were assumed to originate locally. These trips were assumed to access the Project Site equally from all directions.

Residential: Vehicular trips for the residential component were assigned to study area roadways based on guidance from Origin/Destination (O/D) patterns and direct routes to/from the site. These trips were assigned to the on-site garage entrance/exit on 69th Street north of 47th Avenue.

Community Facility, Local Retail, and School Staff: Vehicular trips for community facility, local retail, and school staff were assigned to study area roadways based on direct routes to/from the site. These trips were assigned to the garage entrance/exit on 69th Street north of 47th Avenue.

School Buses

School bus trips were assigned to pick up and drop off at the main school entrance on 47th Avenue west of 70th Street. Overall, the school bus trips were distributed to the study area streets/ roadways following the same distribution pattern as school auto trips.

Deliveries

Truck delivery trips for all land uses were assigned to NYCDOT-designated truck routes. Trucks were assigned to the study area from regional origins via the BQE, 61st Street, and Queens Boulevard.

Using these distribution patterns, the project-generated peak hour incremental vehicle trips were assigned to the study area intersections for the weekday AM, afternoon and PM peak hours as presented in Appendix C, Figures A1 though A3. Based on the assignment patterns, no intersection is expected to experience an increase of 50 or more vehicle trips during the weekday PM peak hour, therefore no detailed traffic analysis is warranted for this peak hour. However, the following five study area intersections could experience 50 or more peak hour vehicle trips during the weekday AM and afternoon peak hours.

1. Queens Boulevard and 69th Street;
2. 47th Avenue and 69th Street;
3. Queens Boulevard and 70th Street; and
4. 47th Avenue and 70th Street; and
5. Queens Boulevard and 65th Place.

In summary, these five intersections were selected for detailed traffic analysis during the weekday AM and afternoon peak hours, as shown in Figure 4.

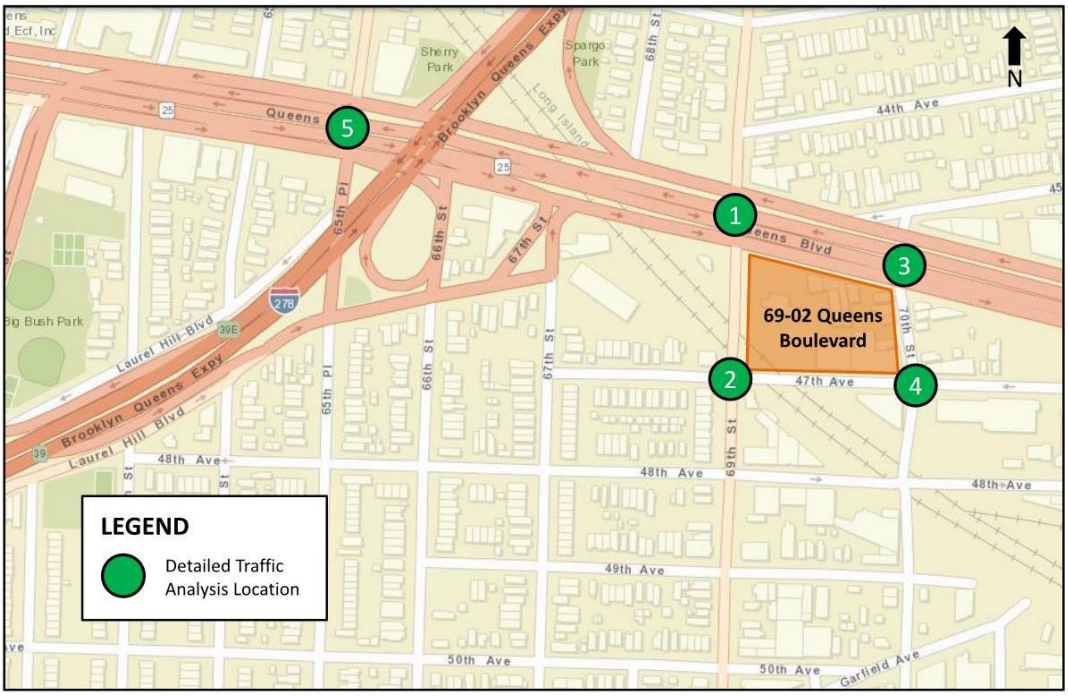


Figure 4: Detailed Traffic Analysis Locations

Pedestrians

As shown in Table 11, the Modified Project would result in approximately 814, -26, 791, 186 and 78 net incremental person trips in the weekday AM, midday, afternoon, PM, and Saturday midday peak hours, respectively. Under the Modified Project, the net incremental person trips during the weekday AM and afternoon analysis peak hours exceeds the CEQR Level 1 trip generation threshold (200 peak hour pedestrian trips). Therefore, a Level 2 screening assessment for project-generated pedestrian trips was conducted for these two peak hours.

The pedestrian trips were assigned based on the location of key transportation elements near the Project Site, including transit stations/stops, parking facilities, and school pick-up/drop-off area.

Autos and School Buses

School: Auto and school bus generated student trips were assigned to the school pick-up/drop-off area on 47th Avenue west of 70th Street, which provides direct access/egress to the school via the north sidewalk of 47th Avenue.

Residential, Community Facility, Local Retail, and School Staff: Auto and taxi generated residential, community facility, local retail, and school staff trips were assigned to the Garage Entrance/Exit on 69th Street north of 47th Avenue, which provides a direct access/egress to the proposed development without the need to use sidewalks, crosswalks, or corners.

Subway

Subway riders would predominantly use the 69th Street (Fisk Avenue) Station on the No. 7 Subway Line. These pedestrians would use the sidewalks, crosswalks, and corners on 69th Street between the subway station and the Project Site.

Bus

Bus riders would use the stops along 69th Street and Queens Boulevard. These pedestrians would use the sidewalks, crosswalks, and corners between the bus stops and the Project Site.

Walk/Bike Trips

Local walk/bike trips to and from the Project Site were based on the location of adjacent land uses, transit facilities, and existing travel patterns.

Using these distribution patterns, the project-generated peak hour incremental pedestrian trips were assigned to the study area sidewalks, crosswalks, and corners as presented in Appendix D, Figures B1 and B2. Based on the pedestrian trip distribution and assignments, the north sidewalk of 47th Avenue west of 70th Street, the northeast corner of 47th Avenue and 69th Street, the southeast corner of Queens Boulevard and 69th Street, and the east sidewalk of 69th Street south of Queens Boulevard (shown in Figure 5) could experience more than 200 pedestrian trips during the weekday AM and afternoon peak hours.

In addition, the northwest corner of the intersection of 47th Avenue and 70th Street could also experience more than 200 incremental pedestrian peak hour trips, given that the proposed school entrance would be located in close proximity to this pedestrian element. However, since this intersection is unsignalized, the crosswalks and corners at this intersection would not warrant detailed pedestrian analysis.

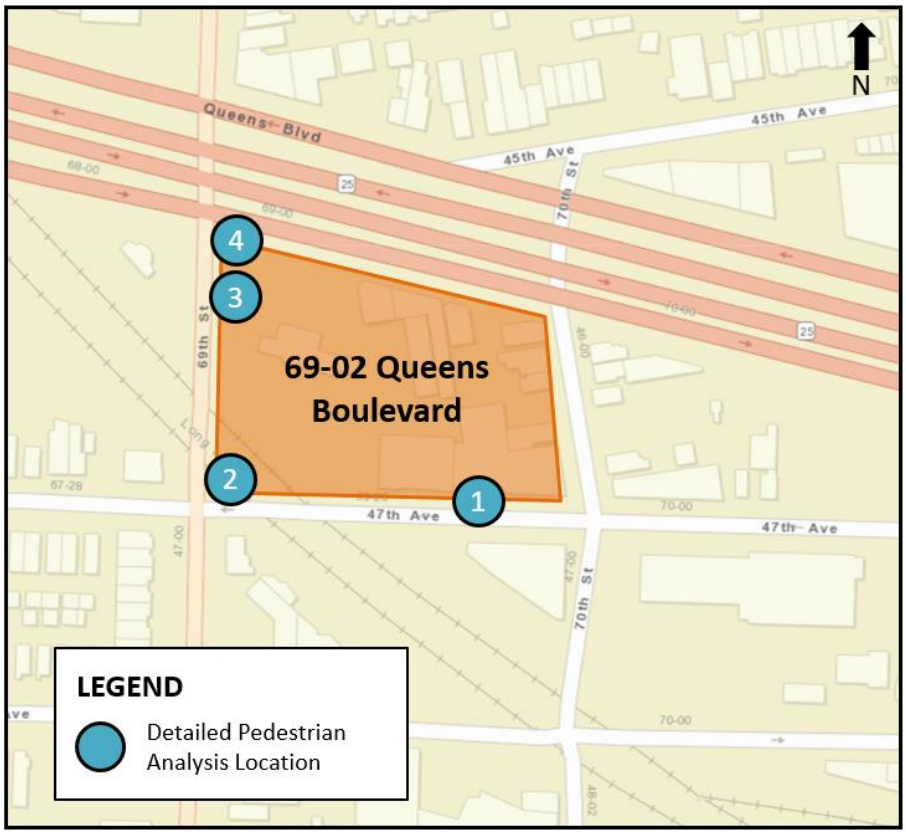


Figure 5: Detailed Pedestrian Analysis Locations

Transportation Analyses Methodologies

Traffic

The traffic capacity analyses are based on methodologies presented in the Highway Capacity Manual (HCM) using the Highway Capacity Software (HCS+) 5.5 model. The HCM methodology produces a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the ratio of traffic volume on an approach to the approach's carrying capacity. A v/c ratio of less than 0.90 is generally considered indicative of non-congested conditions in dense urban areas; when higher than this value, the ratio reflects increasing congestion. At a v/c ratio between 0.95 and 1.0, near-capacity conditions are reached and delays can become substantial. Ratios of greater than 1.0 indicate saturated conditions with queuing. The HCM methodology also expresses the quality of traffic flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. The LOS scale ranges from A, representing minimal delay (10 seconds or less per vehicle), to F, which represents long delays (greater than 80 seconds per vehicle). For un-signalized intersections, the HCM methodology generally assumes that traffic on the major street is not affected by traffic flows on the minor street. Left turns from a major street are assumed to be affected by the opposing, or oncoming, traffic flow on that major street. Traffic on minor streets is affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of traffic flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. LOS definitions used to characterize traffic flows at unsignalized intersections differ somewhat from those used for signalized intersections, primarily because drivers anticipate different levels of performance from the two different kinds of intersections.

For unsignalized intersections, LOS ranges from A, representing minimal delay (10 seconds or less per vehicle, as it is for signalized intersections), to F, which represents long delays (greater than 50 seconds per vehicle, compared to greater than 80 seconds per vehicle for signalized intersections).

Table 12 shows the LOS/delay relationship for signalized and unsignalized intersections using the HCM methodology. LOS A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E is considered to be the limit of acceptable delay, and LOS F is considered to be unacceptable to most drivers.

Table 12: Intersection LOS Criteria based on HCM Methodology

LOS	Average Control Delay (seconds/vehicle)	
	Signalized Intersection	**Unsignalized Intersection**
A	Less than or equal to 10.0	Less than or equal to 10.0
B	10.0 to 20.0	10.0 to 15.0
C	20.0 to 35.0	15.0 to 25.0
D	35.0 to 55.0	25.0 to 35.0
E	55.0 to 80.0	35.0 to 50.0
F	Greater than 80.0	Greater than 50.0

Significant Impact Criteria

The *CEQR Technical Manual* identifies mid-level LOS D or better as an acceptable LOS for a signalized and unsignalized intersections. The *CEQR Technical Manual* also indicates that potential significant adverse traffic impacts could occur at signalized and unsignalized intersections if the Proposed Action results in any of the following:

- A lane group that operates at LOS A through C in the No-Action Condition and deteriorates under the With-Action condition with PCRE to worse than mid-LOS D (greater than 45.0 and 30.0 seconds/vehicle of delay for signalized and unsignalized intersections, respectively);
- A lane group that operates at LOS D in the No-Action Condition and is projected to have a delay increase of 5.0 seconds/vehicle or more if the With-Action with PCRE delay exceeds mid-LOS D;
- For a lane group that operates at LOS E in the No-Action Condition, a delay increase of 4.0 seconds or more; and
- For a lane group that operates at LOS F in the No-Action Condition, a delay increase of 3.0 seconds or more.

Pedestrians

The adequacy of study area's crosswalks, corners, sidewalk capacities in relation to the projected demand is evaluated based on the methodologies presented in the 2010 HCM, pursuant to procedures detailed in the *CEQR Technical Manual*.

Sidewalks are analyzed in terms of pedestrian space, expressed as square feet per pedestrian (ft^2/p). The determination of walkway LOS is dependent on whether the pedestrian flow being analyzed is best described as "non-platoon" or "platoon." Non-platoon flow occurs when pedestrian volume within the peak 15-minute period is relatively uniform, whereas, platoon flow occurs when pedestrian volumes vary significantly with the peak 15-minute period. Such variation typically occurs near bus stops, subway stations, and/or where adjacent crosswalks account for much of the walkway's pedestrian volume. The LOS standards for sidewalks are summarized in Table 13 based on HCM methodology.

Table 13: Sidewalk/Walkway LOS for Non-Platoon and Platoon Conditions

LOS	Non-Platoon Flow	Platoon Flow
LOS A	>60 ft^2/p	>530 ft^2/p
LOS B	>40-60 ft^2/p	>90-530 ft^2/p
LOS C	>24-40 ft^2/p	>40-90 ft^2/p
LOS D	>15-24 ft^2/p	>23-40 ft^2/p
LOS E	>8-15 ft^2/p	>11-23 ft^2/p
LOS F	≤8 ft^2/p	≤11 ft^2/p

Crosswalks and street corners are not easily measured in terms of free pedestrian flow, as they are influenced by the effects of traffic signals. Street corners must be able to provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the street or moving around the corner). The HCM methodologies apply a measure of time and space availability based on the area of the corner, the timing of the intersection signal, and the estimated space used by circulating pedestrians.

The total "time-space" available for these activities, expressed in square feet-second, is calculated by multiplying the net area of the corner (in square feet) by the signal's cycle length. The analysis then determines the total circulation time for all pedestrian movements at the corner per signal cycle (expressed as pedestrians per second). The ratio of net time-space divided by the total pedestrian circulation volume per signal cycle provides the LOS measurement of square feet per pedestrian (SFP).

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet-second. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the total crosswalk pedestrian occupancy time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk. The *CEQR Technical Manual* specifies acceptable LOS in Non-Central Business District (Non-CBD) areas is LOS C or better.

Table 14 defines the LOS criteria for pedestrian crosswalk/corner areas based on HCM methodology.

Table 14: Corner/Crosswalk LOS Pedestrian Space

LOS	Average Pedestrian Space
LOS A	>60 ft^2/p
LOS B	>40-60 ft^2/p
LOS C	>24-40 ft^2/p
LOS D	>15-24 ft^2/p
LOS E	>8-15 ft^2/p
LOS F	≤8 ft^2/p

Significant Impact Criteria

The determination of significant pedestrian impacts considers the level of predicted deterioration in pedestrian flow or decrease in pedestrian space between the No-Action and With-Action with PCRE Conditions. For different pedestrian elements, flow conditions, and area types, the *CEQR Technical Manual* procedure for impact determination corresponds with various sliding-scale formulas, as further detailed below.

Sidewalks

The criterion for determination of significant impacts of sidewalks varies by type of pedestrian flow (*i.e.*, non-platoon or platoon) and the type of area (CBD or non-CBD).

For analysis purposes, the non-CBD and platoon flow criteria have been used. Under these conditions, average pedestrian space under the With-Action Condition with PCRE deteriorating within acceptable LOS (LOS C or better) should generally not be considered a significant impact. If the pedestrian space available under the With-Action Condition with PCRE deteriorates to LOS C or worse, then the determination whether the impact is significant or not is based on a sliding scale. The sliding scale varies within the range of average pedestrian space available under the No-Action Condition. Determination of significant impacts for sidewalks with platoon flow in a non-CBD area is summarized as follows:

- If the average pedestrian space under the No-Action Condition is greater than 44.3 ft^2/p, then a decrease in pedestrian space under the With-Action Condition with PCRE to 40.0 ft^2/p or less (LOS D or worse) should be considered a significant impact. If the average pedestrian space under the With-Action Condition with PCRE is greater than 40.0 ft^2/p (LOS C or better), the impact should not be considered significant.
- If the average pedestrian space under the No-Action condition is between 6.4 and 44.3 ft^2/p, a decrease in pedestrian space under the With-Action Condition with PCRE should be considered significant using the sliding scale formula in the equation below or using Table 15:

$Y \geq X / (9.5\text{-}0.321)$
Where:
Y = decrease in pedestrian space in ft^2/p to be considered a potential significant impact
X = No-Action Condition pedestrian space in ft^2/p

Table 15: Significant Impact Guidance for Sidewalks Platooned flow, Non-CBD Location

No-Action Condition Ped Space (ft^2/p)	With-Action Condition with PCRE Ped Space Reduction to be considered significant impact (ft^2/p)
44.3	With-Action Condition ≤ 40.0
43.5	Reduction ≥ 4.3
42.5	Reduction ≥ 4.2
41.6	Reduction ≥ 4.1
40.6	Reduction ≥ 4.0
39.7	Reduction ≥ 3.9
38.7	Reduction ≥ 3.8
37.8	Reduction ≥ 3.7
36.8	Reduction ≥ 3.6
35.9	Reduction ≥ 3.5
34.9	Reduction ≥ 3.4
34	Reduction ≥ 3.3
33	Reduction ≥ 3.2
32.1	Reduction ≥ 3.1
31.1	Reduction ≥ 3
30.2	Reduction ≥ 2.9
29.2	Reduction ≥ 2.8
28.3	Reduction ≥ 2.7
27.3	Reduction ≥ 2.6
26.4	Reduction ≥ 2.5
25.4	Reduction ≥ 2.4
24.5	Reduction ≥ 2.3
23.5	Reduction ≥ 2.2
22.6	Reduction ≥ 2.1
21.6	Reduction ≥ 2
20.7	Reduction ≥ 1.9
19.7	Reduction ≥ 1.8
18.8	Reduction ≥ 1.7
17.8	Reduction ≥ 1.6
16.9	Reduction ≥ 1.5
15.9	Reduction ≥ 1.4
15	Reduction ≥ 1.3
14	Reduction ≥ 1.2
13.1	Reduction ≥ 1.1
12.1	Reduction ≥ 1
11.2	Reduction ≥ 0.9

10.2	Reduction ≥ 0.8
9.3	Reduction ≥ 0.7
8.3	Reduction ≥ 0.6
7.4	Reduction ≥ 0.5
6.4	Reduction ≥ 0.4
6.4	Reduction ≥ 0.3

Corners and Crosswalks

The criterion for determination of significant corner and crosswalk impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.3$, where Y is the decrease in pedestrian space in SFP and X is the No-Action Condition pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, this formula would apply only if the With-Action Condition with PCRE pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. Determination of significant impacts for corners and crosswalks in a non-CBD area is summarized as follows:

- If the average pedestrian space under the No-Action Condition is greater than 26.6 ft^2/p, then a decrease in pedestrian space under the With-Action Condition with PCRE to less than 24.0 ft^2/p (worse than LOS C) should be considered a significant impact. If the pedestrian space under the With-Action Condition with PCRE is greater than or equal to 19.5 ft^2/p (LOS C or better), the impact should not be considered significant.
- If the average pedestrian space under the No-Action Condition is between 5.1 and 26.6 ft^2/p, a decrease in pedestrian space under the With-Action Condition with PCRE should be considered significant according to the sliding scale formula in Equation discussed above or using Table 16

Table 16: Significant Impact Guidance for Corners and Crosswalks, Non-CBD Location

No-Action Condition Pedestrian Space (ft^2/p)	With-Action Condition with PCRE Pedestrian Space Reduction to be considered a significant impact (ft^2/p)
>26.6	With-Action Condition ≤ 24.0
25.8 to 26.6	Reduction ≥ 2.6
24.9 to 25.7	Reduction ≥ 2.5
24.0 to 24.8	Reduction ≥ 2.4
23.1 to 23.9	Reduction ≥ 2.3
22.2 to 23.0	Reduction ≥ 2.2
21.3 to 22.1	Reduction ≥ 2.1
20.4 to 21.2	Reduction ≥ 2.0
19.5 to 20.3	Reduction ≥ 1.9
18.6 to 19.4	Reduction ≥ 1.8
17.7 to 18.5	Reduction ≥ 1.7
16.8 to 17.6	Reduction ≥ 1.6
15.9 to 16.7	Reduction ≥ 1.5
15.0 to 15.8	Reduction ≥ 1.4
14.1 to 14.9	Reduction ≥ 1.3
13.2 to 14.0	Reduction ≥ 1.2
12.3 to 13.1	Reduction ≥ 1.1
11.4 to 12.2	Reduction ≥ 1.0
10.5 to 11.3	Reduction ≥ 0.9
9.6 to 10.4	Reduction ≥ 0.8
8.7 to 9.5	Reduction ≥ 0.7
7.8 to 8.6	Reduction ≥ 0.6
6.9 to 7.7	Reduction ≥ 0.5
6.0 to 6.8	Reduction ≥ 0.4
5.1 to 5.9	Reduction ≥ 0.3
<5.1	Reduction ≥ 0.2

Vehicular and Pedestrian Safety Evaluation

In conjunction with a Detailed Traffic and/or Pedestrian Analysis, an assessment of vehicular and pedestrian safety is considered to be appropriate. The key element for vehicular and pedestrian safety analyses is the extent to which vehicular and pedestrian exposure to crashes may reasonably be expected to increase with the Proposed Actions in place. Under *CEQR Technical Manual* guidelines, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as locations with 48 or more total reportable (involving fatality, injury, or more than $1,000 in property damage) and non-reportable crashes or where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, crash trends would be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the type of area where the Directly Affected Area is located, traffic and pedestrian volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with DOT.

Parking

The parking analysis identifies the supply of on-street and off-street public parking near a project area and determines the extent to which the supply is utilized in existing conditions and in the future without and with a Proposed Action. The analysis considers anticipated changes in the study area's parking supply and demand, and compares project-generated parking demand with future parking availability to determine if a parking shortfall is likely to result.

Detailed Traffic Analysis

Baseline Conditions (2018)

Study Area Street Network

The traffic study area is bordered by Queens Boulevard to the north, 47th Avenue to the south, 70th Street to the east and 65th Place to the west. Major highways/expressways providing access to the study area are Brooklyn-Queens Expressway (I-278) from the north and south, and Long Island Expressway (I-495) from the east and west. Truck access in the study area is provided primarily via Queens Boulevard which is an official NYCDOT designated through truck route.

In terms of lane configuration, Queens Boulevard operates with a mainline, an eastbound service road and a westbound service road. The Queens Boulevard mainline generally operates with two westbound and two eastbound through lanes. The exception is its intersection with 65th Place, where Queens Boulevard mainline operates with three additional westbound lanes and one additional eastbound lane. The Queens Boulevard eastbound and westbound service roads operate with two lanes in each direction.

In terms of local streets, both 65th Place and 69th Street operates with two northbound lanes and one southbound lane; whereas, 70th Street operates with one northbound and one southbound lane with parking on both sides.

Baseline traffic volumes for the study area intersections were determined based on the data collected in June 2017 and August 2018. The data collection included Turning Movement Counts (TMC), Automatic Traffic Recorder (ATR) counts, vehicle classification counts, and field observations. In coordination with NYCDOT, the two sets of traffic counts were compared to obtain the baseline traffic volumes for the study area intersections using the following methodology:

- For the intersections of Queens Boulevard at 69th and 70th Streets, and 47th Avenue at 69th and 70th Streets, the 2017 TMC (which were higher compared to the 2018 data) were used as baseline for the weekday AM peak hour.
- For the intersections of Queens Boulevard at 65th Place, 69th Street and 70th Street, the 2018 TMC were increased by 8 percent to obtain the baseline traffic volumes for these intersections during the weekday afternoon peak hour.
- For the intersections of 47th Avenue at 69th and 70th Streets, the 2018 TMC were increased by 9 percent to obtain the baseline traffic volumes for these intersections during the weekday afternoon peak hour.

In addition to the traffic counts, physical inventories—including the number of traffic lanes, lane widths, pavement markings, turn prohibitions, bus stops, and typical parking regulations—were conducted for the study area intersections and pedestrian elements. Official signal timing plans were obtained from NYCDOT for operational analysis. The Baseline Conditions traffic volumes for the weekday AM and afternoon peak hours are shown in Appendix C, Figures A4 and A5.

The v/c ratios, delays and LOS for study area intersections are shown in Table 17. As shown in Table 17, of the 41 lane-groups/approaches in the study area, 18 and 15 operate at congested levels (mid-LOS D or worse) during the weekday AM and afternoon peak hours, respectively.

Table 17: Baseline Conditions - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Afternoon		
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1A	Queens Boulevard South Service Road & 69th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.23	19.4	B	0.62	26.6	C
			69th Street	NB	TR	0.83	73.7	E	0.92	84.2	F
				SB	L	0.25	56.1	E	0.29	56.9	E
					T	0.67	68.1	E	0.69	69.0	E
1B	Queens Boulevard & 69th Street	SIGNAL	Queens Boulevard	EB	T	0.22	19.3	B	0.79	32.2	C
				WB	T	0.85	35.7	D	0.40	22.0	C
			69th Street	NB	LTR	0.87	76.9	E	0.82	72.4	E
				SB	LTR	0.74	67.5	E	0.95	88.3	F
1C	Queens Boulevard North Service Road & 69th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.73	30.0	C	0.49	23.7	C
			69th Street	NB	L	0.88	92.5	F	0.81	82.5	F
					T	0.55	63.4	E	0.61	66.0	E
				SB	TR	0.76	68.2	E	0.93	85.3	F
2	47th Avenue & 69th Street	SIGNAL	47th Avenue	WB	LTR	0.17	9.8	A	0.09	9.2	A
			69th Street	NB	LT	0.74	24.7	C	0.71	23.2	C
				SB	TR	0.51	18.1	B	0.68	22.4	C
3A	Queens Boulevard South Service Road & 70th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.24	23.3	C	0.63	35.2	D
			70th Street	NB	TR	0.56	42.7	D	0.42	38.7	D
				SB	LT	0.96	78.0	E	0.49	29.3	C
3B	Queens Boulevard & 70th Street	SIGNAL	Queens Boulevard	EB	L	0.73	112.3	F	0.65	83.4	F
					T	0.24	23.3	C	1.01	69.1	E
				WB	L	1.04	177.1	F	0.25	65.9	E
					T	0.83	38.6	D	0.41	30.0	C
			70th Street	NB	LTR	0.73	51.1	D	0.46	40.0	D
				SB	LTR	0.93	74.8	E	1.05	106.7	F
3C	Queens Boulevard North Service Road & 70th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.58	29.6	C	0.46	31.2	C
			70th Street	NB	LT	1.03	93.6	F	0.70	37.8	D
				SB	T	0.69	47.7	D	0.74	50.4	D
					R	0.29	36.6	D	0.26	35.9	D
4	47th Avenue & 70th Street	AWSC[1]	47th Avenue	WB	LTR	0.10	8.6	A	0.10	8.2	A
			70th Street	NB	LT	0.42	10.6	B	0.31	9.3	A
				SB	TR	0.32	9.4	A	0.20	8.5	A
5A	Queens Boulevard South Service Road & 65th Place	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.36	18.3	B	0.79	29.1	C
			65th Place	NB	TR	0.81	52.4	D	1.05	90.1	F
				SB	LT	1.05	110.0	F	1.05	116.7	F
5B	Queens Boulevard & 65th Place	SIGNAL	Queens Boulevard	EB	T	0.14	15.5	B	0.49	20.2	C
				WB	T	0.34	17.6	B	0.30	17.2	B
			65th Place	NB	DefL	0.81	72.7	E	0.76	50.0	D
					TR	0.49	42.2	D			
				SB	LTR	0.47	40.2	D	0.50	41.4	D
5C	Queens Boulevard North Service Road & 65th Place	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.47	20.0	C	0.67	24.7	C
			65th Place	NB	LT	0.30	37.3	D	0.50	41.5	D
				SB	TR	0.44	39.6	D	0.34	37.8	D

Note:
1. All-Way Stop-Controlled intersection

No-Action Condition (2025)

The future No-Action Condition traffic volumes were determined for the 2025 analysis year (the estimated time of completion for the Modified Project). Per the *CEQR Technical Manual*, a compounded annual background growth rate of 0.50 percent was applied to the baseline traffic volumes for the first five years (2019 through 2023) and then a compounded annual background growth rate of 0.25 percent was applied for the remaining two years (2024 and 2025). In addition, trips expected to be generated by the three background development projects were incorporated in the No Action Condition traffic volumes. The No-Action Condition traffic volumes during weekday AM and afternoon peak hours are shown in Appendix C, Figures A6 and A7.

The intersection capacity analysis results for the future No-Action Condition are shown in Table 18. As shown in Table 18, of the 42 lane-groups/approaches in the study area, 18 and 15 operate at mid-LOS D or worse during the weekday AM and afternoon peak hours, respectively.

Table 18: No-Action Condition - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Afternoon		
						No-Action Condition			No-Action Condition		
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1A	Queens Boulevard South Service Road & 69th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.26	19.9	B	0.65	20.6	C
			69th Street	NB	TR	0.91	77.0	E	0.98	90.4	F
				SB	L	0.27	55.1	E	0.31	54.5	D
					T	0.75	66.1	E	0.75	60.3	E
1B	Queens Boulevard & 69th Street	SIGNAL	Queens Boulevard	EB	T	0.24	19.6	B	0.82	25.2	C
				WB	T	0.89	25.8	C	0.43	22.3	C
			69th Street	NB	LTR	1.00	80.8	F	0.89	65.3	E
				SB	LTR	0.81	65.6	E	0.94	65.6	E
1C	Queens Boulevard North Service Road & 69th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.80	23.9	C	0.53	24.3	C
			69th Street	NB	L	1.05	99.8	F	0.91	78.8	E
					T	0.58	58.2	E	0.53	58.7	E
				SB	TR	0.85	75.8	E	1.04	110.3	F
2	47th Avenue & 69th Street	SIGNAL	47th Avenue	EB	LR	0.06	9.0	A	0.07	9.1	A
				WB	LTR	0.16	9.8	A	0.11	9.3	A
			69th Street	NB	LT	0.76	25.7	C	0.74	24.7	C
				SB	TR	0.54	17.7	B	0.72	21.1	C
3A	Queens Boulevard South Service Road & 70th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.27	23.7	C	0.64	30.2	C
			70th Street	NB	TR	0.61	44.2	D	0.45	39.6	D
				SB	LT	1.06	75.6	E	0.54	28.0	C
3B	Queens Boulevard & 70th Street	SIGNAL	Queens Boulevard	EB	L	0.85	129.8	F	0.76	79.3	E
					T	0.25	23.3	C	1.04	65.1	E
				WB	L	1.15	208.5	F	0.32	67.7	E
					T	0.85	33.2	C	0.42	30.3	C
			70th Street	NB	LTR	0.80	53.3	D	0.50	40.8	D
				SB	LTR	1.09	110.5	F	1.10	110.9	F
3C	Queens Boulevard North Service Road & 70th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.62	24.9	C	0.51	32.2	C
			70th Street	NB	LT	1.13	118.8	F	0.76	40.2	D
				SB	T	0.75	51.2	D	0.77	52.5	D
					R	0.36	38.4	D	0.33	37.5	D
4	47th Avenue & 70th Street	AWSC[1]	47th Avenue	WB	LTR	0.10	8.7	A	0.09	8.2	A
			70th Street	NB	LT	0.44	10.9	B	0.34	9.5	A
				SB	TR	0.35	9.7	A	0.22	8.6	A
5A	Queens Boulevard South Service Road & 65th Place	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.37	18.4	B	0.75	18.9	B
			65th Place	NB	TR	0.84	54.4	D	0.88	57.2	E
				SB	LT	1.03	101.0	F	1.02	104.7	F
5B	Queens Boulevard & 65th Place	SIGNAL	Queens Boulevard	EB	T	0.15	15.5	B	0.51	13.6	B
				WB	T	0.36	11.6	B	0.20	16.0	B
			65th Place	NB	DefL	0.81	58.6	E	0.53	40.6	D
					TR	0.51	41.0	D			
				SB	LTR	0.48	40.4	D	0.43	39.5	D
5C	Queens Boulevard North Service Road & 65th Place	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.48	13.5	B	0.46	19.9	B
			65th Place	NB	LT	0.28	36.8	D	0.32	37.5	D
				SB	TR	0.45	39.8	D	0.36	38.0	D

Note:
1. All-Way Stop-Controlled

With-Action Condition with PCRE (2025)

The future With-Action Condition with PCRE traffic volumes were estimated by overlaying the incremental vehicle trips on the No-Action Condition volumes. The With-Action Condition with PCRE traffic volumes during weekday AM and afternoon peak hours are presented in Appendix C, Figures A8 and A9.

As part of the With-Action Condition with PCRE, minor signal timing improvements were incorporated in the analyses. With the PCRE in place, the existing signal timing plans at the intersections of Queens Boulevard at 69th and 70th Streets will be modified. The proposed traffic improvements are the same that were approved in Technical Memorandum 001 and are discussed as follows:

Queens Boulevard and 69th Street:

Minor Signal Retiming:

- During the weekday AM peak hour, shift 4 seconds of green time from the eastbound/westbound phase to the northbound phase.

- During the weekday afternoon peak hour, remove 4 seconds of green time from the eastbound/westbound phase and add 3 seconds to the northbound phase and 1 second to the southbound phase.

Queens Boulevard and 70th Street:

Minor Signal Retiming:

- During the weekday AM peak hour, shift 1 second of green time from the eastbound/westbound phase to the eastbound/westbound exclusive left-turn-only phase.

The intersection capacity analysis results for the With-Action Condition with PCRE are shown in Table 19. Based on the analysis results, with the signal timing improvements in place, all intersection approaches will operate with service conditions similar to the No-Action Condition without any significant increase in delays. Therefore, the Modified Project in the With-Action Condition with PCRE would not adversely affect the future traffic operating conditions in the study area and would operate at acceptable service levels, as per CEQR criteria.

Table 19: With-Action Condition with PCRE - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Afternoon		
						With-Action Condition with PCRE			With-Action Condition with PCRE		
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1A	Queens Boulevard South Service Road & 69th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.31	22.7	C	0.72	25.5	C
			69th Street	NB	TR	0.95	79.5	E	1.00	92.0	F
				SB	L	0.34	56.4	E	0.36	54.6	D
					T	0.75	66.0	E	0.72	60.0	E
1B	Queens Boulevard & 69th Street	SIGNAL	Queens Boulevard	EB	T	0.26	21.9	C	0.87	30.6	C
				WB	T	0.94	32.1	C	0.45	24.9	C
			69th Street	NB	LTR	1.02	76.2	E	0.89	60.9	E
				SB	LTR	0.84	66.4	E	0.95	65.4	E
1C	Queens Boulevard North Service Road & 69th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.84	28.8	C	0.56	27.2	C
			69th Street	NB	L	1.06	97.1	F	0.91	68.2	E
					T	0.52	54.1	D	0.49	54.8	D
				SB	TR	0.88	78.7	E	1.03	109.3	F
2	47th Avenue & 69th Street	SIGNAL	47th Avenue	EB	LR	0.07	9.0	A	0.08	9.1	A
				WB	LTR	0.33	11.5	B	0.23	10.4	B
			69th Street	NB	LT	0.76	25.7	C	0.74	24.7	C
				SB	TR	0.57	18.4	B	0.73	21.7	C
3A	Queens Boulevard South Service Road & 70th Street	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.27	23.7	C	0.69	31.3	C
			70th Street	NB	TR	0.61	44.2	D	0.45	39.6	D
				SB	LT	1.06	75.6	E	0.56	28.5	C
3B	Queens Boulevard & 70th Street	SIGNAL	Queens Boulevard	EB	L	0.85	129.8	F	0.76	79.4	E
					T	0.25	23.3	C	1.04	65.2	E
				WB	L	1.15	208.5	F	0.38	69.7	E
					T	0.85	33.2	C	0.42	30.3	C
			70th Street	NB	LTR	0.80	53.3	D	0.50	40.8	D
				SB	LTR	1.09	110.5	F	1.11	113.5	F
3C	Queens Boulevard North Service Road & 70th Street	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.62	24.9	C	0.50	32.0	C
			70th Street	NB	LT	1.13	118.8	F	0.76	40.1	D
				SB	T	0.75	51.2	D	0.77	52.5	D
					R	0.36	38.4	D	0.33	37.5	D
4	47th Avenue & 70th Street	AWSC[1]	47th Avenue	WB	LTR	0.10	8.9	A	0.09	8.4	A
			70th Street	NB	LT	0.48	11.7	B	0.36	9.9	A
				SB	TR	0.43	10.6	B	0.28	8.9	A
5A	Queens Boulevard South Service Road & 65th Place	SIGNAL	Queens Boulevard South Service Road	EB	TR	0.37	18.4	B	0.75	18.9	B
			65th Place	NB	TR	0.84	54.4	D	0.88	57.2	E
				SB	LT	1.03	101.0	F	1.02	104.5	F
5B	Queens Boulevard & 65th Place	SIGNAL	Queens Boulevard	EB	T	0.16	15.6	B	0.52	13.6	B
				WB	T	0.37	11.6	B	0.21	16.0	B
			65th Place	NB	DefL	0.81	58.1	E	0.53	40.6	D
					TR	0.51	40.9	D			
				SB	LTR	0.48	40.4	D	0.43	39.5	D
5C	Queens Boulevard North Service Road & 65th Place	SIGNAL	Queens Boulevard North Service Road	WB	TR	0.48	13.5	B	0.47	20.0	B
			65th Place	NB	LT	0.28	36.8	D	0.32	37.5	D
				SB	TR	0.45	39.8	D	0.36	38.0	D

Note:
1. All-Way Stop-Controlled

Pedestrian Analyses

Baseline Conditions

Baseline pedestrian levels in the study area were determined based on pedestrian counts conducted in June 2017 and August 2018. Per guidance from NYCDOT, the two sets of pedestrian counts were compared to obtain the baseline pedestrian volumes using the following methodology:

- For the intersections of Queens Boulevard at 69th and 70th Streets, and 47th Avenue at 69th and 70th Streets, TMC were conducted in June 2017 during the weekday AM and PM peak hours. As such, these higher 2017 TMC counts were used as baseline traffic volumes for these intersections during the weekday AM peak hour.
- For the intersections of Queens Boulevard at 65th Place, 69th Street and 70th Street, TMC were conducted in August 2018 during the weekday afternoon peak hour. These TMC were

increased by 8 percent to obtain the baseline traffic volumes for these intersections during the weekday afternoon peak hour.

- For the intersections of 47th Avenue at 69th and 70th Streets, TMC were conducted in August 2018 during the weekday afternoon peak hour. These TMC were increased by 9 percent to obtain the baseline traffic volumes for these intersections during the weekday afternoon peak hour.

As per coordination with NYCDCP and NYCDOT, the Baseline Conditions pedestrian volumes at the three analysis locations were determined using the following methodology:

- At the intersection of Queens Boulevard at 69th Street crosswalk and sidewalk counts conducted in June 2017 were used as baseline pedestrian volumes during the weekday AM peak hour. For the corner elements, counts conducted in August 2018 were increased by 11 percent to be used as baseline pedestrian volumes during the weekday AM peak hour.
- At the intersection of Queens Boulevard at 69th Street, crosswalk, corner and sidewalk counts conducted in August 2018 were used as baseline pedestrian volumes during the weekday afternoon peak hour.
- At the intersection of 47th Avenue at 69th Street, crosswalk and sidewalk counts conducted in June 2017 were used as baseline pedestrian volumes during the weekday AM peak hour. For the corner elements, counts conducted in August 2018 were increased by 11 percent to be used as baseline pedestrian volumes during the weekday AM peak hour.
- At the intersection of 47th Avenue at 69th Street, crosswalk, corner and sidewalk counts conducted in August 2018 were increased by 11 percent to be used as baseline pedestrian volumes during the weekday afternoon peak hour.
- At the intersection of 47th Avenue at 70th Street, sidewalk counts conducted in June 2017 were used as baseline pedestrian volumes during the weekday AM peak hour. These sidewalk counts increased by 11 percent to be used as baseline pedestrian volumes during the weekday afternoon peak hour.

Baseline Conditions pedestrian volumes for the weekday AM and afternoon peak hours are shown in Appendix D, Figures B3 and B4.

As shown in Tables 20 and 21, all pedestrian elements in the pedestrian study area operate at acceptable service conditions during the weekday AM and afternoon peak hours.

Table 20: Baseline Conditions Sidewalk Analysis

Location	Sidewalk	Sidewalk Movement	Weekday AM Peak Hour					Weekday Afternoon Peak Hour				
			Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS	Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS
47th Avenue betw. 69th Street and 70th Street	North	East-West	8.0	23	0.58	1,620	A	8.0	24	0.79	2,133	A
69th Street betw. Queens Boulevard and 47th Avenue	East	North-South	16.0	57	0.75	2,274	A	16.0	36	0.69	3,312	A

Table 21: Baseline Conditions Corner Analysis

Location	Corner	Weekday AM Peak Hour			Weekday Afternoon Peak Hour		
		Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
69th Street and 47th Avenue	Northeast	3	2,260.2	A	2	3,131.6	A
69th Street and EB Queens Boulevard South Service Road	Southeast	3	1,002.7	A	9	1,725.8	A

No-Action Condition (2025)

The No-Action Condition pedestrian volumes were determined for the 2025 analysis year (the estimated time of completion for the Modified Project). Per the CEQR Technical Manual, a compounded annual background growth rate of 0.50 percent was applied to the baseline pedestrian volumes for the first five years (2019 through 2023) and then a compounded annual background growth rate of 0.25 percent was applied for the remaining two years (2024 and 2025). In addition, trips expected to be generated by the three background development projects were incorporated in the No Action Condition pedestrian volumes. The No-Action Condition pedestrian volumes during the weekday AM and afternoon peak hours are shown in Appendix D, Figures B5 and B6.

As shown in Tables 22 and 23, all pedestrian elements in the study area operate at acceptable service conditions during the weekday AM and afternoon peak hours.

Table 22: No-Action Condition Sidewalk Analysis

Location	Sidewalk	Sidewalk Movement	Weekday AM Peak Hour					Weekday Afternoon Peak Hour				
			Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS	Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS
47th Avenue betw. 69th Street and 70th Street	North	East-West	8.0	81	0.58	459.9	B	8.0	90	0.79	568.8	A
69th Street betw. Queens Boulevard and 47th Avenue	East	North-South	16.0	176	0.75	736.3	A	16.0	123	0.69	969.3	A

Table 23: No-Action Condition Corner Analysis

Location	Corner	Weekday AM Peak Hour			Weekday Afternoon Peak Hour		
		Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
69th Street and 47th Avenue	Northeast	39	666.3	A	30	720.3	A
69th Street and EB Queens Boulevard South Service Road	Southeast	25	447.8	A	37	731.2	A

With-Action Condition with PCRE (2025)

The future With-Action Condition with PCRE pedestrian volumes were estimated by overlaying the incremental pedestrian trips on the No-Action Condition volumes. The With-Action Condition with PCRE pedestrian volumes for the weekday AM and afternoon peak hours are presented in Appendix D, Figures B7 and B8.

As shown in Tables 24 and 25, the pedestrian elements in the study area will operate at acceptable service conditions the weekday AM and afternoon peak hours. Therefore, the Modified Project would not adversely affect pedestrian operations in the study area.

Table 24: With-Action Condition with PCRE Sidewalk Analysis

Location	Sidewalk	Sidewalk Movement	Weekday AM Peak Hour					Weekday Afternoon Peak Hour				
			Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS	Effective Width (ft.)	Two-Way Peak Hour Volume	PHF	Average Space (ft^2/p)	Platoon LOS
47th Avenue betw. 69th Street and 70th Street	North	East-West	13.0	654	0.58	104.2	B	13.0	503	0.79	186.4	B
69th Street betw. Queens Boulevard and 47th Avenue	East	North-South	16.0	386	0.75	335.7	B	16.0	353	0.69	337.7	B

Table 25: With-Action Condition with PCRE Corner Analysis

Location	Corner	Weekday AM Peak Hour			Weekday Afternoon Peak Hour		
		Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
69th Street and 47th Avenue	Northeast	194	191.6	A	203	200.1	A
69th Street and EB Queens Boulevard South Service Road	Southeast	51	251.8	A	78	348.0	A

Parking

Baseline Conditions (2018)

A detailed parking inventory of the area surrounding the project site was conducted during a typical weekday overnight period. There are no available off-street parking facilities within a ¼-mile radius of the project site. Therefore, an overnight on-street parking utilization survey within a ¼-mile radius of the project site was conducted.

As shown in Figure 6, the ¼-mile radius study area is generally bounded by Woodside Avenue to the north, 65th Place to the west, 74th Street to the east and 51st Avenue to the south. On-street parking regulations, capacity, and occupancy were inventoried for the study areas on a block-by-block basis and are shown in Tables 26 and 27.

Table 26 presents the on-street parking occupancy within a ¼-mile of the project site for the Baseline Conditions. There are approximately 2,005 legal on-street parking spaces within a ¼-mile of the project site with a utilization rate of 93 percent during the overnight hours. In total, there are approximately 147 legal on-street parking spaces available during the overnight hours within ¼-mile radius of the project site.

Figure 6: Parking Regulations within a ¼-Mile of the Project Site

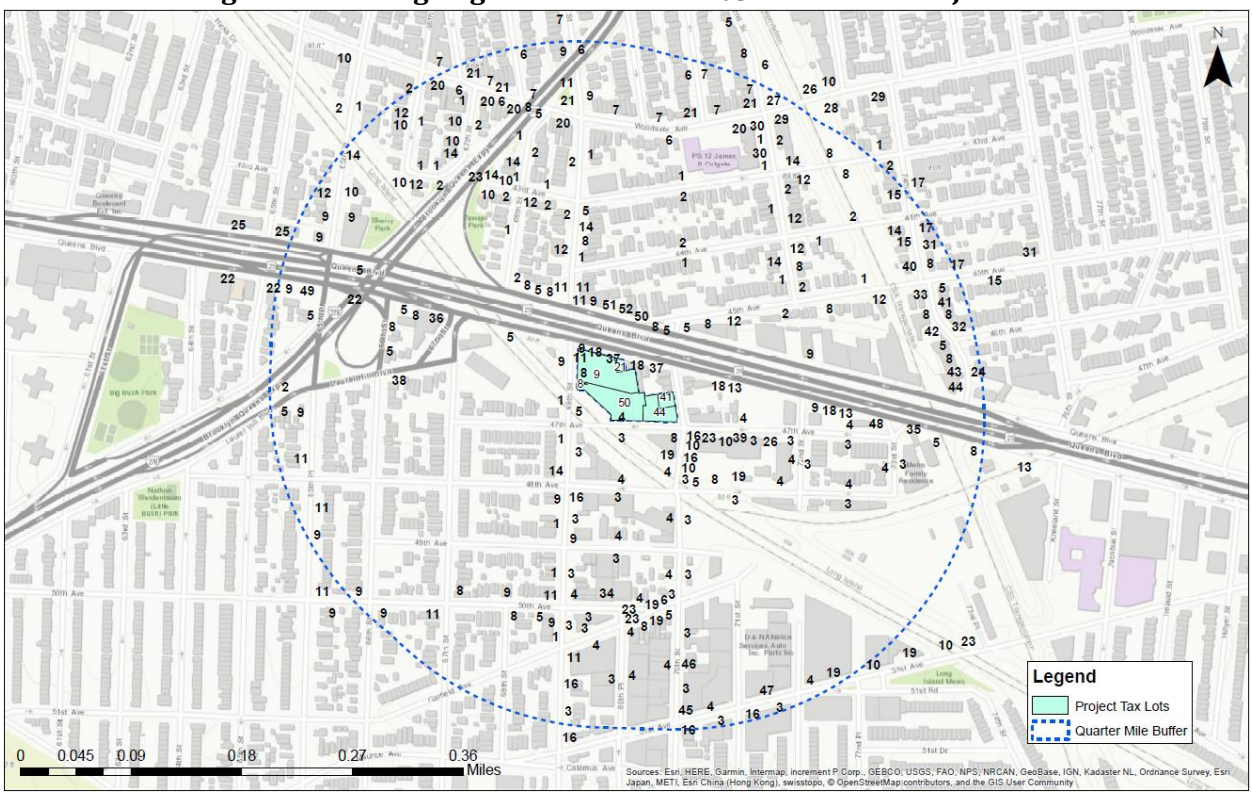


Table 26: Baseline Conditions On-Street Parking Utilization

Study Area	Capacity	Occupied Spaces	Available Spaces	Parking Utilization (%)
¼-Mile Radius	2,005	1,858	147	93%

Table 27: Parking Regulations within a ¼-Mile of the Project Site

Index	Regulation
1	NO PARKING THURSDAY 11AM-12:30PM (DOUBLE ARROW)
2	NO PARKING FRIDAY 11AM-12:30PM (DOUBLE ARROW)
3	NO PARKING TUESDAY FRIDAY MIDNIGHT-3AM (DOUBLE ARROW)
4	NO PARKING MONDAY THURSDAY MIDNIGHT-3AM (DOUBLE ARROW)
5	NO STANDING ANYTIME (DOUBLE ARROW)
6	NO PARKING FRIDAY 9AM-10:30AM (DOUBLE ARROW)
7	NO PARKING THURSDAY 9AM-10:30AM (DOUBLE ARROW)
8	NO STANDING ANYTIME (SINGLE ARROW)
9	NO STANDING BUS STOP (SINGLE ARROW)
10	NO PARKING ANYTIME (SINGLE ARROW)
11	NO STANDING BUS STOP (DOUBLE ARROW)
12	NO PARKING FRIDAY 11AM-12:30PM (SINGLE ARROW)
13	NO PARKING MONDAY TUESDAY THURSDAY FRIDAY 7:30AM-8AM (DOUBLE ARROW)
14	NO PARKING THURSDAY 11AM-12:30PM (SINGLE ARROW)
15	NO PARKING MONDAY 9:30AM-11AM (DOUBLE ARROW)
16	NO PARKING TUESDAY FRIDAY MIDNIGHT-3AM (SINGLE ARROW)
17	NO PARKING TUESDAY 9:30AM-11AM (DOUBLE ARROW)
18	NO STANDING MONDAY-FRIDAY 3PM-7PM (DOUBLE ARROW)
19	NO PARKING MONDAY THURSDAY MIDNIGHT-3AM (SINGLE ARROW)
20	NO PARKING FRIDAY 9AM-10:30AM (SINGLE ARROW)
21	NO PARKING 9AM-10:30AM (SINGLE ARROW)
22	NO STOPPING ANYTIME (DOUBLE ARROW)
23	NO PARKING ANYTIME (DOUBLE ARROW)
24	NO PARKING MONDAY 11:30AM-1PM (DOUBLE ARROW)
25	NO STANDING 7AM-10AM 4PM-6PM EXCEPT SUNDAY (DOUBLE ARROW)
26	NO STANDING 7AM-4PM SCHOOL DAYS (SINGLE ARROW)
27	NO PARKING MONDAY 8:30AM-10AM (DOUBLE ARROW)
28	NO PARKING TUESDAY 8:30AM-10AM (DOUBLE ARROW)
29	NO PARKING TUESDAY 8:30AM-10AM (SINGLE ARROW)
30	NO STANDING 7AM-4PM SCHOOL DAYS EXCEPT SCHOOL BUSES (DOUBLE ARROW)
31	NO PARKING TUESDAY 9:30AM-11AM (SINGLE ARROW)
32	NO PARKING TUESDAY 11:30AM-1PM (DOUBLE ARROW)
33	NO STANDING MONDAY-FRIDAY 7AM-9AM (DOUBLE ARROW)
34	NO PARKING 8AM-6PM EXCEPT SUNDAY (SINGLE ARROW)
35	NO PARKING FRIDAY 11AM-2PM (DOUBLE ARROW)
36	AMBULETTE ONLY (DOUBLE ARROW)
37	NO PARKING 7AM-7:30AM EXCEPT SUNDAY (DOUBLE ARROW)
38	NO PARKING MONDAY-FRIDAY 7AM-7PM (SINGLE ARROW)
39	NO STANDING 7AM-4PM SCHOOL DAYS (DOUBLE ARROW)
40	NO PARKING MONDAY 9:30AM-11AM (SINGLE ARROW)
41	NO PARKING TUESDAY 11:30AM-1PM (SINGLE ARROW)
42	NO STANDING MONDAY-FRIDAY 7AM-9AM (SINGLE ARROW)
43	NO PARKING 7AM-7:30AM EXCEPT SUNDAY (SINGLE ARROW)
44	2-HOUR METERED PARKING 7:30AM-7PM EXCEPT SUNDAY (SINGLE ARROW)
45	TRUCK LOADING ONLY MONDAY-FRIDAY 7AM-4PM (DOUBLE ARROW)
46	TRUCK LOADING ONLY MONDAY-FRIDAY 7AM-4PM (SINGLE ARROW)
47	NO PARKING MONDAY 9AM-10:30AM (DOUBLE ARROW)
48	NO PARKING THURSDAY 11AM-2PM(DOUBLE ARROW)
49	NO STOPPING ANYTIME (SINGLE ARROW)
50	NO STANDING MONDAY-FRIDAY 4PM-7PM (DOUBLE ARROW)
51	PAY-BY-CELL LOCATOR NUMBER
52	2-HOUR METERED PARKING 9AM-4PM EXCEPT SUNDAY (DOUBLE ARROW)

No-Action Condition (2025)

As recommended by the *2014 CEQR Technical Manual*, a compounded annual background growth rate of 0.50 percent was applied to the existing occupied parking spaces for the first five years (2019 through 2023) and then a compounded annual background growth rate of 0.25 percent was applied for the remaining two years (2024 and 2025). Adjustments were made to the No-Action Condition on-street parking occupancies to incorporate the three background development projects in the study area that are anticipated for completion by Build Year 2025.

Table 28 presents the on-street parking occupancy within a ¼-mile of the project site in the future No-Action Condition. As indicated in the table, there are approximately 2,005 legal on-street parking spaces within a ¼-mile of the project site, 96 percent of which are anticipated to be utilized during the overnight hours. In total, there would be approximately 82 legal on-street parking spaces available during the overnight hours within ¼-mile radius of the project site in the future No-Action Condition.

Table 28: No-Action Condition On-Street Parking Utilization

Study Area	Capacity	Occupied Spaces	Available Spaces	Parking Utilization (%)
¼-Mile Radius	2,005	1,923	82	96%

With-Action Condition with PCRE (2025)

In the future With-Action Condition with PCRE, the Modified Project would provide 238 parking spaces for residential, commercial, and school uses under both Schemes. The 24-hour parking accumulation for the Modified Project is presented in Table 29. Based on the *2012-2016 American Community Survey (ACS)*, the average vehicle ownership rate per household for the study area is approximately 0.53 vehicles per renter occupied unit. The Modified Project would provide 505 rental units, generating a weekday overnight demand for 269 parking spaces based on the ACS data. This peak parking demand would result in a shortfall of approximately 31 spaces at the on-site parking facility during the overnight period.

Table 29: Hourly Parking Accumulation

Time period	School Staff Component			Local Retail Component			Residential Component			Weekday Parking Accumulation		
	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.
Overnight			0			0			269			269
12:00 AM -- 1:00 AM	0	0	0	0	0	0	4	4	269	4	4	269
1:00 AM -- 2:00 AM	0	0	0	0	0	0	4	4	269	4	4	269
2:00 AM -- 3:00 AM	0	0	0	0	0	0	0	0	269	0	0	269
3:00 AM -- 4:00 AM	0	0	0	0	0	0	0	0	269	0	0	269
4:00 AM -- 5:00 AM	0	0	0	0	0	0	0	0	269	0	0	269
5:00 AM -- 6:00 AM	0	0	0	0	0	0	2	6	265	2	6	265
6:00 AM -- 7:00 AM	0	0	0	3	0	3	7	22	250	10	22	253
7:00 AM -- 8:00 AM	26	0	26	9	9	3	16	92	174	25	101	203
8:00 AM -- 9:00 AM	6	0	32	9	6	6	29	55	148	38	61	186
9:00 AM -- 10:00 AM	0	0	32	21	12	15	18	32	134	40	45	181
10:00 AM -- 11:00 AM	0	0	32	21	21	15	15	25	124	37	46	171
11:00 AM -- 12:00 PM	0	0	32	57	57	15	27	27	124	84	84	171
12:00 PM -- 1:00 PM	0	0	32	27	24	18	20	20	124	47	44	174
1:00 PM -- 2:00 PM	0	0	32	27	21	24	20	20	125	48	41	181
2:00 PM -- 3:00 PM	0	18	14	18	18	24	37	20	142	55	38	180
3:00 PM -- 4:00 PM	0	0	14	24	24	24	37	25	154	61	49	192
4:00 PM -- 5:00 PM	0	14	0	30	30	24	84	36	202	113	66	226
5:00 PM -- 6:00 PM	0	0	0	18	27	15	46	27	220	64	54	235
6:00 PM -- 7:00 PM	0	0	0	15	24	6	55	28	248	71	53	254
7:00 PM -- 8:00 PM	0	0	0	9	15	0	42	20	269	51	36	269
8:00 PM -- 9:00 PM	0	0	0	6	6	0	31	31	269	37	37	269
9:00 PM -- 10:00 PM	0	0	0	0	0	0	20	20	269	20	20	269
10:00 PM -- 11:00 PM	0	0	0	0	0	0	15	15	269	15	15	269
11:00 PM -- 12:00 AM	0	0	0	0	0	0	14	15	269	14	15	269

Notes:

1. In/Out and Temporal Distributions for the School Staff, Local Retail and Residential components during the AM, MD, Afternoon, PM and SAT MD peak hours are based on the transportation planning assumptions and demand estimates shown in Table 4.
2. Temporal Distribution for the Residential component during the remaining hours of the 24-hr profile are based on the *NYCDOT Residential 24-Hour Parking Accumulation - Queens* .
3. In/Out Distribution for the Residential component during the remaining hours of the 24-hr profile are based on the East *126th Street Bus Depot Memorial & Mixed-Use Project GEIS, 2016* (CEQR No. 16DME011M), as per DCP guidance.
4. In/Out and Temporal Distributions for the Local Retail component during the remaining hours of the 24-hr profile are based on the *East 126th Street Bus Depot Memorial & Mixed-Use Project GEIS, 2016* (CEQR No. 16DME011M), as per DCP guidance.

Table 30 presents the on-street parking occupancy within a ¼-mile of the project site in the future With-Action Condition. As indicated in the table, there are approximately 2,005 legal on-street parking spaces within a ¼-mile of the project site, 97 percent of which are anticipated to be utilized during the overnight hours. In total, approximately 51 legal on-street parking spaces would remain available during the overnight hours within ¼-mile radius of the project site in the future With-Action Condition. Therefore, the Modified Project would not result in parking shortfall in the study area.

Table 30: With-Action Condition with PCRE On-Street Parking Utilization within a ¼-mile of the Project Site

Scheme	Capacity	Occupied Spaces	Available Spaces	Parking Utilization (%)
¼-Mile Radius	2,005	1,954	51	97%

Vehicular and Pedestrian Safety Evaluation

Crash data for the study area intersection were obtained from New York State Department of Transportation (NYSDOT) for the time period between January 9, 2015 and December 30, 2017. Table 31 summarizes the total number of reportable crashes, fatalities, and injuries during the study period, as well as a yearly breakdown of vehicular crashes with pedestrians and bicycles at each location. Based on this information, the intersection of Queens Boulevard and 69th Street is identified as a high-crash location, with six total bicycle and pedestrian injury crashes from the consecutive 12 month period beginning in May 2016 and ending in April 2017.

Table 31: Crash Data Analysis Summary

Intersection ID	Intersection Name	Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Bicycle + Pedestrian Injury Crashes Combined			Motorist Injury Crashes			Total Crashes (Reportable + Non-Reportable)		
		2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
1	Queens Boulevard and 69th Street	1	2	3	0	3	1	1	5	4	9	11	10	10	16	14
2	Queens Boulevard and 70th Street	0	0	0	0	1	0	0	1	0	0	1	2	0	2	2
3	47th Avenue and 69th Street	0	1	1	0	0	0	0	1	1	8	3	10	8	4	11
4	47th Avenue and 70th Street	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
5	45th Avenue and 70th Street	1	1	2	0	2	2	1	3	4	13	10	17	14	13	21
6	Queens Boulevard and 45th Avenue	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
7	47th Avenue and 70th Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	45th Avenue and 70th Street	0	0	0	0	0	2	0	0	2	1	2	1	1	2	3
9	Queens Boulevard and 45th Avenue	0	1	0	0	0	0	0	1	0	1	1	3	1	2	3

Table 32 shows a detailed description of each pedestrian/bicyclist-related crash at the intersection of Queens Boulevard and 69th Street during the three year period.

Table 32: Vehicle and Pedestrian/Bicyclist Crash Details

Intersection	Date	Crash Class			Action of Vehicle	Action of Pedestrian/ Bicyclist	Cause of Crash			
		Type	Injured	Killed			Left/ Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
Queens Boulevard and 69th Street	5/31/2015	Collision with Pedestrian	X		Unknown	Unknown				Not entered
	5/10/2016	Collision with Bicyclist	X		Going straight - North	Going straight - North				Passing too closely
	5/11/2016	Collision with Pedestrian	X		Making left turn - North	Crossing with signal	X		X	
	9/30/2016	Collision with Pedestrian	X		Making left turn - West	Crossing with signal	X			Failure to yield right of way
	11/7/2016	Collision with Bicyclist	X		Going straight - East	Going straight - South				Traffic control devices disregarded
	11/17/2016	Collision with Bicyclist	X		Making left turn - North	Going straight - South	X		X	
	3/10/2017	Collision with Pedestrian	X		Making right turn - Northwest	Crossing with signal	X		X	
	5/7/2017	Collision with Pedestrian	X		Unknown - West	Emerge from front/behind parked vehicle		X		
	5/14/2017	Collision with Bicyclist	X		Going Straight - South	Not Applicable			X	
	9/7/2017	Collision with Pedestrian	X		Making right turn - North	Crossing no signal or crosswalk	X	X	X	

Queens Boulevard and 69 Street

Based on the review of the crash history at the intersection of Queens Boulevard and 69th Street, prevailing trends with regard to geometric deficiencies were not identified as the primary causes of recorded crashes. With respect to geometric deficiencies that could potentially cause safety hazards, the intersection of Queens Boulevard and 69th Street is signalized and provides four school crosswalks. In addition, pedestrian safety signs are installed at the eastbound and westbound approaches. Based on the review of crash history data, most of the pedestrian/bicyclist crashes were caused by vehicles making a left or right-turn. In addition, some of these accidents were also caused by driver inattention. With the Modified Project, this intersection could experience approximately 286 and 284 incremental peak hour project generated pedestrian trips (combined for all crosswalks) during the weekday AM and afternoon peak hours, respectively.

To improve safety conditions at this intersection, additional measures can be implemented. These measures could include restriping partially faded crosswalks, installing school crossing signs at the northbound and southbound approaches and on the center medians on Queens Boulevard, and installing pedestrian countdown signals to inform pedestrians about the impending expiration of walk-time indication. These additional safety measures, coupled with the proposed initiatives identified as part of the Vision Zero Queens Pedestrian Safety Action Plan and the Vision Zero: Great Streets Capital Project, are expected to enhance pedestrian safety at this location.

J. AIR QUALITY

As discussed in the August 31 EAS, the development contemplated in the August 31 EAS would not result in any significant adverse mobile or stationary source air quality impacts. The Modified Project would result in the generation of approximately 200 vehicles, which is above the 170 vehicle threshold. However, no single intersection would experience an increase of 170 vehicles or more during one peak period; therefore, no mobile source AQ analysis is required. The Modified Project is anticipated to result in a maximum of seven peak hour heavy duty diesel vehicles (HDDVs). Accordingly, a screening assessment was performed using the Equivalent Truck Calculation spreadsheet. The results of the screening indicate the Modified Project would pass the Particulate Matter (PM) 2.5 screen on all road types.

As discussed in Technical Memorandum 001, although the inclusion of a school would be anticipated to result in an increase of peak hour trips, the Modified Project would not result in traffic that would trigger *CEQR* thresholds requiring additional mobile source air quality analysis. The development contemplated in the August 31 EAS indicated no anticipated adverse stationary source air quality effects on existing nearby buildings of equal or greater height.

To prevent any potential project-on-project air quality impacts from stationary sources, as part of the Approved Actions an (E) Designation (E-472) for air quality was assigned to Lots 41, 44, and 50 (East Tower) and Lots 9 and 21 (West tower).

As discussed in the August 31 EAS, to preclude the potential for significant adverse impacts related to air quality, an (E) designation **(E-472)** was be incorporated into the Approved Actions for Block 2432, Lots 9, 21, 41, 44, and 50. The requirements of (E) Designation (E-472) would be as follows as set forth in the September 5, 2018 negative declaration:

> **<u>East Tower: Block 2432, Lots 41, 44 and 50</u>: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating, and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least 155 feet above grade and at a setback distance of at least 126 feet from the West Tower to avoid any potential significant adverse air quality impacts.**
>
> **<u>West Tower: Block 2432, Lots 9 and 21</u>: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least 185 feet above grade to avoid any potential significant adverse air quality impacts.**

The Modified Project would result in reduced building heights compared to the project contemplated in the August 31 EAS. Accordingly, HVAC stack heights would be required to be located at the highest tier, or at least 164.5 feet above grade, and 143 feet above grade for the West and East Tower, respectively. The Modified Project would not result in a building footprint that exceeds or differs substantially from what was assessed in the August 31 EAS, therefore, HVAC stack location on the East Tower would be required to be setback at least 126 feet from the West Tower. The Development Site for the Modified Project would include Block 2432, Lot 8, which was not contemplated in the August 31 EAS.. Accordingly, the changes to the Modified Project would require a modification to the (E) designation. The revised text of the (E) designation would be:

> **<u>East Tower: Block 2432, Lots 41, 44 and 50</u>: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating, and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least *143* feet above grade and at a setback distance of at least 126 feet from the West Tower to avoid any potential significant adverse air quality impacts.**
>
> **<u>West Tower: Block 2432, Lots 8, 9 and 21</u>: Any new residential and/or commercial development on the above-referenced properties must use natural gas as the type of fuel for heating, ventilating and air conditioning systems (HVAC) and ensure that the HVAC stack is located at the highest tier or at least *164.5* feet above grade to avoid any potential significant adverse air quality impacts.**

Based on this information, with the implementation of the measures described in the August 31 EAS and September 5, 2018 negative declaration, the Modified Project would not result in any new or different significant adverse impacts to air quality, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would remain valid.

K. NOISE

According to the *CEQR Technical Manual*, an initial noise assessment on vehicular traffic noise is necessary if a proposed project would (i) generate or reroute traffic or (ii) introduce a new receptor near a heavily trafficked thoroughfare. In order for a detailed analysis on train noise to be warranted the proposed project must (i) be located within 1,500 feet of existing rail activity and have a direct line of sight to that rail facility or (ii) add rail activity to existing or new rail lines within 1,500 feet and have a direct line of site to a receptor.

As discussed in the August 31 EAS, the Development Site is within 1,500 feet of the existing elevated rail tracks and will have a direct line of site to the receptor; therefore, a detailed train noise assessment was performed. The attenuation requirements derived from the noise assessment are displayed in Table 35 and Table 36.

Table 35: West Tower Façade Attenuation Requirements

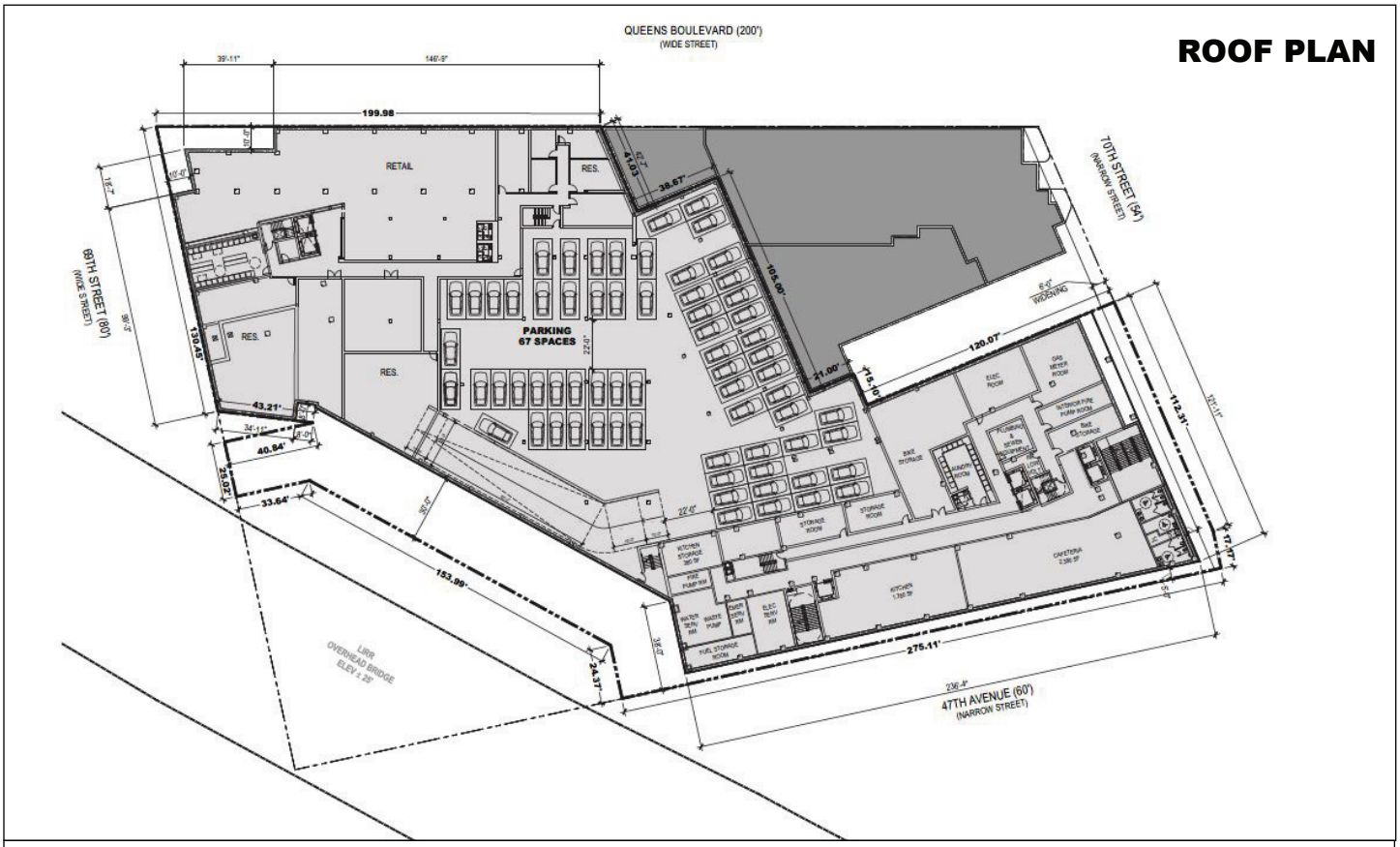
Façade	Elevation	*CEQR* Required Attenuation	Comment
North	1st to 9th Floor 10th Floor and Up	33 dBA 31 dBA	Traffic noise along QB major noise source – no exposure to LIRR
West	1st Floor 2nd to 11th Floor 12th Floor and Up	33 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
South	1st Floor 2nd to 11th Floor 12th Floor and Up	31 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
East	1st Floor 2nd to 11th Floor 12th Floor and Up	28 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have some exposure to LIRR at higher elevations.

Table 36: East Tower Façade Attenuation Requirements

Façade	Elevation	*CEQR* Required Attenuation	Comment
North	1st to 9th Floor 10th Floor and Up	33 dBA 31 dBA	Traffic noise along QB major noise source – no exposure to LIRR
West	1st Floor 2nd to 11th Floor 12th Floor and Up	33 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
South	1st Floor 2nd to 11th Floor 12th Floor and Up	31 dBA 37 dBA 35 dBA	1st Fl values based on 20-min spot meas. – façade to have exposure to LIRR at higher elevations.
East	All Floors	28 dBA	Based on 20-min spot meas. – façade not anticipated to be impacted by LIRR

As described in Technical Memorandum 001, due to the inclusion of the community facility (school), the Modified Project would be anticipated to increase vehicle traffic volumes along 47 Avenue between 70 Street and 69 Street during weekday AM and afternoon peak hours. The school would include an open space area on the roof of the first floor facing the interior of the Development Site (Figure 7). Therefore, the Modified Project would be anticipated to increase noise levels on the south facing façades that were not contemplated in the August 31 EAS but were contemplated in Technical Memorandum 001.

FIGURE 7
SITE AND ROOF PLAN



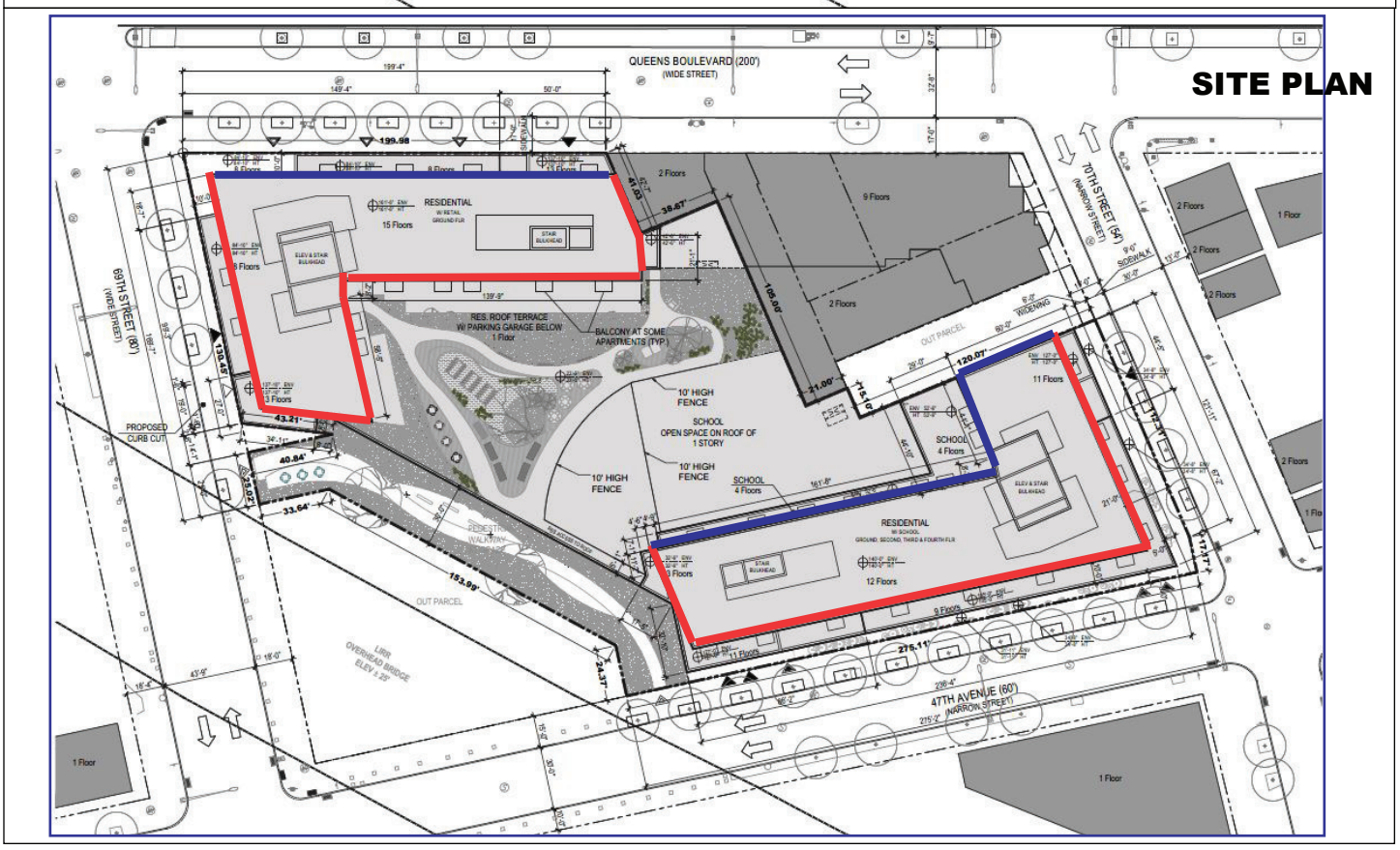


Image Source: Perkins Eastman Architects
For Illustrative Purposes Only

37 dB(A)

33 dB(A)

LANGAN

As discussed in the August 31 EAS, to preclude the potential for significant adverse impacts related to noise, an (E) designation **(E-472)** was incorporated into the Approved Actions for Block 2432, Lots 9, 21, 41, 44, and 50.[10] The requirements of (E) designation **(E-472)** would be as follows:

Block 2432, Lots 9. 21, 41, 44, and 50 (Development Site)

In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed window condition with minimum attenuation of 37 dB(A) window/wall attenuation on western, eastern and southern facades and a minimum attenuation of 33 dB(A) window/wall attenuation on northern façades for the first 100 ft. above the appropriate noise source elevation in order to maintain an interior noise level of 45 dB(A). To achieve 37 dB(A) or 33 dB(A) of building attenuation, special design features that go beyond the normal double-glazed windows are necessary and may include using specially designed windows (i.e., windows with small sizes, windows with air gaps, windows with thicker glazing, etc.), and additional building attenuation. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.

The attenuation requirements for the south facing façade, where the Modified Project is anticipated to increase vehicle traffic volumes, were initially designed to satisfy indoor residential dB(A) requirements based on the development contemplated in the August 31 EAS. These attenuation requirements were determined as result of existing noise levels generated predominantly from the elevated rail adjacent to the Development Site. Pursuant to the *CEQR Technical Manual*, the attenuation requirement for schools is the same as the attenuation requirement for residences. As a result, the attenuation requirement described in the (E) Designation (E-472) to satisfy indoor residential dB(A) requirements would therefore also satisfy the dB(A) requirements of the community facility (school).

Playground Noise Analysis

Pursuant to *CEQR Technical Manual* guidelines, noise generated by children in playgrounds or people using parks is considered stationary source noise. For locations adjacent to playgrounds or parks, absent data for comparable facilities, based upon noise measurements made at ten school playground sites in 1987, it may be assumed that Leq(1) noise levels at the boundary would be 75 dB(A), 15 feet from the boundary would be 73 dB(A), 30 feet from the boundary would be 70 dB(A), and the noise level would decrease by 4.5 dB(A) per doubling of distance beyond 30 feet. In some situations, these values may overestimate playground noise levels. It is prudent to consult with New York City Department of Environmental Protection (DEP) to see if updated information is available prior to using these screening values.

[10] There is an existing (E) Designation (E-163) for noise on Lots 9 and 21, which was assigned as part of the 2006 Maspeth Woodside Rezoning (CEQR No. 06DCP065Q). The (E) Designation (E-472) proposed in the With-Action Condition would supersede the requirements of E-163.

Due to the inclusion of the school open space, as part of Technical Memorandum 001, the requirements of the (E) Designation were revised to account for the potential noise that could be generated by children utilizing the space.[11]

The Development Site for the Modified Project would include Block 2432, Lot 8, which was not contemplated in the August 31 EAS. Accordingly, the changes to the Modified Project would require a modification to the (E) designation. The revised text of the (E) designation would be:

East Tower: Block 2432, Lots 41, 44 and 50: In order to ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed window condition with a minimum attenuation of 33 dB(A) window/wall attenuation on the interior southern and eastern facades facing the playground, and a minimum of 37 dB(A) window/wall attenuation on all other facades in order to maintain an interior noise level not greater than 45 dB(A) for residential and community facility uses or not greater than 50 dB(A) for commercial uses. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

West Tower: Block 2432, Lots 8, 9 and 21: In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with minimum attenuation of 37 dB(A) window/wall attenuation on western, eastern and southern facades and a minimum attenuation of 33 dB(A) window/wall attenuation on northern facades for the first 100 ft. above the appropriate noise source elevation in order to maintain an interior noise level not greater than 45 dB(A) for residential uses or not greater than 50 dB(A) for commercial uses. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Based on this information, with the implementation of the measures described in the August 31 EAS, Technical Memorandum 001, and above, the Modified Project would not result in any new or different significant adverse impacts to noise, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

[11] Tech Memo 001, published October 30, 2018, incorrectly referenced a required 38 dB(A) rating for a portion of the proposed development. This conclusion was based on a prior version of the site plan. Under the proposed development plan, this condition no longer occurs and the statement has been removed. The proposed text of the (E) designation provided in this Tech Memo 002 reflects attenuation requirements based on analysis of conditions of the currently proposed development.

L. NEIGHBORHOOD CHARACTER

As described in the August 31 EAS, of the relevant technical areas specified in the *CEQR Technical Manual*, the Approved Actions would not result in adverse environmental effects to land use, zoning, and public policy, socioeconomic conditions, open space, shadows, historic and cultural resources, urban design and visual resources, transportation, or noise. In addition, the technical areas that contribute to a neighborhood's character would not, either individually or in combination, result in a moderate adverse impact on neighborhood character.

The modifications to the type and amount of commercial and community facility floor area associated with the Modified Project would not result in any changes to the neighborhood character of the Study Area that were not already assessed in the August 31 EAS or Technical Memorandum 001. Consistent with what was contemplated in the August 31 EAS, the Modified Project would be consistent with the Study Area's mixed-use character and would provide new ground floor commercial uses and mixed-income housing. The Modified Project would also provide streetscape improvements including street trees and pedestrian features along segments of the four perimeter streets, as well as a landscaped pathway between the LIRR right-of-way and the new development.

Based on this information, the Modified Project would not result in any new or different significant adverse impacts to neighborhood character, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

M. CONSTRUCTION

Based on the known development schedule of the Modified Project, an anticipated construction schedule was created for the Development Site. The schedule anticipates that construction of the Modified Project would not exceed 24 months. Because construction of the Modified Project would not exceed 24 months, and because 50 or more PCEs (passenger car equivalents) would not be generated during peak traffic hours as a result of construction, as stated in the August 31 EAS and Technical Memorandum 001, the Approved Actions are not anticipated to result in significant adverse impacts related to construction activities.

As stated previously, the Build Year for the Modified Project would exceed the Build Year contemplated in the August 31 EAS and Technical Memorandum 001. The BuildYear for the Modified Project is anticipated to be longer due to the site selection period and fit out of the proposed SCA school. However, construction of the buildings would not be anticipated to exceed 24 months. Accordingly, while the Build Year exceeds a period of 24 months, construction activities on the Development Site are not anticipated to exceed a period of 24 months.

Based on this information, the Modified Project would not result in any new or different significant adverse impacts to construction, and the conclusions of the August 31 EAS and/or Technical Memorandum 001 would not change.

6) CONCLUSION

The purpose of this technical memorandum is to determine whether the Modified Project would result in any new adverse environmental effects compared to development contemplated in the August 31 EAS and/or Technical Memorandum 001. Compared to the development contemplated in the August 31 EAS, the Modified Project would result in a decrease of residential floor area and dwelling units and would include an approximately 81,484 gsf community facility (school).

Compared to the project contemplated in the August 31 EAS, the reduced dwelling unit count, building height, and residential generation would indicate the Modified Project would not have the potential to result in adverse environmental effects to Land Use, Zoning, and Public Policy, Socioeconomic Conditions, Community Facilities and Services, Open Space, Shadows, Historic Resources, Urban Design, Hazardous Materials, Neighborhood Character, or Construction. Compared to the Approved Project contemplated in Technical Memorandum 001, the increase in community facility (school) area and commercial area, would not result in adverse environmental effects to Transportation.

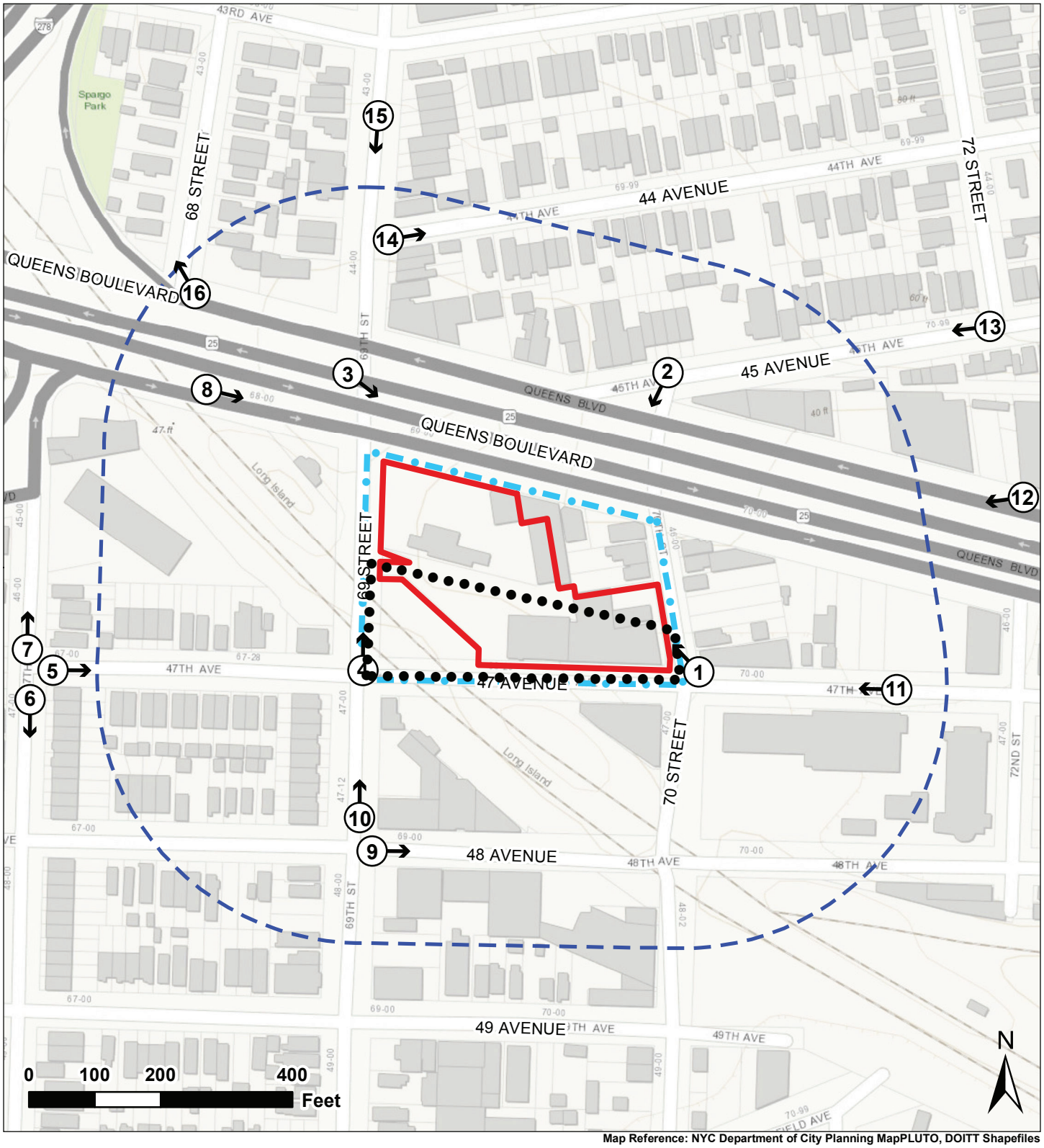
Accordingly, as demonstrated herein, the Modified Project would not result in any new environmental effects that had not been previously disclosed in the August 31 EAS and/or Technical Memorandum 001.

APPENDICES

APPENDIX A: SITE PHOTOGRAPHS

69-02 QUEENS BOULEVARD

FIGURE A-1
PHOTOGRAPH LOCATION MAP



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Directly Affected Area

Development Site

Study Area (400-foot radius)

4 Photograph Location and Direction

WOODSIDE, QUEENS, NY

LANGAN



Photograph 1: At the intersection of 70th Street and 47th Avenue, looking northwest at the Development Site



Photograph 2: At the intersection of Queens Boulevard and 45th Avenue, looking southwest at the Development Site



Photograph 3: At the intersection of Queens Boulevard and 69th Street, looking southeast at the Development Site



Photograph 4: At the intersection of 69th Street and 47th Avenue, looking north on 69th Street



Photograph 5: At the intersection of 47th Avenue and 67th Street, looking east on 47th Avenue



Photograph 6: At the intersection of 47th Avenue and 67th Street, looking south on 67th Street



Photograph 7: At the intersection of 47th Avenue and 67th Street, looking north on 67th Street



Photograph 8: On the south side of Queens Boulevard, between 67th Street and 69th Street, looking east at the Development Site



Photograph 9: At the intersection of 48th Avenue and 69th Street, looking east on 48th Avenue



Photograph 10: At the intersection of 48th Avenue and 69th Street, looking north on 69th Street



Photograph 11: On 47th Avenue, between 70th Street and 72nd Street, looking west



Photograph 12: On the north side of Queens Boulevard, between 45th Avenue and 74th Street, looking west at the Development Site



Photograph 13: At the intersection of 45th Avenue and 72nd Street, looking southwest



Photograph 14: At the intersection of 69th Street and 44th Avenue, looking northeast



Photograph 15: On 69th Street, between 43rd Avenue and 44th Avenue, looking south



Photograph 16: At the intersection of Queens Boulevard and 68th Street, looking northwest

APPENDIX B: AGENCY CORRESPONDENCE

ELTON	EMMANUEL		52287	$58246.0000	RETIRED	NO	04/02/19	067
EMANUEL	MIKHAIL	A	56057	$42803.0000	INCREASE	YES	04/07/19	067
ESPINO	NANCY	R	52304	$53519.0000	RESIGNED	NO	04/04/19	067
FORMAN	DIANA		52408	$81535.0000	INCREASE	YES	02/19/19	067

ADMIN FOR CHILDREN'S SVCS
FOR PERIOD ENDING 04/13/19

NAME			TITLE NUM	SALARY	ACTION	PROV	EFF DATE	AGENCY
GUISHARD	ALICIA		10251	$40629.0000	INCREASE	NO	03/31/19	067
GUZMAN	MARIA	D	52367	$83588.0000	INCREASE	NO	03/31/19	067
HALL	BASIL	E	52304	$57070.0000	RETIRED	NO	04/02/19	067
HAMLER	MONIQUE	D	56058	$60403.0000	RESIGNED	YES	03/24/19	067
HIRSCH	STELLA	K	30087	$67523.0000	RESIGNED	YES	04/05/19	067
HOLDER DELATOUR	RENEE	E	10056	$68402.0000	RETIRED	NO	04/02/19	067
HUNT	TASIA	A	52367	$65429.0000	RESIGNED	NO	04/05/19	067
IQBAL	NASIR		52366	$47279.0000	RESIGNED	NO	04/07/19	067
ITHURBURN	ERIKA	N	30087	$67523.0000	INCREASE	YES	03/31/19	067
JACKSON	DRUSCILL	L	10251	$40988.0000	RETIRED	NO	03/31/19	067
JADUNAUTH	MANIWAT		12158	$91719.0000	RETIRED	NO	03/31/19	067
JOHNSON	DUSTIN	J	30087	$76275.0000	INCREASE	YES	04/07/19	067
JOSEPH	MARCIA	L	52367	$83588.0000	INCREASE	NO	03/31/19	067
KEALOH	HORACE	L	70410	$46896.0000	RETIRED	NO	04/08/19	067
KELLY	RENEE	S	1005C	$101166.0000	INCREASE	NO	11/11/18	067
KRAUSS	JILL	A	95798	$220141.0000	INCREASE	YES	03/31/19	067
LAGRASSA	ERIKA	K	95680	$96743.0000	INCREASE	YES	04/07/19	067
LETTAS	DENNA	M	56058	$62083.0000	RESIGNED	YES	04/07/19	067
LILLY	KIRA	M	52366	$49279.0000	RESIGNED	NO	04/07/19	067
LOBRON	SAMANTHA		56058	$61280.0000	INCREASE	YES	04/07/19	067
MARTINEZ	FELIX	J	52287	$44426.0000	RESIGNED	YES	03/31/19	067
MATUTE	BESSY	M	95680	$93503.0000	INCREASE	YES	04/07/19	067
MCCASSLING POST	NADIRA		52287	$44426.0000	TERMINATED	YES	03/28/19	067
MEYER	RACHEL	T	10016	$97000.0000	INCREASE	YES	03/31/19	067
MILLER	PHOENICI		70410	$33409.0000	TERMINATED	NO	03/31/19	067
MOHAMED	DANIEL	A	90210	$38528.0000	RESIGNED	YES	04/07/19	067
MOHAMMED	SHAHAZ		95680	$131411.0000	INCREASE	YES	03/31/19	067
MOLINA JR	MICHAEL		52304	$40275.0000	APPOINTED	NO	04/07/19	067
MOORE	ELBERT		10124	$51091.0000	RETIRED	NO	04/02/19	067
MUI	JIMMY	K	21215	$92000.0000	INCREASE	NO	04/07/19	067
NEALY	JEANNETT	Y	52366	$57070.0000	RESIGNED	NO	03/31/19	067
NEELY	AKEISHA		10124	$54852.0000	TRANSFER	NO	02/05/19	067
NELSON	ROBERT	A	52287	$44426.0000	TERMINATED	YES	04/06/19	067
NESTEROVA	MARINA	V	13643	$99904.0000	RESIGNED	NO	03/31/19	067
NUNEZ	JULIANA	M	52408	$70900.0000	APPOINTED	YES	03/31/19	067
OWELT	ALEXANDE	A	1005C	$87000.0000	PROMOTED	NO	02/19/19	067
ONO	FRANK	A	13631	$74356.0000	APPOINTED	NO	04/07/19	067
PARKER	RONIQUE	E	52304	$40275.0000	APPOINTED	NO	04/07/19	067
PARRIS	TAMICA	T	52408	$70900.0000	APPOINTED	YES	04/07/19	067

LATE NOTICE

SCHOOL CONSTRUCTION AUTHORITY

■ NOTICE

NOTICE OF FILING

Pursuant to §1731 of the New York City School Construction Authority Act, notice has been filed for the proposed site selection of all or portions of Block 2432, Lots 41, 44 & 50, for the construction of a new, approximately 476-seat primary school facility in Community School District No. 24.

The proposed site is, located at the corner of 70th Street and 47th Avenue, in the Woodside section of Queens. The proposed site consists of a school condominium within a planned, new, mixed-use development. The proposed site to be acquired by the New York City School Construction Authority, on behalf of the New York City Department of Education, will be an approximately 71,400 square foot school condominium, with outdoor play, to accommodate the proposed school facility.

The site plan and supplemental materials summarizing the proposed action are available at:

New York City School Construction Authority
30-30 Thomson Avenue
Long Island City, NY 11101
Attention: Steve Lawitts, Executive Vice President

Comments on the proposed action are to be submitted to the New York City School Construction Authority at the above address or by email to sites@nycsca.org and will be accepted until June 28, 2019.

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APPENDIX C: TRANSPORTATION VOLUME NETWORK

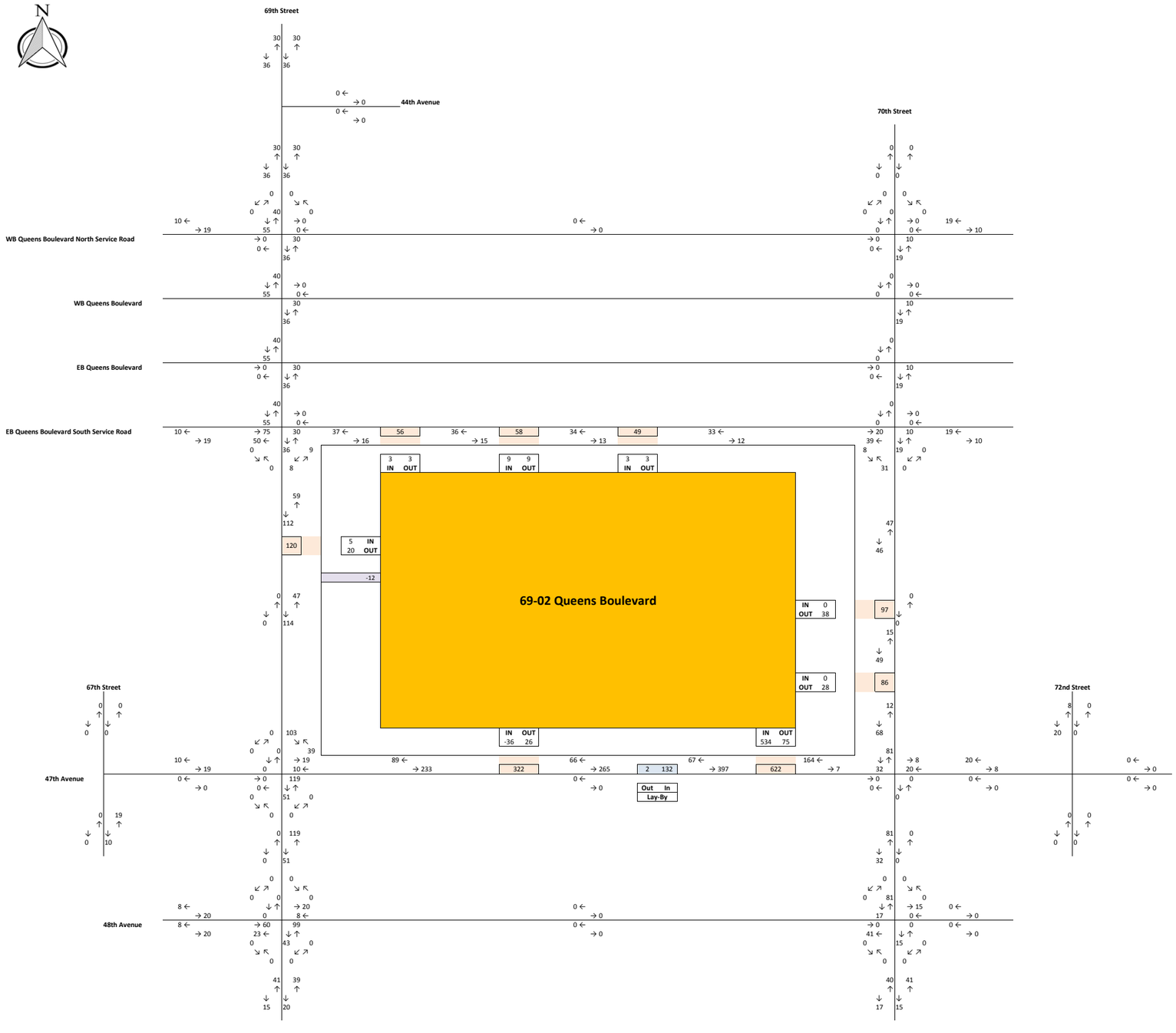

Figure B1. Weekday AM Peak Hour - Incremental Pedestrian Trips

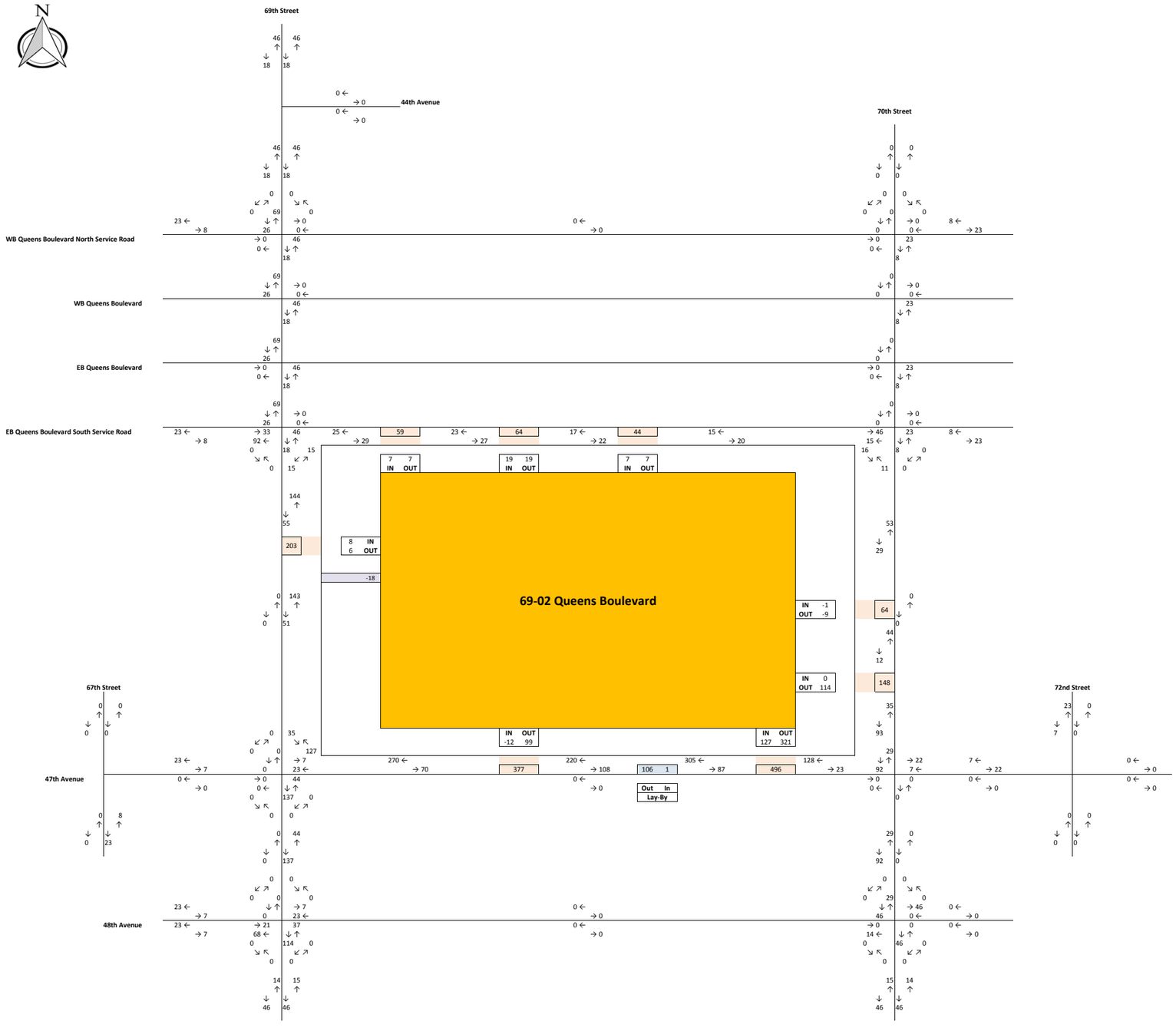

Figure B2. Weekday Afternoon Peak Hour - Incremental Pedestrian Trips

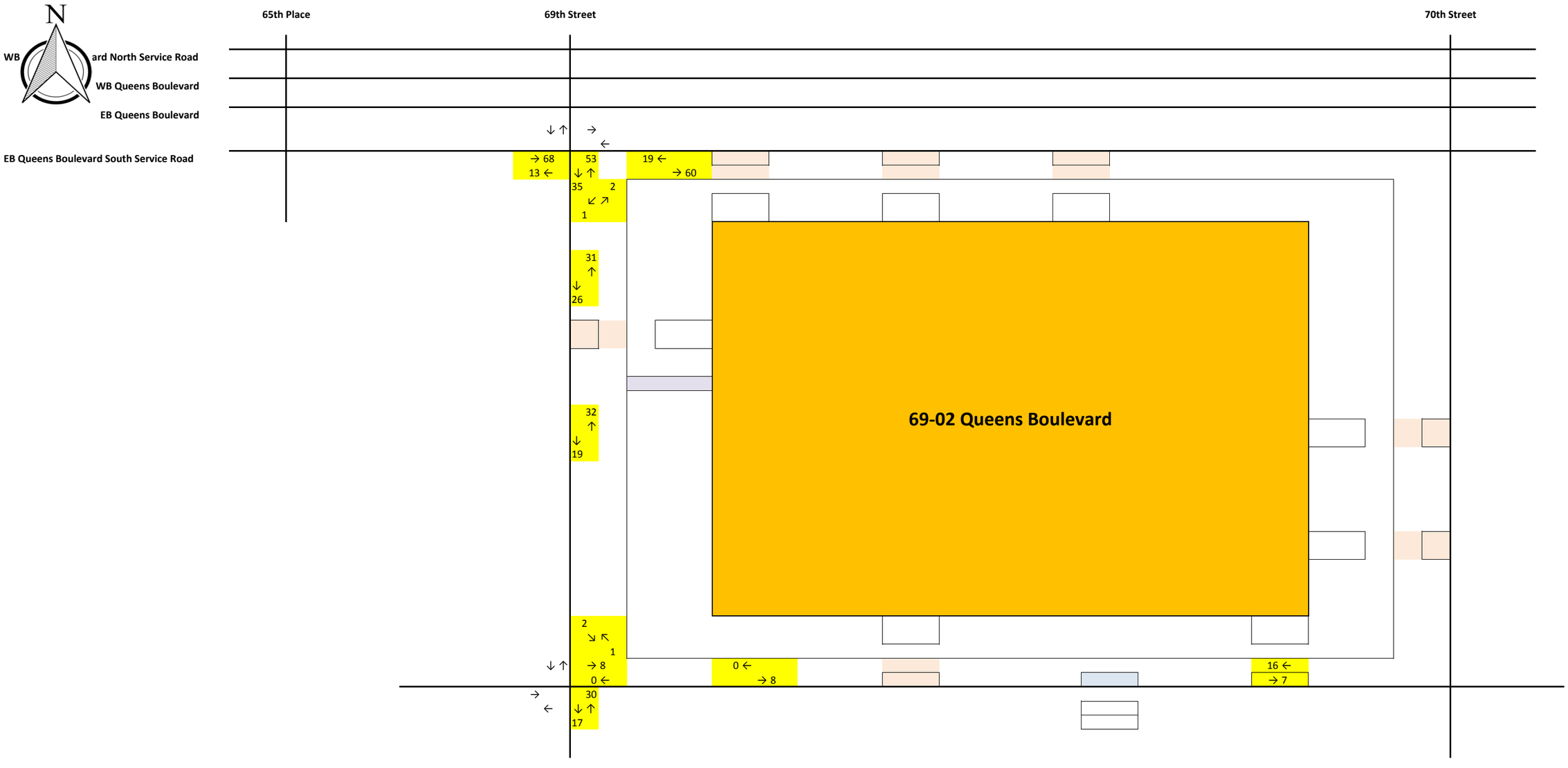

Figure B3. Weekday AM Peak Hour - Baseline Conditions Pedestrian Trips

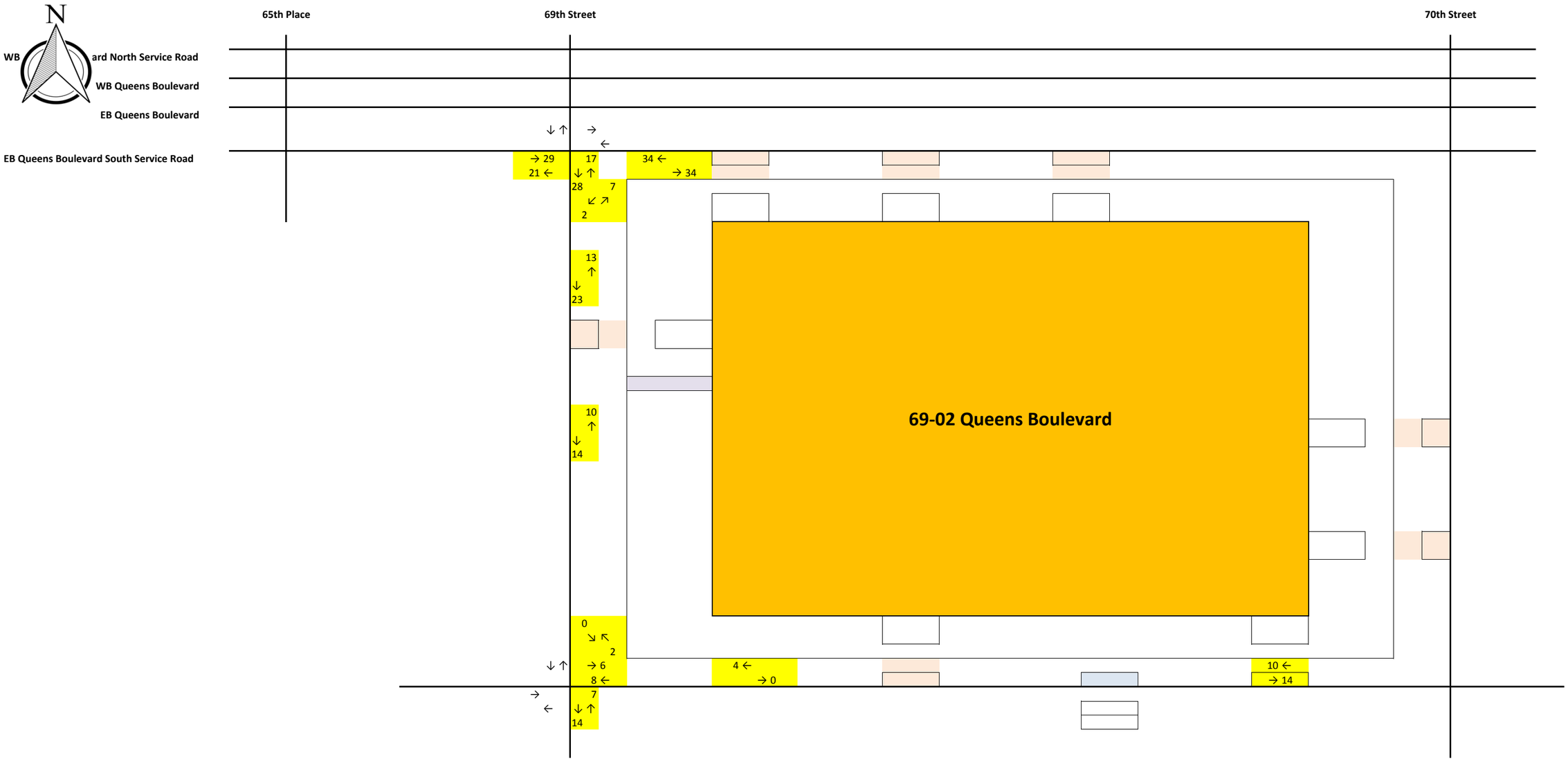

Figure B4. Weekday Afternoon Peak Hour - Baseline Conditions Pedestrian Trips

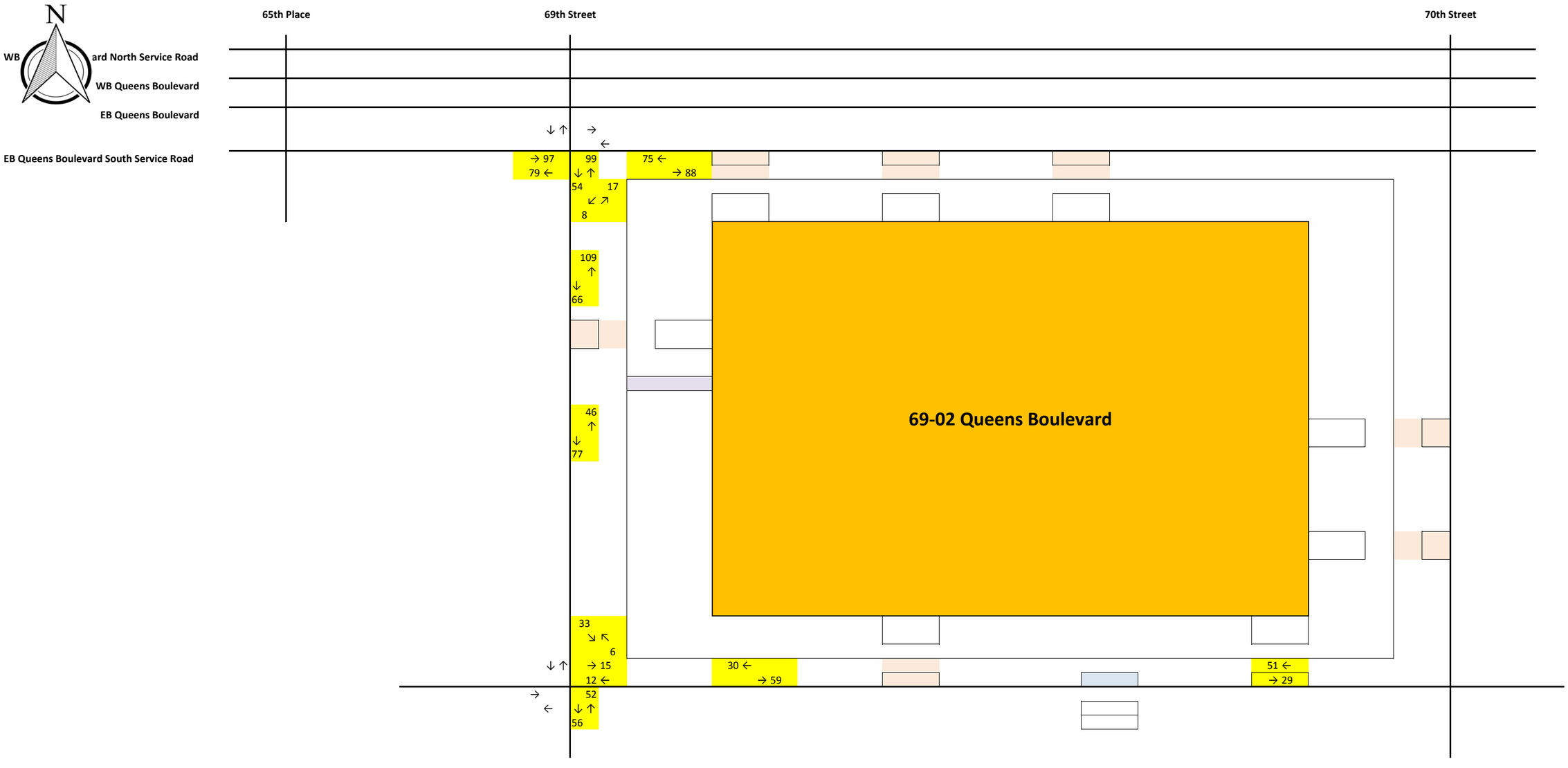

Figure B5. Weekday AM Peak Hour - No-Action Condition Pedestrian Trips

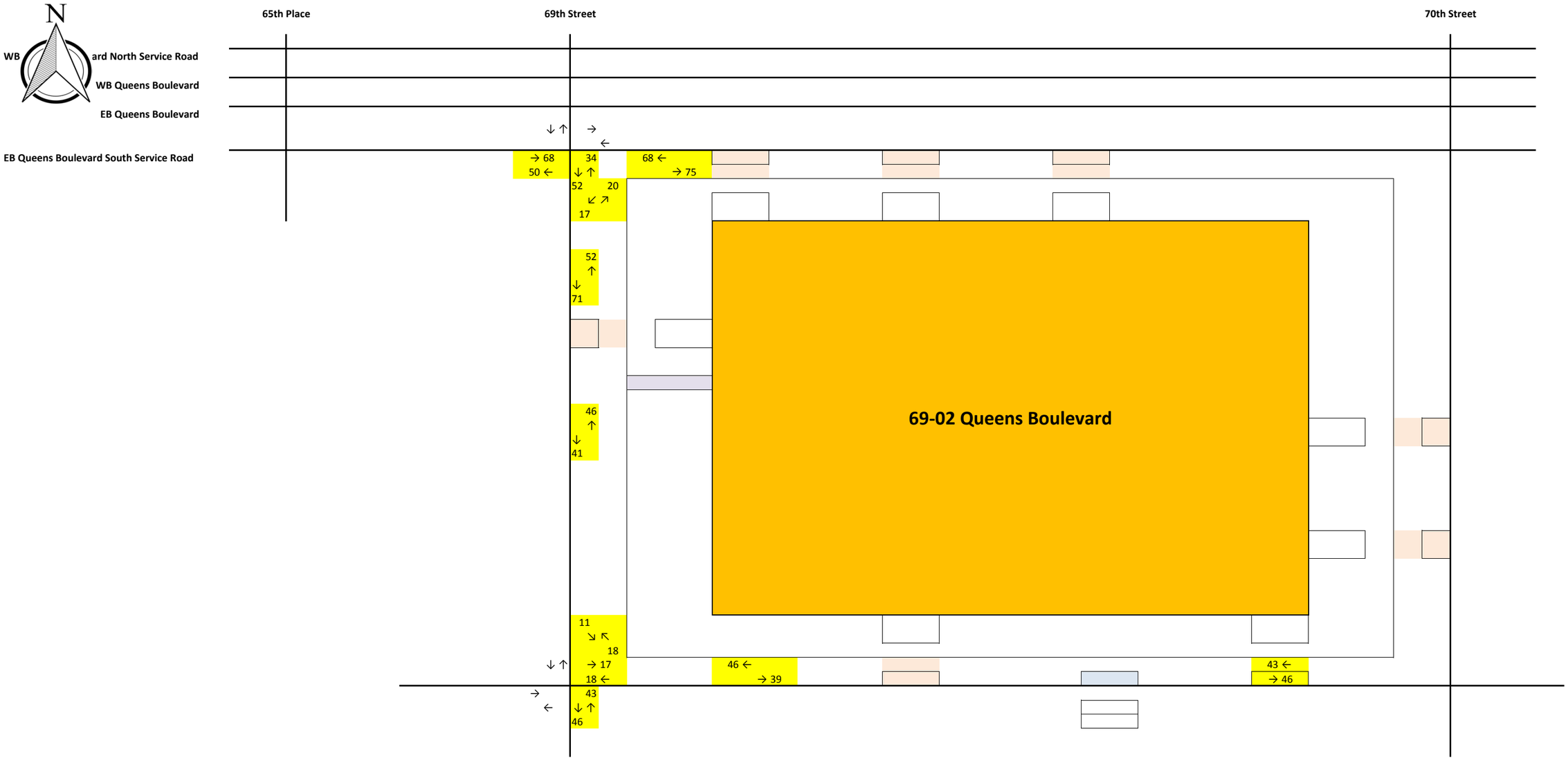

Figure B6. Weekday Afternoon Peak Hour - No-Action Condition Pedestrian Trips

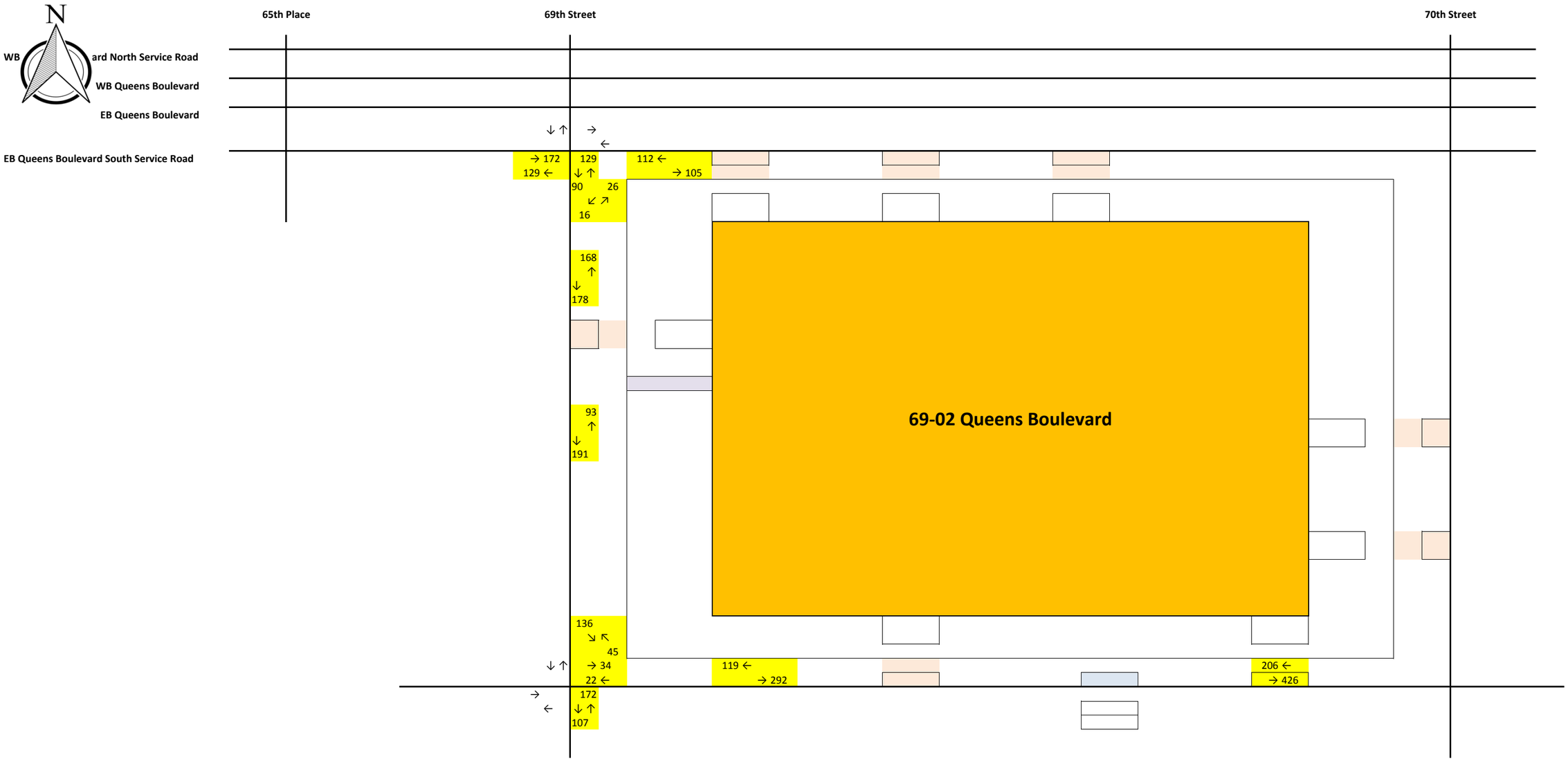

Figure B7. Weekday AM Peak Hour - With-Action Condition with PCRE Pedestrian Trips

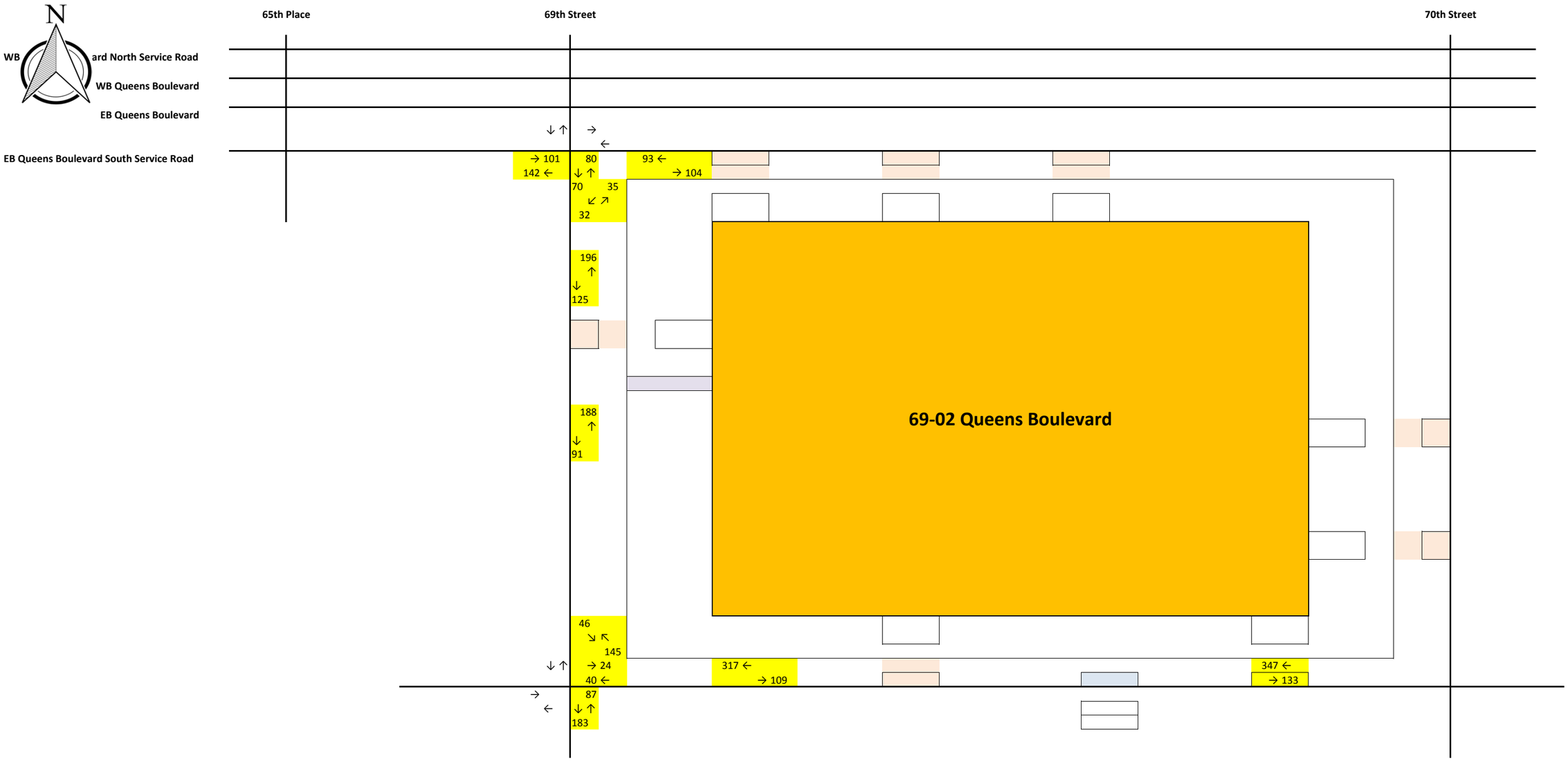

Figure B8. Weekday Afternoon Peak Hour - With-Action Condition with PCRE Pedestrian Trips

APPENDIX D: PEDESTRIAN TRIPS

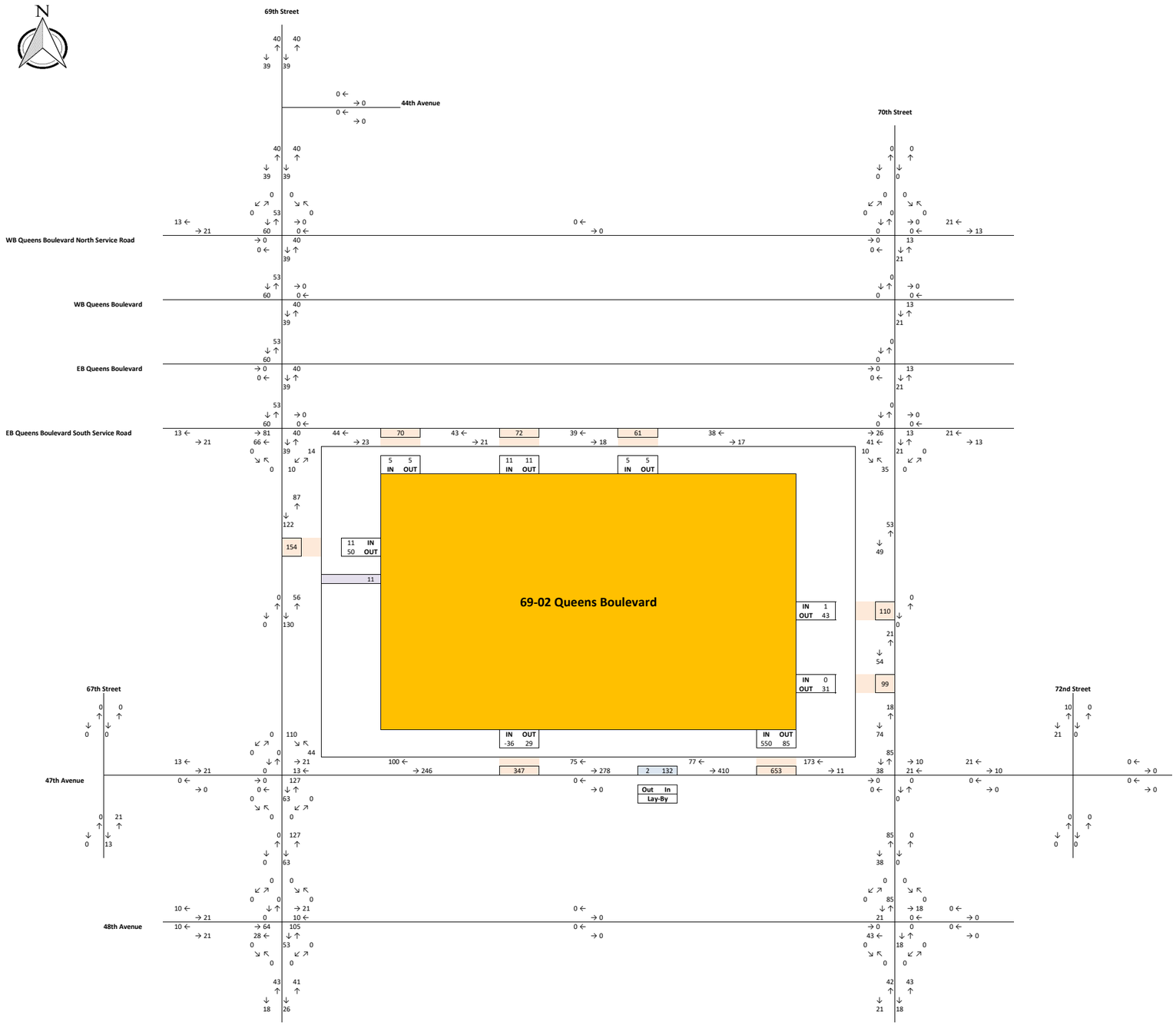

Figure C1. Weekday AM Peak Hour - Incremental Pedestrian Trips

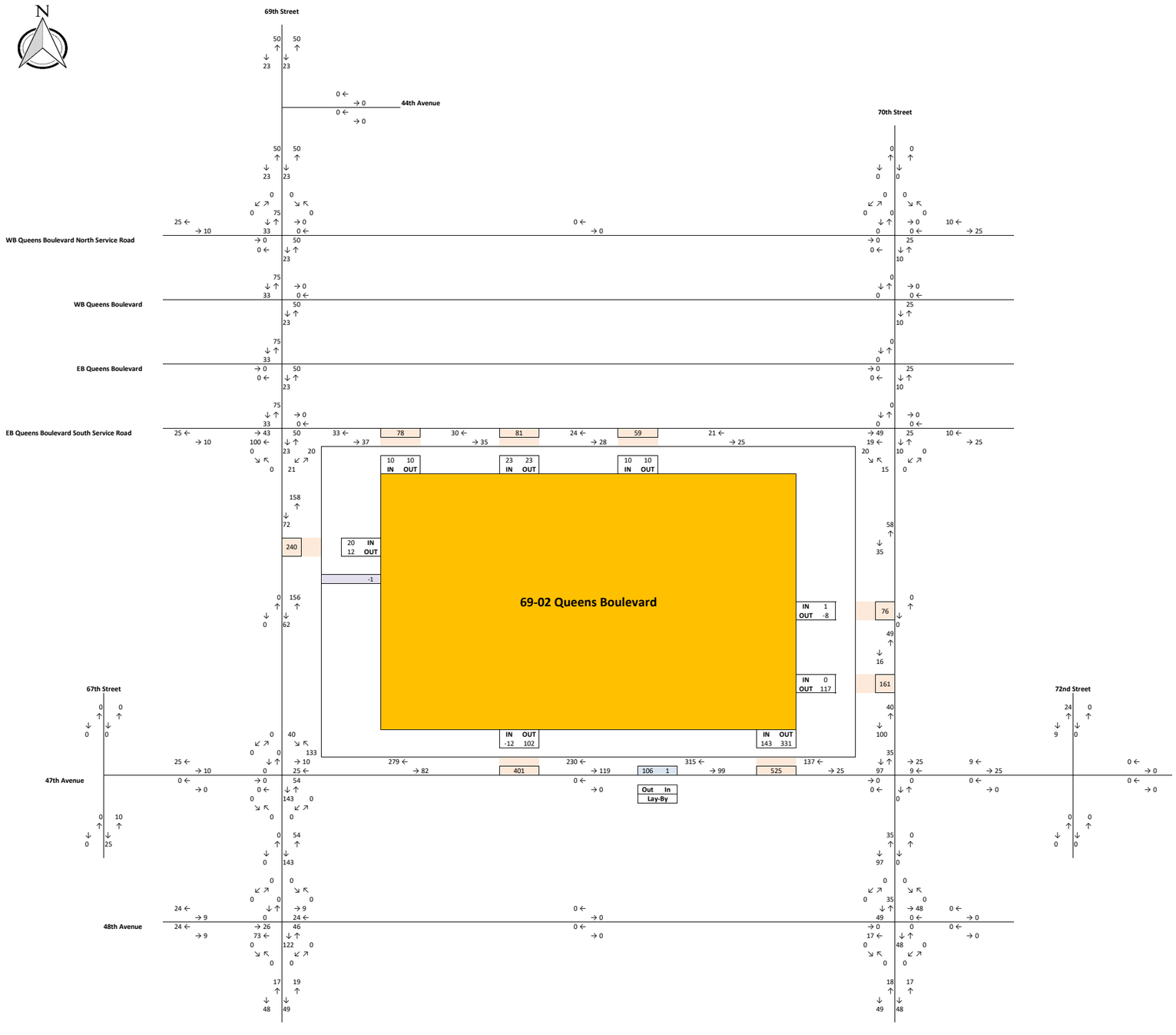

Figure C2. Weekday Afternoon Peak Hour - Incremental Pedestrian Trips

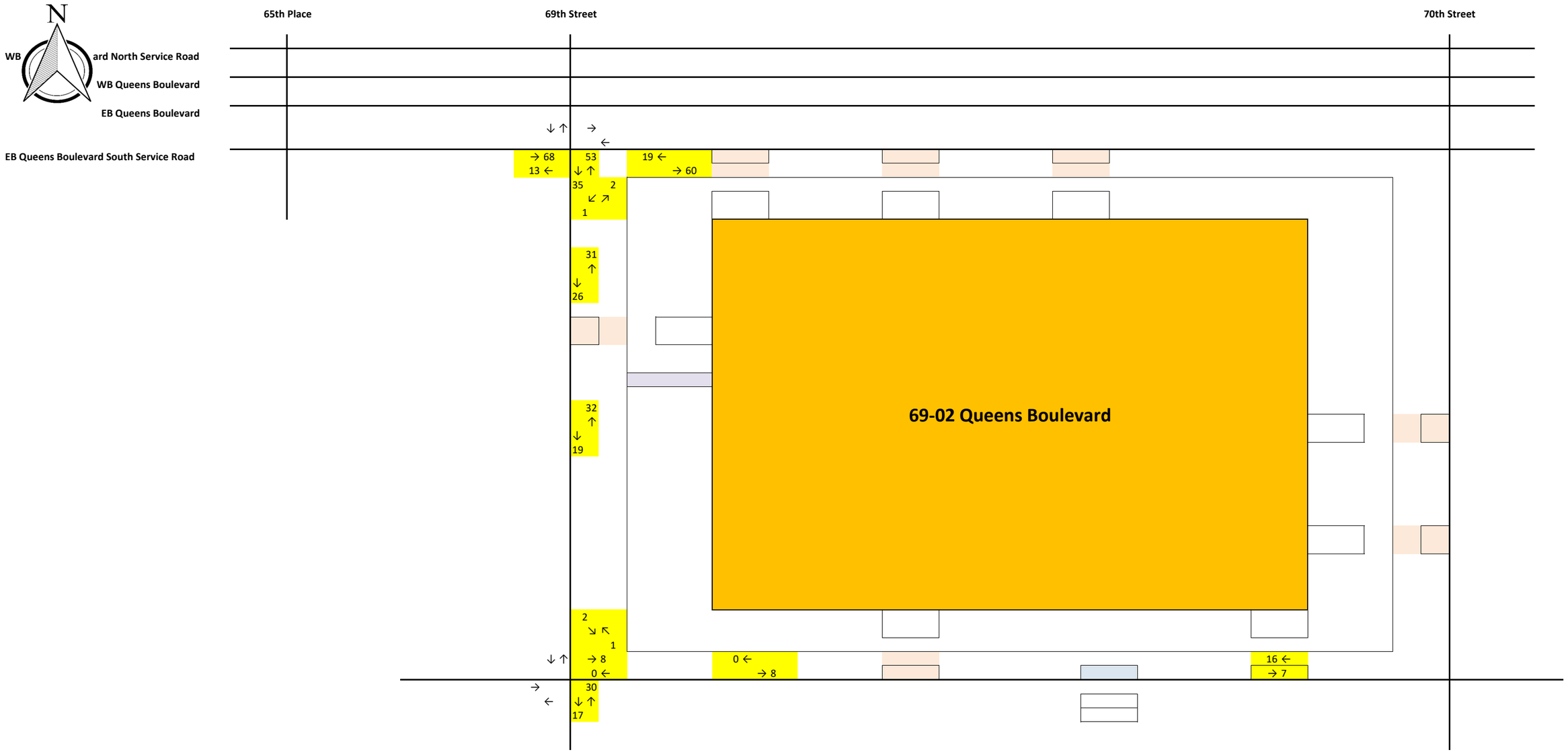

Figure C3. Weekday AM Peak Hour - Baseline Conditions Pedestrian Trips

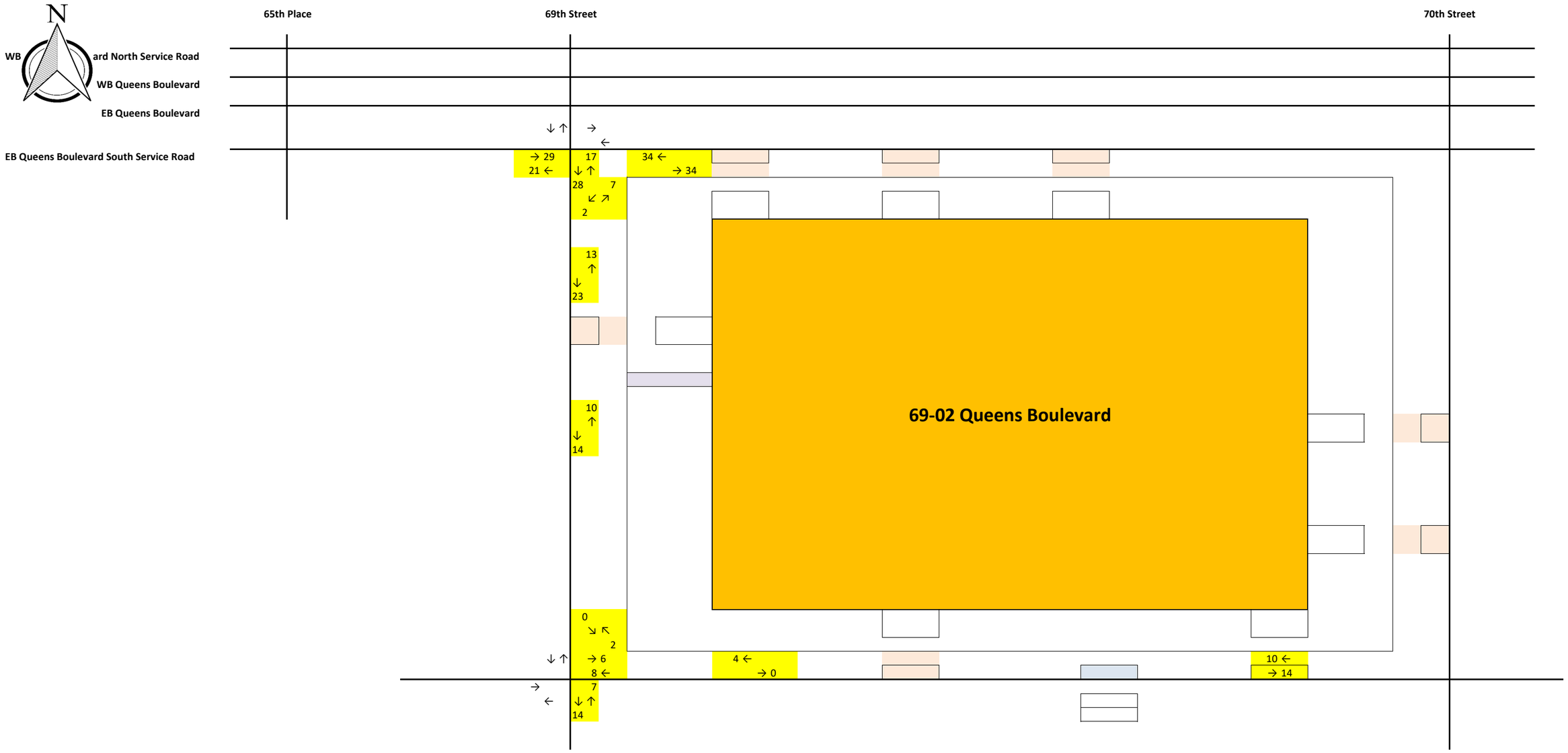

Figure C4. Weekday Afternoon Peak Hour - Baseline Conditions Pedestrian Trips

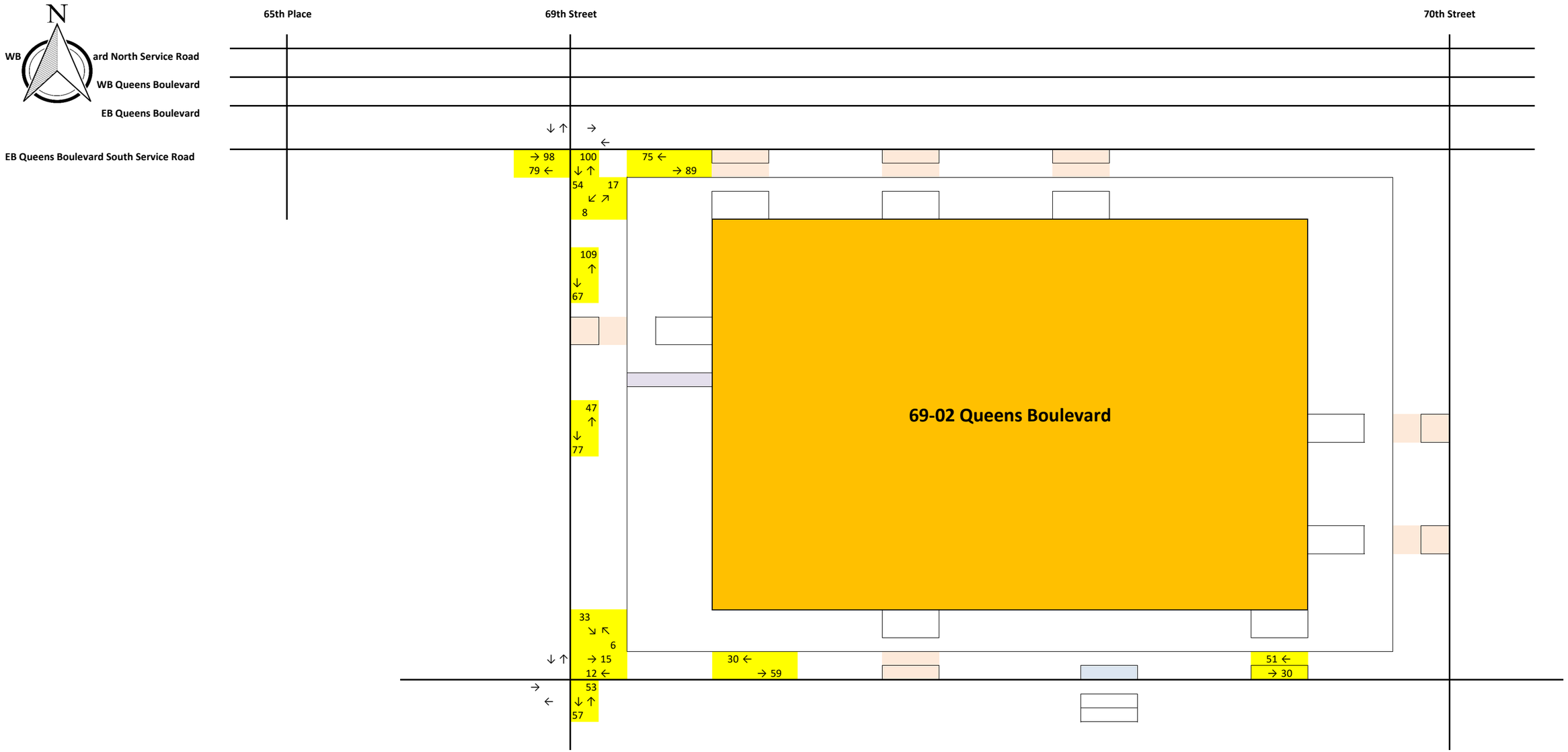

Figure C5. Weekday AM Peak Hour - No-Action Condition Pedestrian Trips

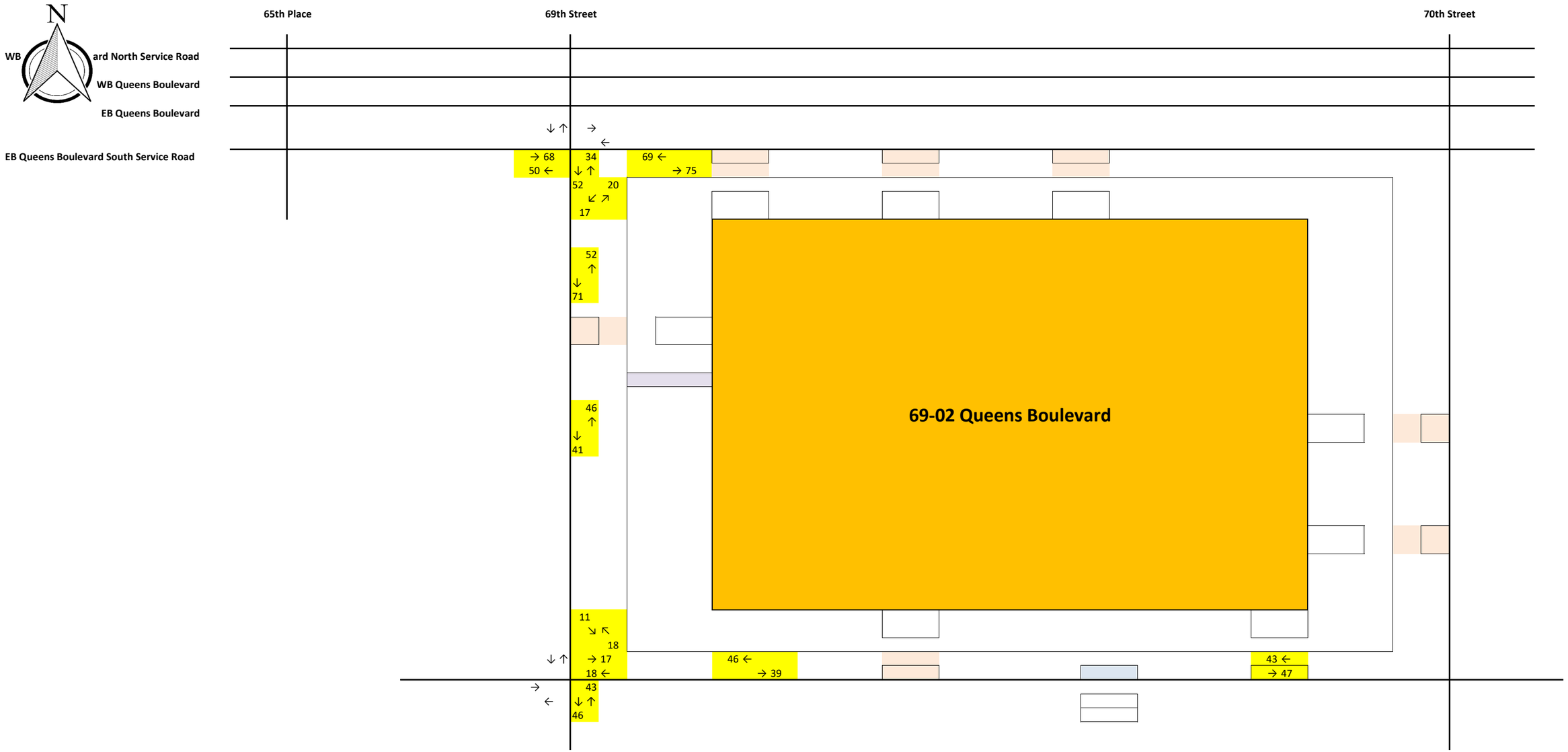

Figure C6. Weekday Afternoon Peak Hour - No-Action Condition Pedestrian Trips