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

Lead Agency:
Department of City Planning
120 Broadway, 31St Floor
New York, NY 10271

Prepared for:
Ranbir LLC

Prepared by:
Equity Environmental Engineering
500 International Drive, Suite 150
Mount Olive, NJ 07828

October 27, 2021

146-93 Guy R. Brewer Boulevard

Queens, NY
Block 13354, Lots 12, 19, 21, 22, 23, p/o 10, and p/o 25
Queens Community District 13

CEQR Reference No: 20DCP163Q

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

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

Part I: GENERAL INFORMATION

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

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

2. *Project Name* 146-93 Guy R Brewer Boulevard

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
20DCP163Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
200246ZMQ and N200247ZRQ	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT Ranbir LLC		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shellooe, Deputy Director;			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Amber Kartalyan		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 500 International Drive		
CITY New York	STATE NY	ZIP 10271	CITY Mount Olive	STATE NJ	ZIP 07828
TELEPHONE 212-720-3328	EMAIL sshellooe@planning.nyc.gov		TELEPHONE 973-527-7451	EMAIL amber.kartalyan@equityenvironmental.com	

5. *Project Description*

The Applicant, Ranbir LLC, requests approval of a zoning map and zoning text amendment (the Proposed Actions) to facilitate the development of Block 13354, Lot 12 (the Project Site) with a eight-story, 37,475-gross-square-foot (gsf) mixed commercial and residential building (the Proposed Project; 33,447 GSF residential and 4,028 GSF commercial) in the Springfield Gardens neighborhood of Queens, Community District 13.

The zoning map amendment would rezone Block 13354, Lots 12, 19, 21, 22, 23, and p/o Lots 10 and 25 (the Affected Area) from an R3-2 zoning district to an R6A/C2-2 zoning district. The zoning text amendment would establish an area coterminous with the rezoning area as a Mandatory Inclusionary Housing (MIH) area. The environmental analysis technical sections that follow assume a Reasonable Worst Case Development Scenario (RWCDS) that includes the full build-out of Block 13354, Lot 12 (Projected Development Site 1) and Block 13354, Lots 19, 21, 22, and 23 (Projected Development Site 2).

The proposed development on the Applicant-owned Lot 12 would not maximize bulk within the proposed rezoning district. Therefore, for the purposes of a more conservative analysis under CEQR, an RWCDS where Lot 12 is built to the maximum bulk is considered.

As a result of the proposed rezoning, the assemblage and redevelopment of Lots 19, 21, 22, and 23 is considered likely. The redevelopment of these lots under a With-Action condition is assumed as each lot would be significantly underdeveloped within the new zoning district. It is assumed the Projected Development Site would max out permitted bulk and height.

Projected Development Site 1

The Applicant's Site, 146-93 Guy Brewer Boulevard (Block 13354, Lot 12), would develop with a 41,693 GSF (3.60 FAR), 8-story, 85-foot-tall building. 33,447 GSF of residential floor area (2.86 FAR) and 8,246 GSF of ground floor commercial (0.76 FAR) would be included. There would be 42 total dwelling units, 11-13 of which would be affordable at or below 80% AMI. There would be 46 total parking spaces required—19 residential and 27 commercial.

Projected Development Site 2
147-07, 147-03, and 146-01 Guy R. Brewer Boulevard (Block 13354, Lots 19, 21, 22, and 23) would assemble and develop with an eight-story, 85-foot-tall, 35,556 GSF structure (33,264 ZSF; 3.60 FAR). The building would contain 25,946 GSF of residential floor area (24,024 ZSF; 2.60 FAR) and 9,610 GSF of commercial floor area (9,240 ZSF; 1.00 FAR). There would be 26 total dwelling units, 7-8 of which would be permanently affordable at or below 80% AMI. There would be 44 total parking spaces required—12 residential and 32 commercial.

It is assumed under the Future With-Action Condition that ground floor development for all Projected Development Sites would be local retail.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 13	STREET ADDRESS 146-93 Guy R Boulevard
TAX BLOCK(S) AND LOT(S) Block 13354, Lot 12		ZIP CODE 11434

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The property is bounded by 145th drive to the north, 178th Place to the east, 146th Road to the south, Guy R Brewer Boulevard and Farmers Boulevard to the west.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R3-2 | ZONING SECTIONAL MAP NUMBER

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

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

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

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

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

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

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

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

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 19,990 Waterbody area (sq. ft) and type:

Roads, buildings, and other paved surfaces (sq. ft.): Other, describe (sq. ft.):

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 77,248

NUMBER OF BUILDINGS: 2

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): Projected Site 1 - 41,693, Projected Site 2 - 35,556

HEIGHT OF EACH BUILDING (ft.): 85

NUMBER OF STORIES OF EACH BUILDING: 8

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: 10,750

The total square feet not owned or controlled by the applicant: 9,240

Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? ☒ YES ☐ NO

If "yes," indicate the estimated area and volume dimensions of subsurface permanent and temporary disturbance (if known):

AREA OF TEMPORARY DISTURBANCE: 10,750 sq. ft. (width x length)

VOLUME OF DISTURBANCE: 107,500 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 10,750 sq. ft. (width x length)

Description of Proposed Uses (please complete the following information as appropriate)

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	59,393	17,856		
Type (*e.g.,* retail, office, school)	68 units	Retail		

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

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 222 NUMBER OF ADDITIONAL WORKERS: 50

Provide a brief explanation of how these numbers were determined: 3 workers per 1,000 GSF; 3.26 residents per dwelling unit

Does the proposed project create new open space? ☐ YES ☒ NO If "yes," specify size of project-created open space: sq. ft.

Has a No-Action scenario been defined for this project that differs from the existing condition? ☐ YES ☒ NO

If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly:

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2024 factoring the Environmental Approval process and ULURP process of 18 months, followed by 23-month site preparation and construction of the Applicant site. The remaining lots would need time to assemble, cease current site operations, and demolish existing structures, resulting in an additional 23 months of construction with no overlap between sites.

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 23 months

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

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

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

Part II: TECHNICAL ANALYSIS

INSTRUCTIONS: For each of the analysis categories listed in this section, assess the proposed project's impacts based on the thresholds and criteria presented in the CEQR Technical Manual. Check each box that applies.

- If the proposed project can be demonstrated not to meet or exceed the threshold, check the "no" box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the "yes" box.
- For each "yes" response, provide additional analyses (and, if needed, attach supporting information) based on guidance in the CEQR Technical Manual to determine whether the potential for significant impacts exists. Please note that a "yes" answer does not mean that an EIS must be prepared—it means that more information may be required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to provide additional information to support the Short EAS Form. For example, if a question is answered "no," an agency may request a short explanation for this response.

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☒	☐
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☐	☒
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach.		
(e) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☒	☐
○ If "yes," complete the Consistency Assessment Form. See Appendix D		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 200 or more residential units?	☐	☒
○ Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
○ Directly displace more than 500 residents?	☐	☒
○ Directly displace more than 100 employees?	☐	☒
○ Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
○ **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ **Libraries:** Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
○ If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☐	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
○ If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐

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

	YES	NO
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 6,697 = (41 * 67) + (50 * 79)		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 10,749.43 = (126.7 * 58.79) + (216.3 * 15.26)		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☒
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☒	☐
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☒
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See attached	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☐	☒
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒

	YES	NO
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☐	☒
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☐	☒
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☐	☒
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☒	☐
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.		
The proposed action would not result in any direct or indirect impacts to the S/NR eligible property (See EAS Section 2.4)		

20. *APPLICANT'S CERTIFICATION*

I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of the pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.

Still under oath, I further swear or affirm that I make this statement in my capacity as the applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.

APPLICANT/REPRESENTATIVE NAME	DATE
Amber Kartalyan	10/27/2021

SIGNATURE Amber Kartalyan

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

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

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

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

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

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

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

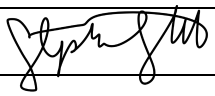
3. Check determination to be issued by the lead agency:

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

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

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

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

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	City Planning Commission
NAME: Stephanie Shellooe	DATE: October 29, 2021
SIGNATURE: 	

NEGATIVE DECLARATION

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS. The applicant requests approval of a zoning map and zoning text amendment to facilitate the development of Block 13354, Lot 12 with an eight-story, 37,475-gross-square-foot (gsf) mixed commercial and residential building (Projected Development Site 1)) in the Springfield Gardens neighborhood of Queens, Community District 13. The zoning map amendment would rezone Block 13354, Lots 12, 19, 21, 22, 23, and p/o Lots 10 and 25 (the Affected Area) from an R3-2 zoning district to an R6A/C2-2 zoning district. The zoning text amendment to Appendix F would establish an area coterminous with the rezoning area as a Mandatory Inclusionary Housing (MIH) area. The Proposed Actions would also facilitate development on one non-Applicant owned site, with and eight-story, 35,556 gsf mixed commercial and residential building, located on Block 13354, Lots 19, 21, 22 and 23 (Projected Development Site 2). The proposed action would establish medium-density mixed-use residential districts that would mandate provision of a substantial amount of affordable housing. The proposed action would not introduce new uses that differ from the surrounding area, nor would the uses be incompatible with surrounding uses. The development resulting from the proposed action would not result in significant adverse impacts; therefore, no further analysis is required.

Open Space

A detailed analysis related to open space is included in this EAS. Under the existing, No-Action, and With-Action conditions, the OSR in the area would be 4.48 acres per 1,000 residents, well above 1.5 acres per thousand residents, which is the citywide average. Per the CEQR Technical Manual, projects that exceed the 1.5 acres per thousand resident threshold would not be expected to have significant adverse impacts if they reduce the OSR by less than 5 percent. The Proposed Actions would reduce the OSR by 4.1 percent, which is below thresholds requiring further analysis, and further assessment is not required and no significant adverse impacts would occur.

Shadows

A detailed analysis related to shadows is included in this EAS. The analysis shows that the Proposed Actions would cast shadows on a sunlight sensitive open space resource, P.S. 52 Playground (Block 13353, Lot 20; Resource 1) for a duration of up to 8 hours and 22 minutes on the March/September analysis day. The shadows would affect a narrow ribbon area at its southern boundary, which is mainly a grass patch and benches. Since the shadows cast by the Proposed Development buildings would be constantly moving across the narrow ribbon area throughout the day, the use of the benches and the growth of the grass are not expected to be significantly impacted by the project-induced shadows in March/September. In addition, other areas within the playground with access to direct sunlight for the whole day contain benches that would provide sufficient opportunities for using the outdoor space with access to sunlight in March/September. Therefore, no adverse impact is expected on the Vegetation or Open Space Utilization of the playground on any analysis day and no further analysis is warranted.

Hazardous Materials, Air Quality, and Noise

An (E) designation (E-646) related to hazardous materials, air quality, and noise would be established as part of the approval of the proposed actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The hazardous materials, air quality, and noise analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to hazardous materials, air quality, or noise.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Stephanie Shellooe at +1 212-720-3328.

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3328
NAME	DATE
Stephanie Shellooe, AICP	October 29, 2021
SIGNATURE	

Project Name: 146-93 Guy Brewer Blvd Rezoning
CEQR # 20DCP163Q
SEQRA Classification: Unlisted

TITLE Chair, City Planning Commission	
NAME Anita Laremont	DATE November 1, 2021
SIGNATURE	

Project Name: 146-93 Guy Brewer Blvd Rezoning
CEQR # 20DCP163Q
SEQRA Classification: Unlisted

Determination of Significance Appendix

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

Development Site	Borough	Block and Lot
Projected Development Site 1	Queens	Block 13354, Lot 12
Projected Development Site 2	Queens	Block 13354, Lots 19, 21, 22 and 23

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality, and noise an (E) designation (**E-646**) would be established as part of approval of the proposed actions on **Projected Development Site 1 and Projected Development Site 2** as described below:

Development Site	Hazardous Materials	Air Quality	Noise
Projected Development Site 1	X	X	X
Projected Development Site 2	X	X	X

Hazardous Materials

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

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

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

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

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

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

Air Quality

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

***Block 13354, Lot 12 (Projected Development Site 1**): Any new residential/commercial development on the above-referenced property must ensure that the heating, ventilation, and air conditioning (HVAC) system and hot water equipment stack is located at the building's highest level and at a minimum of 88 feet above grade to avoid any potential significant adverse air quality impacts.*

***Block 13354, Lots 19, 21, 22, 23 (Projected Development Site 2):** Any new residential/commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC) system, and hot water equipment stack is located at the building's highest level and at least 88 feet above grade, and is at least 20 feet from the southern lot line facing 147th Avenue, to avoid any potential significant adverse air quality impacts.*

Noise

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

***Block 13354, Lot 12 (Projected Development Site 1**): In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 31 dB(A) window/wall attenuation on all facades in order to maintain an interior L10 noise level not greater than 45 dBA for residential uses or not greater than 50 dBA 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, central air conditioning or air conditioning sleeves containing air conditioners.*

***Block 13354, Lots 19, 21, 22, and 23 (Projected Development Site 2):** In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 31 dB(A) window/wall attenuation on all facades in order to maintain an interior L10 noise level not greater than 45 dBA for residential uses or not greater than 50 dBA 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, central air conditioning or air conditioning sleeves containing air conditioners.*

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Figure 1: Project Location Map



Figure 2: Land Use Map

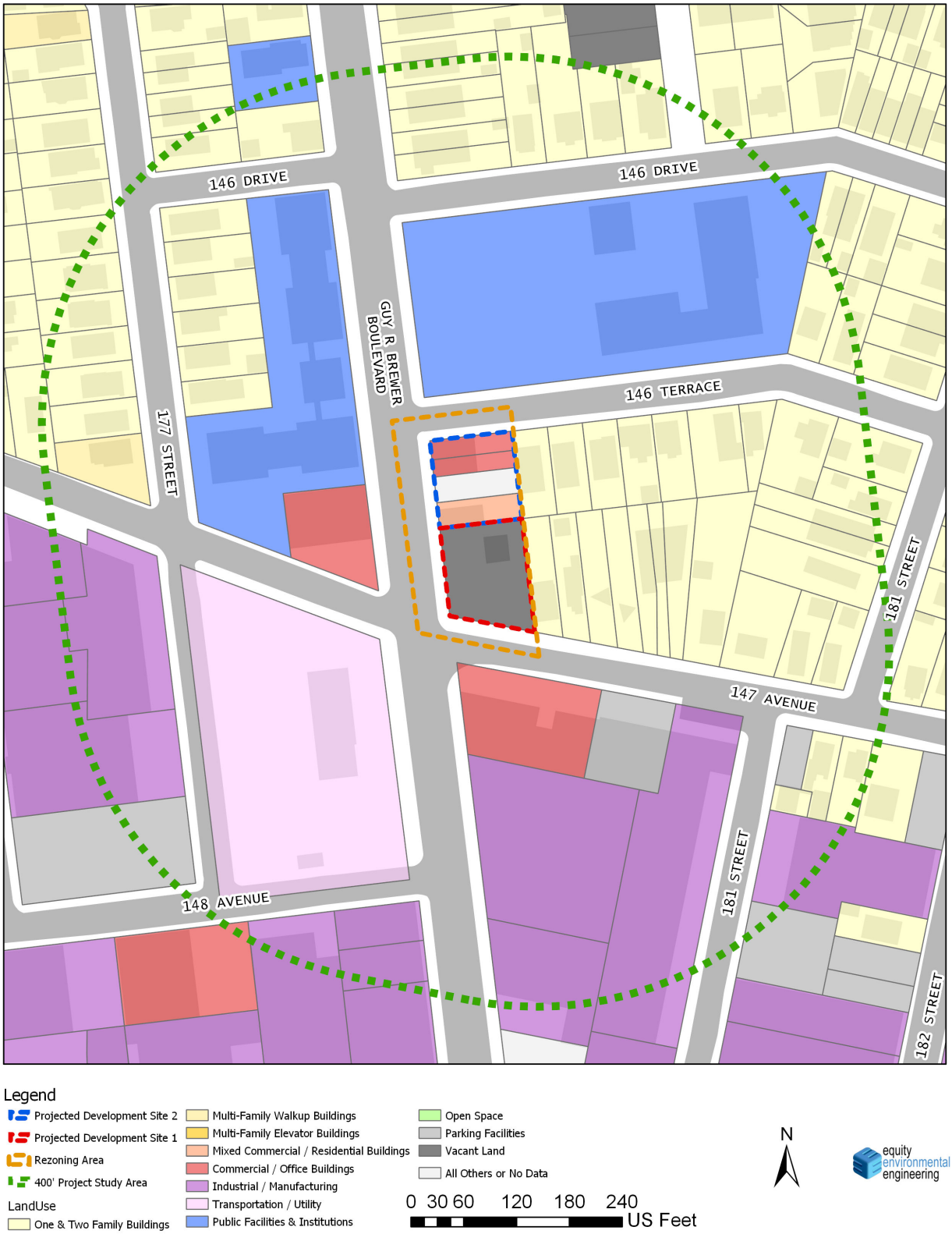


Figure 3: Tax Map



Figure 4: Zoning Map

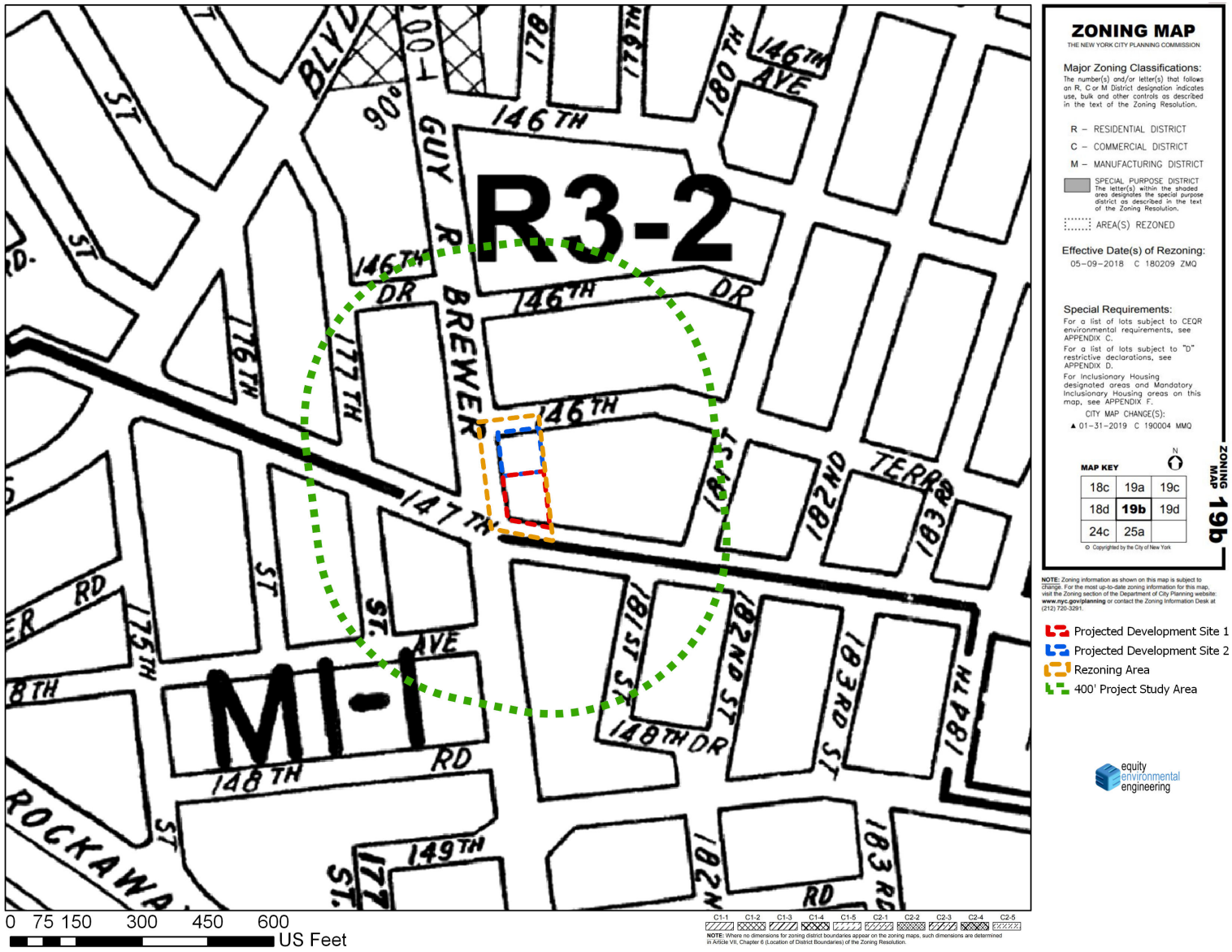


Figure 5: Photo Key



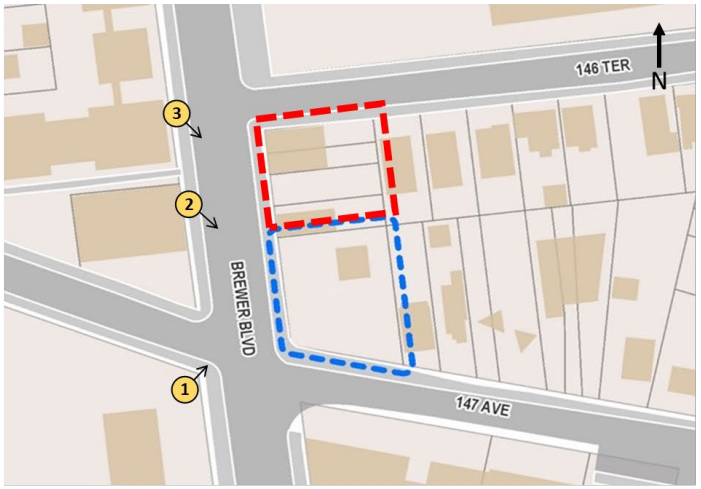
01 View of Projected Sites from Guy Brewer Blvd. and 147 Ave



02 View of Projected Site 1 from Guy Brewer Blvd.



03 View of Projected Site 2 from Guy Brewer Blvd.



1.0 PROPOSED ACTION

1.1 Introduction

The applicant, Ranbir LLC, requests approval of a zoning map and zoning text amendment to facilitate the development of Block 13354, Lot 12 (Projected Development Site 1) with an eight-story, 37,475-gross-square-foot (gsf) mixed commercial and residential building (the proposed project) in the Springfield Gardens neighborhood of Queens, Community District 13.

The zoning map amendment would rezone Block 13354, Lots 12, 19, 21, 22, 23, and p/o Lots 10 and 25 (the Affected Area) from an R3-2 zoning district to an R6A/C2-2 zoning district. The zoning text amendment would establish an area coterminous with the rezoning area as a Mandatory Inclusionary Housing (MIH) area.

The proposed actions are discretionary actions subject to environmental review. The NYC Department of City Planning shall be the lead agency on behalf of the City Planning Commission for environmental review under CEQR.

1.2 Background

The Affected Area is shown in **Figures 1 through 6** above. The Affected Area has been zoned R3-2 since the original zoning district was created in 1961. There are no pending or historical rezonings in the surrounding area.

Projected Development Site 1 was improved with a one-story gas station beginning in 1953, and, according to historic aerials, site operations ceased in 2010 before the structure was demolished between 2012 and 2014.

1.3 Description of Surrounding Area

Within the 400-foot surrounding area land uses include residential (one- and two-family), mixed commercial and office, public facilities, manufacturing, and transportation/utility. The residential buildings are generally located north of 147th Avenue and are the dominant land use in the area. South of 147th Avenue and north of Rockaway Boulevard land use is generally manufacturing with a few mixed-use buildings and public facility uses. South of Rockaway Boulevard is the John F. Kennedy International Airport. Public facilities in the area include the 21,000 GSF Springfield Family Residence, a social services organization, and the four-story, 69,000 GSF Public School 52.

Built form in the area is varied. One- and two-family homes are generally one to two stories in height, and are either detached or semi-detached with front yards and driveways and brick or aluminum facades. Manufacturing uses are typically one to two stories in height, with large buildings built out to the lot lines and primarily brick facades. The tallest buildings in the area, both four stories, are Public School 52 and the Clarion Inn, which are adjacent to the Affected Area to the north and south, respectively.

Zoning in the Surrounding Area is low-density residential and light manufacturing. The Affected Area is located at the southern boundary of an R3-2 zoning district that covers an area from 147th Avenue to the south to the Belt Parkway to the north. An M1-1 zoning district to the south

of the Affected Area, across 147th Avenue, is bounded to the south by John F. Kennedy International Airport.

The traffic grid is irregular. 147th Avenue, bounding the Affected Area to the south, is a major collector road running east-west with one moving lane in each direction and no curbside parking. 146th Terrace bounds the Affected Area to the north, and is an east-west two-way road with one moving lane in each direction and curbside parking. Guy R. Brewer Boulevard bounds the area to the west and is a north-south major collector road with one moving lane in each direction and no curbside parking. 181st Street bounds the area to the east and is a southwest-northeast road with one moving lane in each direction and curbside parking. The street network along Guy R. Brewer Boulevard and 147th Avenue is disjointed with the minor collector roads, and the alignment creates irregular block forms throughout the area.

The area is not well-served by transit. MTA bus stops for the Q111, Q113, and Q114 run along 147th Avenue, and the closest subway stop is approximately three-and-a-half miles to the west of the Affected Area.

1.4 Description of Affected Area

The Affected Area, shown in **Figure 1** and summarized below, is comprised of five lots running adjacent to Guy R. Brewer Boulevard. The existing R3-2 zoning district promotes low-density, non-contextual residential development up to .50 FAR and community facility development up to 1.00 FAR. The Lots within the rezoning area are described below in **Table 1.4-1.**

Table 1.4-1: Affected Area Existing Conditions

Block	Lot	Lot Area (ft)	Site ID	Zoning	Existing Land Use	Ownership
13354	12	10,750	Projected Site 1	R3-2	Car Rental Business	Ranbir LLC (Applicant)
	19	2,780	Projected Site 2	R3-2	Commercial/Residential	Lian Ying Wu
	21	2,780		R3-2	Parking Lot	147-03 Guy R. Brewer
	22	1,840		R3-2	Commercial	147-03 Guy R. Brewer
	23	1,840		R3-2	Commercial	Alawdi Estates, Inc.

ft = Feet

1.5 Description of the Development Site

The applicant-owned Development Site is Block 13354, Lot 12. The site is a 10,750 SF corner lot with 102 feet of frontage on Guy R. Brewer Boulevard and 97 feet of frontage on 147th Avenue. The lot is currently in use as a car rental business, has two curb cuts on Guy R. Brewer Boulevard, and is completely paved with no structure on site.

1.6 Description of Proposed Development

The Applicant proposes to develop the site with an eight-story plus cellar 37,475 GSF (34,503 ZSF; 3.35 FAR) mixed-use building with 4,028 GSF of ground floor local retail and 33,447 GSF of floors two through eight residential apartments. The building would contain approximately 33,447 GSF of residential floor area along with 23 accessory residential parking spaces. The applicant proposes mapping MIH Options 1 and 2 to provide maximum flexibility for non-applicant-controlled sites. The building will include 42 total dwelling units, at least 20% of which would be permanently set aside at or below 80% AMI. Pursuant to MIH between 11 and 13 units would be permanently set aside as affordable (25% and 30%); MIH Option 1 would require 25% floor area set aside at or below 60% AMI, while MIH Option 2 would require 30% floor area set aside at or below 80% AMI.

Build Year

2024 factoring the Environmental Approval process and ULURP process of 18 months, followed by 23-month site preparation and construction of the Applicant site. The remaining lots would need time to assemble, cease current site operations, and demolish existing structures, resulting in an additional 23 months of construction with no overlap between sites.

1.7 Action(s) Necessary to Facilitate the Project

There are two actions necessary to facilitate the Proposed Project:

1) A Zoning Map Amendment to rezone Block 13354, Lots 12, 19, 21, 22, 23, and p/o 10 and 25 from the existing R3-2 zoning district to an R6A zoning district with a C2-2 commercial overlay.
2) A Zoning Text Amendment to ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas for Community District 13, Queens, to establish the Affected Area as an MIH Area.

1.8 Purpose and Need

The Applicant believes that the Proposed Actions would induce the development of affordable housing and commercial uses along an underutilized block at the intersection of two major collector roads by increasing the permitted height from 35 feet to 85 feet, bulk from a maximum of 1.00 FAR to 3.60 FAR, and by introducing UGs 5-9 and 14. The provision of affordable housing would further the goals of NYC Housing 2.0 to provide permanently affordable housing throughout the city.

1.9 Analysis Framework

The analysis which follows compares the incremental difference between the future absent the proposed actions (no-action condition) and the future with the proposed actions (with-action

condition for the 2024 build year). This EAS studies the potential for individual and cumulative environmental impacts related to the proposed action occurring in a study area of approximately 400 feet around the rezoning area or (affected area). The analysis framework is described below:

Reasonable Worst-Case Development Scenario (RWCDS)

Pursuant to 2020 CEQR Technical Manual methodology, sites may be considered 'soft' if they are built to substantially less than the maximum allowable floor area ratio and are of a sufficient size or could be assembled into a parcel of sufficient size, to support a feasible development. Sites that have recently been developed or redeveloped are considered less likely to be soft, due to the significant recent investment in the current use. Projected development sites are defined as those sites that are more likely to be developed as a result of the proposed project.

Future Without the Proposed Action

In the future without the Proposed Action existing conditions would remain. Under the Affected Area's existing R3-2 zoning, development of residential uses would be permitted at .50 FAR and development of community facility uses would be permitted at 1.00 FAR. For residential uses, 1 parking space per dwelling unit is required.

Based on current neighborhood trends and long-tenanted uses of the existing buildings no development is expected to occur. All buildings within the Affected Area are non-conforming (Lot 22 and Lot 23 are also non-complying), but, due to the absence of certificates of occupancy, it is not known whether the uses are legal. For this reason, existing conditions are expected to remain.

Future With the Proposed Action

In the future with the Proposed Actions the Affected Area would be rezoned R6A with a C2-2 commercial overlay. The proposed development on the Applicant-owned Lot 12 would not maximize bulk within the proposed rezoning district. Therefore, for the purposes of a more conservative analysis under CEQR, an RWCDS where Lot 12 is built to the maximum bulk and will be considered. The Applicant is proposing ground floor retail use and an average dwelling unit size of 796 GSF, both of which will be included in the RWCDS.

As a result of the proposed rezoning, the assemblage and redevelopment of Lots 19, 21, 22, and 23 is considered likely. The redevelopment of these lots under a With-Action condition is assumed as each lot would be significantly underdeveloped within the new zoning district. It is assumed the Projected Development Site would max out permitted bulk and height.

Projected Development Site 1
The Applicant's Site, 146-93 Guy Brewer Boulevard (Block 13354, Lot 12), would develop with a 41,693 GSF (3.60 FAR), 8-story, 85-foot-tall building. 33,447 GSF of residential floor area (2.86 FAR) and 8,246 GSF of ground floor commercial (0.76 FAR) would be included. There would be 42 total dwelling units, 11-13 of which would be affordable at or below 80% AMI. There would be 46 total parking spaces required—19 residential and 27 commercial.

Projected Development Site 2
147-07, 147-03, and 146-01 Guy R. Brewer Boulevard (Block 13354, Lots 19, 21, 22, and 23) would assemble and develop with an eight-story, 85-foot-tall, 35,556 GSF structure (33,264

ZSF; 3.60 FAR). The building would contain 25,946 GSF of residential floor area (24,024 ZSF; 2.60 FAR) and 9,610 GSF of commercial floor area (9,240 ZSF; 1.00 FAR). There would be 26 total dwelling units, 7-8 of which would be permanently affordable at or below 80% AMI. There would be 44 total parking spaces required—12 residential and 32 commercial.

It is assumed under the Future With-Action Condition that ground floor development for all Projected Development Sites would be local retail.

Other Lots

The portions of Lots 10 and 25 that are included in the rezoning would include only 3 to 5 feet on each lot, and zoning regulations would not change on either site. Neither lot would be affected by the rezoning and redevelopment as a result of the Proposed Actions is not expected.

The Projected Development Sites are shown in **Figure 1.** The RWCDS Analysis Framework described above is shown in **Table 1.9-1.**

The existing, no-action, and with-action conditions on the lots within the Affected Area are presented in the **Table 1.9-2 Incremental Analysis Table.**

Table 1.9-1: Analysis Framework – Existing, No-Action and With-Action Calculations

Site Info				Existing/No-Action Conditions				With-Action Condition				
#	Block	Lot	Lot Area (gsf)	Zoning	Res. (gsf)	DU	Commercial (gsf)	Zoning	Res. (gsf)	Total DU	Affordable Dwelling Units	Commercial (sf)
1	13354	12	10,750	R3-2	0	0	0	R6A/C2-2	33,447	42	11-13	8,246
2		19	2,780		600	1	600		25,946	26	7-8	9,610
		21	2,780		0	0	0					
		22	1,840		0	0	1,000					
		23	1,840		0	0	1,000					
Total			**19,990**		**600**	**1**	**2,600**		**59,393**	**68**	**18-21**	**17,856**

DU = Dwelling Units
CF = Community Facility
gsf = gross square feet
Res. = Residential

Table 1.9-2: Incremental Analysis Table

Use	No-Action Condition	With-Action Condition	Increment
Residential[1]	1 DU 600 gsf	68 DUs 59,393 gsf	67 DUs 58,793 gsf
Total Residential DUs	1	68	67
Affordable (DUs)[2]	0	18-21	18-21
Commercial (gsf)	2,600	17,856	15,256
Residents[3]	3	218	215
Workers[4]	10	60	50

Notes: 'DUs' indicates Dwelling Units; 'gsf' indicates gross square feet

[1] Average Unit Size assumed to be 800 gsf

[2] Assumed 25-30 percent of residential floor area is reserved as affordable to households with incomes at or below 80 percent of the AMI

[3] Assumes 3.26 persons per residential dwelling unit per Queens Community District 13 Census Data

[4] Assumes 1 employee per 300 SF office space/local retail; 1 employee per parking lot

2.0 Supplemental Analyses

2.1 Land Use, Zoning, and Public Policy

The *CEQR Technical Manual* recommends procedures for analysis of land use, zoning and public policy to ascertain the impacts of a project on the surrounding area. Land use, zoning and public policy are described in detail below. This section considers existing conditions, development trends, and zoning and other public policies in relation to the Projected Development Site and the area in which the proposed actions may have an effect; potential development sites are not included in this analysis because development is less likely on these sites in the foreseeable future. Because the proposed action would permit development of uses (multiple family residential, commercial) that are not permitted as of right under the Projected Development Site's existing R3-2 zoning, a preliminary assessment of Land Use, Zoning, and Public Policy is provided.

Methodology

Existing land uses were determined by reference to the New York City Zoning and Land Use (Zola) database and PLUTOTM shapefiles. These uses were then confirmed through site visits. The evaluation of lots within the 400-foot Study Area were performed with reference to New York City Zoning Maps and the Zoning Resolution of the City of New York and served as the basis for the zoning evaluation of the Future No-Action and Future With-Action Conditions. Public Policy research was performed through an evaluation of New York City Department of City Planning (NYCDCP) and other city agencies programs and documentation.

2.1.1 Land Use

The *CEQR Technical Manual* suggests that a land use, zoning and public policy study area should generally extend 400 feet from the affected area. Existing land use patterns of city blocks within approximately 400 feet of the affected area are presented in **Figure 2.**

Existing Conditions

Land Use Study Area
The Affected Area is located in the Springfield Gardens neighborhood within Community District 13 in the Borough of Queens. Within the 400-foot surrounding area land uses include residential (one- and two-family), mixed commercial and office, public facilities, manufacturing, and transportation/utility. The residential buildings are generally located north of 147th Avenue and are the dominant land use in the area. South of 147th Avenue and north of Rockaway Boulevard land use is generally manufacturing (shipping and warehouses) with a few mixed-use buildings and public facility uses. South of Rockaway Boulevard is the John F. Kennedy International Airport. Public facilities in the area include the 21,000 GSF Springfield Family Residence, a social services organization; the four-story, 69,000 GSF Public School 52; and the two-story, 2,480 gsf Latter Rain Christian Fellowship church.

Affected Area
A full breakdown of each site within the Affected Area can be found in **Section 1.4**, **Description of Affected Area** or **Table 2.1-1** below**.** Three of the sites are improved with structures (one

mixed commercial/residential and two commercial buildings), one site is entirely paved and used as a car rental business, and the other lot in the Affected Area is used for airport parking.

Table 2.1-1: Land Use in the Affected Area

Address	Lot (Block 13354)	Lot Area	Built SF	Existing FAR	Use
146-93 Guy R Brewer Blvd	12	10,825	0	0.00	Car Rental
147-07 Guy R. Brewer Blvd	19	2,780	1,200	0.43	Commercial/Residential
Guy R. Brewer Blvd	21	2,780	0	0.00	Parking Lot
147-03 Guy R. Brewer Blvd	22	1,840	1,000	0.54	Commercial
146-01 Guy R. Brewer Blvd	23	1,840	1,000	0.54	Commercial

All of the lots run along Guy R. Brewer Boulevard, and Lots 12 and 23 are corner lots, while the remaining lots are interior and rectangular shaped.

Analysis

Future No-Action Condition

Conditions would remain as they currently exist within the Affected Area. Any new development in surrounding areas would be governed by the underlying low-density, non-contextual R3-2 zoning district and the light manufacturing M1-1 zoning district to the south of 147th Avenue. The existing non-conforming and non-complying uses within the affected area are expected to remain.

Future With-Action Condition

Projected Development Site 1

The Applicant's Site, 146-93 Guy Brewer Boulevard (Block 13354, Lot 12), would develop with a 41,693 GSF (3.60 FAR), 8-story, 85-foot-tall building. 33,447 GSF of residential floor area (2.86 FAR) and 8,246 GSF of ground floor commercial (0.76 FAR) would be included. There would be 42 total dwelling units, 11-13 of which would be affordable at or below 80% AMI. There would be 46 total parking spaces required—19 residential and 27 commercial.

Projected Development Site 2

147-07, 147-03, and 146-01 Guy R. Brewer Boulevard (Block 13354, Lots 19, 21, 22, and 23) would assemble and develop with an eight-story, 85-foot-tall, 35,556 GSF structure (33,264 ZSF; 3.60 FAR). The building would contain 25,946 GSF of residential floor area (24,024 ZSF; 2.60 FAR) and 9,610 GSF of commercial floor area (9,240 ZSF; 1.00 FAR). There would be 26 total dwelling units, 7-8 of which would be permanently affordable at or below 80% AMI. There would be 44 total parking spaces required—12 residential and 32 commercial.

Conclusion

The Proposed Rezoning would result in the development of the Affected Area with mixed-use residential buildings with ground floor local retail. The increased density provided by the rezoning, along with the introduction of commercial uses to the Affected Area, would occur at the intersection of two wide major collector roads. No other changes to land use within the

Affected Area or within the 400-foot Study Area are foreseen as a result of the Proposed Actions. Therefore, the Proposed Actions would not result in any significant adverse impacts to land use.

2.1.2 Zoning

The *CEQR Technical Manual* suggests that a zoning study area should extend 400 feet from the affected area. Existing zoning districts within approximately 400 feet of the Affected Area are presented in **Figure 5.**

Existing Conditions

Zoning Study Area

The zoning districts within 400 feet of the Affected Area are R3-2 and M1-1. R3-2 is a low-density, non-contextual general housing district that allows residential development up to .50 FAR and community facility development up to 1.00 FAR and a maximum height of 35 feet. M1-1 is a light manufacturing district that allows UGs 4-14, 16, and 17 with manufacturing and commercial development up to 1.0 FAR and community facility development up to 2.4 FAR and height governed by the sky exposure plane.

The Affected Area is located at the southern boundary of an R3-2 zoning district that covers an area from 147th Avenue to the south to the Belt Parkway to the north. An M1-1 zoning district to the south of the Affected Area, across 147th Avenue, is bounded to the south by John F. Kennedy International Airport.

Table 2.1-2: Summary of Existing Zoning Regulations

Zoning District	Type and Use Group (UG)	Floor Area Ratio (FAR)	Parking (Required Spaces)
R3-2	Non-Contextual Residential UGs 1-4	.50 FAR – Residential 1.00 FAR – Community Facility	1 per DU; 50% of IRHU
M1-1	Light Manufacturing UGs 4-14, 16, 17	1.00 FAR – Commercial/Manufacturing 2.40 FAR – Community Facility	1 per 300 sf

Source: Zoning Handbook, New York City Department of City Planning, 2018

Existing zoning districts in the surrounding area include:

R3-2

R3-2 districts are general residence districts that allow a variety of housing types, including low-rise attached houses, small multi-family apartment houses, and detached and semi-detached one- and two-family residences. It is the lowest density zoning district in which multiple dwellings are permitted. The 0.5 FAR, which is the same for all R3 districts, may be increased by an attic allowance of up to 20% for the inclusion of a space beneath a pitched roof. The perimeter wall of residences of all types may rise to 21 feet before sloping or being set back to a maximum building height of 35 feet. Lots with detached homes must be at least 40 feet wide; if occupied by semi-detached and attached buildings, the lots must be at least 18 feet wide. The maximum lot coverage of any residence is 35% and the maximum street wall length of a building on a single zoning lot is 125 feet. Front yards must be at least 15 feet deep.

M1-1
M1 districts range from the Garment District in Manhattan and Port Morris in the Bronx with multistory lofts, to parts of Red Hook or College Point with one- or two-story warehouses characterized by loading bays. M1 districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. Nearly all industrial uses are allowed in M1 districts if they meet the stringent M1 performance standards. Offices, hotels and most retail uses are also permitted. Certain community facilities, such as hospitals, are allowed in M1 districts only by special permit, but houses of worship are allowed as-of-right.

Affected Area

The Affected Area is zoned R3-2 which permits non-contextual residential development at .50 FAR and community facility development at 1.00 FAR.

Analysis

Future No-Action Condition

No changes to zoning are anticipated in the future without the proposed action within the affected area. The affected area would continue to be subject to R3-2 zoning.

Future With-Action Condition

Affected Area – R6A/C2-2
The proposed action would establish an R6A zoning district with a C2-2 overlay and would establish the Affected Area as a Mandatory Inclusionary Housing Area.

The proposed R6A/C2-2 zoning would permit medium-density residential development at a maximum FAR of 3.60 for developments with a permanent affordable housing set aside pursuant to the MIH program and a maximum FAR of 2.00 for commercial development. The maximum building height is 85 feet after a setback from the base height of up to 65 feet. Off-street parking is required for 50 percent of the residential dwelling units. Per ZR 23-693, a maximum building height of 45 feet is permitted within 25 feet of an R3-2 zoning district.

Conclusion

The proposed action would establish medium-density mixed use residential districts that would mandate provision of a substantial amount of affordable housing. The proposed actions would not introduce new uses that differ from the surrounding area, nor would the uses be incompatible with surrounding uses. The development resulting from the proposed action would not result in significant adverse impacts; therefore, no further analysis is required.

2.1.3 Public Policy

The Projected Development Sites site is not part of, or subject to, an Urban Renewal Plan (URP), adopted community 197-a Plan, Solid Waste Management Plan, Business Improvement District (BID), Industrial Business Zone (IBZ), or the New York City Landmarks Law. The

proposed action is also not a large publicly sponsored project, and as such, consistency with the City's PlaNYC 2050 for sustainability is not warranted.

The project is within the Jamaica Bay Watershed, requiring the completion and submittal of the Jamaica Bay Watershed Protection Plan Project Tracking Form. The completed form can be found in **Appendix D**.

The project is also within the Coastal Zone, and is therefore subject to the Waterfront Revitalization Program (WRP).

Waterfront Revitalization Program

Because the Projected Development Site is located within the boundaries of the New York City Coastal Zone and is subject to CEQR discretionary review procedures, the Proposed Action must be reviewed and assessed for consistency with the policies and conditions set forth in the New York City Waterfront Revitalization Program (WRP). The WRP establishes the City's policies for waterfront planning, preservation, and development projects to ensure consistency over the long term. The goal of the program is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing any potential conflicts among these objectives.

The WRP Consistency Assessment Form (CAF) was completed (see **Appendix D**) to determine if the Proposed Action is consistent with the WRP policies. The Projected Development Site is not within the 2007 Effective FEMA Flood Insurance Rate Map (FIRM) or the 2015 Preliminary FEMA Flood Insurance Map (PFIRM) 0.2% or 1% chance annual floodplain. Additionally, no hazardous features would be introduced to the area under the Proposed Action. With the exception of promoting Policy 1.3 as described below, the Proposed Action did not meet any of the conditions set forth in the WRP CAF and would not jeopardize the intent of the Waterfront Revitalization Program.

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

Policy 1.1: Encourage commercial & residential redevelopment in appropriate coastal zone areas.

The Proposed Action would permit redevelopment of an underutilized corner lot. The lot would be developed with a mixed-use residential and commercial building that would provide new opportunities for affordable and market-rate housing development in an area experiencing population growth. The surrounding area is predominantly residential and Guy R. Brewer Boulevard is a major connector road that is well-suited for commercial uses. Therefore, the Projected Development Site is suited for residential and commercial development, and the Proposed Action is consistent with policy 1.1.

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

The surrounding area provides access to a mix of residential, commercial, and recreational uses, and allows mobility within the Springfield Gardens neighborhood of Queens and provides connections to the Belt Parkway and JFK Expressway. Additionally, parks and recreational access are located along 147th Avenue and 148th Avenue, and public schools are immediately adjacent to the Affected Area to the north.

The Proposed Action would effectuate the redevelopment of an underutilized lot with local serving retail and permanently affordable housing. As such, the Proposed Action would encourage redevelopment that provides a needed use where infrastructure is adequate in an area with access to regional highways. The Projected Development Site is well-suited for commercial and residential use as it is within an urbanized area and would serve local residents in the surrounding residential neighborhoods. Therefore, the Proposed Action is consistent with Policy 1.3.

Policy 4: Protect and restore the quality and function of ecological systems within the New York Coastal Area

Policy 4.1: Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas

A. *Avoid activities that may cause or cumulatively contribute to permanent adverse changes to the ecological systems and their natural processes. When avoidance is not possible, minimize the impacts of the project to the extent feasible and mitigate any potential physical loss or degradation of the ecological elements. Use mitigation measures that are likely to result in the least environmentally damaging feasible alternative;*
B. *Avoid fragmentation of natural ecological communities and maintain corridors to facilitate the free exchange of biological resources within and among these communities. Protect those sites which have been identified as key to maintaining habitat connections within ecological systems.*
C. *To the extent practicable, remediate and restore ecological systems so as to ensure their continued existence as natural, self-regulating systems.*
D. *Utilize stormwater management best practices, industrial pollution prevention, and other sustainable development strategies to reduce impacts of development on natural resources.*
E. *Protect non-invasive plants from excessive loss or disturbance and encourage greater quantity and diversity of non-invasive plants to the extent practicable. Select plants that are resilient to current and future changes in climate. Avoid use of invasive plants except in ornamental gardens, as collector specimens, or for erosion control, filtration, or phytoremediation, provided that it is not feasible to use non-invasive species to perform the same functions. Avoid use of non-indigenous plants that are invasive species likely to alter existing natural community composition. Where destruction or significant impairment of non-invasive plants cannot be avoided, the potential impacts of land use or development should be minimized, and any resulting losses of non-invasive plants mitigated to the extent practicable.*
F. *For the planning and design of projects with disturbance over 1 acre—except for maintenance to existing facilities (including in-kind replacement of structures)—a natural resources assessment should be prepared whether or not the project meets the threshold criteria described in Chapter 11, Section 200 of the CEQR Technical Manual. This assessment should be used to guide site layout and design. The assessment methodology laid out in Chapter 11, Section 300 of the CEQR Technical Manual should be used as the basis for preparing the natural resources assessment.*
G. *Target public investment towards habitat protection and improvement. Avoid public investment which would interfere with the habitat functions of the area. Pursue acquisition of sites for habitat protection.*

The Proposed Action would not cumulatively contribute to permanent adverse changes to the ecological systems and their natural processes. The residential and commercial uses would not result in industrial pollution that would impact off-site resources. The Proposed Development would not result in habitat fragmentation, interrupt free exchange of biological communities, or encroach on the adjacent SNWA, Significant Coastal Fish and Wildlife Habitats, or impact endangered or critical natural resources. Therefore, the Proposed Action is consistent with this policy.

Conclusion

There are no applicable public policies in place for the Affected Area that require further analysis. The Jamaica Bay Watershed would not be affected as a result of the Proposed Actions, and no further analysis of the Jamaica Bay Watershed policy is required.

2.2 Open Space

Open space is defined as publicly or privately-owned land that is publicly accessible and operates, functions, or is available for leisure, play, or sport, or set aside for the protection and/or enhancement of the natural environment.

Pursuant to Chapter 7, Section 100 of the 2020 CEQR Technical Manual, Open Space Resources are defined as active and/or passive, and may include, but is not limited to, the following:

- Parks operated or managed by the City, State, or Federal governments and include neighborhood and regional parks, beaches, pools, golf courses, boardwalks, playgrounds, ballfields, and recreation centers that are available to the public at no cost or through a nominal fee, as in the case of recreation centers and golf courses;
- Open space designated through regulatory approvals (such as zoning), including large-scale permits that prescribe publicly accessible open space, such as public plazas;
- Outdoor schoolyards if available to the public during non-school hours;
- Publicly-accessible institutional campuses;
- Esplanades;
- Designated greenways, as shown on the City's Bike Map, and defined as multi-use pathways for non-motorized recreation and transportation along natural and manmade linear spaces such as rail and highway rights-of-way, river corridors, and waterfront spaces;
- Landscaped medians with seating;
- Housing complex grounds, if publicly accessible;
- Nature preserves, if publicly accessible;
- Gardens, if publicly accessible.

The CEQR Technical Manual defines the need for an open space assessment if the proposed action would have a direct or indirect effect on open space resources. Direct effects would occur if the proposed action would result in the physical loss of a public open space; change of use of an open space so that it no longer serves the same user population; limit public access to an open space; or cause increased noise or air pollutant emissions, odors, or shadows on public open space that would affect its usefulness, whether temporary or permanent. Indirect effects would occur if the proposed action would result in an increase of population sufficiently large enough to noticeably diminish the ability of an area's open space to serve future population.

Methodology

According to the guidelines of the City's CEQR Technical Manual for analysis of residential development, census tracts with at least half of their geographic area within a one-half mile radius of the development site comprise the open space study area. Using current population figures, an open space ratio is calculated for both the future no-action and future with-action scenarios, expressed as the amount of open space acreage per 1,000 user population. Typically, a comparison is made to the median open space ratio, which is 1.50 acres per 1,000 residents, and the city's planning goal of 2.50 acres per 1,000 residents. A reduction in the open space ratio increment of more than 5 percent over future no-action conditions generally warrants a more detailed analysis, unless the open space ratio is below the citywide average, in which case even a small reduction could be considered significant.

In addition to field surveys, information from the NYC Department of City Planning's Community District Needs Statements, NYC Parks Department website, and U.S. Census data were utilized in preparing the open space analysis.

Preliminary Open Space Assessment

The Proposed Action would result in a net increment of 77,248 GSF of development, including 59,393 GSF of residential floor area and 17,856 GSF of commercial floor area. The Proposed Action is projected to result in the development of 68 dwelling units within the Affected Area. Assuming an average occupancy of 3.26 persons based on the average household size within Queens Community District 13, population introduced as a result of the Proposed Action would be approximately 215 residents. With the increase in commercial floor area the Proposed Action would also introduce approximately 50 workers. The Affected Area is within an area that is identified as neither underserved or well-served by open spaces, and therefore the threshold for assessment of the potential for indirect impacts is 200 new residents or 500 additional employees. Therefore, an assessment of indirect effects on public open space resources is warranted.

Study Area Definition

In accordance with the guidelines established in the City's 2020 CEQR Technical Manual, the open space study area is defined to analyze both the nearby open spaces and the population using those open space resources. It is generally defined by a reasonable walking distance that users would travel to reach local open spaces and recreational areas. Pursuant to the 2020 CEQR Technical Manual, the open space study area includes all U.S. Census Tracts that have 50 percent or more of their area within a half-mile radius of the Affected Area. As shown in **Figure 2.2-1** and summarized in **Table 2.2-1** below, the only Census Tract that has 50% or more of its area within the ½ mile study area is 320.

Figure 2.2-1: Open Space Study Area Census Tracts

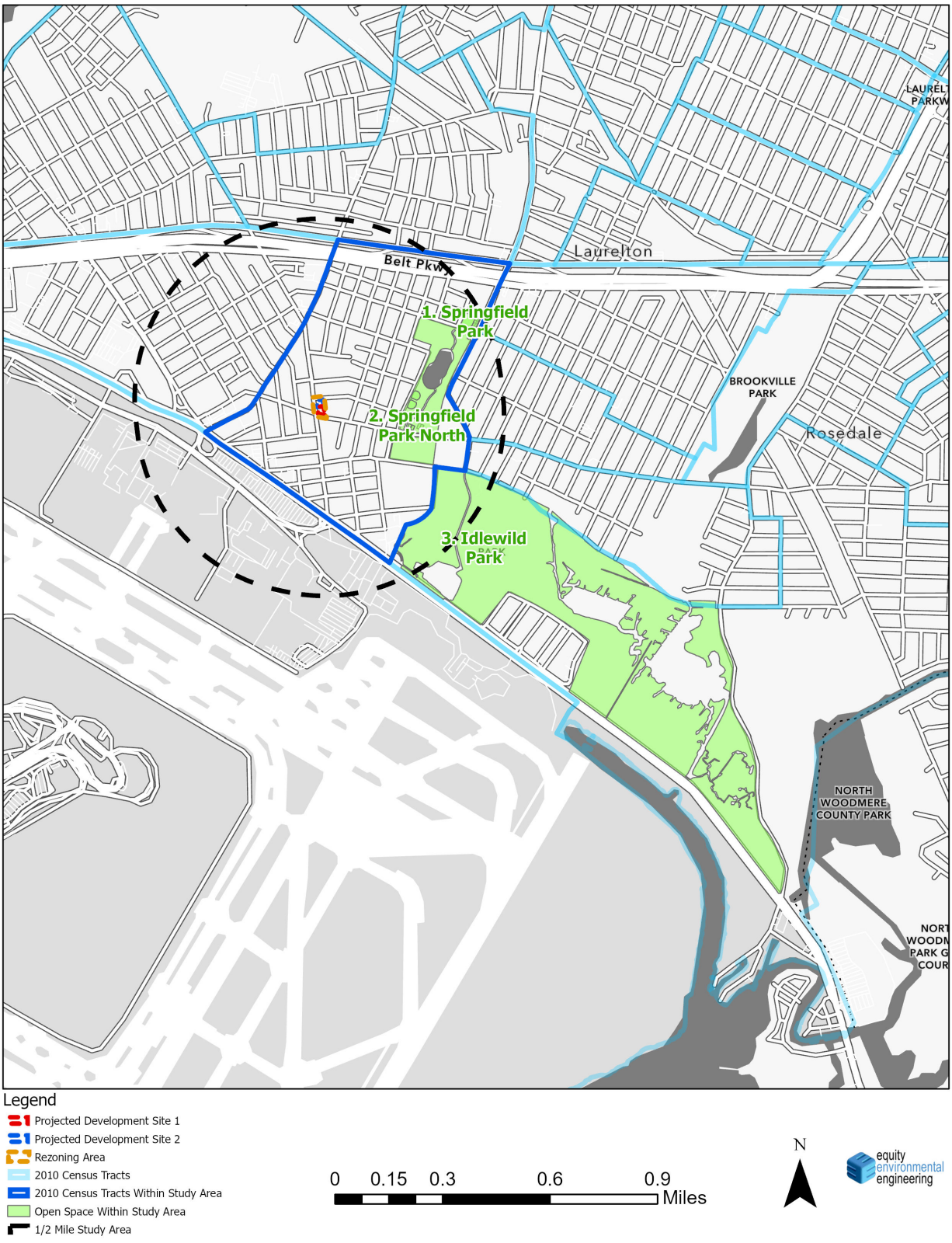


Table 2.2-1: Study Area Population 2018

Census Tract	Population
320	5,072

Study Area Population

Secondary sources were used to determine the residential and non-residential populations served by the existing open space resources in the study area. Total residential population for the Study area was established using data from the 2014-2018 American Community Survey Census for New York City developed by the Department of City Planning's (DCP) Population Division.

As of 2018, the Study Area had a residential population of 5,072 persons.

Future No-Action Condition

In the future without the Proposed Actions no redevelopment would occur in the Affected Area. Six major projects were identified in the Study Area, and those projects would add 58 total dwelling units. Assuming 3.26 residents per dwelling unit per Queens Community District 13 2018 ACS, an additional 189 residents would be added to the Study Area. The Future No-Action Condition population would be 5,261.

Future With-Action

In the future with the Proposed Actions a net increment of 68 dwelling units, resulting in an additional 222 residents, would be introduced to the Affected Area. The Study Area With-Action population is the product of the No-Action population of 5,261 plus the 222 incremental residents resulting from the Proposed Actions for a total 2024 With-Action population of 5,483.

Open Space Resources

There are three open space resources within the Study Area identified in **Table 2.2-2.** There are 24.58 acres of open spaces resources in the Study Area— 6.15 (25%) acres are considered active and 18.43 (75%) acres are considered passive.

Table 2.2-2: Open Space Resources

Name	Address	Ownership	Acreage	Features
Springfield Park	149 Av, Springfield Bl, 145 Rd, 184 St	NYC DPR	23.54	BF, DP, SS, Ba, Pg, TC
Springfield Park North	145 Rd bet. Arthur St. and Springfield Blvd	NYC DPR	1.04	BBQ; HC; Ba; Pg
Total			24.58	

Features: Ba = Bathrooms; BF = Baseball Fields; DP = Dogparks; SS = Spray Showers; Pg = Playgrounds; TC = Tennis Courts; BBQ = Barbecue Areas; HC = Handball Courts; KC = Kayak/Canoe Launch Sites

Analysis

Existing Condition

The Study Area has 24.58 acres of open space and an existing residential population of 5,072. The open space ratio (OSR) under existing conditions is 4.84 acres per thousand residents.

Future No-Action Condition

In the future without the Proposed Actions, the population for the Study Area in the 2024 build year is forecasted to be 5,261 and is projected to be served by the same 24.58 acres of open space as in the existing condition. With this population, the OSR would be 4.67. The OSR is well above the citywide average of 1.5 acres per thousand people and reflects the area's proximity to large park facilities within a ½-mile radius.

Future With-Action Condition

The Proposed Actions would result in an increase in the No-Action population by 222 residents by the 2024 build year. The total 2024 build year With-Action population would be 5,483. With this increase in population, the OSR would be 4.48 acres per 1,000 residents, or a 4.1 percent reduction from the No-Action OSR.

Additional Open Space Just Outside Open Space Study Area

Directly adjacent to the Open Space Study Area is Idlewild Park, immediately to the east of the Study Area. Idlewild is a park and nature preserve that covers 180 acres with both active and passive uses including areas for picnicking and relaxing in the park, marsh areas for canoes and kayaking, paths for running or walking, and soccer and cricket fields.

Conclusion

Under the existing, No-Action, and With-Action conditions, the OSR in the area would be well above 1.5 acres per thousand residents, which is the citywide average. Per the CEQR Technical Manual, projects that exceed the 1.5 acres per thousand resident threshold would not be expected to have significant adverse impacts if they reduce the OSR by less than 5 percent. The Proposed Actions would reduce the OSR by 4.1 percent, which is below thresholds requiring further analysis, and further assessment is not required and no significant adverse impacts would occur.

2.3 Shadows

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

The duration and dimensions of shadows are determined by the geographic location of the area from which the shadow is cast and the time of day and season. Shadows cast during the morning and evening, when the sun is low in the sky, are longer, while midday shadows are shorter in length. Shadows in winter, when the sun arcs low across the southern sky, are also longer throughout the day than at corresponding times in spring and fall seasons. In summer, the high arc of the sun casts shorter shadows than at any other time of year, and early and late shadows during the summer are cast farther towards the south than shadows cast in early and late winter months.

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

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

Methodology

This preliminary analysis of shadows follows the guidelines set forth in the 2020 CEQR Technical Manual for a preliminary assessment (Section 310). According to the 2020 CEQR Technical Manual, a preliminary shadow assessment includes the development of a base map showing the site location in relationship to any sunlight-sensitive resources as per guidelines provided in the 2020 CEQR Technical Manual. Following these guidelines, the longest shadow

study area is determined, and a Tier 1 screening assessment is conducted to determine if any sunlight-sensitive resources fall within the study area. If no resources are identified, no further analysis would be required. If sunlight-sensitive resources lay within the longest shadow study area, the next tier of screening assessment should be conducted. This preliminary assessment includes a basic description of the proposed project that would be facilitated by the Proposed Action in order to determine whether a more detailed assessment would be appropriate.

Analysis

Under the Future With-Action condition Projected Development Sites 1 and 2 would each be developed with a building 100 feet in height (85-foot building plus an additional 15 feet for mechanical bulkheads) in the proximity of sunlight sensitive resources. Accordingly, a preliminary assessment of shadows is warranted.

2.3.1 Tier 1 Shadow Screening Assessment

The shadow assessment begins with a preliminary screening assessment to ascertain whether a project's shadow may reach any sunlight-sensitive resources at any time of the year. If the screening assessment does not eliminate this possibility, a detailed shadow analysis may be warranted to determine the extent and duration of the net incremental shadow resulting from the project. The effects of shadows on a sunlight-sensitive resource are site-specific; therefore, as directed in the CEQR Technical Manual, the screening assessment was performed for the relevant Projected Development Sites to determine whether they fall within the range of maximum possible shadow cast on potential sunlight sensitive resources as described above. To determine this, a Tier 1 Screening Assessment was performed in accordance with the CEQR Technical Manual. A base map is developed that illustrates the proposed site location in relationship to any sunlight-sensitive resources. The longest shadow study area is then determined, which encompasses the site of the proposed project(s) and a perimeter around the site's boundary with a radius equal to the longest shadow that could be cast by the proposed structure, which is 4.3 times the height of the structure that occurs on December 21st, the winter solstice. A map as shown in **Figure 2.3-1** was prepared placing NYC Department of Parks Resources as well as Selected Facilities and Program Sites provided on NYC.gov Department of City Planning GIS portal, as well as a list of park and public spaces provided from NYC.gov DOITT- GIS and Mapping Portal, as well as a screen of SHPO and NYC Landmark Listed Properties. After this a buffer map was prepared to display the maximum possible shadow of 430 feet, which could be cast from each Projected Development Site in the proposed rezoning area. This shadow cast was derived by multiplying the height of 100 feet (the maximum possible height under the proposed rezoning with MIH bonus plus a 15-foot bulkhead) by 4.3 (the CEQR Technical Manual multiplier representing the maximum shadow cast from any object as being 4.3 times its height). The potentially impacted area of shadow from each projected site was then compared to those resources identified above to see if any fell within the shadow cast area.

Based on the Tier 1 analysis in **Figure 2.3-1**, it was determined that one sunlight sensitive resource, P.S. 52 Playground, is within reach of the longest possible shadow that could be cast from the Projected Development buildings associated with the requested rezoning within the Affected Area. Therefore, the Projected Development buildings may have adverse impact on the sunlight-sensitive resource, and a Tier 2 analysis is required.

Figure 2.3-1: Tier 1 Screening Assessment

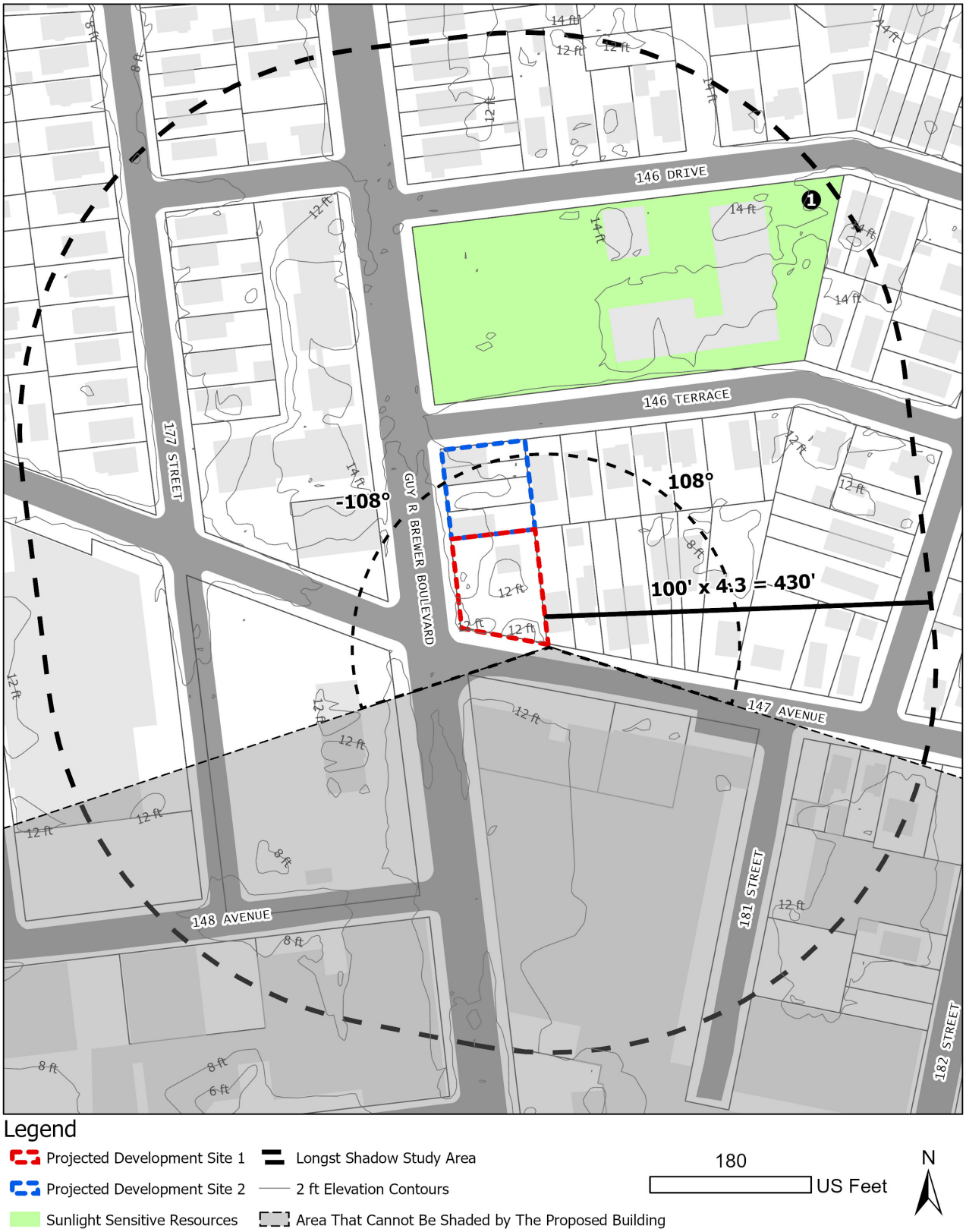


2.3.2 Tier 2 Shadow Screening Assessment

The CEQR Technical Manual states that if any portion of a sunlight-sensitive resource lies within the longest shadow study area, a Tier 2 screening assessment should be performed. 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 Projected Development Site. In New York City, this area lies between -108 and +108 degrees from true north. For a Tier 2 screening assessment, sunlight-sensitive resources within the triangular area cannot be shaded by new development sites, and are screened out. The complementing portion to the north within the longest shadow study area is the area that can be shaded by the proposed project.

As shown in **Figure 2.3-2**, the Tier 2 screening assessment showed that the P.S. 52 Playground (Block 13353, Lot 20; Resource 1) is inside of the -108/+108 area, and therefore a Tier 3 screening would be required.

Figure 2.3-2: Tier 2 Screening Assessment



2.3.3 Tier 3 Shadow Screening Assessment

The CEQR Technical Manual states that if any portion of a sunlight-sensitive resource is within the area that could be shaded by the Proposed Development buildings, a Tier 3 screening assessment should be performed. Because the sun rises in the east and travels across the southern part of the sky to set in the west, a project's earliest shadows would be cast almost directly westward. Throughout the day, they would shift clockwise (moving northwest, then north, then northeast) until sunset, when they would fall east. Therefore, a project's earliest shadow on a sunlight-sensitive resource would occur in a similar pattern, depending in the location of the resource in relation to the Projected Development Site(s). For a Tier 3 screening assessment, if the assessment determines that no shadows from the development would reach any of the sunlight-sensitive resources on any of the representative analysis days then no further assessment for those days is needed. If, however, in the absence of intervening buildings shadows from the proposed buildings would reach sunlight-sensitive resources on any of the representative analysis days then a detailed shadow analysis would be warranted for those days.

As shown in **Figures 2.3-3 to 2.3-6** below, shadows from the Projected Development buildings would reach P.S. 52 Playground on two analysis days in December and March/September and would not impact the playground in May/August or June. Therefore, a detailed shadow analysis for Sunlight Sensitive Resource 1 is required.

Figure 2.3-3: Tier 3 Screening December

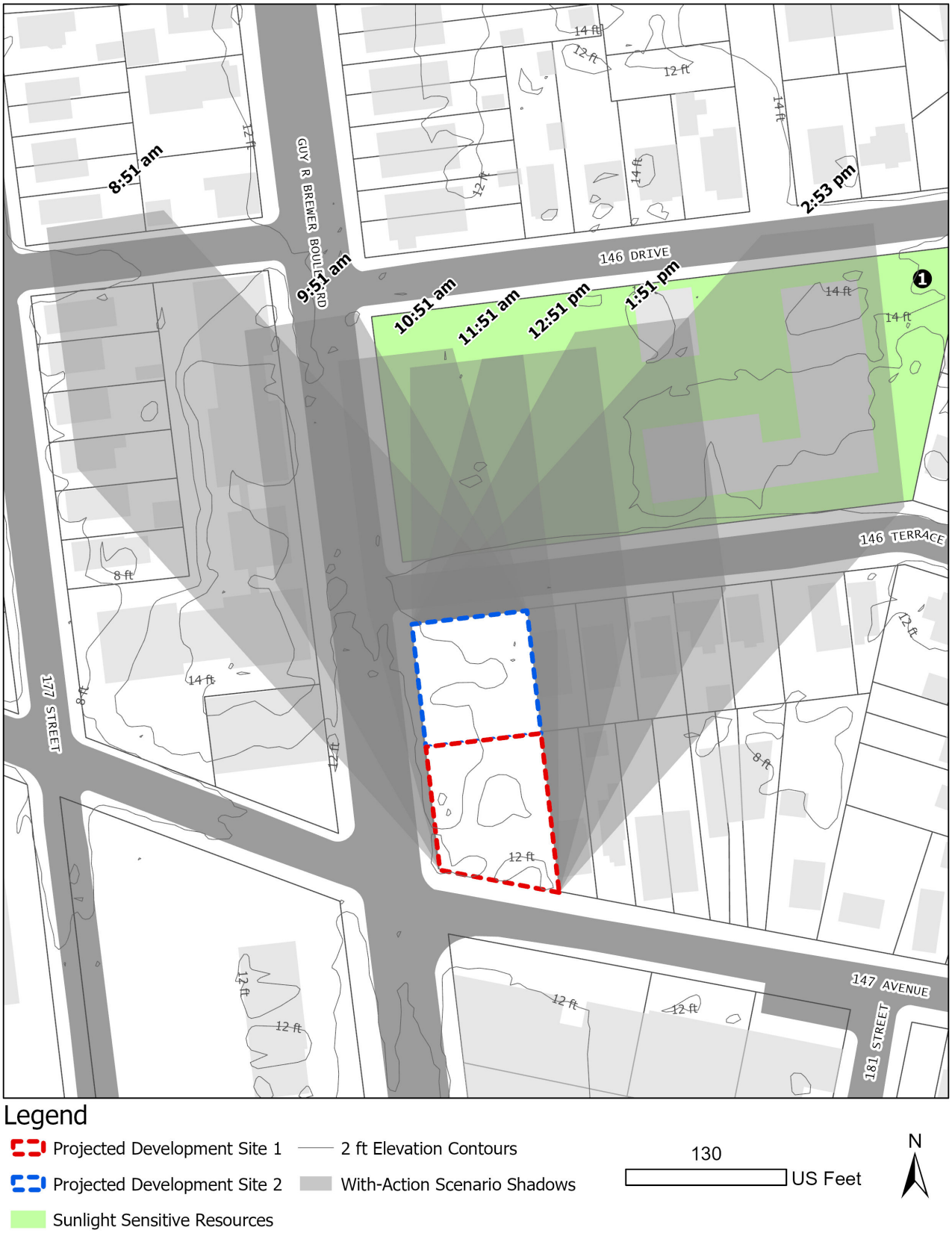


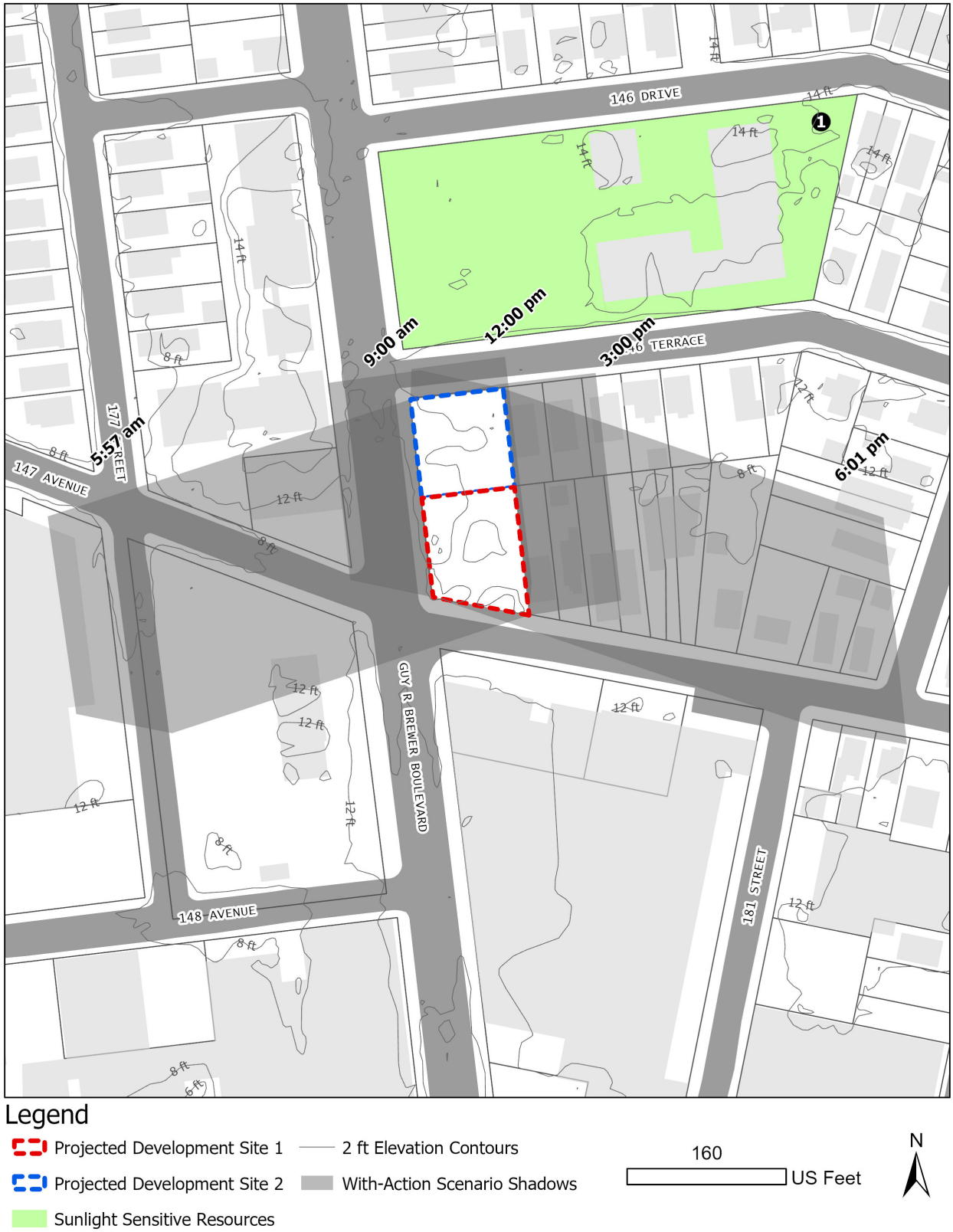
Figure 2.3-4: Tier 3 Screening March/September



Figure 2.3-5: Tier 3 Screening May/August



Figure 2.3-6: Tier 3 Screening June



2.3.4 Detailed Shadow Analysis

The CEQR Technical Manual states that a detailed shadow analysis is warranted when the screening analyses do not rule out the possibility that project-generated shadows would reach any sunlight-sensitive resources. The purpose of the detailed analysis is to determine the extent and duration of shadows that fall on a sunlight-sensitive resource as a result of the proposed project. The results of the detailed shadow analyses on the identified resources of concern are summarized in **Table 2.3-1**.

Based on the Findings of the Tier 3 shadow screening assessment, the Proposed Actions would cast shadows on P.S. 52 Playground (Block 13353, Lot 20; Resource 1) in December and March/September. P.S. 52 is a public school located in Jamaica, NY. It has 418 students in grades PK, K-5 with a student-teacher ratio of 14 to 1. This school has a paved outdoor playground for the students at its west side, which is featured with a running track, basketball hoops, a sports field, various paved playing zones, benches, and playground equipment. The conditions of P.S. 52 Playground are shown in **Photo 2.3-1** below and a high-resolution aerial of the Playground (from August 12, 2021) is shown in **Figure 2.3-7** below.

Table 2.3-1: Detailed Shadow Analysis Table

Analysis Day	December 21	March 21 / September 21	May 6 / August 6	June 21
Timeframe Window	8:51 a.m. - 2:53 p.m.	7:36 a.m. - 4:29 p.m.	6:27 a.m. - 5:18 p.m.	5:57 a.m. - 6:01 p.m.
Sunlight Sensitive Resource 1	P.S. 52 Playground			
Shadow Enter-Exit Times	8:51 am - 2:53 pm	7:50 am - 4:12 pm	-	-
Incremental Shadow Duration	6 Hours 2 Minutes	8 Hours 22 Minutes	-	-
Note: Daylight savings time not used				

The shadows from the Projected Development Sites would reach P.S. 52 Playground on March 21/September 21 for a period of 8 hours and 22 minutes, and on December 21st for a period of 6 hours and 2 minutes. Therefore, the detailed shadow analysis is provided for the December and March 21/September 21 analysis periods. The incremental shadows cast by the Projected Development Sites on December 21 are shown below in **Figures 2.3-8 through 2.3-14**. The incremental shadows cast by the Projected Development Sites on March 21/September 21 are shown below in **Figures 2.3-15 through 2.3-22**. The shadows of intervening buildings were included in the detailed shadow analysis in order to identify the incremental shadows cast by the Projected Development buildings.

Figure 2.3-7: P.S. 52 Site Plan Satellite Map (August 12, 2021)



Photo 2.3-1: P.S. 52 Playground (Sunlight Sensitive Resource 1)



Figure 2.3-8: December Detailed Shadows Analysis (8:51 am)

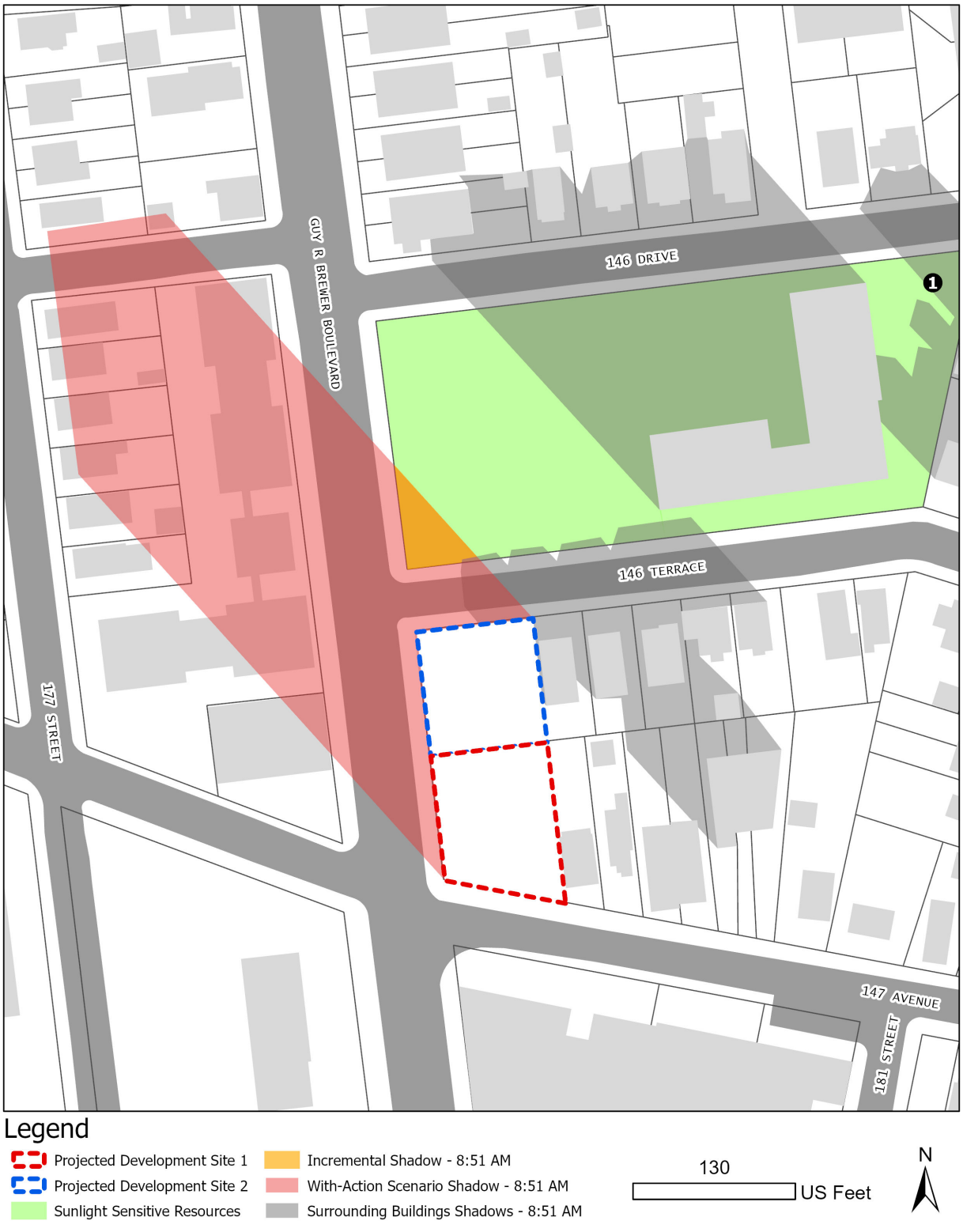


Figure 2.3-9: December Detailed Shadows Analysis (9:51 am)

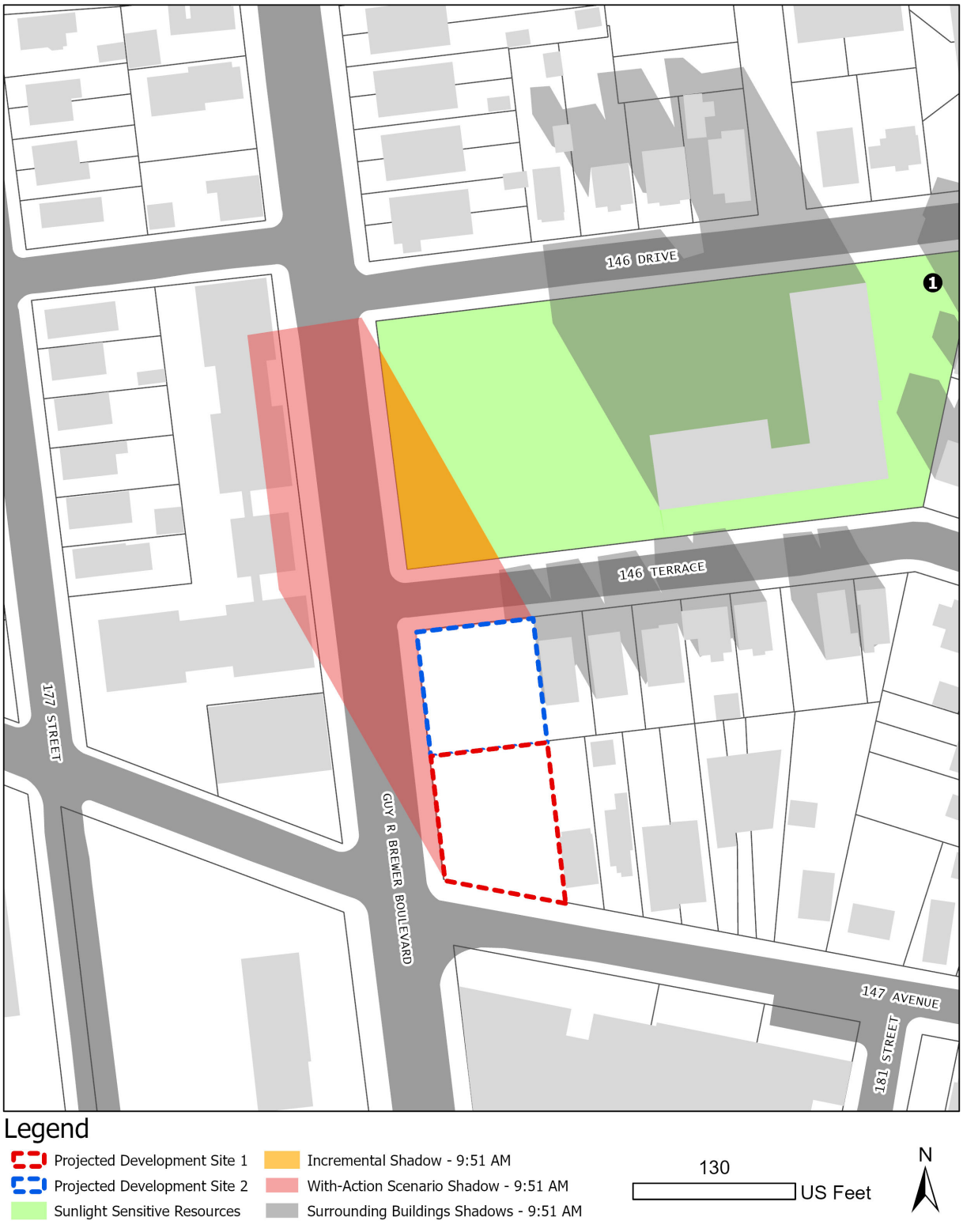


Figure 2.3-10: December Detailed Shadows Analysis (10:51 am)

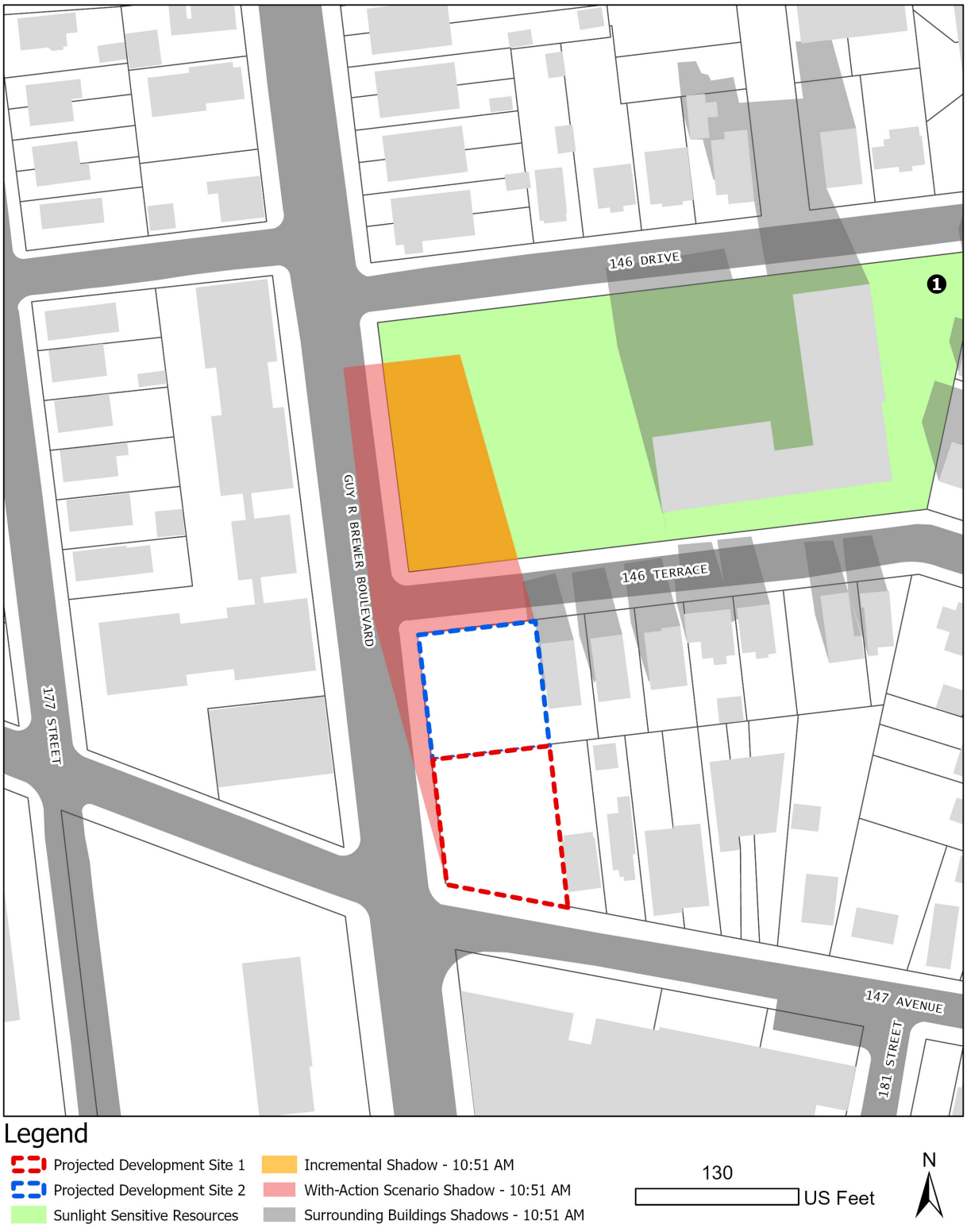


Figure 2.3-11: December Detailed Shadows Analysis (11:51 am)



Figure 2.3-12: December Detailed Shadows Analysis (12:51 pm)

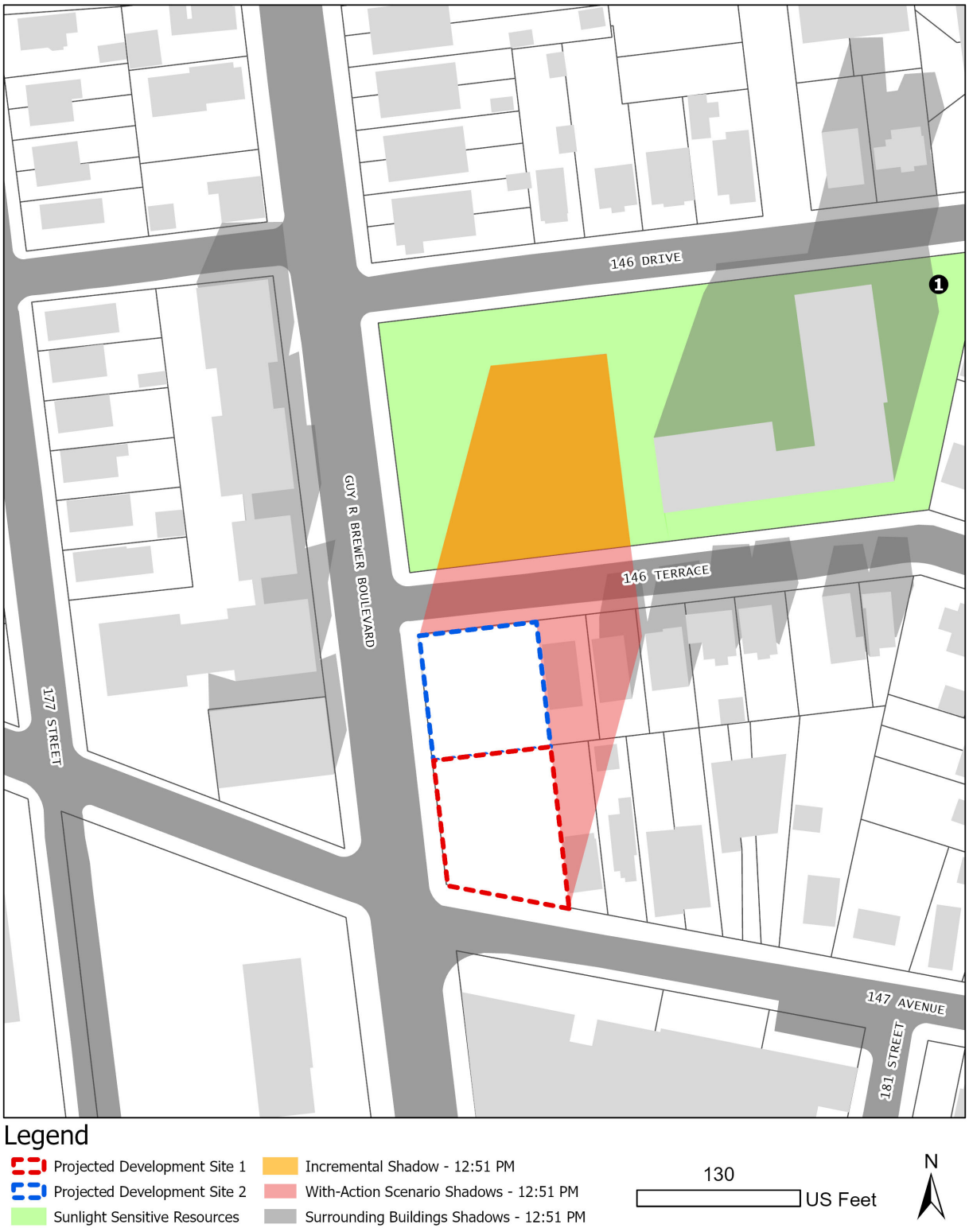


Figure 2.3-13: December Detailed Shadows Analysis (1:51 pm)

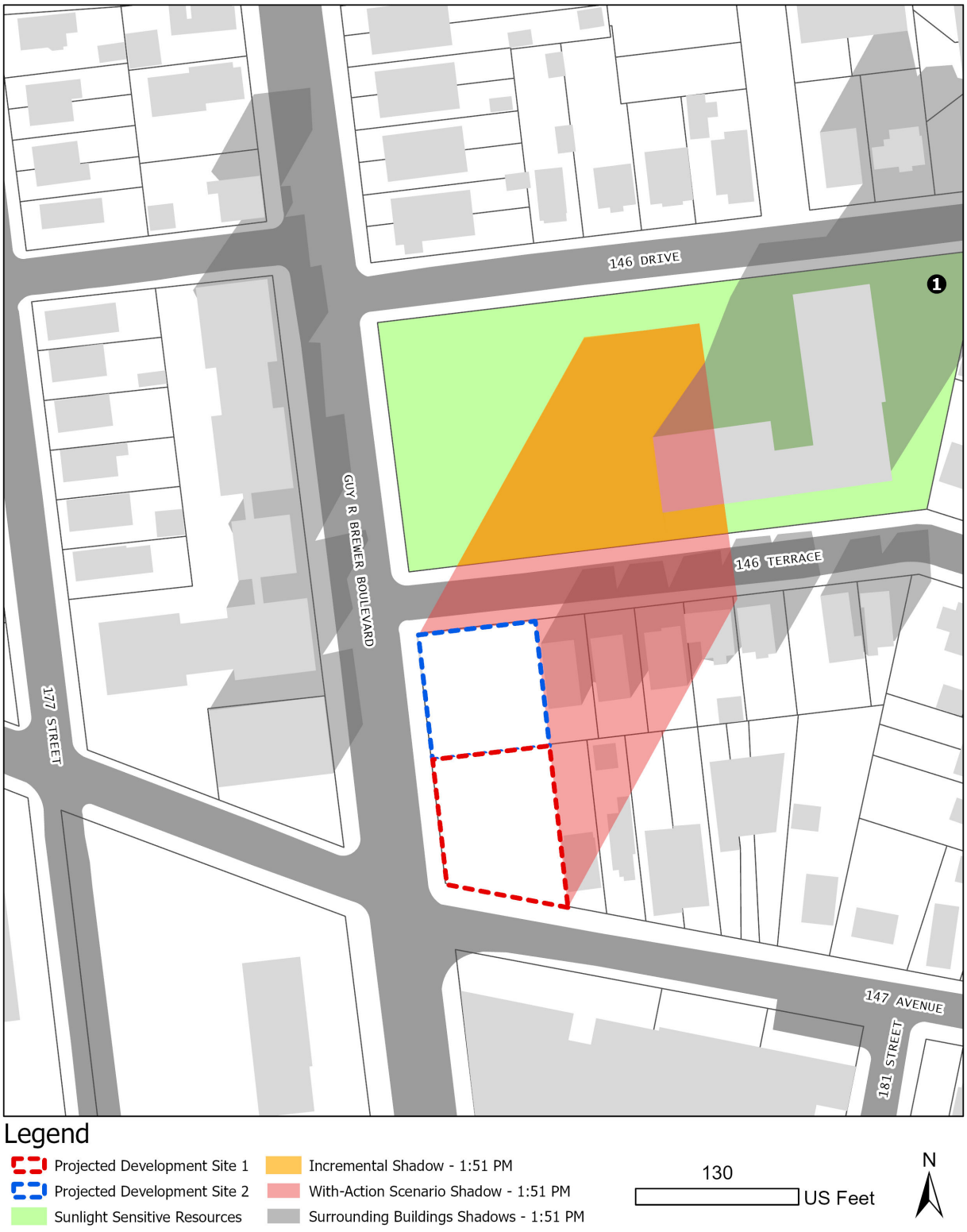


Figure 2.3-14: December Detailed Shadows Analysis (2:53 pm)

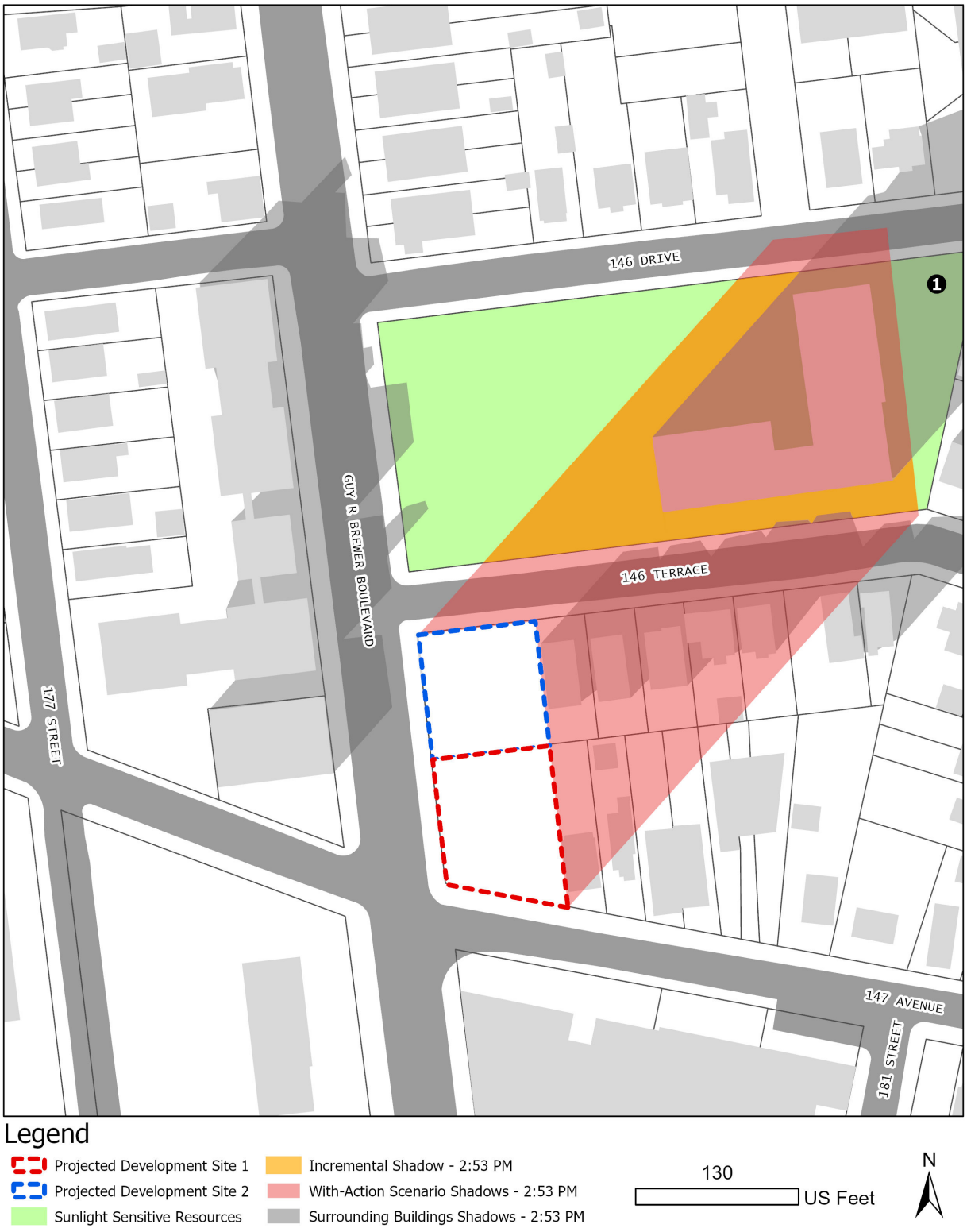


Figure 2.3-15: March/September Detailed Shadows Analysis (8:36 am)

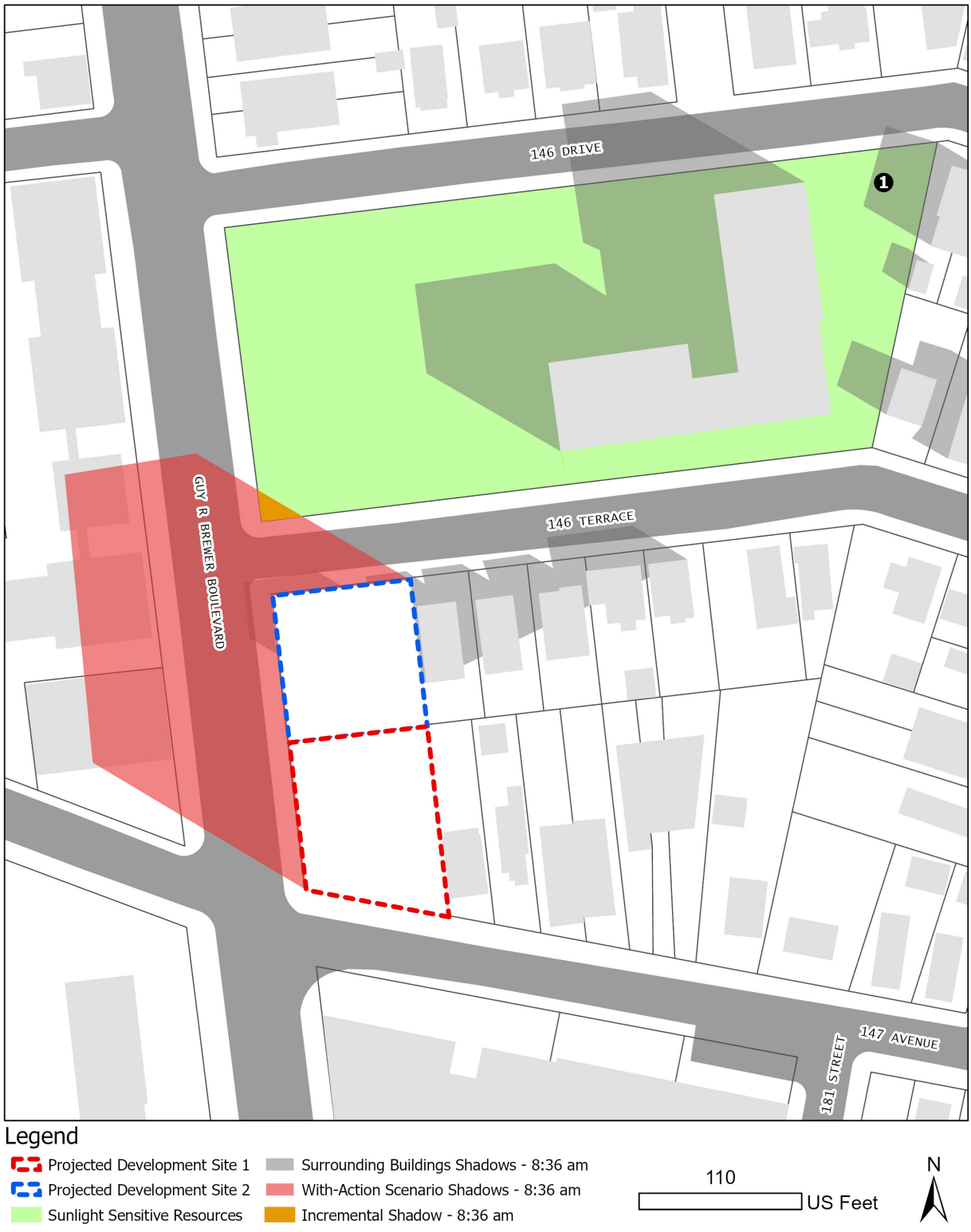


Figure 2.3-16: March/September Detailed Shadows Analysis (9:36 am)

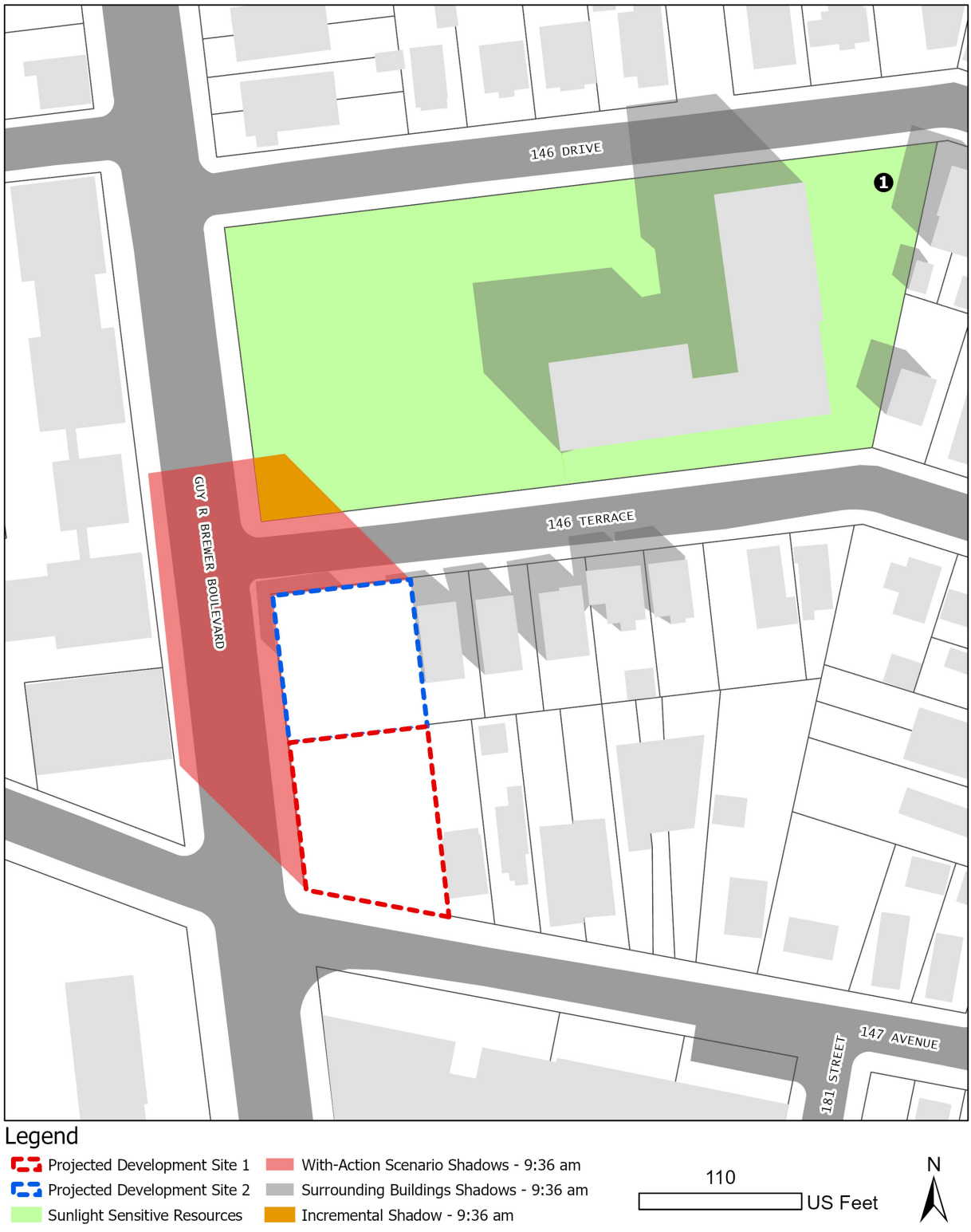


Figure 2.3-17: March/September Detailed Shadows Analysis (10:36 am)

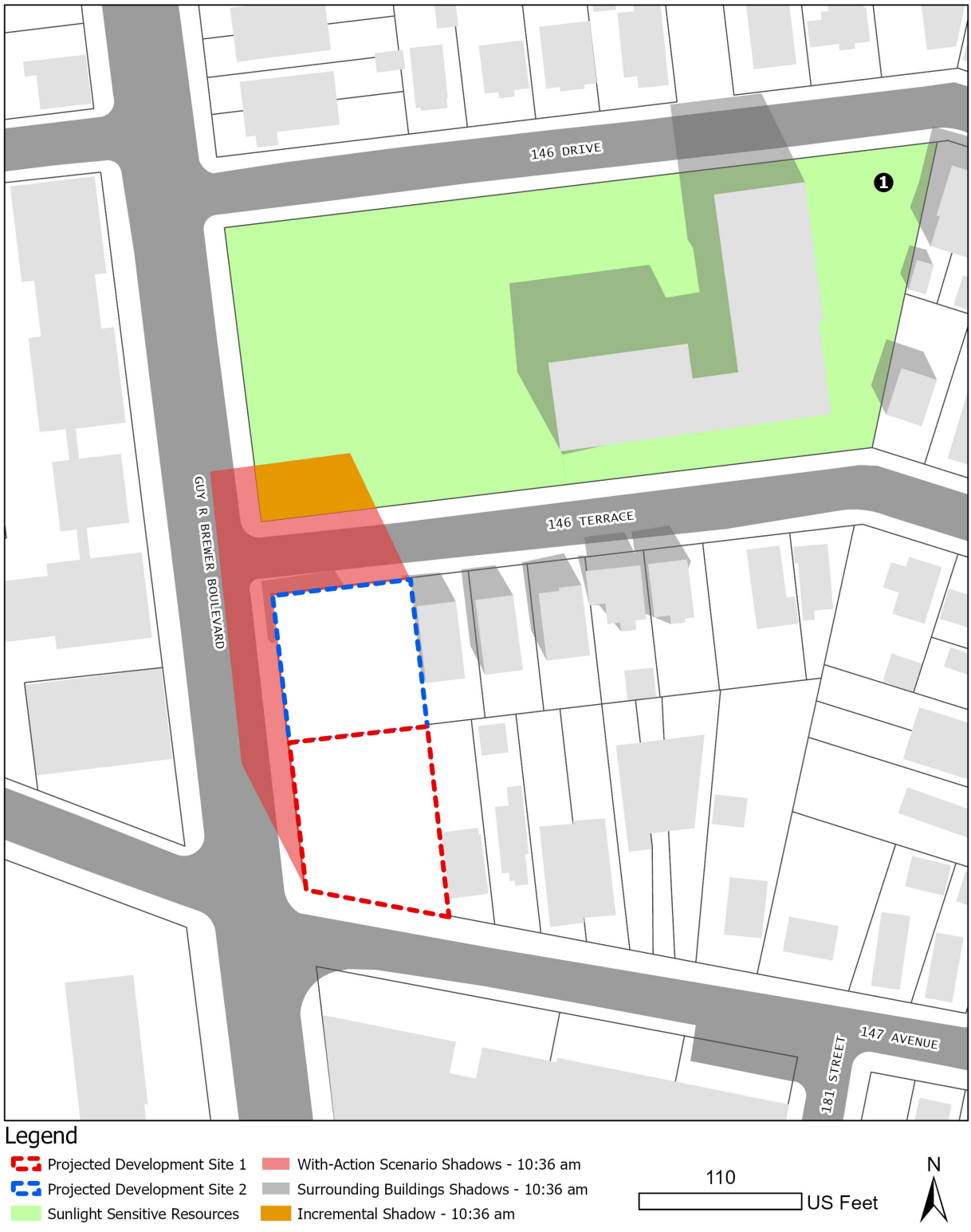


Figure 2.3-18: March/September Detailed Shadows Analysis (11:36 am)



Figure 2.3-19: March/September Detailed Shadows Analysis (12:36 pm)

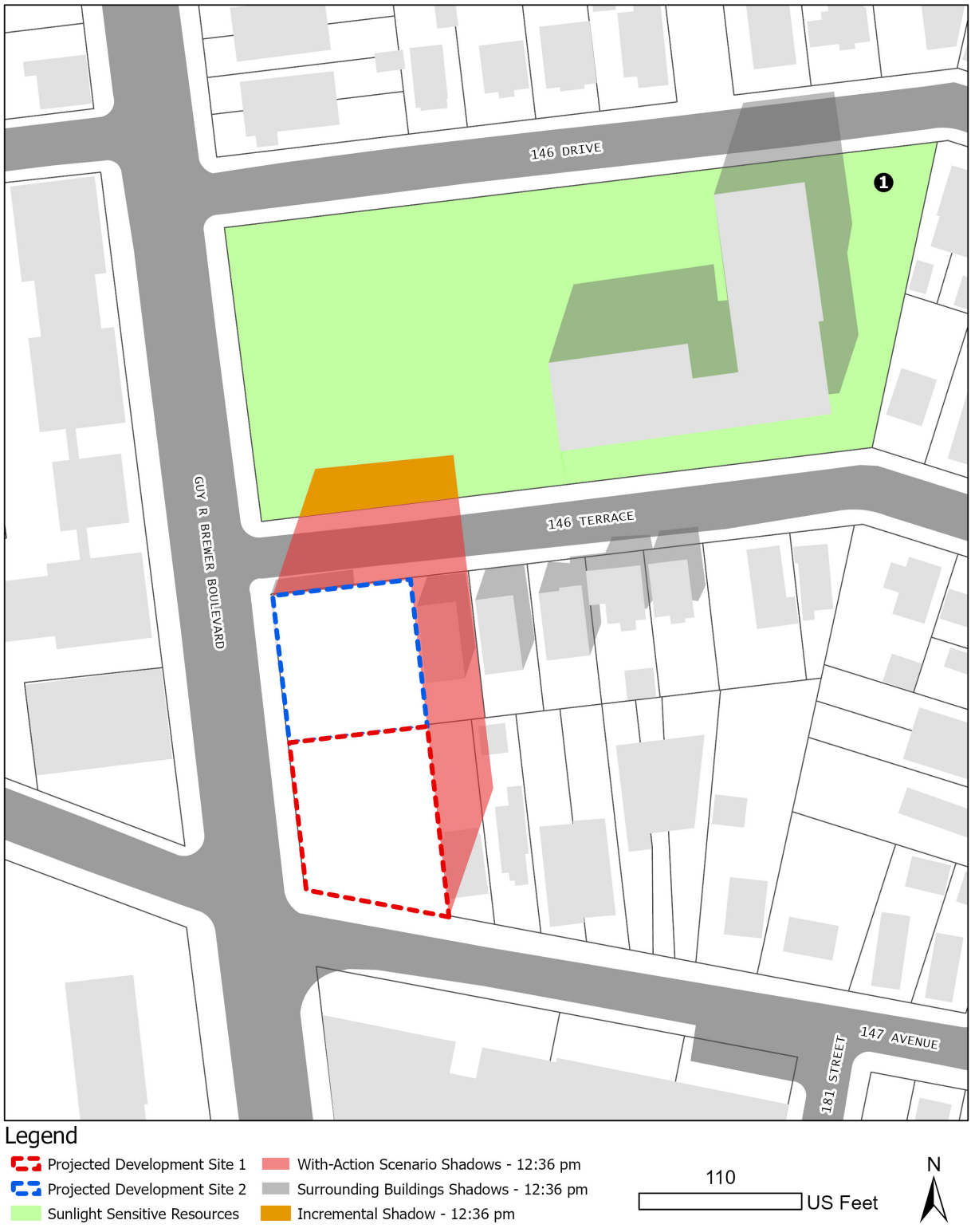


Figure 2.3-20: March/September Detailed Shadows Analysis (1:36 pm)

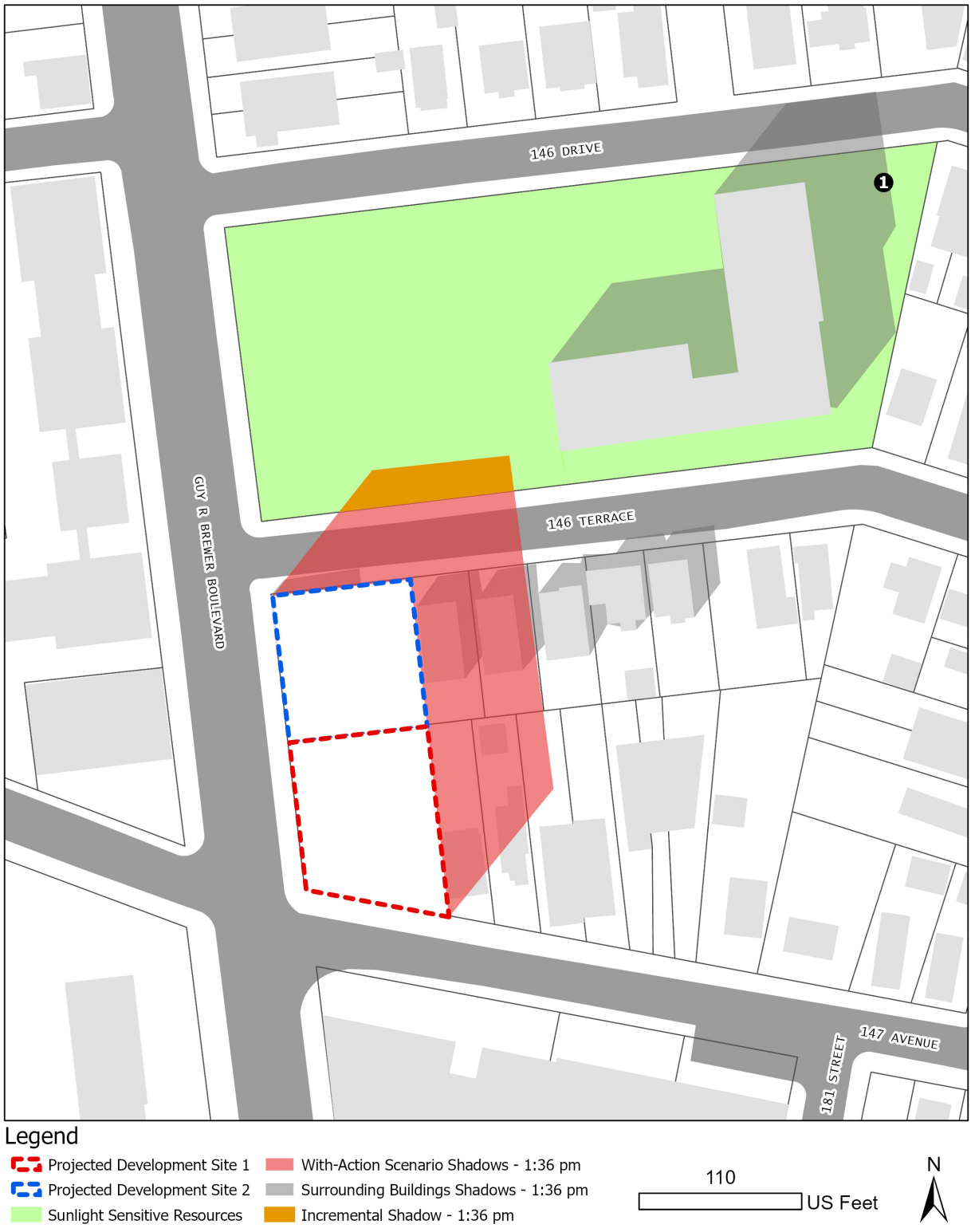


Figure 2.3-21: March/September Detailed Shadows Analysis (2:36 pm)

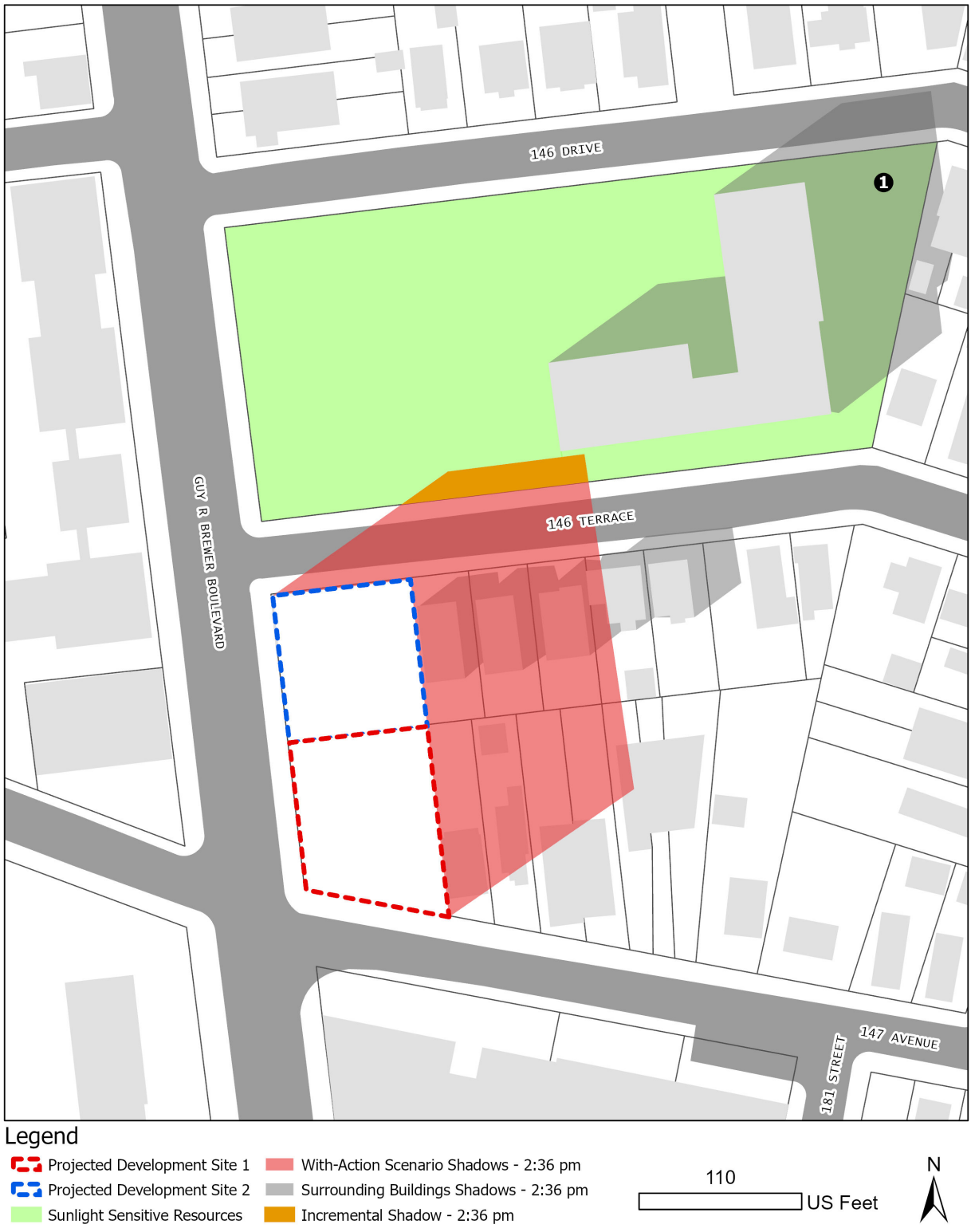
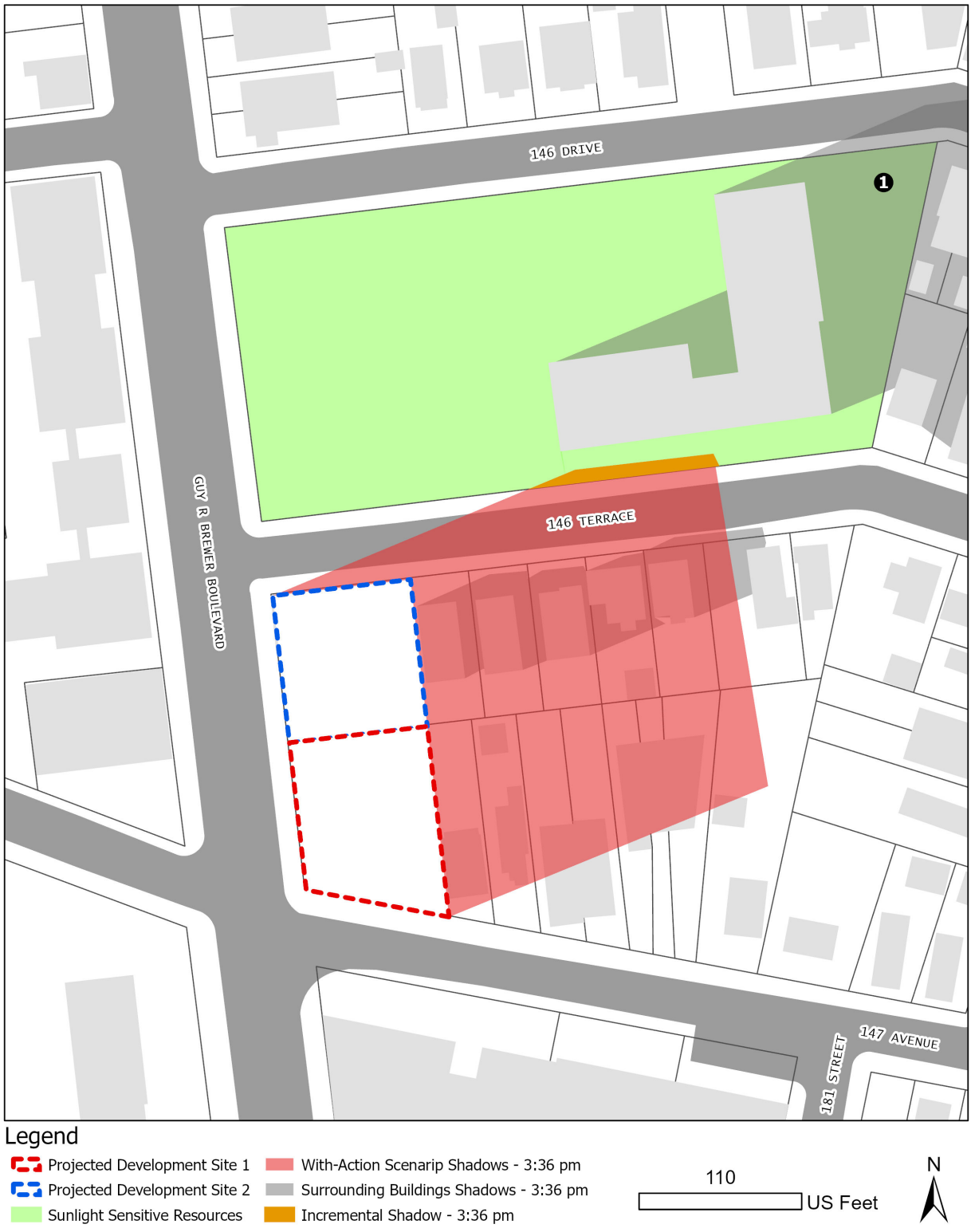


Figure 2.3-22: March/September Detailed Shadows Analysis (3:36 pm)



Determination of Shadow Impact Significance

The CEQR Technical Manual states that the determination of significance of shadow on a sunlight-sensitive resource is based on: (1) the information resulting from the detailed shadow analysis describing the extent and duration of incremental shadows; and (2) an analysis of the resource's sensitivity to reduced sunlight. Determining whether this impact is significant or not, under CEQR, depends on the extent and duration of the incremental shadow and the specific context in which the impact occurs.

For open space and natural resources, the uses and features of a resource is an indicator of its sensitivity to shadows. Shadows occurring during the cold-weather months, for example, generally do not affect the growing season of outdoor vegetation. This sensitivity is assessed for warm-weather-dependent features such as vegetation that could be affected by a loss of sunlight during the growing season, and for features (such as benches) that could be affected by a loss of winter sunlight. Generally, four to six hours a day of sunlight, particularly in the growing season, is often a minimum requirement. Where the incremental shadows from the project fall on sunlight-sensitive features or uses, the analysis assesses the loss of sunlight relative to sunlight that would be available without the project.

As stated in the CEQR Technical Manual, to determine impact significance, an incremental shadow is generally not considered significant when its duration is no longer than 10 minutes at any time of year and the resource continues to receive substantial direct sunlight. A significant shadow impact generally occurs when an incremental shadow of 10 minutes or longer falls on a sunlight-sensitive resource and results in one of the following:

- *Vegetation* - A substantial reduction in sunlight available to a sunlight-sensitive feature of the resource to less than the minimum time necessary for its survival (when there was sufficient sunlight in the future without the project). Or, a reduction in direct sunlight exposure where the sunlight-sensitive feature of the resource is already subject to substandard sunlight (i.e., less than minimum time necessary for its survival).
- *Open Space Utilization* - A substantial reduction in the usability of open space as a result of increased shadow.
- *For Any Sunlight-Sensitive Feature of a Resource* - Complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

Sunlight Sensitive Resource 1 (P.S. 52 Playground)

As shown above in **Figure 2.3-7** and **Photo 2.3-1**, Sunlight Sensitive Resource 1, P.S. 52 Playground, is a paved playground featuring a running track, a sports field, basketball hoops, various paved playing zones, benches, and playground equipment. The shadows induced by the Proposed Actions would not reach this resource on May/August 6 or June 21.

<u>December 21 Analysis Period Summary of Incremental Shadows</u>

- December 8:51 AM (See Figure 2.3-8 for Incremental Shadows cast and Figure 2.3-7 for sunlight sensitive resources affected)

Incremental shadows would cover the southwestern portion of the schoolyard, which contains a grass-covered area with no play equipment or benches

- December 9:51 AM (See Figure 2.3-9 for Incremental Shadows cast and Figure 2.3-7 for sunlight sensitive resources affected)

  Incremental shadows would cover the southwestern portion of the schoolyard, which contains a grass-covered area with no play equipment or benches. Incremental shadows would also cover the westernmost part of the schoolyard, shading benches and a small paved play area, in addition to a small area along the northwestern portion of the schoolyard, which contains play equipment.

- December 10:51 AM (See Figure 2.3-10 for Incremental Shadows cast and Figure 2.3-7 for sunlight sensitive resources affected)

  Incremental shadows would cover the southwestern portion of the schoolyard, which contains a grass-covered area with no play equipment or benches. Incremental shadows would also cover the westernmost part of the schoolyard, shading benches and a small paved play area, in addition to an area along the northwestern portion of the schoolyard, which contains play equipment.

- December 11:51 AM (See Figure 2.3-11 for Incremental Shadows cast and Figure 2.3-7 for sunlight sensitive resources affected)

  Incremental shadows would cover the southwestern portion of the schoolyard, which contains a grass-covered area with no play equipment or benches. Incremental shadows would also cover the western portion of the schoolyard, shading benches and a small paved play area, in addition to an area along the northwestern portion of the schoolyard, which contains play equipment and a portion of the running track and sports field.

- December 12:51 PM (See Figure 2.3-12 for Incremental Shadows cast and Figure 2.3-7 for sunlight sensitive resources affected)

  Incremental shadows would cover the southern portion of the schoolyard, which contains a grass-covered area with no play equipment or benches. Incremental shadows would also cover the center portion of the schoolyard, shading benches. In addition, shadows would cast over a portion of the running track, a basketball hoop, and a sports field.

- December 1:51 PM (See Figure 2.3-13 for Incremental Shadows cast and Figure 2.3-7 for sunlight sensitive resources affected)

  Incremental shadows would cover the southern portion of the schoolyard, which contains a grass-covered area with no play equipment or benches. Incremental shadows would also cover the center portion of the schoolyard, shading benches. In addition, shadows would cast over a portion of the running track, a basketball hoop, a sports field, and a portion of a paved play area located to the north of a surface parking lot.

- December 2:53 PM (See Figure 2.3-14 for Incremental Shadows cast and Figure 2.3-7 for sunlight sensitive resources affected)

Incremental shadows would cover the southern portion of the schoolyard shading benches. In addition, shadows would cast over a portion of the running track, a basketball hoop, a sports field, and a portion of a paved play area located to the north of a surface parking lot.

Shadows cast from the Projected Development buildings in December would move across the playground for a period of 6 hours and 2 minutes, entering the playground at 8:51 AM and exiting the playground at 2:53 PM. As shown in **Figures 2.3-8 through 2.3-14** above, the narrow shadow cast from the Projected Development buildings would not eliminate light on all portions of the playground, and would leave the majority of the playground with direct sunlight as shadow moves across its surface. The shadows cast from the Projected Development buildings would intersect the southern portion of the playground in December, with shadows moving across part of the running lane, the sports field, basketball hoops, some of the paved playing zones, benches, and playground equipment. The running lane, sports field, basketball hoops, paved playing zones, and playground equipment are active resources mostly utilized in warm-weather months, and the benches within the playground are located in various areas that would not be covered in shadows at the same time, leaving enough benches with direct sunlight at any single moment throughout the day. In addition, December is a cold weather month when the minimal vegetation present in playground area is not in growing season, indicating that the shadows would not impact the growth or survival of vegetation. Therefore, the vegetation and open space utilization of this resource would not be significantly impacted for the December analysis period.

March 21/September 21 Analysis Period Summary of Incremental Shadows

For the March 21/September 21 analysis period of Sunlight Sensitive Resource 1, there would be 8 hours and 22 minutes of incremental shadows cast. As shown in **Figures 2.3-15 through 2.3-22**, though the project-induced shadows would reach and stay on the playground for a long period, it would only impact a narrow ribbon area at its southern boundary, which is mainly a grass strip outside of the fenced in area that contains the school playground, as well as a few benches as shown in **Figure 2.3-7** above. Since the shadows cast by the Proposed Development buildings would be constantly moving across the narrow ribbon area throughout the day, the use of the benches and the growth of the grass are not expected to be significantly impacted by the project-induced shadows in March/September. In addition, other areas within the playground with access to direct sunlight for the whole day contain benches that would provide sufficient opportunities for using the outdoor space with access to sunlight in March/September. Therefore, there would be no adverse impacts for the March 21/September 21 analysis period on the Vegetation or Open Space Utilization.

Conclusion

Based on the analyses above, no adverse impact is expected on the Vegetation or Open Space Utilization of the playground on any analysis day and therefore no further analysis is warranted.

2.4 Historic and Cultural Resources

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

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

2.4.1 Architectural Resources

Per CEQR Technical Manual guidelines, impacts on historic resources are considered on those sites affected by the proposed action and in the area surrounding identified development sites. The historic resources study area is therefore defined as the Projected Development Site(s) plus an approximately 400-foot radius around the proposed action area.

To determine whether the projected development has the potential to affect nearby off-site historic or architectural resources, the study area was screened for historic and architectural resources. The LPC was contacted for their initial review of the project's potential to impact nearby historic and cultural resources, and by letter dated April 26, 2019, indicated that the Affected Area does not contain any sites of buildings of known architectural or archeological significance (see **Appendix A**).

LPC did identify one S/NR eligible building within the Study Area: P.S. 52, located at 178-37 146th Terrace.

Existing Conditions—Study Area

The Affected Area is located at the western end of Block 13354, along Guy R. Brewer Boulevard. LPC indicated that no historic resources are located within the Affected Area, but that the Study Area includes on S/NR eligible building located at 178-37 146th Terrace, north of the Affected Area along 146th Terrace.

Future Without the Proposed Actions

Without the Proposed Actions conditions in the Study Area are expected to remain. No development would take place within the Affected Area.

Future With the Proposed Actions

The existing buildings on Lots 23, 22, and 19 would be demolished as a result of the Proposed Actions. Lots 19, 21, 22, and 23 are anticipated to redevelop as Projected Development Site 2, and Lot 12 would develop as Projected Development Site 1. Both sites would be developed with

8-story, 85-foot-tall mixed-use commercial and residential buildings.

Conclusion

According to the CEQR Technical Manual, significant adverse impacts to historic and cultural resources could potentially result if a proposed action affects those characteristics that make a resource eligible for LPC designation or S/NR listing. The Future With-Action Scenario's potential for significant adverse impacts on historic resources were assessed in accordance with Table 8-1 from the CEQR Technical Manual to determine (a) whether there would be a physical change to any designated resource or its setting, and (b) if so, is the change likely to diminish the qualities of the resource that make it important (including non-physical changes such as context or visual prominence). The assessment of the potential for impacts on significant resources are described below.

The Proposed Action would not involve the replacement or re-development of an LPC S/NL or S/NR property, therefore the Proposed Action does not have the potential to result in direct impacts to potentially eligible LPC and S/NR eligible properties.

The Proposed Action would not result in any types of visual and contextual impacts to the known historic resource within the Study Area. The Proposed Actions would not introduce any incompatible visual, audible, or atmospheric elements to the settings of historic resources. Additionally, the significant views of each of the historic architectural resources will not be adversely affected by the Proposed Action. The historic resource in the project area include a range of buildings of various types, sizes, and styles and the Proposed Action would not induce or encourage development that is not in character with the area. Publicly accessible views of the resource would not be blocked because of its set back from the lot line. There would also be no significant adverse impacts to historic resources with sunlight dependent features.

Historic resources may be subject to indirect construction impacts from activities taking place nearby. The 90-foot buffer is recognized as being close enough to potentially experience adverse construction-related impacts from ground-borne construction-period vibrations, falling debris, and/or collapse. The Affected area is greater than 90 feet from the S/NR eligible property, therefore, construction-related effects via ground borne construction activities are unlikely to occur as a result of the Proposed Action.

2.4.2 Cultural and Archaeological Resources

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

The proposed action would result in new in-ground construction on the Projected Development Sites. As noted, the LPC was contacted for their initial review of the project's potential to impact nearby historic and cultural resources, and a response was received on April 26, 2019 (see **Appendix A**). The LPC has indicated that no cultural resource of archaeological significance is associated with the Study Area. Therefore, significant adverse impacts to archaeological resources are not expected because of the proposed action, and further analysis is not warranted.

2.5 Urban Design and Visual Resources

According to the CEQR Technical Manual, urban design is the totality of components that may affect a pedestrian's experience of public space. Elements that play an important role in the pedestrian's experience include streets, buildings, visual resources, open space, and natural features, as well as wind as it relates to channelization and downwash pressure from tall buildings. Pursuant to the 2020 CEQR Technical Manual, an assessment of Urban Design may be warranted when a Proposed Action may affect one or more of the elements that contribute to the pedestrian experience of an area, specifically the arrangement, appearance, and functionality of the built environment. As stated in the CEQR Technical Manual, the Study Area for urban design is the area where the project may influence land use patterns and the built environment, and is generally consistent with the Study Area used for the land use analysis (i.e., 400 feet around the Projected Development Sites). For visual resources, existing publicly accessible view corridors within the Study Area should be identified. The purpose of the preliminary assessment is to determine whether any physical changes proposed by a project may raise the potential to significantly and adversely affect elements of urban design, which would warrant the need for a detailed urban design and visual resources assessment.

Within the Study Area there are no potential visual resources. Therefore, there would be no significant adverse effects to visual resources as a result of the Proposed Actions.

Preliminary Assessment

The Project Area consists of five lots at the end of Block 13354 fronting on Guy R. Brewer Boulevard and is described in detail in **Section 1.4** and **2.1.1**.

Within the 400-foot surrounding area land uses include residential (one- and two-family), mixed commercial and office, public facilities, manufacturing, and transportation/utility. The residential buildings are generally located north of 147th Avenue and are the dominant land use in the area. South of 147th Avenue and north of Rockaway Boulevard land use is generally manufacturing with a few mixed-use buildings and public facility uses. South of Rockaway Boulevard is the John F. Kennedy International Airport. Public facilities in the area include the 21,000 GSF Springfield Family Residence, a social services organization, and the four-story, 69,000 GSF Public School 52.

Built form in the area is varied. One- and two-family homes are generally one to two stories in height, and are either detached or semi-detached with front yards and driveways and brick or aluminum facades. Manufacturing uses are typically one to two stories in height, with large buildings built out to the lot lines and primarily brick facades. The tallest buildings in the area, both four stories, are Public School 52 and the Clarion Inn, which are adjacent to the Affected Area to the north and south, respectively.

The traffic grid is irregular. 147th Avenue, bounding the Affected Area to the south, is a major collector road running east-west with one moving lane in each direction and no curbside parking. 146th Terrace bounds the Affected Area to the north, and is an east-west two-way road with one moving lane in each direction and curbside parking. Guy R. Brewer Boulevard bounds the area to the west and is a north-south major collector road with one moving lane in each direction and no curbside parking. 181st Street bounds the area to the east and is a southwest-northeast road with one moving lane in each direction and curbside parking. The street network along Guy R. Brewer Boulevard and 147th Avenue is disjointed with the minor collector roads that feed into them, and the alignment creates irregular block forms throughout the area.

Figure 2.5-1 below shows an aerial view of the Affected Area and the Study Area (400' buffer around the Affected Area). **Figures 2.5-2 through 2.5-5** show the reasonable worst-case development (as described in Section 1.9) building massing and compares these massings to existing conditions.

Figure 2.5-1: Aerial Map



Figure 2.5-2: View 1 - No-Action/Existing Conditions
Looking North towards Projected Development Site 1 from 147th Avenue



Figure 2.5-3: View 1 - No-Action/Existing Conditions
Looking North towards Projected Development Site 1 from 147th Avenue

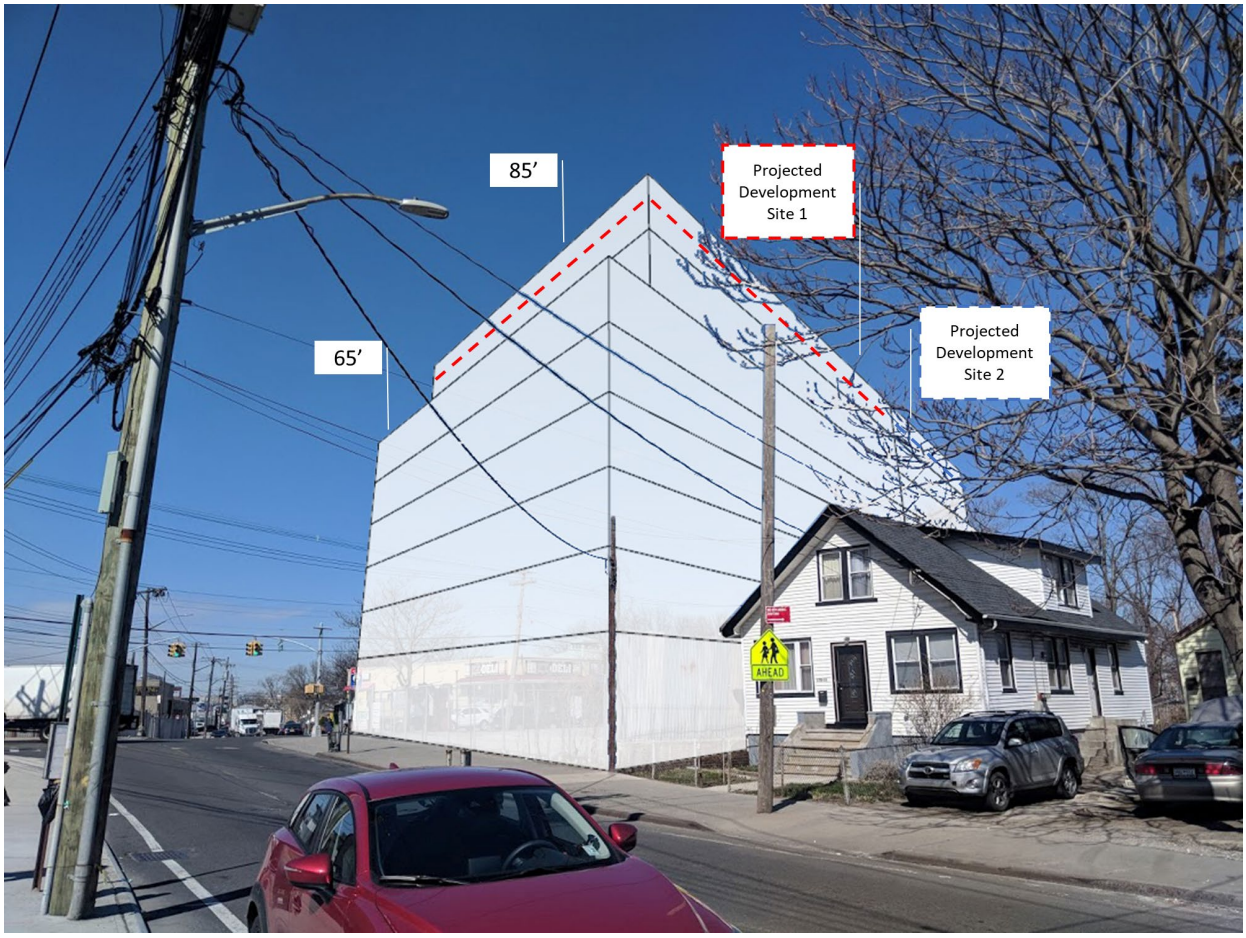
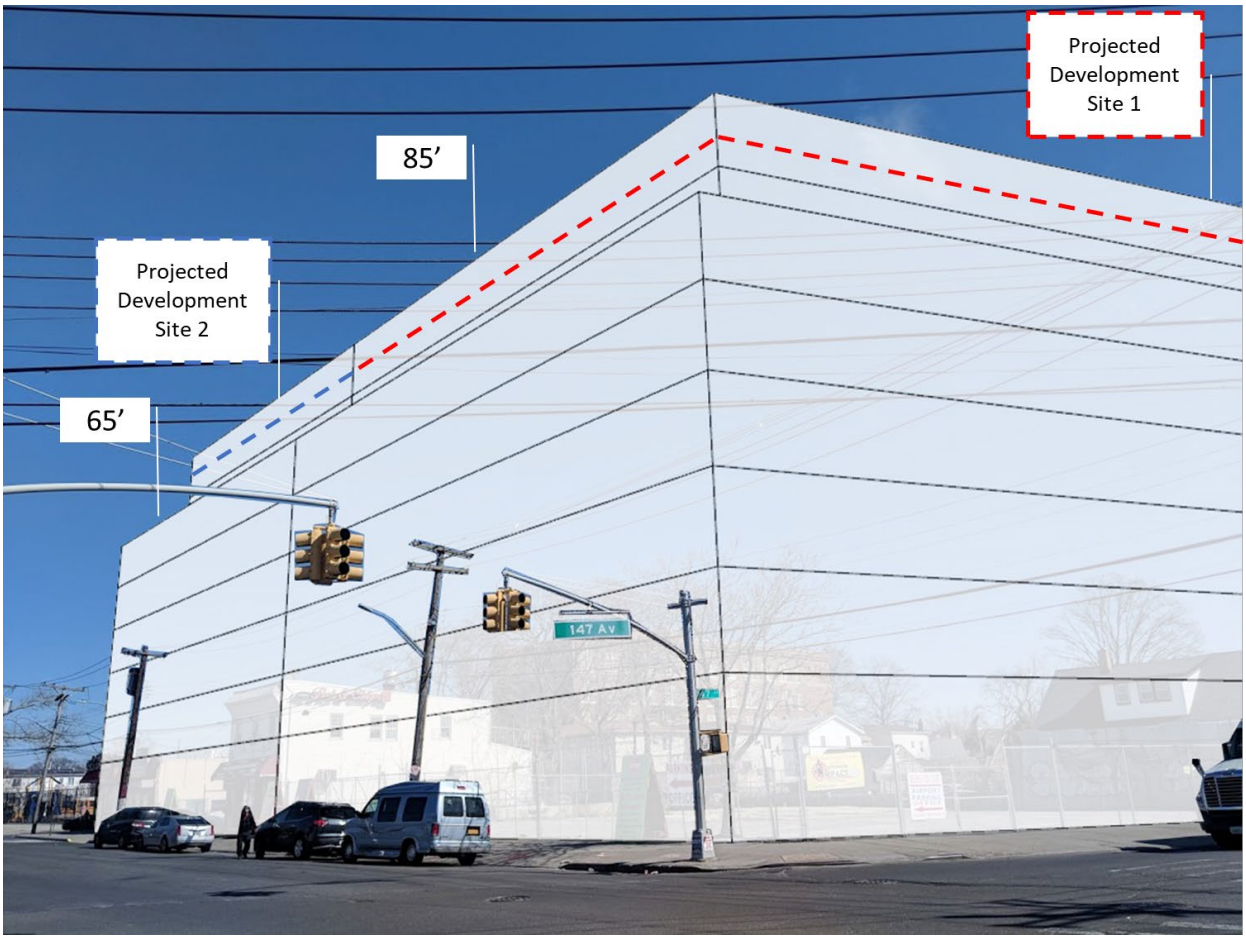


Figure 2.5-4: View 2 - No-Action/Existing Conditions
Looking East towards Projected Development Site 1 and Projected Development Site 2
From Guy Brewer Boulevard and 147th Avenue



Figure 2.5-5: View 2 – With-Action
Looking East towards Projected Development Site 1 and Projected Development Site 2
From Guy Brewer Boulevard and 147th Avenue



Analysis

Future No-Action Scenario

Under no-action conditions it is presumed that no additional floor area or changes in use would occur at any site within the Affected Area and existing conditions would prevail.

Future With-Action Scenario

The Projected Development Sites on Block 13354, Lot 12 (Projected Site 1) and Lots 19, 21, 22, and 23 (Projected Site 2), could be developed with buildings of up to 8 stories and 85 feet in height. It is expected that Lot 12) would be developed at an FAR of 3.60 to maximize available bulk and floor area. Lot 12 would provide 41,693 GSF of floor area: 33,447 GSF of residential floor area and 8,246 GSF of commercial floor area while providing 42 total dwelling units. Lots 19, 21, 22, and 23 could assemble and be developed with a 3.60 FAR building to maximize bulk and floor area. The building would provide 35,556 GSF of floor area: 25,946 GSF of residential floor area and 9,610 GSF of commercial space, while providing 26 total dwelling units. Both sites would be corner lots and could be developed to the lot lines with 100% lot coverage. The

maximum building height for both buildings would be 85 feet after a setback from the base height of up to 65 feet.

As shown in **Figures 2.5-2** through **Figure 2.5-5**, the Projected Developments effectuated by the Proposed Action would provide higher density development and introduce commercial uses at the convergence of two wide major collector roads.

Conclusion

The Proposed Rezoning would activate the pedestrian realm and increase activity at the convergence of Guy R. Brewer Boulevard and 147th Avenue, and would result in the redevelopment of an underutilized parcel. The development facilitated by the Proposed Action would not adversely impact any of the constituent urban design elements or impact the overall character of the neighborhood, nor would it block a view corridor or a natural or built visual resource. Therefore, the Proposed Action would not introduce density or land uses to the area that would result in any significant adverse impact to the constituent elements of Urban Design.

2.6 Hazardous Materials

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

The proposed actions would facilitate the development of Block 13354, Lot 12 (Projected Development Site 1) with a new 8-story mixed use building. The applicant-owned Projected Development Site 1 is currently vacant while the remainder of the project area not controlled by the applicant. Projected Development Site 2 (Block 13354, Lots 19, 21, 22, 23), is currently developed with two 1-story commercial buildings and one 2-story mixed use building. In the Future-With Action Scenario, it is assumed that Projected Development Site 2 would be redeveloped with an 8-story residential and commercial mixed-use building. Redevelopment of Block 13354, Lots 10 and 25 as a result of the proposed action is not expected.

Pursuant to *CEQR Technical Manual* methodology, actions that would result in ground disturbance in an area where current or past uses on or near the site raise the potential for the presence of hazardous materials should be assessed for hazardous materials. Accordingly, a Phase I Environmental Site Assessments (Phase I) was conducted.

Summary of Phase I Environmental Site Assessment & Phase II Investigation

The October 2016 Phase I report revealed that historical on-site and surrounding area land uses consists of residential, industrial and commercial uses including a filling station, a lubritorium, E & C 52 Car Rental, a deli grocery, a public school, Catfish café, The Brewer Hotel, a telephone company facility, an air freight facility, as well as several residential buildings. Regulatory databases such as the New York State Department of Environmental Conservation (NYSDEC) SPILLS, Leaking Underground Storage Tank, Leaking Storage Tanks (LTANKS), Resource Conservation and Recovery Act Generators, and Petroleum Bulk Storage (PBS) Underground Storage Tanks (USTs) and PBS Aboveground Storage Tanks (ASTs) identified several sites in close proximity to the project site. The SPILLS database reported 12 SPILLS within a 1/8-mile radius of the project site and the LTANKS database reported 16 LTANKS within a 1/2-mile radius of the project site. The PBS USTs and the PBS ASTs databases reported five USTs and four AST within a 1/4-mile radius of the project site.

During the October 2016 fieldwork at Projected Development Site 1, five soil borings (SP-1 through SP-5) and five temporary groundwater monitoring wells (TW-1 through TW-5) were installed at the project site. One soil sample was collected from each boring at the 10 – 12 feet below grade surface (bgs) interval. Five soil samples and five groundwater samples were collected and analyzed for volatile organic compounds (VOCs) via United States Environmental Protection Agency (EPA) Method 8260 and semi-volatile organic compounds (SVOCs) via EPA Method 8270. One soil sample (SP-1) and one groundwater sample (TW-1) were also analyzed for polychlorinated biphenyls (PCBs) via EPA Method 8082.

The soil analytical results revealed VOCs, SVOCs and PCBs were either non-detect (ND) or below NYSDEC 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs). The

groundwater analytical results revealed SVOCs and PCBs were either ND or below NYSDEC Division of Water Technical Operational Guidance Series 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations for Class GA standards. Two VOCs (tert-butyl alcohol and xylene) were detected above NYSDEC Water Quality Guideline Values.

It should be noted that this Phase II Investigation is limited and not conducted in accordance with the *City Environmental Quality Review (CEQR) Technical Manual*.

Based on prior on-site and/or surrounding area land uses which could result in environmental contamination, DEP recommends that an (E) Designation for hazardous materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject properties. The (E) Designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation. The E-Designation language related to Hazardous Materials is as follows:

E-Designation (E-646):

Block 13354, Lots 12, 19, 21, 22 and 23

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

A written report with findings and a summary of the data must 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 test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined

necessary by OER. The Applicant should then provide proper documentation that the work has been satisfactorily completed.

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

Conclusion

With the (E) designation in place, no significant adverse impacts related to hazardous materials are expected, and no further analysis is warranted.

2.7 Transportation

Pursuant to *CEQR Technical Manual* methodology, a transportation assessment may be necessary when a proposed action would alter the transportation network by closing, opening, or realigning an element of the transportation system such as a roadway, pedestrian way, or transit route, or if it would generate new trips on the transportation network. The objective of the transportation analyses is to determine whether a proposed project may have a potential significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, bicyclists and vehicles), on- and off-street parking, or goods movement.

Methodology

The *CEQR Technical Manual* states that if an analysis is warranted, a preliminary trip generation assessment should be prepared to determine whether a quantified analysis of any technical areas of the transportation system is necessary. Except in unusual circumstances, a further quantified analysis would typically not be needed for a technical area if the proposed development would result in fewer than the following increments:

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

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

Analysis

Existing Conditions

The Affected Area is located on Block 13354, and includes lots 12, 19, 21, 22 and 23. In total the rezoning area is approximately 19,990 SF and includes a mix of residential/commercial and commercial uses.

The area is not well-served by transit. MTA bus stops for the Q111, Q113, and Q114 run along 147th Avenue, and the closest subway stop is approximately three-and-a-half miles to the west of the Affected Area.

The traffic grid is irregular. 147th Avenue, bounding the Affected Area to the south, is a major collector road running east-west with one moving lane in each direction and no curbside parking. 146th Terrace bounds the Affected Area to the north, and is an east-west two-way road with one moving lane in each direction and curbside parking. Guy R. Brewer Boulevard bounds the area to the west and is a north-south major collector road with one moving lane in each direction and no curbside parking. 181st Street bounds the area to the east and is a southwest-northeast road with one moving lane in each direction and curbside parking. The street network along Guy R. Brewer Boulevard and 147th Avenue is disjointed with the minor collector roads, and the alignment creates irregular block forms throughout the area.

Future No-Action Scenario

In the future without the Proposed Actions existing conditions would remain. Based on current neighborhood trends and long-tenanted uses of the buildings no development is expected to occur.

Future With-Action Scenario

In the future with the Proposed Actions the Projected Development Sites would be developed with 68 dwelling units and 17,856 GSF of commercial (local retail) uses.

Preliminary Assessment

The Affected Area is located in CEQR traffic zone five. Pursuant to Table 16-1 of the *2020 CEQR Technical Manual*, a development that exceeds 200 dwelling units, 10,000 GSF of additional local retail space, or a weighted average exceeding 1.00 of any of the above, would exceed the threshold for warranting further analysis of potential transportation impacts.

The Incremental Development, as assessed under the RWCDS, that could be effectuated by the Proposed Actions is as follows:

Residential Dwelling Units: +67 dwelling units
Local Retail: +15,256 GSF

The weighted average for the Proposed Actions is 1.87, and a Tier 1 Trip Generation Assessment is required.

Table 2.7-1: Increment of Analysis

Use	No-Action Condition	With-Action Condition	Increment
Residential[1]	1 DU 600 gsf	68 DUs 59,393 gsf	67 DUs 58,793 gsf
Total Residential DUs	1	68	67
Affordable (DUs)[2]	0	18-21	18-21
Commercial (gsf)	2,600	17,856	15,256
Residents[3]	3	218	215
Workers[4]	10	60	50

Notes: 'DUs' indicates Dwelling Units; 'gsf' indicates gross square feet

[1] Average Unit Size assumed to be 800 gsf

[2] Assumed 25-30 percent of residential floor area is reserved as affordable to households with incomes at or below 80 percent of the AMI

[3] Assumes 3.26 persons per residential dwelling unit per Queens Community District 13 Census Data

[4] Assumes 1 employee per 300 SF office space/local retail; 1 employee per parking lot

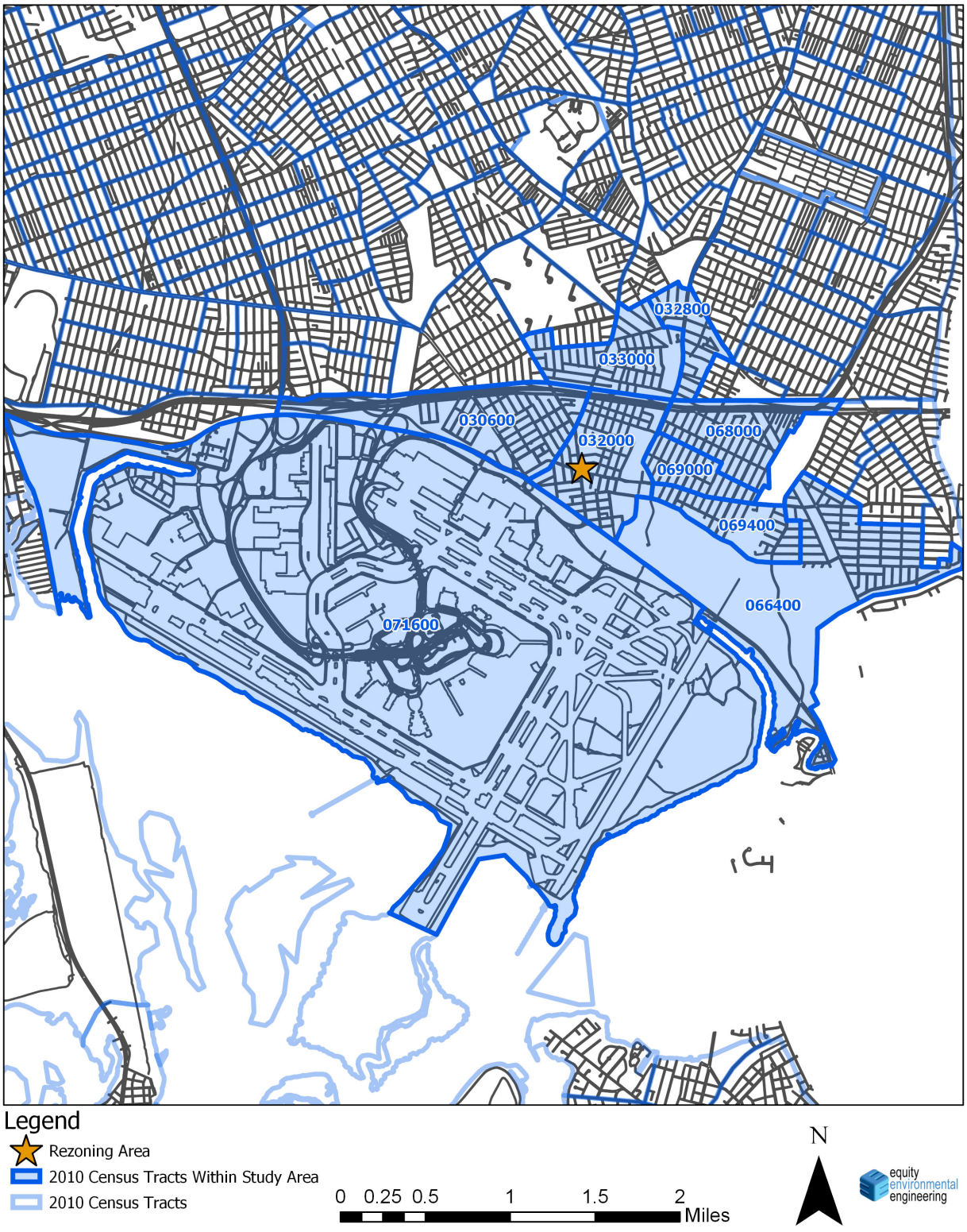
Tier 1 Trip Generation Screening Assessment

The following Transportation Study assesses the incremental difference between the With-Action and the No-Action Scenarios in order to determine the potential effects of the Proposed Actions on traffic conditions. Data sources include field observations, information provided by the project sponsor, data gathered from the Institute of Transportation Engineers (ITE) manual, the 2020 CEQR Technical Manual, U.S. Census data, factors developed for recent environmental reviews, and other references as described below. These factors form the basis for the travel demand forecast (*Tier 1: Trip Generation Screening Assessment*) which analyzes peak hours and projected mode of travel, as well as person, pedestrian and vehicular trip-ends.

The trip generation analysis provides the estimated number of person trip-ends expected to be generated by the proposed project over the course of the entire day, as well as during the peak analysis hours. The classification of a proposed project's daily trip-ends by hour of the day is also referred to as its temporal distribution. Modal split refers to the travel modes likely to be used by persons going to and from the proposed project, including autos, taxis and delivery services, subways, buses, ferries, commuter rail, bicycles, and walking. These modes are considered in terms of percentages—i.e., what percent of the total number of people traveling to and from the site would travel by that particular mode. The modal split percentages are then applied to the hourly trip generation estimates to determine the number of persons traveling to and from the site by each mode for each of the analysis peak hours.

*All Trip Generation Planning Factors are described below and shown in **Table 2.7-2**. Census tracts used for journey to work and reverse journey to work are shown below in **Figure 2.7-1**.*

Figure 2.7-1: Transportation Census Tracts



Note: Census Tract 716 includes JFK Airport, and was not included in the Census Study Area

Transportation Planning Factors:

Residential Assumptions

To assess the trip generation characteristics of the residential use that would occur under both With-Action and No-Action Conditions, a combination of Chapter 16 of the *CEQR Technical Manual*, American Community Survey 2015-2019 5-year Journey to Work Data (census tracts 306, 320, 328, 330, 664, 680, 690, and 694), and Astoria Cove Environmental Impact Statement (EIS) were consulted.

Retail Assumptions

To assess the trip generation of retail increment, the With-Action ground floor commercial space was assumed to be local retail. Factors from CEQR TM, East New York EIS, and NYCDOT Local Retail Mode Choice Survey Data for Queens non-transit zones were used.

Table 2.7-2: Transportation Planning Factors

	Local Retail		Residential	
Trip Generation	(1)		(1)	
Weekday	205		8.075	
Saturday	240		9.6	
	per 1,000 sf		per dwelling unit	
Linked-trip	25%			
Temporal Distribution	(1)		(1)	
AM	3.00%		10.00%	
MD	19.00%		5.00%	
PM	10.00%		11.00%	
Sat MD	10.00%		8.00%	
Modal Splits	(4)		(3)	
Auto	11%		59%	
Taxi	0%		2%	
Bus	2%		14%	
Subway	3%		24%	
Walk/Other	84%		1%	
In/Out Splits	In (2)	Out (2)	In (5)	Out (5)
AM	50%	50%	20%	80%
MD	50%	50%	50%	50%
PM	50%	50%	65%	35%
Sat MD	55%	45%	50%	50%
Vehicle Occupancy	(4)		(3), (5)	
Auto	1.40		1.06	
Taxi	1.40		1.40	
Truck Trip Generation	(1)		(1)	
Weekday	0.35		0.06	
Saturday	0.04		0.02	
Temporal Distribution	(1)		(1)	
AM	8.00%		12.00%	
MD	11.00%		9.00%	
PM	2.00%		2.00%	
Saturday	11.00%		9.00%	
In/Out Splits	In (1)	Out (1)	In (1)	Out (1)
AM/MD/PM/Sat	50.00%	50.00%	50.00%	50.00%

1 = CEQR TM

2 = East New York EIS (2016)

3 = ACS 2015-2019 5-yr JTW Data (CTs 306, 320, 328, 330, 664, 680, 690, and 694)

4 = DOT Provided Local Retail Mode Choice Survey Data for Queens Non-transit Zones

5 = Astoria Cove FEIS (2014)

Table 2.7-3: Estimated Trips

	Local Retail		Residential		Total		
Size (gsf)	15,256 gsf		67 du				
Peak Hour Trips							
AM	70		54		124		
MD	446		27		473		
PM	235		60		294		
Sat MD	275		51		326		
Person Trips							
AM	In	Out	In	Out	In	Out	Total
Auto	4	4	6	25	10	29	39
Taxi	0	0	0	1	0	1	1
Bus	1	1	2	6	2	7	9
Subway	1	1	3	11	4	12	15
Walk/Other	30	30	0	1	30	30	60
Total	35	35	11	43	46	78	124
MD	In	Out	In	Out	In	Out	Total
Auto	25	25	8	8	32	32	65
Taxi	0	0	0	0	0	0	0
Bus	4	4	2	2	6	6	13
Subway	7	7	3	3	10	10	20
Walk/Other	187	187	0	0	187	187	375
Total	223	223	14	14	236	236	473
PM	In	Out	In	Out	In	Out	Total
Auto	13	13	23	12	36	25	61
Taxi	0	0	1	0	1	0	1
Bus	2	2	5	3	8	5	13
Subway	4	4	9	5	13	9	22
Walk/Other	99	99	0	0	99	99	198
Total	117	117	39	21	156	138	294
Saturday	In	Out	In	Out	In	Out	Total
Auto	17	14	15	15	32	29	60
Taxi	0	0	0	0	0	0	1
Bus	3	2	4	4	7	6	13
Subway	5	4	6	6	11	10	21
Walk/Other	127	104	0	0	127	104	231
Total	151	124	26	26	177	149	326
Taxi Overlap Rate	25%		25%				

Vehicle Trips							
AM	In	Out	In	Out	In	Out	Total
Auto	3	3	6	24	9	27	35
Taxi	0	0	0	0	0	0	1
Taxi Balanced	0	0	1	1	1	1	1
Truck	0	0	0	0	0	0	1
Total	3	3	7	25	10	28	37
MD	In	Out	In	Out	In	Out	Total
Auto	18	18	7	7	25	25	50
Taxi	0	0	0	0	0	0	0
Taxi Balanced	0	0	0	0	0	0	1
Truck	0	0	0	0	0	0	1
Total	18	18	8	8	26	26	51
PM	In	Out	In	Out	In	Out	Total
Auto	9	9	21	12	31	21	51
Taxi	0	0	0	0	0	0	1
Taxi Balanced	0	0	1	1	1	1	1
Truck	0	0	0	0	0	0	0
Total	9	9	22	12	31	21	53
Saturday	In	Out	In	Out	In	Out	Total
Auto	12	10	14	14	26	24	50
Taxi	0	0	0	0	0	0	1
Taxi Balanced	0	0	1	1	1	1	1
Truck	0	0	0	0	0	0	0
Total	12	10	15	15	27	25	51

Table 2.7-4: Tier 1 Trip Generation Findings

Peak Hour	AM Peak Hour	Midday Peak Hour	PM Peak Hour	Saturday Peak Hour
Total Walk Only Trip-Ends	60	375	198	231
Walk Only Threshold	**200**	**200**	**200**	**200**
Total Subway Trip-Ends	15	20	22	21
Subway Threshold	**200**	**200**	**200**	**200**
Total MTA Bus Trip-Ends	9	13	13	13
MTA Bus Threshold	**200**	**200**	**200**	**200**
Total Pedestrian Trip-Ends	84	407	232	265
Pedestrian Threshold	**200**	**200**	**200**	**200**
Total Vehicular Trip-Ends	37.5	51	53	51
Vehicular Threshold	**50**	**50**	**50**	**50**

*Highlighted cells denote trips in exceedance of 200 pedestrians or 50 vehicles per peak hour

Conclusion

Based on the findings shown in **Table 2.7-4** above, the Proposed Actions would not exceed the 200-trip MTA bus threshold for the AM, Midday, PM, or Saturday peak hours. However, the Proposed Actions would reach the 50-trip vehicular threshold for Midday, PM, and Saturday peak hours. Additionally, the project would exceed the total walk trip threshold of 200 for the Midday, PM, and Saturday peak hours. Therefore, a Level 2 Screening Assessment of pedestrian and vehicular trips for those peak hours is required.

Tier 2 Projected Generated Trip Assignment

Pedestrian Analysis

Residential Assumptions

In order to identify destination points for the proposed residential pedestrian trips, U.S. Census Bureau American Community Survey 2015-2019 Census Transportation Planning Package Part 3 Journey to Work (JTW) data was reviewed for Census Tract 320 (the subject census tract). The JTW data indicated the following commuting flows for the subject census tract:

- East – 38%
- West - 22%
- North - 38%
- South – 2%

Local Retail Assumptions

For the local retail component, pedestrian trips were assumed to be evenly dispersed, as people travel throughout the area for restaurants, shopping, or errands.

Vehicular Analysis

Residential Assumptions

In order to identify destination points for the proposed residential vehicular trips, U.S. Census Bureau American Community Survey 2015-2019 Census Transportation Planning Package Part 3 Journey to Work (JTW) data was reviewed for Census Tract 320 (the subject census tract). The JTW data indicated the following commuting flows for the subject census tract:

- East – 38%
- West - 22%
- North - 38%
- South – 2%

Local Retail Assumptions

For the local retail component, vehicular trips were assumed to be evenly dispersed, as people travel throughout the area for restaurants, shopping, or errands.

Assessment

Pedestrian

According to the *CEQR Technical Manual*, projected pedestrian volume increases of less than 200 pedestrians per hour at any sidewalk, crosswalk, or intersection corner would not typically be considered a significant impact and would not require a detailed analysis.

As shown in **Appendix E**, the Midday and Saturday pedestrian trip assignments indicate that there would be no exceedances of the 200 trips per hour threshold, and a level of service analysis is not required.

Vehicular

According to the *CEQR Technical Manual*, projected vehicular volume increases of less than 50 vehicles per hour at any intersection would not typically be considered a significant impact and would not require a detailed analysis.

As shown in **Appendix E,** the Midday, PM, and Saturday vehicular trip assignments indicate that there would be no exceedances of the 50 trips per hour threshold, and a level of service analysis is not required.

2.8 Air Quality

When assessing the potential for air quality significant impacts, the CEQR Technical Manual seeks to determine a Proposed Action's effect on ambient air quality, or the quality of the surrounding air. Ambient air can be affected by motor vehicles, referred to as "mobile sources," or by fixed facilities, referred to as "stationary sources." This can occur during operation and/or construction of a project being proposed. The pollutants of most concern are carbon monoxide, lead, nitrogen dioxide, ozone, relatively coarse inhalable particulates (PM_{10}), fine particulate matter ($PM_{2.5}$), and sulfur dioxide. The CEQR Technical Manual generally recommends an assessment of the potential impact of mobile sources on air quality when an action increases traffic or causes a redistribution of traffic flows, creates any other mobile sources of pollutants (such as diesel train usage), or adds new uses near mobile sources (e.g., roadways, parking lots, garages). The CEQR Technical Manual generally recommends assessments when new stationary sources of pollutants are created, when a new use might be affected by existing stationary sources, or when stationary sources are added near existing sources and the combined dispersion of emissions would impact surrounding areas.

Mobile Sources

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

- Projects that would result in placement of operable windows, balconies, air intakes or intake vents generally within 200 feet of an atypical source of vehicular pollutants.
- Projects that would result in the creation of a fully or partially covered roadway, would exacerbate traffic conditions on such a roadway, or would add new uses near such a roadway.
- Projects that would generate peak hour auto traffic or divert existing peak hour traffic of 170 or more auto trips in this area of the city.
- Projects that would generate peak hour heavy- duty diesel vehicle traffic or its equivalent in vehicular emissions resulting from 12 or more heavy-duty diesel vehicles (HDDVs) for paved roads with average daily traffic of fewer than 5,000 vehicles, 19 or more HDDVs for collector roads, 23 or more HDDVs for principal and minor arterials, or 23 or more HDDVs for expressways and limited-access roads.
- Projects that would result in new sensitive uses (e.g., schools or hospitals) adjacent to large existing parking facilities or parking garage exhaust vents.
- Projects that would result in parking facilities or applications requesting the grant of a special permit or authorization for parking facilities; or projects that would result in a sizable number of other mobile sources of pollution (e.g., a heliport or a new railroad terminal).
- Projects that would substantially increase the vehicle miles traveled in a large area.

The Proposed Actions would not result in operable windows or air intakes within 200 feet of an atypical roadway. It would not result in creation of a covered roadway or affect any covered roadway. Peak hour trip generation is far below the 170-car threshold identified in Section 17-210 of the *CEQR Technical Manual* as potentially warranting further assessment as described above in **Section 2.7**. The project would not create a new sensitive receptor adjacent to large parking facilities. The project would not result in creation of a new parking facility. The project

would not result in any other mobile sources of pollution, and would not significantly increase vehicle miles traveled in a large area.

Per the CEQR TM, mobile source impact analysis for air quality does not rely on the pedestrian trips but the incremental vehicle trip-ends generated by the project. According to the Transportation chapter **Table 2.7-4**, the incremental vehicle trip-ends during the AM, midday, PM, and Saturday peak hours are 37.5, 51, 53, and 51 respectively. Using the worksheet provided in the *CEQR TM Section 210*, the vehicle trips based on the Vehicular Trip Assignments provided in **Appendix E** were referenced to determine the HHDV equivalent vehicles projected to traverse to and from the Affected Area. Vehicles are projected to arrive to and from the Site via 147th Avenue and Guy Brewer Boulevard, both Major Collector roadways (Functional Class 17 per NYS DOT Functional Classification) and via 147th Avenue and 181st Street, a paved roadway.

Under worst case project-generated peak-hour traffic volumes during the PM peak hour, 42 vehicles are projected to traverse through Guy Brewer Boulevard and 147th Avenue, and 11 vehicles are projected to traverse through 147th Avenue and 181st Street. All vehicles at 181st and 147th are anticipated to travel through 147th Avenue, with no vehicles traveling along 181st Street. However, this intersection was conservatively considered in whole as a paved roadway.

The HDDV equivalent vehicles are as follows:

- Guy Brewer Boulevard and 147th Avenue – 8 HDDV (Collector Roadways)
- 181st Street and 147th Avenue – 5 HDDV (Paved Roadway < 5,000 Vehicles/Day)

181st Street is classified as a local paved road, and has a threshold of 12 HDDV for $PM_{2.5}$ analysis. 147th Avenue and Guy Brewer Boulevard, both collector roadways, have a threshold of 19 HDDV for PM2.5 analysis. Therefore, no further analysis is warranted.

Stationary Sources

According to the *CEQR Technical Manual*, projects may result in stationary source air quality impacts when one or more of the following occurs:

- New stationary sources of pollutants are created (e.g., emission stacks for industrial plants, hospitals, and other large institutional uses).
- Certain new uses near existing (or planned future) emissions stacks are introduced that may affect the use.
- Structures near such stacks are introduced so that the structures may change the dispersion of emissions from the stacks so that surrounding uses are affected.
- Fossil fuels (fuel oil or natural gas) for heating/hot water, ventilation, and air conditioning systems are used.
- Large emission sources are created (e.g., solid waste or medical-waste incinerators, cogeneration facilities, asphalt/concrete plants, or power-generating plants, etc.).
- New sensitive uses are located near a large emission source.
- Medical, chemical, or research labs are created or result in new uses being located near them.
- Operation of manufacturing or processing facilities is created.
- New sensitive uses created within 400 feet of manufacturing or processing facilities.
- New uses created within 400 feet of a stack associated with commercial, institutional, or

residential developments (and the height of the new structures would be similar to or greater than the height of the emission stack).
- Potentially significant odors are created.
- New uses near an odor-producing facility are created.
- "Non-point" sources that could result in fugitive dust are created.
- New uses near nonpoint sources are created.
- A generic or programmatic action is introduced that would change or create a stationary source or that would expose new populations to such a station

Ambient air quality describes pollutant levels in the surrounding environment to which the public has access. To assess potential health hazards due to ambient air quality, the impact of air pollutants emitted by motor vehicles (mobile source) and by fixed facilities (stationary source) are analyzed, where the effects of both the proposed project on ambient air quality and the ambient air quality effect on the proposed project are considered. The analysis frame work, as mandated by the State Environmental Review Act, follows the New York City Environmental Quality Review Technical Manual (CEQR TM). The potential air quality impacts of the following emissions are estimated following the procedures and methodologies prescribed in the CEQR TM:

- The potential for changes in vehicular travel associated with proposed development activities to result in significant mobile source (vehicular related) air quality impacts.
- The potential for emissions from the heating, ventilation and air conditioning (HVAC) systems of the proposed development to significantly impact nearby existing land uses.
- The potential for air toxic emissions released from existing industrial facilities to significantly impact the proposed development within 400 feet of the proposed development.
- The potential for significant air quality impacts from the emissions of existing HVAC systems with a 20 or more million Btu per hour (MMBtu/hr) design capacity to significantly impact the proposed development within 400 feet of the proposed development.
- The potential for significant air quality impacts from the emissions of facilities that require Prevention of Significant Deterioration permits (Title V), and facilities which require a state facility permit to significantly impact the proposed development within 1,000 feet of the proposed development.

Analysis Framework

Future No-Action

There are 5 lots affected by the Proposed Rezoning: Projected Development Site 1 (Block 13354, Lot 12) and Projected Development Site 2 (Block 13354, Lots 19, 21, 22, and 23). In the future without the Proposed Action existing conditions are expected to continue. Three of the lots are improved with one- and two-story structures, two of the lots are vacant and unimproved, and no changes are expected.

Future With-Action

Projected Development Site 1 (Block 13354, Lot 12)
146-93 Guy Brewer Boulevard would develop with a 41,693 GSF (3.60 FAR), 8-story, 85-foot-tall building. 33,447 GSF of residential floor area (2.86 FAR) and 8,246 GSF of ground floor commercial (0.74 FAR) would be included. There would be 46 total parking spaces required—19 residential and 27 commercial.

Projected Development Site 2 (Block 13354, Lots 19, 21, 22, and 23)
147-07, 147-03, and 146-01 Guy R. Brewer Boulevard would assemble and develop with an eight-story, 85-foot-tall, 35,556 GSF structure (33,264 ZSF; 3.60 FAR). The building would contain 25,946 GSF of residential floor area (24,024 ZSF; 2.60 FAR) and 9,610 GSF of commercial floor area (9,240 ZSF; 1.00 FAR). There would be 44 total parking spaces required—12 residential and 32 commercial.

AIR POLLUTANTS AND APPLICABLE STANDARDS/GUIDELINES

National Air Quality Standards

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

- Carbon Monoxide (CO) is mainly produced by motor vehicles from the incomplete combustion of gasoline. The impact of CO on the ambient air is analyzed next to roadways, intersections, parking lots, and parking garages vents as these locations are the most affected.
- Nitrogen Dioxide (NO_2) is a main concern related to the burning of natural gas. Emitted NOx from the burning of fossil fuel gradually convert to NO_2 in a chemical reaction that is affected by ozone concentration and the presence of sunlight. In a micro scale analysis, buildings HVAC systems are analyzed for NO_2 impact.
- Ozone (O_3) is formed by chemical reaction between hydrocarbons and nitrogen oxides and its impact is analyzed on a regional scale by monitoring stations.
- Lead (Pb) in the ambient air is monitored on a regional level. In a project scale analysis, impact due to Lead concentration levels are analyzed if a new source, such as lead smelters, is introduced into the environment or if a project is located next to a lead emitter.
- Particulate Matter emissions are associated with both stationary sources and mobile sources. Two sizes of particulate matters are analyzed: Inhalable Particles (PM_{10}) and Fine Particulate Matter ($PM_{2.5}$), where the subscript number refers to the diameter of the particulate matter in micrometers.
- Sulfur Dioxide (SO_2) emission is principally associated with stationary sources that burn oil or coal. These fuels contain sulfur that bond to oxygen atoms in the burning process.

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for the criteria pollutants by EPA, and New York State has adopted the NAAQS as the State ambient air quality standards. The NO_2 and $PM_{2.5}$ standards together with their health-related averaging periods are presented in **Table 2.8-1**.

Table 2.8-1. National AND New York States Ambient Air Quality

Pollutant	Averaging Period	National and State Standards
NO_2	Maximum 1-Hour Concentration	0.10 ppm (188 µg/m^3)
	Annual Arithmetic Average	0.053 ppm (100 µg/m^3)
$PM_{2.5}$	24-Hour Concentration	35 µg/m^3
	Average of 3 Consecutive Annual Means	12 µg/m^3
SO_2	Maximum 1-Hour Concentration	75 ppb (196 µg/m^3)
	Annual Arithmetic Mean	30 ppb (80 µg/m^3)

NO_2 NAAQS

Nitrogen oxide (NO_x) emissions from gas combustion consist predominantly of nitric oxide (NO) at the source. The NO_x in these emissions is then gradually converted to NO_2, which is the pollutant of concern, in the atmosphere (in the presence of ozone and sunlight as these emissions travel downwind of a source).

The 1-hour NO_2 NAAQS standard of 0.100 ppm (188 ug/m^3) is the 3-year average of the 98th percentile (8th Highest) of daily maximum 1-hour average concentrations in a year. For determining compliance with this standard, the EPA has developed a modeling approach for estimating 1-hour NO_2 concentrations that is comprised of 3 tiers: Tier 1, the most conservative approach, assumes a full (100%) conversion of NO_x to NO_2; Tier 2 applies a conservative ambient NOx/NO_2 ratio of 80% to the NO_x estimated concentrations; and Tier 3, which is the most precise approach, employs AERMOD's PVMRM module. The PVMRM accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations. When Tier 3 is utilized, AERMOD generates 8th highest daily maximum 1-hour NO_2 concentrations or total 1-hour NO_2 concentrations if hourly NO_2 background concentrations are added within the model.

Per the *CEQR TM*, a Tier 1 approach is initially applied, followed by a Tier 2 application of NOx/NO_2 ratio of 80% to the NOx modeled concentration to determine whether violation of the NAAQS is likely to occur. A less conservative Tier 3 approach is then applied if exceedances of the 1-hour NO_2 NAAQS were estimated.

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

New York State Standards

As mentioned, New York State has adopted the national standard, NAAQS. In addition, the New York State Department of Environmental Conservation (NYSDEC) has established guidelines for maximum allowable concentration of "noncriteria pollutants," which are potentially toxic or carcinogenic pollutants. The maximum allowable guidelines set a maximum 1-hour and annual averaging time concentrations and are published in the DAR-1 AGC/SGC Table, where AGC/SGC refers to Annual and Short-term Guideline Concentrations. The most recent DAR-1 guidelines were created on July 14, 2016.

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

NYC Interim Guidelines

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

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 $\mu g/m^3$ at any receptor location for stationary sources.

Background Concentrations

Determination of significant impact criteria is evaluated by adding the background concentrations at the nearest NYSDEC monitoring station to the concentrations of criteria pollutants in the ambient air of the project area.

Background concentrations of NO_2, SO_2, and $PM_{2.5}$—the criteria pollutants relevant for HVAC system fueled by natural gas or fuel oil #2 analysis—were obtained from the NYSDEC's annual report for 2017 at the nearest monitoring stations. **Table 2.8-2** shows the background concentrations.

Table 2.8-2: Background Concentration at the Queens College Monitoring Station (NYSDEC 2017 Report)

Pollutant	Averaging Period	Background Concentration	Monitoring Station
NO_2	1-Hour Concentration	105.7 $\mu g/m^3$	Queens College
	Annual Arithmetic Average	27.2 $\mu g/m^3$	
$PM_{2.5}$	24-Hour Concentration	17.7 $\mu g/m^3$	Queens College
	Average of 3 Consecutive Annual Means	7.0 $\mu g/m^3$	
SO_2	1-Hour Concentration	14.8 $\mu g/m^3$	Queens College
	Annual Arithmetic Mean	1.1 $\mu g/m^3$	

The *de minimis* criteria for $PM_{2.5}$ was evaluated as described in the NYC Interim Guidelines. The concentration increments are presented below:

- 24-hour $PM_{2.5}$ 8.65 $\mu g/m^3$
- Annual $PM_{2.5}$ 0.3 $\mu g/m^3$

Project HVAC Systems Analysis

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

Buildings' HVAC systems are defined as stationary sources. Based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the heat and hot water system boiler emissions would result in a significant impact. This CEQR screening procedure is applicable to buildings that are not less than 30 feet from the nearest building of similar or greater height. Otherwise, a detailed dispersion analysis is required.

Projected Development Site 1 abuts Projected Development Site 2; hence the project-on-project screening analyses is not applicable. Therefore, dispersion modeling analyses were conducted for the project-on-project analysis. The building heights considered in the analysis were the Projected Development Site 2 RWCDS height of 85 feet, and the Projected Development Site 1 proposed and RWCDS height of 85 feet, respectively.

Screening Analysis

Based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system boiler emissions can be significant. The screening analysis determines the threshold of development size below which the action would not have a significant impact. This CEQR screening procedure is applicable to buildings that are not less than 30 feet from the nearest building of similar or greater height. Otherwise, a detailed dispersion analysis is required.

The potential for the heat and hot water system(s) to have a significant adverse impact on nearby receptors depends on the type of fuel that would be used by the HVAC system, the height of the stack venting the emissions, the distance to the nearest building, the building's residential or non-residential use, and the square footage of the development that would be served by the system. The CEQR Technical Manual provides a screening analysis based on these factors, which was utilized to determine the potential for significant impacts from the proposed building's HVAC system(s).

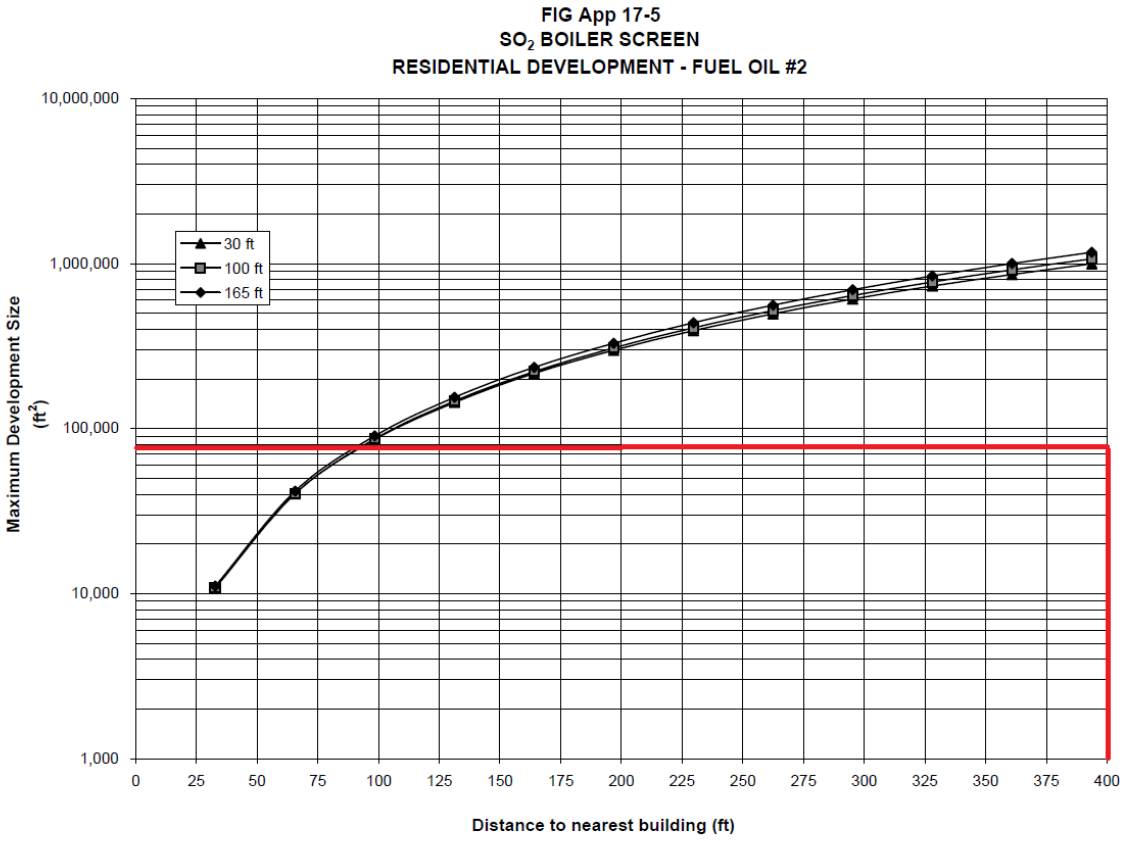
If the actual distance between the source building and the affected building is greater than the threshold distance for a building size, then that building passes the screening analysis (and no significant impact is predicted). However, if the actual distance is less than the threshold distance for a building, then there is a potential for a significant impact and a detailed analysis would be required. In addition, according to 15 RCNY 2-15, no new boiler or burner installations may use No. 6 or No. 4 fuel oils. Therefore, the highest-emitting fuel that could be used is No. 2 fuel oil. The following screening analyses were conducted (or considered):

- Cumulative impact (the developments floor areas in gsf were combined as one building) on existing land uses with buildings that are at least 85 feet tall. In this case, the combined Projected Development Sites 1 and 2 assume an 85-foot tall, 77,249 gsf building. A distance of 400 feet was applied, as no other land use in the area is similar or greater in height. Fuel oil No. 2 was assumed to be the type of fuel used in the building HVAC system. The CEQR nomograph depicted on Figure 17-5 of the CEQR Technical Manual Appendices was used for the screening analysis. This nomograph is for a No. 2

fuel oil HVAC system serving a residential development. Figure 17-1 (using Figure 17-5 of the CEQR Technical Manual Appendices) shows the screening analysis.

The CEQR nomograph depicted on Figure 17-5 of the CEQR Technical Manual Appendices was used for the screening analysis. This nomograph is for No. 2 fuel oil HVAC system serving a residential development. **Figure 2.8-1** (using Figure 17-5 of the CEQR Technical Manual Appendices) shows the project-on-existing screening analysis below.

Figure 2.8-1: HVAC Screen Nomograph



As seen in **Figure 2.8-1** (using Figure 17-5 of the CEQR Technical Manual Appendices), the line is below the curve. Therefore, the cumulative impact of Projected Development Sites 1 and 2 pass the screening analysis on existing land uses.

- Project-on-Project: As the Projected Development Sites are adjacent (less than 30 feet distance, and less than the applicable screening analysis distance), a detailed analysis was required.

Air Pollutants and Applicable Standards/Guidelines

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for the criteria pollutants by EPA, and New York State has adopted the NAAQS as the State ambient air quality standards. Background concentrations of SO_2, NO_2, and $PM_{2.5}$, the criteria pollutants of concern of oil No.2 or natural gas fueled boilers, were obtained from the

NYSDEC's annual report for 2018 at the nearest monitoring station(s). **Table 2.8-3** below shows the background concentrations and the NAAQS.

Table 2.8-3: Background Concentration - NYSDEC Monitoring Station(s)

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
NO_2	1-Hour	188 µg/m^3	105.7 µg/m^3	Queens College
	Annual	100 µg/m^3	27.2 µg/m^3	
$PM_{2.5}$	24-Hour	35 µg/m^3	17.7 µg/m^3	Queens College
	Annual	12 µg/m^3	7.0 µg/m^3	
SO_2	1-Hour	188 µg/m^3	14.8 µg/m^3	Queens College
	Annual (1)	100 µg/m^3	1.1 µg/m^3	

1. 6 CRR-NY 257-2.3 for annual SO_2 standard: "During any 12 consecutive months, the annual average of the 24-hour average concentrations shall not exceed 0.03 ppm.

In addition to the NAAQS, projects subject to the CEQR require evaluation of $PM_{2.5}$ significant impact criteria, de minimis, which are based on concentration increments. $PM_{2.5}$ significant impact concentrations for stationary sources are: Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 µg/m^3 at any receptor location for stationary sources.

NO_2 NAAQS

The 1-hour NO_2 NAAQS was promulgated in the United States in February 2010. This 1-hour standard is based on a percentile rank from the annual distribution of daily maximum 1-hour values, averaged across the number of years processed. The 1-hour NO_2 modeled design value is based on the 98th percentile, or 8th highest, of the daily maximum 1-hour values across the year. For typical multi-year modeling analysis based on 5 years of National Weather Service (NWS) meteorological data, the modeled design value is the 5-year average of the 8th highest values for NO_2.

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

Detailed Analysis

Methodology

The EPA's AERMOD modeling system version 19191 was used to predict pollutants' concentrations. In accordance with CEQR guidance, this analysis was conducted assuming stack tip downwash and elimination of calms. Models specified flat terrain, urban dispersion surface roughness, and population of 2,000,000. The Building Profile Input Program (BPIP) was run with the downwash effect enabled. All analyses were conducted using five consecutive years of meteorological data (2013-2017). Surface data was obtained from JFK Airport, upper air data was obtained from Brookhaven station, New York. The meteorology data, processed by Lakes Environmental Software, was processed using AERMET version 18081, AERMINUTE version 15272, and AERSURFACE version 13016. No data filling was conducted as the raw data quality was more than sufficient for the modeling purposes (99.53 percent of raw data). These meteorological data provided hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. Meteorological data were combined to develop a 5-year set of meteorological conditions, which was used for the AERMOD modeling runs and Anemometer height of 6.7 meters was specified per Lakes Environmental Software.

The pollutants of concern of oil #2 fueled boilers are SO_2, $PM_{2.5}$, and NO_2. The predicted annual fuel usage, which is based on the development's gross floor area and land use category (assumed residential), was used to calculate the boilers' energy intensities of the Projected Development Sites. Pertinent values were obtained from the CEQR Technical Manual Appendices, the assumption that all fuel would be consumed during the 100-day (or 2,400 hour) heating season, and emission factors were obtained from the EPA's AP-42 manual for external combustion sources. **Table 2.8-4** shows the calculated emission rates, both short-term and annual.

Table 2.8-4: Projected Development Sites Estimated Short-term and Annual Emission Rates

Site ID	Boiler Description	Pollutant	Averaging Time	Emission Rate (g/s)
Projected Development Site 1	Oil No. 2 fueled boiler, 1.05 MMBtu energy intensity	NO_2	1-hour	1.89E-02
			Annual	5.18E-03
		$PM_{2.5}$	1-hour	2.01E-03
			Annual	5.52E-04
		SO_2	1-hour	2.01E-04
			Annual	5.52E-05
Projected Development Site 2	Oil No. 2 fueled boiler, 0.89 MMBtu energy intensity	NO_2	1-hour	1.61E-02
			Annual	4.42E-03
		$PM_{2.5}$	1-hour	1.72E-03
			Annual	4.71E-04
		SO_2	1-hour	1.72E-04
			Annual	4.71E-05

Projected Development Site 1 stack diameter and exhaust exit velocity were based on values obtained from the New York City Department of Environmental Protection (DEP) "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million Btu per hour).

Projected Development Site 2 stack diameter and exhausts exit velocity were assumed to be 0.0 feet and 0.001 meter per second, respectively, based on values obtained from the CEQR Technical Manual. The stacks exit temperatures were assumed to be 300oF (423oK), which is appropriate for boilers.

The New York City Building Code (Building Code) requires that a rooftop stack should be at least 10 feet away from the edge of the roof and at least 3 feet higher than the roofline. As such, the stack of the source building was situated 3 feet above the roofline and 10 feet from the edge of the building closest to the receiving building. A stack set back distance was applied if impact was predicted.

The Projected Development Sites 1 and 2 were modeled as buildings that cover their entire lot areas (wall façade placed on the outer lot lines) and rise to their RWCDS heights. Other buildings in the surrounding area that might affect the plume dispersion were input into the models. These buildings footprint geo metadata were obtained from the NYC Open Data Building Footprints shapefile and the NYC Department of Building database. The map application in the commercial version of AERMOD (Lakes Environmental, Inc. AERMOD View) was used to spatially locate the proposed development and the existing buildings in the area.

The AERMOD model of the Projected Development Site 1 impact on the Projected Development Site 2 were run with a generic emission of 1 gram per second and 1st highest impact concentrations. The AERMOD model of the Projected Development Site 2 impact on the Projected Development Site 1 were also run with a generic emission of 1 gram per second and 1st highest impact concentrations, except the 1-hour NO_2. The 1-hour NO_2 was run with the estimated emission rate and 8th highest output concentration (the modeled design value of the 5-year average of the 8th highest values for NO_2) and a Tier 2, applying conservative ambient NO_x/NO_2 ratio of 80% to the NO_x estimated concentrations, approach applied. In addition, a stack set back of 20 feet was specified for the Projected Development Site 2.

Receptors on the receiving building were placed all around the receiving building's envelope, at 10-foot horizontal increments and on all floor levels. Ground floor receptors were placed at a height of 6 feet above grade. Second-floor receptors were placed at a height of 21 feet above grade, assuming a 15-foot-high ground floor, and receptors on the third to top floors were placed 6 feet above each floor level, assuming 10-foot-high floor levels.

Results of Dispersion Analyses

The SO_2 and NO_2 impact concentrations were evaluated with the NAAQS. The $PM_{2.5}$ modeled concentrations were evaluated with the NYC Guidelines de minims threshold criterions. The reported concentrations are the maximum predicted concentrations of the building wake effects abled/disabled scenarios. Results of the HVAC dispersion analyses are shown in **Table 2.8-5**.

Table 2.8-5: HVAC Dispersion Analyses Results

Pollutant and Averaging Time	Modeled Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Evaluated Concentration ($\mu g/m^3$)	Threshold Concentration ($\mu g/m^3$)	Threshold Standard
Projected Development Site 1 on Projected Development Site 2					
1-hour NO_2 (1)	19.59	105.66	125	**188**	NAAQS
Annual NO_2	0.28	27.25	28	**100**	NAAQS
24-hour $PM_{2.5}$	0.82	N.A.	0.82	**8.65**	*de minimis*
Annual $PM_{2.5}$	0.03	N.A.	0.03	**0.3**	*de minimis*
1-hour SO_2	0.21	14.82	15	**196**	NAAQS
Annual SO_2	0.003	1.09	1	**80**	NAAQS
Projected Development Site 2 on Projected Development Site 1 (2)					
1-hour NO_2	79.63	105.66	185	**188**	NAAQS
Annual NO_2	0.56	27.25	28	**100**	NAAQS
24-hour $PM_{2.5}$	2.57	N.A.	2.57	**8.65**	*de minimis*
Annual $PM_{2.5}$	0.06	N.A.	0.06	**0.3**	*de minimis*
1-hour SO_2	1.83	14.82	17	**196**	NAAQS
Annual SO_2	0.006	1.09	1	**80**	NAAQS

1. A Tier 2 approach used.
2. Impact concentrations predicted with a stack set back of 20 feet.

As seen in **Table 2.8-5**, the SO_2 and NO_2 predicted concentrations are within the NAAQS and the $PM_{2.5}$ concentrations do not exceed the de minimis. Therefore, with (E) Designations in place, the emissions of the Development Sites HVAC systems would not pose a significant adverse impact to other buildings in the area.

(E) Designation (E-646)

Block 13354, Lot 12 (Projected Development Site 1): Any new residential/commercial development on the above-referenced property must ensure that the heating, ventilation, and air conditioning (HVAC) system and hot water equipment stack is located at the building's highest level and at a minimum of 88 feet above grade to avoid any potential significant adverse air quality impacts.

Block 13354, Lots 19, 21, 22, 23 (Projected Development Site 2): Any new residential/commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC) system, and hot water equipment stack is located at the building's highest level and at least 88 feet above grade, and is at least 20 feet from the southern lot line facing 147th Avenue, to avoid any potential significant adverse air quality impacts.

Conclusion

Emissions from project-related heating, ventilation, and air conditioning system(s) (HVACs) would not cause significant air quality impacts to receptors at the local scale with E-Designation in place.

Industrial Emissions

The Proposed Action would introduce a sensitive land use into the area. Accordingly, a preliminary screening was conducted to determine if there are any potential sources of industrial process emissions that could affect project occupants. Industrial sources were identified through a site visit within a 400-foot study area and the DEP CATS search.

400 Foot Study Area

The Affected Area is located within a R3-2 zoning district. The surrounding area within a radius of 400 feet consists primarily of residential, commercial, institutional, and industrial uses. The 400-foot radius was screened for potential sources of industrial emissions. Ten industrial uses were identified and are shown below in **Table 2.8-6.**

Table 2.8-6: Industrial/Manufacturing within 400 feet of the Affected Area

Key	Block	Lot	Address	Current Use	Permit Search Results
11	13406	35	178-22 147 AVENUE	Industrial/Manufacturing	No Record Found
15	13379	44	148-02 GUY R BREWER BLVD	Industrial/Manufacturing	No Record Found
20	13377	26	177-20 147 AVENUE	Industrial/Manufacturing	No Record Found
24	13379	30	175-57 148 STREET	Industrial/Manufacturing	No Record Found
28	13377	6	147-31 176 STREET	Industrial/Manufacturing	No Record Found
30	13407	12	147-11 181 STREET	Industrial/Manufacturing	No Record Found
31	13406	13	148-09 GUY R BREWER BLVD	Industrial/Manufacturing	PA046485 Cancelled 1994
41	13406	39	147-02 181 STREET	Industrial/Manufacturing	No Record Found
48	13379	42	148-10 GUY R BREWER BLVD	Industrial/Manufacturing	No Record Found
53	13406	19	147-17 GUY R BREWER BLVD	Industrial/Manufacturing	CA192385 (expired 2009)

1,000 Foot Study Area

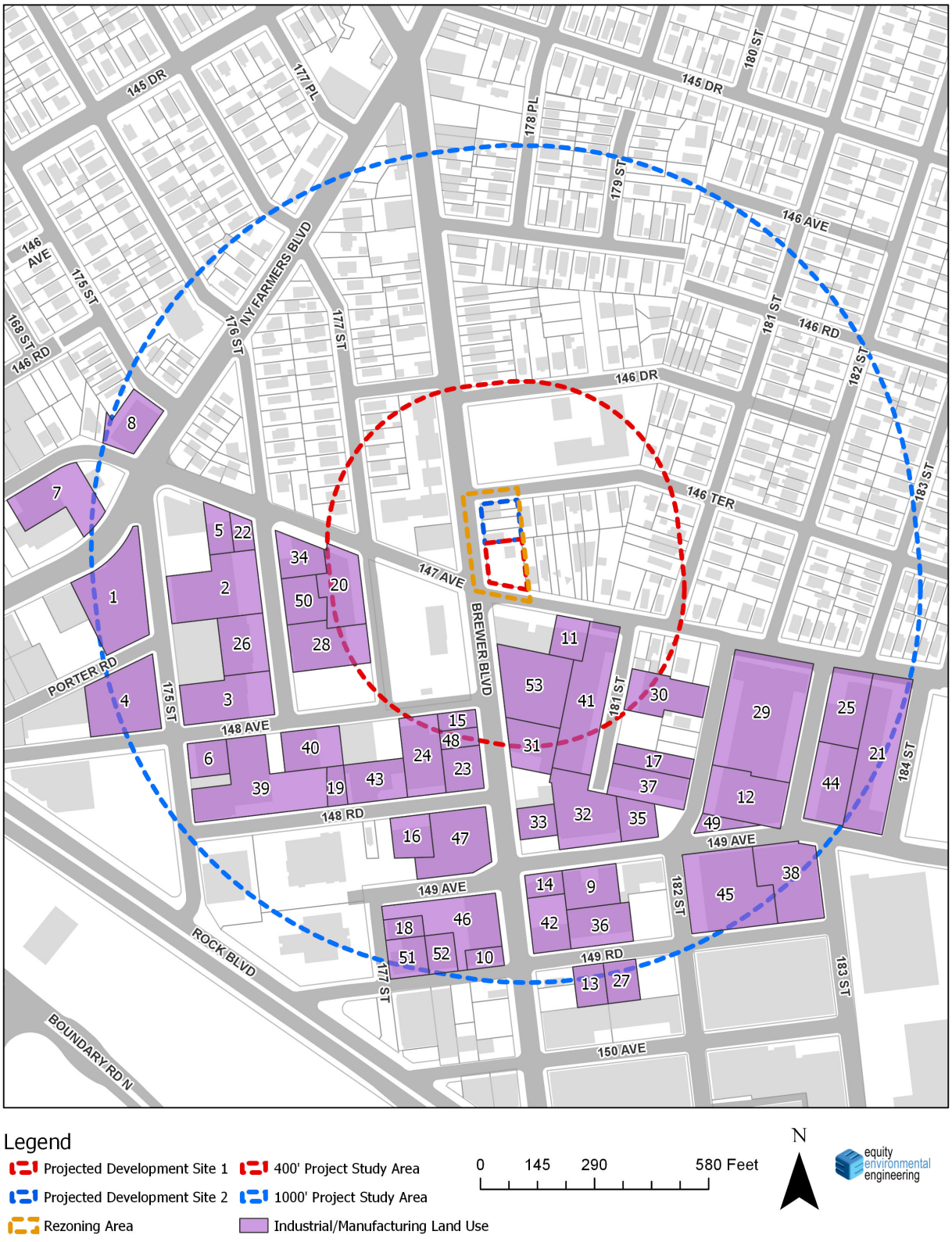
The surrounding area within a radius of 1,000 feet of the Affected Area was screened for potential large and major source industrial emissions.

Based on field observations and reviews of DCP land use maps, no such sources were identified. See **Figure 2.8-2** below.

Conclusion

As indicated above, there are no active industrial emissions permits, large or major industrial emission sources within the 400- or 1,000-foot study areas. Additionally, there is no evidence present to conclude that there are illegal unpermitted air emissions present in the study area. Therefore, there does not appear to be any potentially significant impact in terms of air toxics to project occupants**.**

Figure 2.8-2: Industrial Emissions Sources



Legend

- Projected Development Site 1
- Projected Development Site 2
- Rezoning Area
- 400' Project Study Area
- 1000' Project Study Area
- Industrial/Manufacturing Land Use

0 145 290 580 Feet

N

equity environmental engineering

2.9 Noise

Introduction

Equity Environmental Engineering, LLC (Equity) conducted Noise Monitoring in support of the Proposed Action. Vehicular traffic is the predominant source of noise in the area, and Guy R. Brewer Boulevard and 147th Avenue are located within 1,500 feet of the Affected Area with an unobstructed line of sight. Therefore, the Proposed Action warrants an assessment of the potential for adverse effects on project occupants from ambient noise.

The Proposed Action would not create a significant noise generator. Additionally, project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. This noise assessment is limited to an assessment of ambient noise that could adversely affect occupants of the development.

The purpose of the noise assessment under CEQR is to determine: (1) if new noise receptors that would be introduced by the proposed actions would be in an acceptable ambient sound level environment; and (2) if the proposed actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors adjacent to the proposed development including residential, commercial, and institutional land uses.

According to the 2020 CEQR Technical Manual a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would be located in an area with high ambient noise levels. Mobile sources include vehicular traffic generated by the proposed action and stationary sources include rooftop equipment such as emergency generators, cooling towers, and other mechanical equipment.

Methodology

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

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

Noise is measured in sound pressure level (SPL), which is converted to a decibel scale. The decibel is a relative measure of the sound level pressure with respect to a standardized reference quantity. Decibels on the A-weighted scale are termed “dB(A).” The A-weighted scale is used for evaluating the effects of noise in the environment because it most closely approximates the response of the human ear. On this scale, the threshold of discomfort is 120 dB(A), and the threshold of pain is about 140 dB(A). **Table 2.9-1** shows the range of noise levels for a variety of indoor and outdoor noise levels.

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

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

The *CEQR Technical Manual* recommends an analysis of two principal types of noise sources: mobile sources; and stationary sources. Both types of noise sources are examined in the following sections.

Mobile Sources

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

Per the *CEQR Technical Manual*, if existing passenger car equivalent (PCE) values are increased by 100 percent or more due to a Proposed Actions, a detailed analysis is generally performed.

Pursuant to Section 332.1 of the *2020 CEQR Technical Manual*, to calculate vehicular noise using projections:

- Each Automobile or Light Truck: 1 Noise PCE
- Each Medium Truck: 13 Noise PCEs
- Each Bus: 18 Noise PCEs
- Each Heavy Truck: 47 Noise PCEs

As shown in **Table 2.7-4**, the highest peak hour increment generated by the Proposed Actions for vehicular trips would be 37.5, 51, and 53 vehicular trip-ends during the AM, Midday and PM peak hours, respectively. All projected vehicular trips are private cars for a total PCE value of 37.5, 51, and 53 during the AM, Midday, and PM peak hours. As indicated below in **Table 2.9-5** through **2.9-7**, project generated vehicles would not increase existing passenger equivalent values by more than 100 percent. Therefore, no significant adverse mobile source noise impacts due to vehicular traffic are anticipated because of the Proposed Actions.

As discussed in the *CEQR Technical Manual*, if the proposed project is located in areas with high ambient noise levels, which typically include those near heavily-traveled thoroughfares, airports, exposed rail, or other loud activities, further noise analysis may be warranted. Accordingly, ambient noise levels were measured at the proposed development site to provide an assessment of the potential for ambient noise to have a significant adverse effect on future residents of the proposed development.

The *CEQR Technical Manual* provides noise exposure guidelines in terms of L_{eq} and L_{10} for the maximum amount of allowable noise under existing regulations. L_{eq} is the continuous

equivalent sound level. The sound energy from the fluctuating sound pressure levels is averaged over time to create a single number to describe the mean energy or intensity level. High noise levels during a measurement period will have greater effect on the L_{eq} than low noise levels. The L_{eq} has an advantage over other descriptors because L_{eq} values from different noise sources can be added and subtracted to determine cumulative noise levels. In comparison, L_{10} is the SPL exceeded 10 percent of the time. Similar descriptors include the L_{50}, L_{01}, and L_{90} values.

Stationary Sources

The CEQR Technical Manual states that based upon previous studies, unless existing ambient noise levels are very low and/or stationary source levels are very high (and there are no structures that provide shielding), it is unusual for stationary sources to have significant impacts at distances beyond 1,500 feet. A detailed analysis may be appropriate if the proposed project would: cause a substantial stationary source (i.e., unenclosed mechanical equipment for manufacturing or building ventilation purposes, playground, etc.) to be operating within 1,500 feet of a receptor, with a direct line of sight to that receptor; or introduce a receptor in an area with high ambient noise levels resulting from stationary sources, such as unenclosed manufacturing activities or other loud uses. Machinery, mechanical equipment, heating, ventilating and air-conditioning units, loudspeakers, new loading docks, and other noise associated with building structures may also be considered in a stationary source noise analysis. Impacts may occur when a stationary noise source is near a sensitive receptor, and is unenclosed. No unenclosed specific stationary noise sources of concern were observed during field inspection; however, the Affected Area is located approximately 65' from the Public School 52 outdoor play area. The school has students from Pre-K through 5th grade. Therefore, projected noise generated from this play area is considered below. As the proposed project would not introduce a new stationary noise source, no significant adverse stationary source impacts are anticipated because of the Proposed Action.

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Protection Order-City Environmental Quality Review (CEPO-CEQR) noise standards at the exterior façade to achieve interior noise levels of 45 dB(A) or below. CEPO-CEQR Noise Standards classify noise exposure into four categories: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable. As noted in the *CEQR Technical Manual*, these standards are the basis for classifying noise exposure into the following categories based on the L_{10} measured directly outside the projected development site:

Table 2.9-1 Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly
Noise Level with Proposed Project	70 < L10 ≤ 73	73 < L10 ≤ 76	76 < L10 ≤ 78	78 < L10 ≤ 80	80 < L10
Attenuation[1]	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	36 + (L10 – 80) dB(A)[2]

- ***Source**: CEQR Technical Manual: The above composite window-wall attenuation values are residential dwellings and community facility development. Commercial office spaces would be 5 dB(A) less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.*

Table 2.9-2: Noise Levels of Common Sources

Sound Source	SPL (dB(A))
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110
On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0

Notes: A change in 3dB(A) is a just noticeable change in SPL.

A change in 10 dB(A) is perceived as a doubling or halving in SPL.

Source: 2020 CEQR Technical Manual

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

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

[2] Required attenuation values increase by 1 dB(A) increments for L10 values greater than 80 dBA.

to sounds of most frequencies. Mid-range frequencies approximate the actual (unweighted) sound level, while the very low and very high frequency bands are significantly affected by C-weighting.

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

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

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

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the mean energy, or intensity, level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.
- $L_{eq\,(24)}$ is the continuous equivalent sound level over a 24-hour time period.

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

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

Measurement Location and Equipment

Because the predominant noise sources in the area of the proposed project are vehicular movements, noise monitoring was conducted during peak vehicular travel periods, 07:30 am-09:00 am, 12:00 pm-1:30 pm, and 4:30 pm-6:00 pm. Pursuant to CEQR Technical Manual methodology, readings on all frontages were conducted for 20-minute periods during three peak periods of vehicular travel. Noise monitoring was conducted using a Type 1 Casella CEL-633 sound meter with wind screen. The monitor was placed on a tripod at a height of approximately three feet above the ground, away from any other noise-reflective surfaces. The monitor was calibrated prior to and following each monitoring session. Periods of peak vehicular around the subject site constitute a worst-case condition for noise at the Projected Development Sites.

Figure 2.9-1 Noise Monitoring Locations

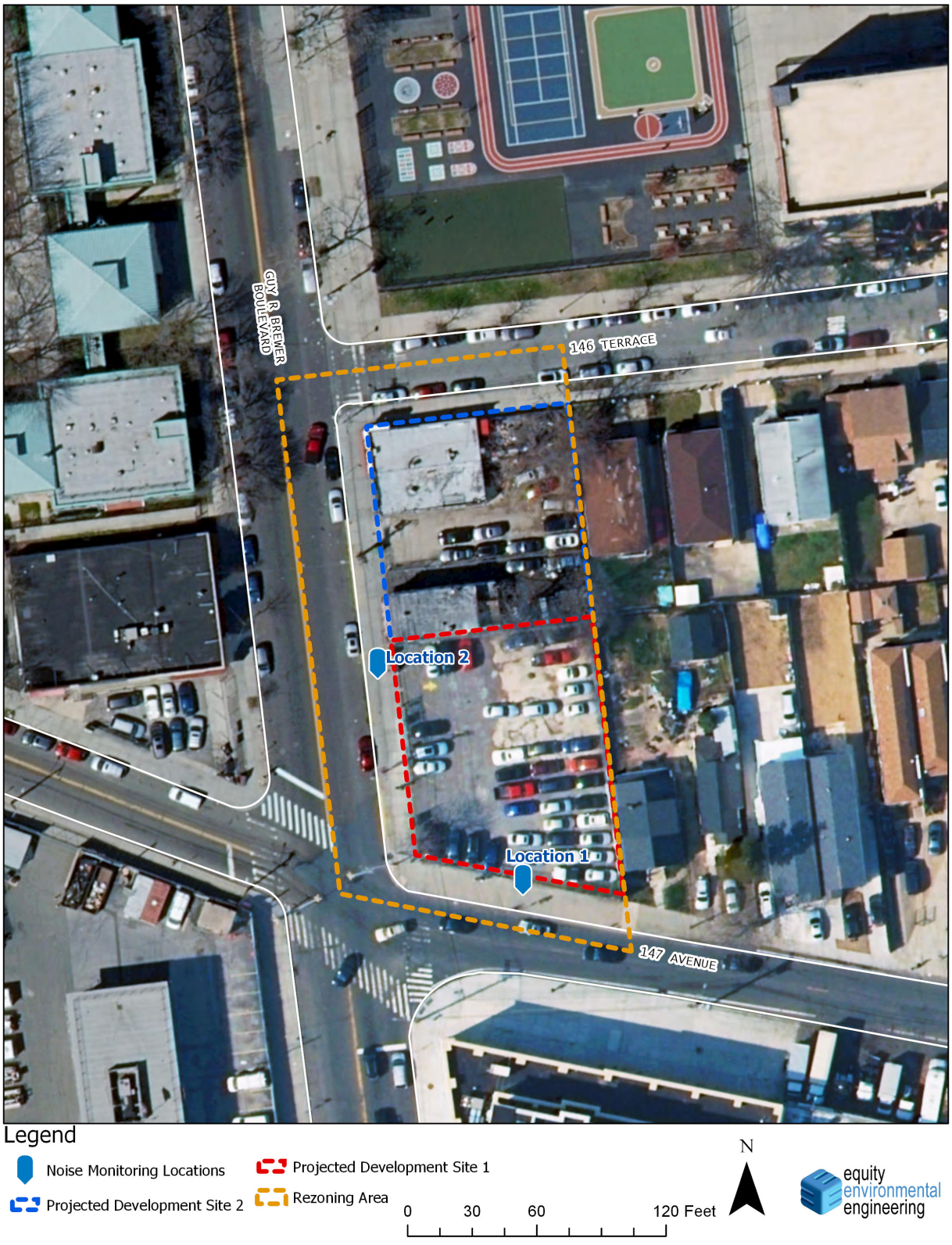


Figure 2.9-2: Location 1 Facing 147th Avenue



Figure 2.9-3: Location 2 Facing Guy Brewer Boulevard



Measurement Conditions

Monitoring was conducted during typical midweek conditions, on Thursday, March 7, 2019. The weather was approximately 50^0-60^0 Fahrenheit and wind speeds were mild during monitoring. Traffic volumes and vehicle classification were documented during the noise monitoring.

Existing Conditions

The predominant source of noise at the site is vehicular traffic. The volume of traffic and its corresponding level of noise is moderate at each of the three monitoring sites.

Table 2.9-3: Noise (dB) Levels at Location 1

Thursday, March 7, 2019			
Time	7:57 am – 8:17 am	12:01 pm– 12:21 pm	4:33 pm – 4:54 pm
L_{max}	98.8	89.5	96.1
L_{10}	**73.5**	73.0	73.0
L_{eq}	73.2	70.0	71.3
L_{50}	63.5	66.0	64.0
L_{90}	57.5	60.5	57.5
L_{min}	49.8	53.5	49.5

Table 2.9-4: Noise (dB) Levels at Location 2

Thursday, March 7, 2019			
Time	8:20 am – 8:40 am	12:28 pm– 12:48 pm	4:57 pm – 5:18 pm
L_{max}	92.0	91.2	92.9
L_{10}	71.5	**75.0**	73.5
L_{eq}	70.2	72.2	71.4
L_{50}	65.0	65.0	65.5
L_{90}	59.5	57.5	60.0
L_{min}	50.9	50.8	54.0

Tables 2.9-5 through **Table 2.9-7** contains the traffic volumes and vehicle classifications for the morning, noon, and evening monitoring sessions.

Table 2.9-5: Traffic Volume Morning

	Location 1	**Location 2**
Car/ Taxi	67	54
Van/Light Truck/SUV	83	66
Train	0	0
Heavy Truck	18	16
Bus	23	11

Table 2.9-6: Traffic Volume Noon

	Location 1	Location 2
Car/ Taxi	56	41
Van/Light Truck/SUV	71	51
Train	0	0
Heavy Truck	22	20
Bus	19	10

Table 2.9-7: Traffic Volume Evening

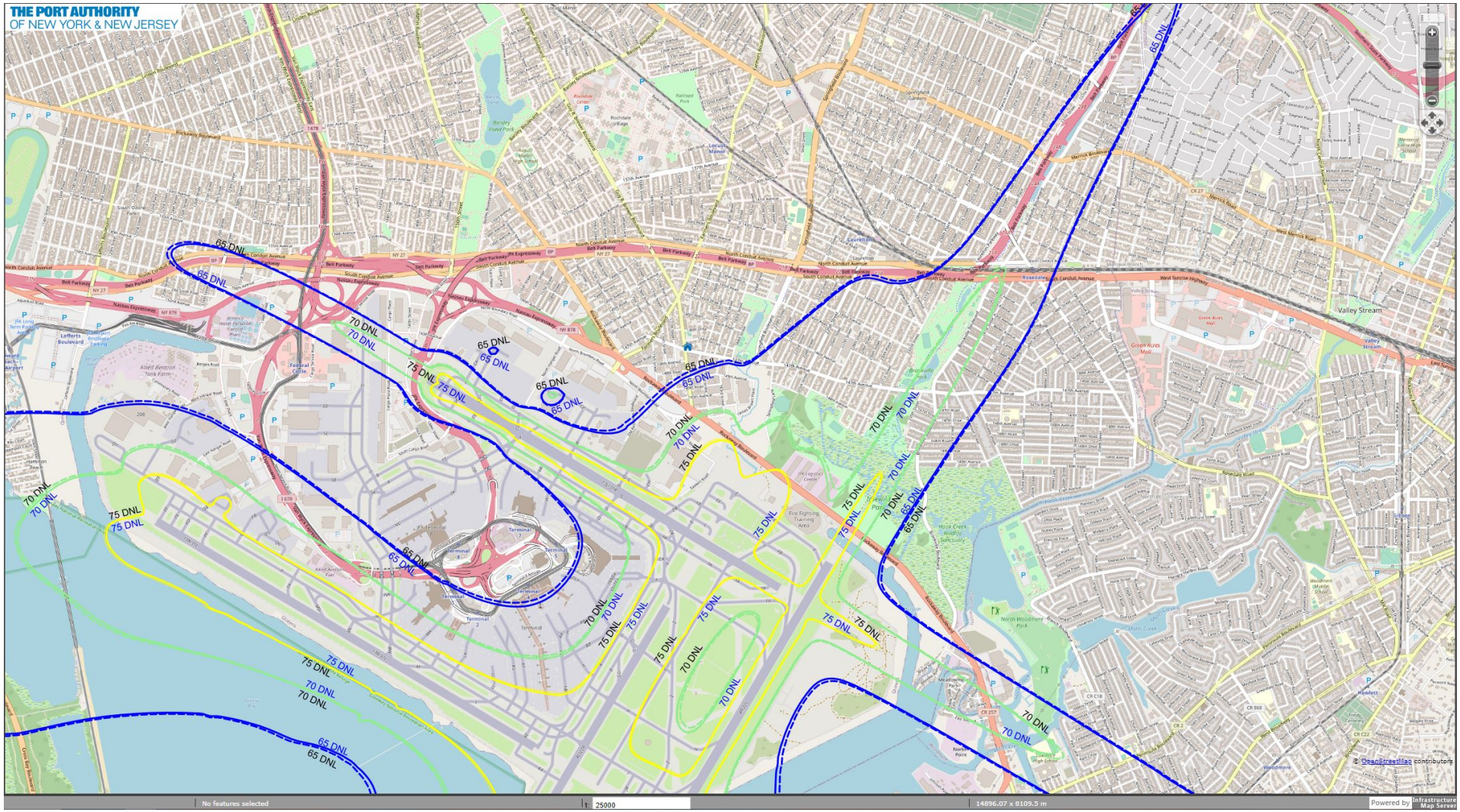
	Location 1	Location 2
Car/ Taxi	66	71
Van/Light Truck/SUV	89	92
Train	0	0
Heavy Truck	17	19
Bus	15	11

Initial Airport/Aircraft Noise Assessment

According to the *CEQR Technical Manual*, an initial noise assessment of airport/aircraft noise is warranted if the project is introducing a new receptor within one-mile of an existing flight path; or causes an aircraft to fly through existing or new flight paths over or within one mile (horizontal distance parallel to the ground of a receptor. The Affected Area is introducing a new receptor approximately 1 mile from JFK International Airport, therefore an initial noise assessment of airport/aircraft noise is warranted.

The most recent yearly Ldn contours (2016 and 2021) were obtained for JFK International Airport from the Port Authority of New York and New Jersey (PAYNJ). According to **Figure 2.9-4** below, the Affected Area is not located within the Ldn contours and therefore, no further airport/aircraft assessment is required.

Figure 2.9-4: JFK International Airport – Contour Map



Playground Noise Assessment

The *CEQR Technical Manual* states that based upon previous studies, unless existing ambient noise levels are very low and/or stationary source levels are very high (and there are no structures that provide shielding), it is unusual for stationary sources to have significant impacts at distances beyond 1,500 feet. A detailed analysis may be appropriate if the proposed project would: cause a substantial stationary source (i.e., unenclosed mechanical equipment for manufacturing or building ventilation purposes, playground, etc.) to be operating within 1,500 feet of a receptor, with a direct line of sight to that receptor; or introduce a receptor in an area with high ambient noise levels resulting from stationary sources, such as unenclosed manufacturing activities or other loud uses. Machinery, mechanical equipment, heating, ventilating and air-conditioning units, loudspeakers, new loading docks, and other noise associated with building structures may also be considered in a stationary source noise analysis. Impacts may occur when a stationary noise source is near a sensitive receptor and is unenclosed.

The Affected Area is located approximately 65' from the Public School 52 outdoor play area. The school has students from Pre-K through 5th grade.

To determine the potential noise impacts of the P.S. 52 outdoor play area, the measurements and procedures outlined in a study conducted by AKRF titled, "*Development of Noise Assessment Method for School Playground Noise*."10F[3] were referenced. The study, conducted for the New York School Construction Authority (SCA), included noise monitoring at nine schools (one early childhood center, four elementary schools, three intermediate schools, and one high school) and provides the results for hourly equivalent (L_{eq}) noise levels by grade composition, as shown below in **Table 2.9-8**. This study has been widely used and recognized for assessing school playground noise impacts for previously approved projects subject to environmental review by the New York City Department of City Planning (DCP), the New York City Department of Environmental Protection (DEP), and the SCA.

Table 2.9-8: Maximum Playground Boundary Noise Level in Leq

School Type	Leq Noise Level (In dBA)
Early Childhood Center	71.5
Elementary School	71.4
Intermediate School	71.0
High School	68.2

Source: Wu, Weixiong, AKRF, Inc. "Development of Noise Assessment Method for School Playground Noise," Inter-Noise 2006, Volume 6.

As shown in **Table 2.9-8** above, the early childhood center noise level (71.5 dBA) was selected as the referenced noise levels from the boundary of the proposed surface play area.

Geometric spreading and the consequent dissipation of sound energy with increased distance from the recreation area decreases noise levels at varying distances from the recreation area boundary. To determine the potential noise impacts at a given distance from a play area boundary, the study suggests a 4.5 dBA reduction in L_{eq} noise levels per doubling of distance at

[3] Wu, Weixiong, AKRF Inc. "Development of Noise Assessment Method for School Playground Noise," Inter-Noise 2006, Volume 6.

a distance between 40 and 300 feet, with initial reductions of 4.8 dBA applied at a distance of 20 feet, 6.8 dBA applied at a distance of 30 feet, and 9.1 dBA applied at a distance of 40 feet.

To add the monitored and projected noise levels, the following equation was used:

$$L = 10 \log_{10}\left(\sum_{i=1}^{n} 10^{(L_i / 10)} \right)$$

As the early childhood center noise level (71.5 dBA) was selected, and the play area is 65' from the Projected Development Site, a conservative assumption of a 40' reduction is applied. This reduces the sound level by 9.1 decibels, for a total playground sound level of 62.4 dB(A).

As a noise measurement was not collected at the frontage of the Affected Area facing the play area, Noise Monitoring Location 1 will be applied as this location (147th Avenue) has similar traffic patterns to the frontage facing the play area (146th Terrace). The highest measured sound level (in L_{eq}) is 73.2. Using the above equation, the total sound level including the play area is 73.5 dB(A). The predicted combined L_{eq} was converted to L_{10} by adding the difference between the measured L_{eq} and L_{10}. The expected L_{10} is 73.8 dB(A).

Conclusion

The 2020 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the Proposed Action, an L_{10} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure. An L_{10} of between 70 and 80 dB(A) is identified as marginally unacceptable general external exposure. The highest recorded L_{10} at the southern portion of the Affected Area, along 147th Avenue, (Location 1) was 73.5 dB(A) during the morning period. The highest recorded L_{10} at the western portion of the Affected Area, along Guy R. Brewer Boulevard (Location 2), was 75.0 dB(A) during the midday period. The highest calculated L_{10} at the 146th Terrace façade was 73.8 dB(A).

Based on the results of the noise monitoring as summarized above, a composite window-wall noise attenuation of 31 dB(A) for all building facades would be required.

The text for E-Designation would be as follows:

E-646

Block 13354, Lot 12 (Projected Development Site 1): In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 31 dB(A) window/wall attenuation on all facades in order to maintain an interior L10 noise level not greater than 45 dBA for residential uses or not greater than 50 dBA 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, central air conditioning or air conditioning sleeves containing air conditioners.

Block 13354, Lots 19, 21, 22, and 23 (Projected Development Site 2): In order to ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 31 dB(A) window/wall attenuation on all facades in order to maintain an interior L10 noise level not greater than 45 dBA for residential uses or not greater than 50 dBA 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, central air conditioning or air conditioning sleeves containing air conditioners.

Conclusion

With this (E) designation in place, no significant adverse impacts related to noise are expected, and no further analysis is warranted.

Appendix A: Agency Correspondence

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: NO LEAD AGENCY / ER.Q
Project: 146-93 GUY R. BREWER BLVD
Date received: 4/22/2019

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 147-07 Guy R Brewer Boulevard, BBL: 4133540019
2) ADDRESS: Guy R Brewer Boulevard, BBL: 4133540021
3) ADDRESS: 147-03 Guy R Brewer Boulevard, BBL: 4133540022
4) ADDRESS: 146-01 Guy R Brewer Boulevard, BBL: 4133540023

Comments:

S/NR ELIGIBLE P.S. 52, QUEENS, 178-37 146TH TERRACE WITHIN RADIUS.

Gina Santucci 4/26/2019

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 34171_FSO_DNP_04262019.doc

Appendix B: Architectural Drawings

147 AVENUE - MIXED USE DEVELOPMENT



ZONING ANALYSIS: R6A/C2-2

ADDRESS: 178-01 147 AVENUE, QUEENS
MAP: 19B
CURRENT ZONE: R3-2
PROPOSED ZONE: R6A/C2-2
BIN: 4285978
CB: 413
BLOCK: 13354 LOT: 12
ENVIRONMENTAL RESTRICTION: NO
TRANSIT RESTRICTION: NO
FIRE DISTRICT: YES
CONSTRUCTION CLASS: TBD
STREET WIDTH:
GUY BREWER BOULEVARD: 80.0'
147 AVENUE: IRREGULAR (NARROW)

ZR22-10 USES PERMITTED AS-OF-RIGHT (EXISTING ZONING)
R3-2 ZONE: USE GROUP 1,2,3,4
ZR32-10 USES PERMITTED AS-OF-RIGHT (PROPOSED ZONING)
R6A/C2-2 ZONE: USE GROUP 1,2,3,4,6,7,8,9

PROPOSED USE: 2,6

CHAPTER 5
BULK REGULATIONS FOR MIXED BUILDINGS IN COMMERCIAL DISTRICTS

LOT AREA: 10,750.00 SF

ZR35-31 MAXIMUM FLOOR AREA RATIO
MAX FAR PERMITTED FOR A COMMERCIAL USE: ARTICLE III, CHAPTER 3
MAX FAR FOR RESIDENTIAL USE: ARTICLE II, CHAPTER 3

ZR23-154 INCLUSIONARY HOUSING FAR
R6A MAXIMUM FAR: 3.60

RESIDENTIAL ALLOWABLE FLOOR AREA:
MAX: 10,750.00 SF x 3.6 = 38,700.00 SF

ZR33-121 FAR IN DISTRICTS GOVERNED BY RESIDENCE DISTRICT BULK REGS
MAX COMMERCIAL FAR: 2.0

COMMERCIAL ALLOWABLE FLOOR AREA: 10,750.00 SF x 2.0 = 21,500.00 SF

PROPOSED ZONING FLOOR AREA					
FLOOR	GROSS SF RESIDENTIAL	RESIDENTIAL DEDUCTIONS	GROSS SF COMMERCIAL	COMMERCIAL DEDUCTIONS	COMBINED ZONING SF
CELLAR	0.00	0.00	0.00	0.00	0.00
FIRST	969.00	0.00	4028.00	0.00	4997.00
SECOND	5538.00	500.00	0.00	0.00	5038.00
THIRD	5538.00	500.00	0.00	0.00	5038.00
FOURTH	5538.00	500.00	0.00	0.00	5038.00
FIFTH	4712.00	436.00	0.00	0.00	4276.00
SIXTH	4712.00	436.00	0.00	0.00	4276.00
SEVENTH	3220.00	300.00	0.00	0.00	2920.00
EIGHTH	3220.00	300.00	0.00	0.00	2920.00
BULKHEAD	0.00	0.00	0.00	0.00	0.00
TOTAL	33447.00	2972.00	4028.00	0.00	34503.00
	NET RESIDENTIAL	30475.00	NET COMM. FAC.	4028.00	

ZR35-40 DENSITY REGULATIONS
AS PER SECTION 23-20 USE FACTOR: 680.0 SF
MAX ALLOWABLE DWELLING UNITS: 32,250.00 SF / 680.0 SF = 47 DWELLING UNITS

ZR35-50 YARD REGULATIONS
RESIDENTIAL YARD REGULATIONS SHALL APPLY AT THE LOWEST STORY CONTAINING DWELLING UNITS

ZR23-661 RESIDENTIAL STREET WALL LOCATION
STREET WALL SHALL BE NO CLOSER TO THE STREET LINE THAN THE CLOSEST STREET WALL OF AN EXISTING ADJACENT BUILDING WITHIN 10'-0" OF THE STREET LINE. PROVISION APPLIES TO ONLY ONE STREET FRONTAGE

ZR35-51 FRONT YARD REQUIREMENTS
IN THE COMMERCIAL DISTRICT, NO FRONT YARD IS REQUIRED. SECTION 34-233 SHALL APPLY

ZR35-52 SIDE YARD REQUIREMENTS
NO SIDE YARD IS REQUIRED. IF A SIDE YARD IS PROVIDED THE MIN YARD IS 8'-0"

ZR35-53 REAR YARD REQUIREMENTS
REQUIRED RESIDENTIAL REAR YARD SHALL BE PROVIDED AT THE LOWEST STORY CONTAINING DWELLING UNITS

ZR35-54 ADJACENT TO R1 THROUGH R5 DISTRICTS
PROVIDE A SIDE YARD MIN 8'-0" WIDE
ZR35-652 MAXIMUM HEIGHT OF BUILDINGS AND SETBACK REGULATIONS
(1) ELIGIBLE BUILDINGS: REFER TO SECTION 23-662
(2) SUPPLEMENTAL GROUND FLOOR PROVISIONS
(2)1) ALONG PRIMARY STREET FRONTAGE: EACH GROUND FLOOR LEVEL SHALL BE GLAZED IN ACCORDANCE WITH ZR37-34

ZR23-664 MODIFIED HEIGHT AND SETBACK REGULATIONS FOR CERTAIN INCLUSIONARY HOUSING BUILDINGS
(A) ELIGIBLE BUILDINGS
(3) MIH DEVELOPMENTS

(WITH QUALIFYING GROUND FLOORS)
MINIMUM BASE HEIGHT: 40.0'
MAXIMUM BASE HEIGHT: 65.0'
MAXIMUM BUILDING HEIGHT: 85.0'

SETBACK ABOVE MIN BASE HEIGHT:
WIDE STREET: 10.0'
NARROW STREET: 15.0'

ZR36-20 REQUIRED OFF STREET PARKING FOR COMMERCIAL USES
GENERAL RETAIL OR SERVICE: 1 PER 300.00 SF OF FLOOR AREA

ZR36-23 WAIVER OF PARKING REQUIREMENTS
C2-2: MAX 15 SPACES WAIVED

REQUIRED COMMERCIAL PARKING SPACES: 4,028.00 SF / 300.00 SF = 13 PARKING SPACES (WAIVED)

ZR25-23 RESIDENTIAL PARKING REQUIREMENT
R6 QUALITY HOUSING: 50%

PROPOSED DWELLING UNITS: 42 DWELLING UNITS
REQUIRED RESIDENTIAL PARKING: 42 UNITS x 0.50 = 21 PARKING SPACES
PROPOSED: 23 RESIDENTIAL PARKING SPACES



P 1 / Z101 PLOT PLAN
1/8"=1'-0"

CONSULTANTS:

MEP:

STRUCTURAL:

SITE:

NO.	DATE	DESCRIPTION OF REVISION
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mss@mssarch.com

CLIENT:
MR. DHARMINDAR SING
178-01 147 AVENUE
QUEENS, NY

DOB STAMP & SIGNATURE:

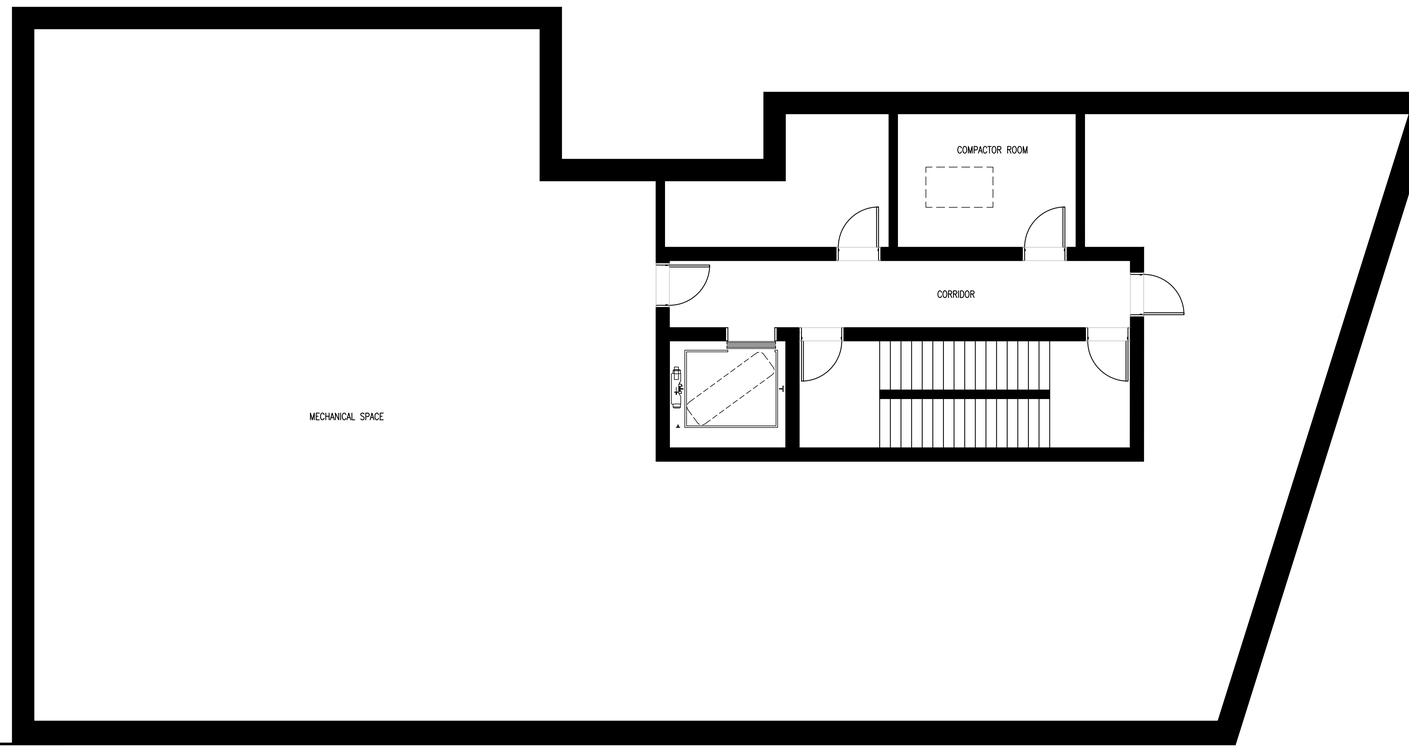
JOB #

PROJECT:
MIXED USE DEVELOPMENT
178-01 147 AVENUE
QUEENS, NY

TITLE:
PLOT PLAN
ZONING ANALYSIS

SEAL & SIGNATURE:

DATE: 11.29.17
PROJECT NO.: MSS700
DRAWING BY: AL
CHK. BY: MS
DWG NO:
Z-101.00
CAD FILE NO: 1 OF 7
Z:\1-MANISH\MSS-700



P 1
A101 CELLAR FLOOR PLAN
3/16"=1'-0"

CONSULTANTS:

MEP:

STRUCTURAL:

SITE:

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MR. DHARMINDAR SING
178-01 147 AVENUE
QUEENS, NY

DOB STAMP & SIGNATURE:

JOB #

PROJECT:
MIXED USE DEVELOPMENT
178-01 147 AVENUE
QUEENS, NY

TITLE:
FLOOR PLAN

SEAL & SIGNATURE:

DATE: 08.01.17
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CHK. BY: MS
DWG NO:
A-101.00
CAD FILE NO: 2 OF 7
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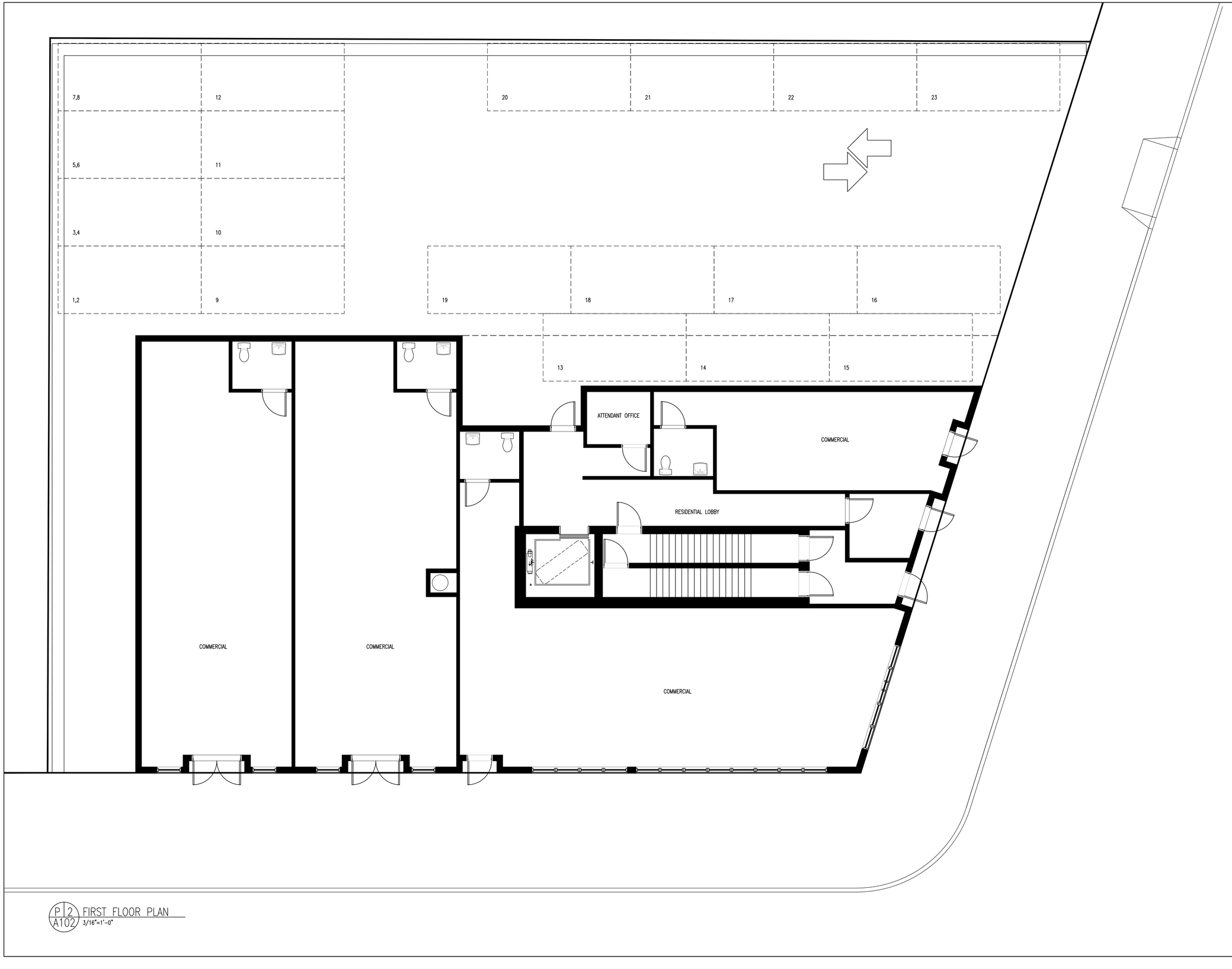

P 2
A102 FIRST FLOOR PLAN
3/16"=1'-0"

CONSULTANTS:

MEP:

STRUCTURAL:

SITE:

NO.	DATE	DESCRIPTION OF REVISION
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DOB STAMP & SIGNATURE:

JOB #

PROJECT:
MIXED USE DEVELOPMENT
178-01 147 AVENUE
QUEENS, NY

TITLE:
FLOOR PLAN

SEAL & SIGNATURE:

DATE: 08.01.17
PROJECT NO.: MSS700
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CHK. BY: MS
DWG NO:
A-102.00
CAD FILE NO: 3 OF 7
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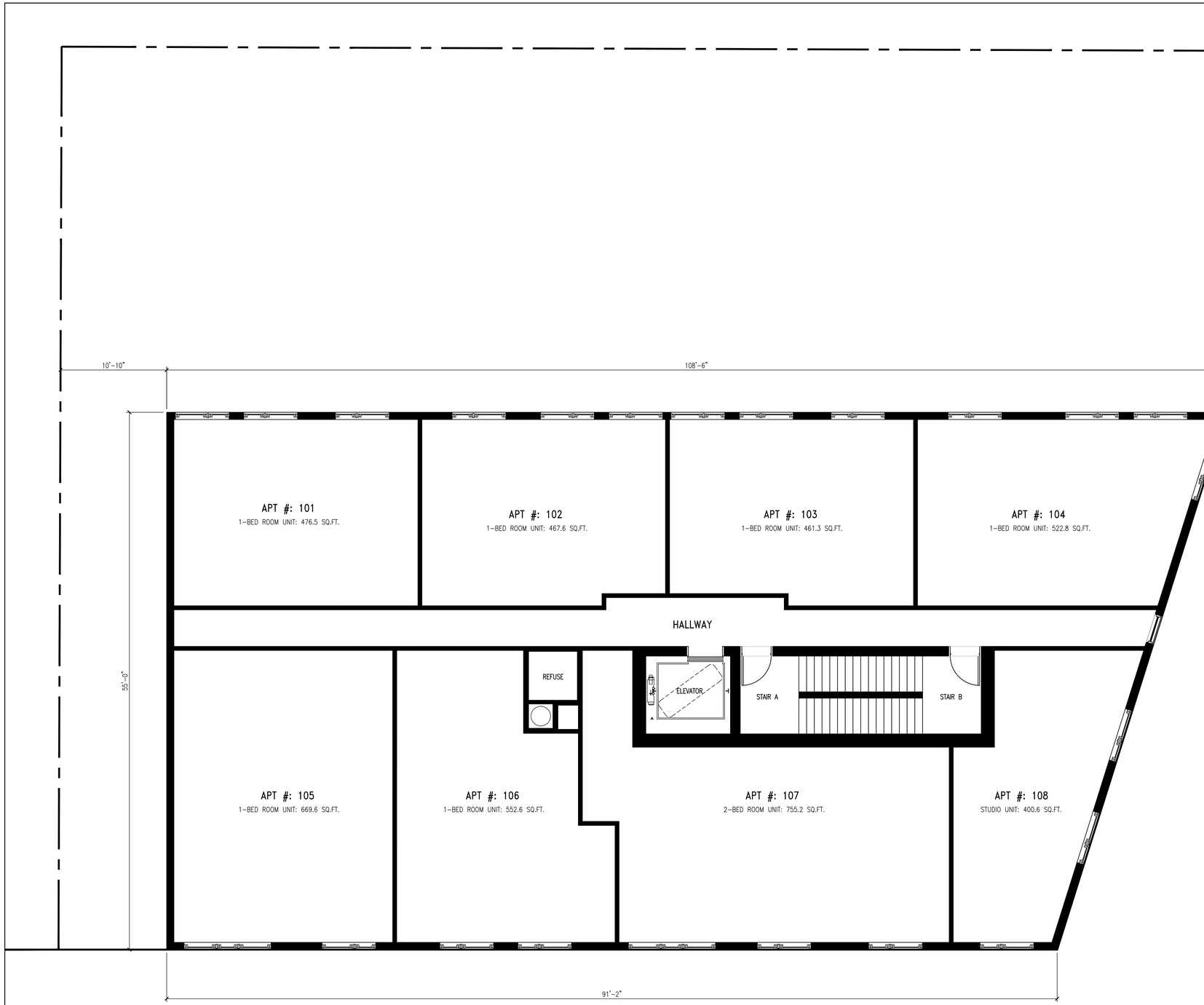

P 3
A103
SECOND THROUGH FOURTH FLOOR PLAN
3/16"=1'-0"

8- UNITS/ FLOOR
6- 1 BEDROOM UNIT
1- 2 BEDROOM UNIT
1- STUDIO UNIT

CONSULTANTS:

MEP:

STRUCTURAL:

SITE:

NO.	DATE	DESCRIPTION OF REVISION
–	–	–
–	–	–
–	–	–
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mss@mssarch.com

CLIENT:
MR. DHARMINDAR SING
178-01 147 AVENUE
QUEENS, NY

DOB STAMP & SIGNATURE:

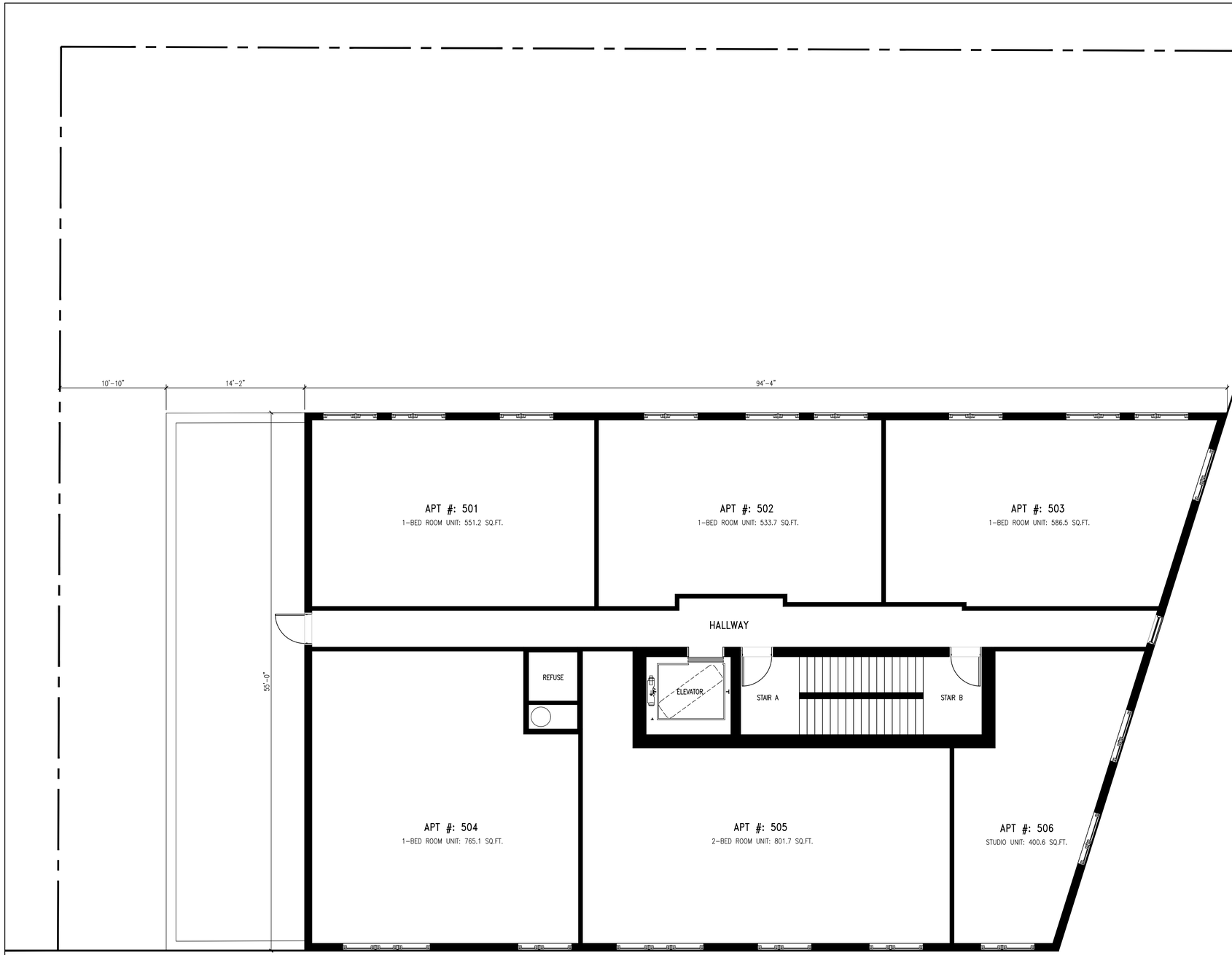
JOB #

PROJECT:
MIXED USE DEVELOPMENT
178-01 147 AVENUE
QUEENS, NY

TITLE:
FLOOR PLAN

SEAL & SIGNATURE:

DATE: 08.01.17
PROJECT NO.: MSS700
DRAWING BY: AJ
CHK. BY: MS
DWG NO:
A-103.00
CAD FILE NO: 4 OF 7
Z:\1-MANISH\MSS-700



P 4
A104
FIFTH THROUGH SIXTH FLOOR PLAN
3/16"=1'-0"

6- UNITS/ FLOOR
4- 1 BEDROOM UNIT
1- 2 BEDROOM UNIT
1- STUDIO UNIT

CONSULTANTS:

MEP:

STRUCTURAL:

SITE:

NO.	DATE	DESCRIPTION OF REVISION
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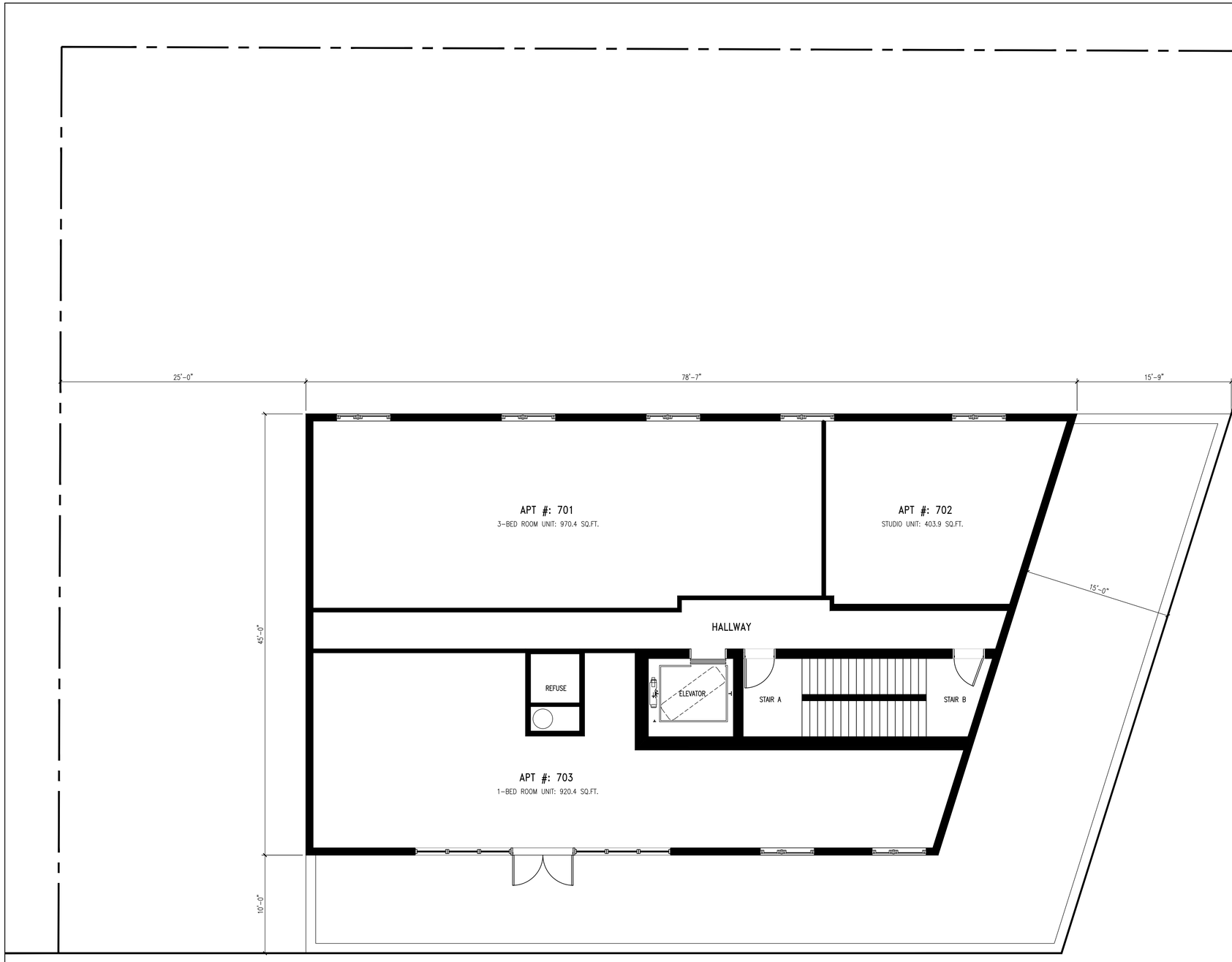
JOB #

PROJECT:
MIXED USE DEVELOPMENT
178-01 147 AVENUE
QUEENS, NY

TITLE:
FLOOR PLAN

SEAL & SIGNATURE:

DATE: 08.01.17
PROJECT NO.: MSS700
DRAWING BY: AJ
CHK. BY: MS
DWG NO:
A-104.00
CAD FILE NO: 5 OF 7
Z:\1-MANISH\MSS-700



P|5 A105 SEVENTH THROUGH EIGHTH FLOOR PLAN
3/16"=1'-0"

3- UNITS
1- 1 BEDROOM UNIT
1- 3 BEDROOM UNIT
1- STUDIO UNIT

CONSULTANTS:

MEP:

STRUCTURAL:

SITE:

NO.	DATE	DESCRIPTION OF REVISION
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–	–	–
–	–	–
–	–	–
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DOB STAMP & SIGNATURE:

JOB #

PROJECT:
MIXED USE DEVELOPMENT
178-01 147 AVENUE
QUEENS, NY

TITLE:
FLOOR PLAN

SEAL & SIGNATURE:

DATE: 08.01.17
PROJECT NO.: MSS700
DRAWING BY: AJ
CHK. BY: MS
DWG NO:
A-105.00
CAD FILE NO: 6 OF 7
Z:\1-MANISH\MSS-700



E 1 / A201 FRONT ELEVATION, GUY BREWER AVENUE
3/16"=1'-0"

CONSULTANTS:

MEP:

STRUCTURAL:

SITE:

NO.	DATE	DESCRIPTION OF REVISION
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QUEENS, NY

DOB STAMP & SIGNATURE:

JOB #

PROJECT:
MIXED USE DEVELOPMENT
178-01 147 AVENUE
QUEENS, NY

TITLE:
ELEVATION

SEAL & SIGNATURE:

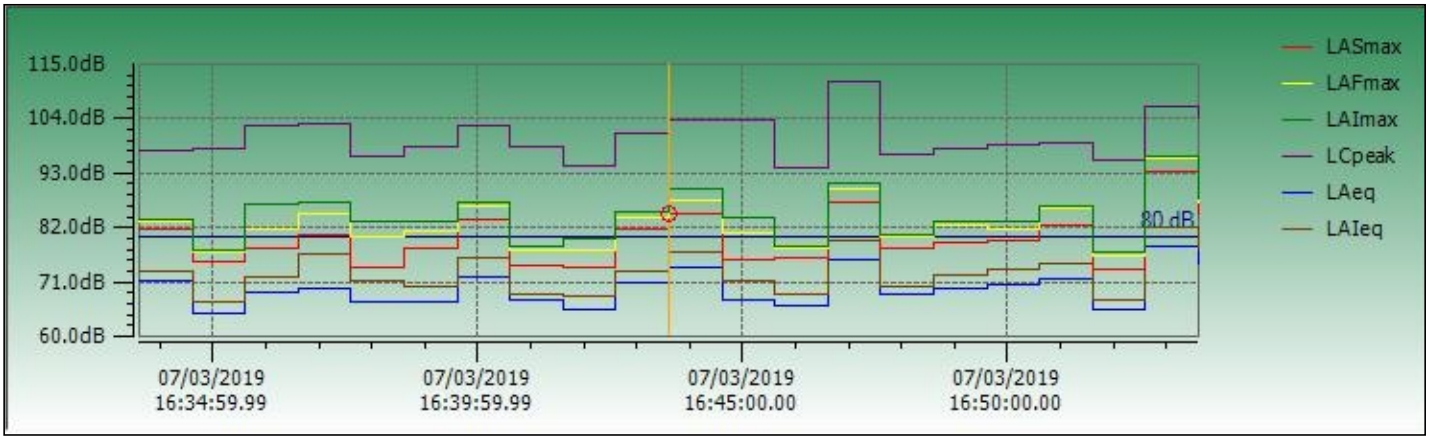
DATE: 08.01.17
PROJECT NO.: MSS700
DRAWING BY: AJ
CHK. BY: MS
DWG NO:
A-201.00
CAD FILE NO: 7 OF 7
Z:\1-MANISH\MSS-700

Appendix C: Noise Backup and Calibration Certificates

146-93 Grey Beaver Blvd.	Cars	SUVs	Trucks	Busses
Loc. 1 7:57 - 8:17 Run 95	67	83	18	23
Loc. 2 8:20 - 8:40 Run 96	54	66	16	17
Run 98 Location 1 12:01 - 12:21	56	71	22	19
Location 2 12:28 - 12:48	41	51	20	10
Location 1 16:33 - 16:53	66	89	17	15
Location 2 16:57 - 15:17	71	92	19	11

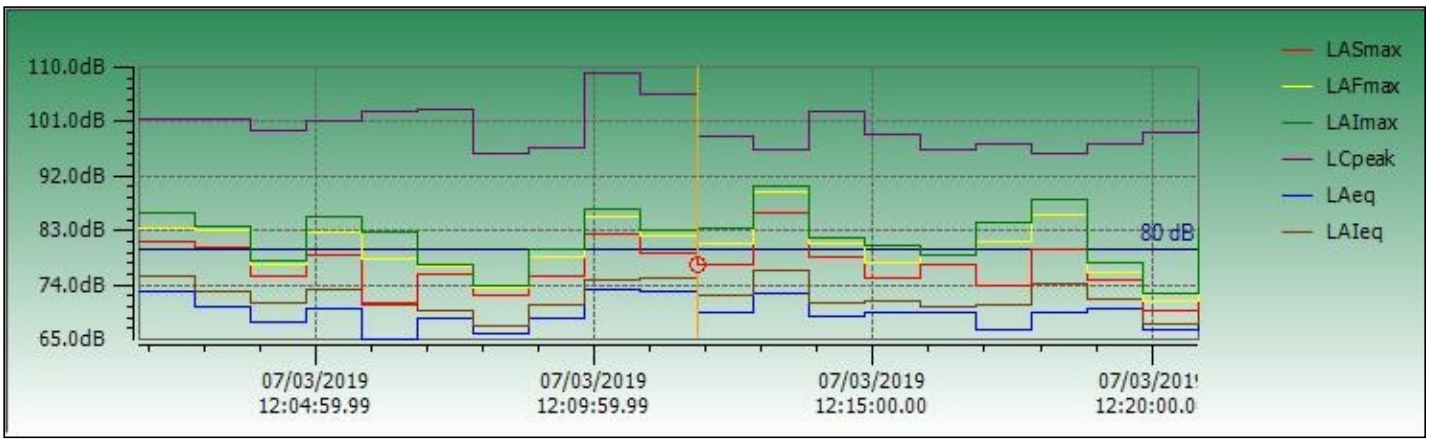
Casella # 1274486 Calibrator # 2045304

Instrument Model	CEL-633C		
LAeq	71.3 dB	Battery Low	No
LCpeak with Time	111.6 dB (3/7/2019 4:47:06 PM)	Duration	00:20:40 HH:MM:SS
Lepd(Projected)	71.3 dB	End Date & Time	3/7/2019 4:54:16 PM
Lex8h(Projected)	71.3 dB	Overload	No
LAFmax with Time	96.1 dB (3/7/2019 4:53:01 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	96.3 dB (3/7/2019 4:53:01 PM)	Response	Random
LAFmin with Time	49.5 dB (3/7/2019 4:33:37 PM)	Run Number	102
LAImin with Time	49.9 dB (3/7/2019 4:33:37 PM)	Serial Number	1274486
LZeq	82.2 dB	Start Date & Time	3/7/2019 4:33:36 PM
LCeq	80.1 dB	Site	Unallocated
LCeq-LAeq	8.8 dB	Location	Unallocated
LAleq	74.9 dB	Person	Unallocated
LAE	102.3 dB	Process	Unallocated
Calibration (Before) Date	3/7/2019 4:33:19 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	64 dB
Calibration (After) Date	3/7/2019 5:20:35 PM	LAF 90%	57.5 dB
Calibration Drift	-0.2 dB	LAF 95%	56 dB
LAF 10%	73 dB		
Notes			



Instrument Model	CEL-633C		
LAeq	70 dB	Battery Low	Yes
LCpeak with Time	108.9 dB (3/7/2019 12:10:03 PM)	Duration	00:20:00 HH:MM:SS
Lepd(Projected)	70 dB	End Date & Time	3/7/2019 12:21:50 PM
Lex8h(Projected)	70 dB	Overload	No
LAFmax with Time	89.5 dB (3/7/2019 12:13:36 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	90.3 dB (3/7/2019 12:13:36 PM)	Response	Random
LAFmin with Time	53.5 dB (3/7/2019 12:06:00 PM)	Run Number	98

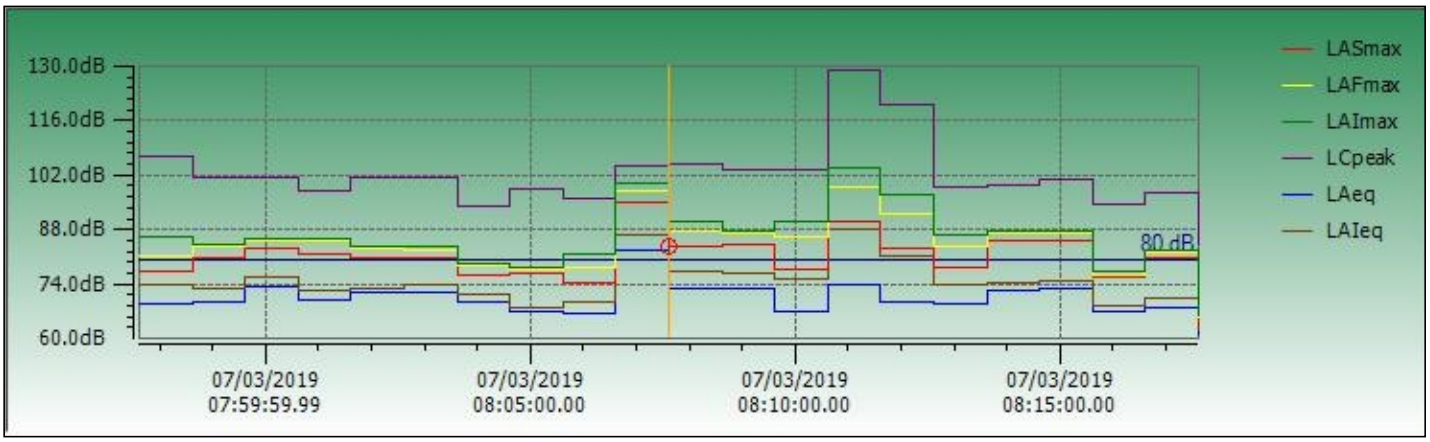
LAImin with Time	54.4 dB (3/7/2019 12:17:37 PM)	Serial Number	1274486
LZeq	87.5 dB	Start Date & Time	3/7/2019 12:01:50 PM
LCeq	80.9 dB	Site	Unallocated
LCeq-LAeq	10.9 dB	Location	Unallocated
LAleq	72.6 dB	Person	Unallocated
LAE	100.7 dB	Process	Unallocated
Calibration (Before) Date	3/7/2019 11:55:22 AM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	66 dB
Calibration (After) Date	3/7/2019 12:27:48 PM	LAF 90%	60.5 dB
Calibration Drift	0.3 dB	LAF 95%	59 dB
LAF 10%	73 dB		
Notes			



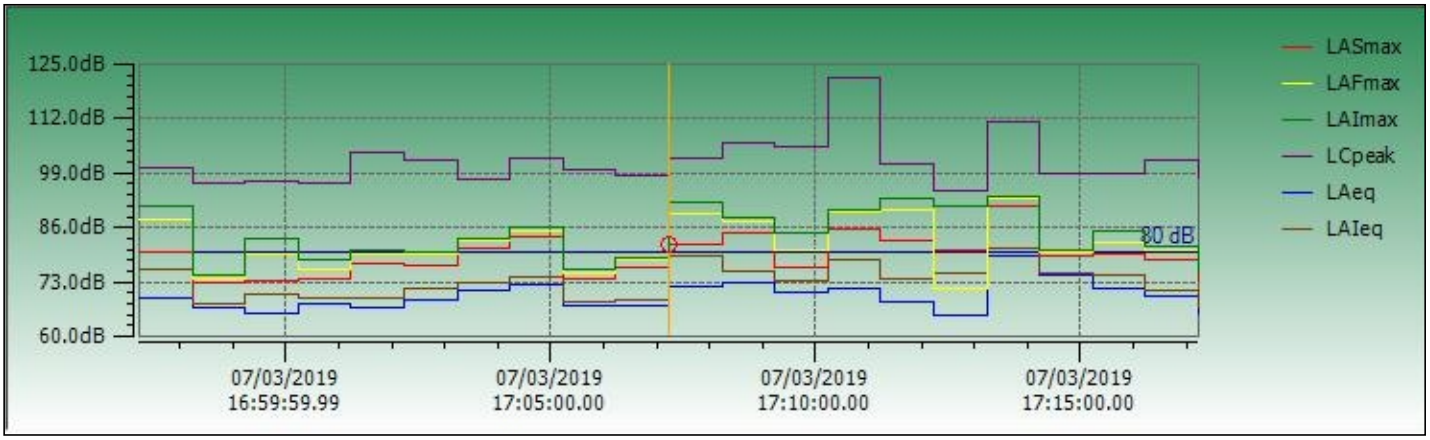
Instrument Model	**CEL-633C**		
LAeq	73.2 dB	Battery Low	No
LCpeak with Time	129.2 dB (3/7/2019 8:11:22 AM)	Duration	00:20:06 HH:MM:SS
Lepd(Projected)	73.2 dB	End Date & Time	3/7/2019 8:17:43 AM
Lex8h(Projected)	73.2 dB	Overload	No
LAFmax with Time	98.8 dB (3/7/2019 8:11:22 AM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	103.9 dB (3/7/2019 8:11:22 AM)	Response	Random
LAFmin with Time	49.8 dB (3/7/2019 8:09:49 AM)	Run Number	95
LAImin with Time	51.4 dB (3/7/2019 8:05:38 AM)	Serial Number	1274486
LZeq	81.1 dB	Start Date & Time	3/7/2019 7:57:37 AM
LCeq	78.1 dB	Site	Unallocated
LCeq-LAeq	4.9 dB	Location	Unallocated
LAleq	79.1 dB	Person	Unallocated
LAE	104 dB	Process	Unallocated
Calibration (Before) Date	3/7/2019 7:53:05 AM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	63.5 dB
Calibration (After) Date	3/7/2019 11:55:22 AM	LAF 90%	57.5 dB

Calibration Drift	-0.1 dB	LAF 95%	55.5 dB
LAF 10%	73.5 dB		

Notes

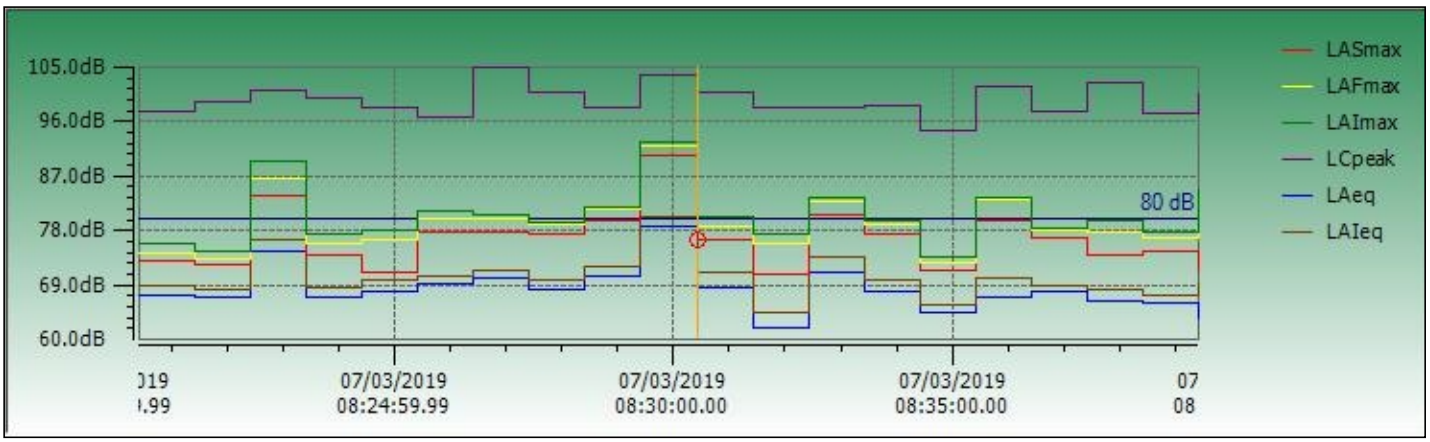


Instrument Model	CEL-633C		
LAeq	71.4 dB	Battery Low	No
LCpeak with Time	121.9 dB (3/7/2019 5:10:58 PM)	Duration	00:20:50 HH:MM:SS
Lepd(Projected)	71.4 dB	End Date & Time	3/7/2019 5:18:04 PM
Lex8h(Projected)	71.4 dB	Overload	No
LAFmax with Time	92.9 dB (3/7/2019 5:13:43 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	93.4 dB (3/7/2019 5:13:43 PM)	Response	Random
LAFmin with Time	54.0 dB (3/7/2019 5:08:57 PM)	Run Number	103
LAImin with Time	55.0 dB (3/7/2019 5:05:59 PM)	Serial Number	1274486
LZeq	89.4 dB	Start Date & Time	3/7/2019 4:57:14 PM
LCeq	82.7 dB	Site	Unallocated
LCeq-LAeq	11.3 dB	Location	Unallocated
LAleq	74.7 dB	Person	Unallocated
LAE	102.4 dB	Process	Unallocated
Calibration (Before) Date	3/7/2019 4:33:19 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	65.5 dB
Calibration (After) Date	3/7/2019 5:20:35 PM	LAF 90%	60 dB
Calibration Drift	-0.2 dB	LAF 95%	59 dB
LAF 10%	73.5 dB		
Notes			



Instrument Model	CEL-633C		
LAeq	70.2 dB	Battery Low	Yes
LCpeak with Time	105.0 dB (3/7/2019 8:27:14 AM)	Duration	00:20:00 HH:MM:SS
Lepd(Projected)	70.2 dB	End Date & Time	3/7/2019 8:40:25 AM
Lex8h(Projected)	70.2 dB	Overload	No
LAFmax with Time	92.0 dB (3/7/2019 8:29:40 AM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	92.5 dB (3/7/2019 8:29:40 AM)	Response	Random
LAFmin with Time	50.9 dB (3/7/2019 8:38:34 AM)	Run Number	96

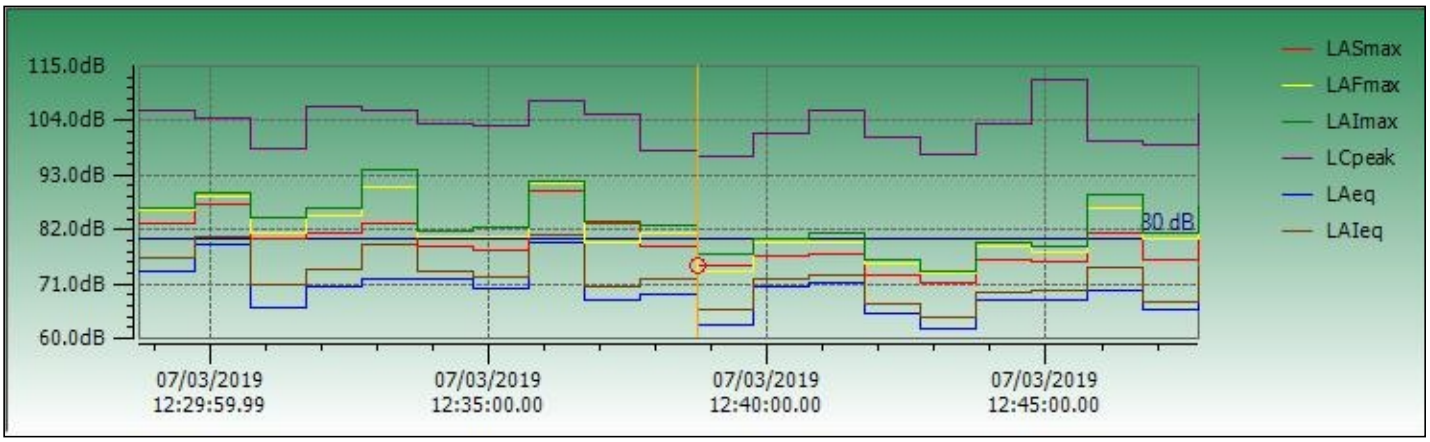
LAImin with Time	52.3 dB (3/7/2019 8:38:31 AM)	Serial Number	1274486
LZeq	87.8 dB	Start Date & Time	3/7/2019 8:20:25 AM
LCeq	79.3 dB	Site	Unallocated
LCeq-LAeq	9.1 dB	Location	Unallocated
LAleq	72.1 dB	Person	Unallocated
LAE	101 dB	Process	Unallocated
Calibration (Before) Date	3/7/2019 7:53:05 AM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	65 dB
Calibration (After) Date	3/7/2019 11:55:22 AM	LAF 90%	59.5 dB
Calibration Drift	-0.1 dB	LAF 95%	58 dB
LAF 10%	71.5 dB		
Notes			



Instrument Model	**CEL-633C**		
LAeq	72.2 dB	Battery Low	Yes
LCpeak with Time	112.4 dB (3/7/2019 12:44:57 PM)	Duration	00:20:00 HH:MM:SS
Lepd(Projected)	72.2 dB	End Date & Time	3/7/2019 12:48:44 PM
Lex8h(Projected)	72.2 dB	Overload	No
LAFmax with Time	91.2 dB (3/7/2019 12:36:14 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	94.0 dB (3/7/2019 12:32:54 PM)	Response	Random
LAFmin with Time	50.8 dB (3/7/2019 12:39:17 PM)	Run Number	100
LAImin with Time	51.3 dB (3/7/2019 12:39:17 PM)	Serial Number	1274486
LZeq	89.9 dB	Start Date & Time	3/7/2019 12:28:44 PM
LCeq	82.4 dB	Site	Unallocated
LCeq-LAeq	10.2 dB	Location	Unallocated
LAleq	74.7 dB	Person	Unallocated
LAE	103 dB	Process	Unallocated
Calibration (Before) Date	3/7/2019 12:27:48 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	65 dB
Calibration (After) Date	3/7/2019 4:33:19 PM	LAF 90%	57.5 dB

Calibration Drift	-0.4 dB	LAF 95%	56 dB
LAF 10%	75 dB		

Notes



Appendix D: Jamaica Bay Watershed and Waterfront Revitalization Program Consistency Assessment Forms

FOR INTERNAL USE ONLY	WRP No.
Date Received:	DOS No.

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)* which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: Ranbir LLC

Name of Applicant Representative: Dharminder Singh

Address: 206 Willets Lane

Telephone: 718 666 1961 Email: OMGE2008@yahoo.com

Project site owner (if different than above): _____

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The applicant, Ranbir LLC, requests approval of a zoning map and zoning text amendment to facilitate the development of Block 13354, Lot 12 (the project site) with a eight-story, 37,475-gross-square-foot (gsf) mixed commercial and residential building (the proposed project) in the Springfield Gardens neighborhood of Queens, Community District 13.

The zoning map amendment would rezone Block 13354, Lots 12, 19, 21, 22, and 23 (the Affected Area) from an R3-2 zoning district to an R6A/C2-2 zoning district. The zoning text amendment would establish an area coterminous with the rezoning area as a Mandatory Inclusionary Housing (MIH) area.

2. Purpose of activity

The Applicant proposes to develop the site with an eight-story plus cellar 37,475 GSF (34,503 ZSF; 3.35 FAR) mixed-use building with ground floor local retail and floors two through eight residential apartments. Approximately 33,447 GSF of residential floor area and 42 dwelling units are proposed along with 23 accessory residential parking spaces. The ground floor commercial space will be approximately 4,028 GSF.

C. PROJECT LOCATION

Borough: Queens Tax Block/Lot(s): Block 13354, Lot 12

Street Address: 146-03 Guy R. Brewer Boulevard

Name of water body (if located on the waterfront): N/A

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

- ☐ City Map Amendment
- ☑ Zoning Map Amendment
- ☑ Zoning Text Amendment
- ☐ Site Selection – Public Facility
- ☐ Housing Plan & Project
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____
- ☐ Zoning Certification
- ☐ Zoning Authorizations
- ☐ Acquisition – Real Property
- ☐ Disposition – Real Property
- ☐ Other, explain: _____
- ☐ Concession
- ☐ UDAAP
- ☐ Revocable Consent
- ☐ Franchise

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- ☐ Legislation
- ☐ Rulemaking
- ☐ Construction of Public Facilities
- ☐ 384 (b) (4) Approval
- ☐ Other, explain: _____
- ☐ Funding for Construction, specify: _____
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☐ Permits, specify: _____

State Actions/Approvals/Funding

- ☐ State permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

- ☐ Federal permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a Joint Application for Permits? ☐ Yes ☑ No

E. LOCATION QUESTIONS

1.	Does the project require a waterfront site?	☐ Yes	☑ No
2.	Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters?	☐ Yes	☑ No
3.	Is the project located on publicly owned land or receiving public assistance?	☐ Yes	☑ No
4.	Is the project located within a FEMA 1% annual chance floodplain? *(6.2)*	☐ Yes	☑ No
5.	Is the project located within a FEMA 0.2% annual chance floodplain? *(6.2)*	☐ Yes	☑ No
6.	Is the project located adjacent to or within a special area designation? *See Maps – Part III of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).*	☐ Yes	☑ No

- ☐ Significant Maritime and Industrial Area (SMIA) *(2.1)*
- ☐ Special Natural Waterfront Area (SNWA) *(4.1)*
- ☐ Priority Maritime Activity Zone (PMAZ) *(3.5)*
- ☐ Recognized Ecological Complex (REC) *(4.4)*
- ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) *(2.2, 4.2)*

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder *or* Not Applicable (N/A). *For more information about consistency review process and determination, see* ***Part I*** *of the NYC Waterfront Revitalization Program. When assessing each policy, review the full policy language, including all sub-policies, contained within* ***Part II*** *of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).*

For those policies checked Promote *or* Hinder, *provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.*

		Promote	Hinder	N/A
1	**Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**	☑	☐	☐
1.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☑	☐	☐
1.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☐	☐	☑
1.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☑	☐	☐
1.4	In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☑
1.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☐	☐	☑

		Promote	Hinder	N/A
2	**Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.**	☐	☐	☑
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	☐	☐	☑
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	☐	☐	☑
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	☐	☐	☑
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	☐	☐	☑
3	**Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.**	☐	☐	☑
3.1.	Support and encourage in-water recreational activities in suitable locations.	☐	☐	☑
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	☐	☐	☑
3.3	Minimize conflicts between recreational boating and commercial ship operations.	☐	☐	☑
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	☐	☐	☑
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	☐	☐	☑
4	**Protect and restore the quality and function of ecological systems within the New York City coastal area.**	☑	☐	☐
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	☐	☐	☑
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	☐	☐	☑
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	☐	☐	☑
4.5	Protect and restore tidal and freshwater wetlands.	☐	☐	☑
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	☐	☐	☑
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	☐	☐	☑
4.8	Maintain and protect living aquatic resources.	☐	☐	☑

		Promote	Hinder	N/A
5	**Protect and improve water quality in the New York City coastal area.**	☐	☐	☑
5.1	Manage direct or indirect discharges to waterbodies.	☐	☐	☑
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	☐	☐	☑
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	☐	☐	☑
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	☐	☐	☑
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	☐	☐	☑
6	**Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.**	☐	☐	☑
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	☐	☐	☑
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in *New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the city's Coastal Zone.	☐	☐	☑
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	☐	☐	☑
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	☐	☐	☑
7	**Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**	☐	☐	☑
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	☐	☐	☑
7.2	Prevent and remediate discharge of petroleum products.	☐	☐	☑
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	☐	☐	☑
8	**Provide public access to, from, and along New York City's coastal waters.**	☐	☐	☑
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	☐	☐	☑
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	☐	☐	☑
8.3	Provide visual access to the waterfront where physically practical.	☐	☐	☑
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	☐	☐	☑

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	☐	☐	☑
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	☐	☐	☑
9	**Protect scenic resources that contribute to the visual quality of the New York City coastal area.**	☐	☐	☑
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	☐	☐	☑
9.2	Protect and enhance scenic values associated with natural resources.	☐	☐	☑
10	**Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.**	☐	☐	☑
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	☐	☐	☑
10.2	Protect and preserve archaeological resources and artifacts.	☐	☐	☑

G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: Amber Kartalyan - Equity Environmental Engineering

Address: 500 International Drive, Suite 150 Mount Olive NJ 07828

Telephone: 973-527-7451 X 204 Email: amber.kartalyan@equityenvironmental.co

Applicant/Agent's Signature: Amber Kartalyan Digitally signed by Amber Kartalyan Date: 2021.09.21 20:43:54 -04'00'

Date: 9/21/21

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the NYS Department of State Office of Planning and Development and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning
Waterfront and Open Space Division
120 Broadway, 31st Floor
New York, New York 10271
212-720-3696
wrp@planning.nyc.gov
www.nyc.gov/wrp

New York State Department of State
Office of Planning and Development
Suite 1010
One Commerce Place, 99 Washington Avenue
Albany, New York 12231-0001
518-474-6000
www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☐ Copy of original signed NYC Consistency Assessment Form
- ☐ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☐ Environmental Review documents
- ☐ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.
- ☐ Policy 6.2 Flood Elevation worksheet, if applicable. For guidance on applicability, refer to the WRP Policy 6.2 Guidance document available at www.nyc.gov/wrp

Print Form

Jamaica Bay Watershed Protection Plan
Project Tracking Form

The Jamaica Bay Watershed Protection Plan, developed pursuant to Local Law 71 of 2005, mandates that the New York City Department of Environmental Protection (DEP) work with the Mayor's Office of Environmental Coordination (MOEC) to review and track proposed development projects in the Jamaica Bay Watershed (http://www.nyc.gov/html/oec/downloads/pdf/ceqr/Jamaica_Bay_Watershed_Map.jpg) that are subject to CEQR in order to monitor growth and trends. If a project is located in the Jamaica Bay Watershed, (the applicant should complete this form and submit it to DEP and MOEC. This form must be updated with any project modifications and resubmitted to DEP and MOEC.

The information below will be used for tracking purposes only. It is not intended to indicate whether further CEQR analysis is needed to substitute for the guidance offered in the relevant chapters of the CEQR Technical Manual.

A. GENERAL PROJECT INFORMATION

1. CEQR Number: Pending 1a. Modification ☐
2. Project Name: 146-93 Guy R. Brewer Boulevard Rezoning
3. Project Description:

The rezoning of 146-93 Guy Brewer Blvd to facilitate the construction of an eight-story plus cellar, 37,475 GSF mixed residential and commercial building. The new building would include a set aside for mandatory inclusionary housing, with 20% of the floor area set aside at or below 80% of the AMI.

4. Project Sponsor: Ranbir LLC
5. Required approvals: Zoning Map Amendment; Zoning Text Amendment; ULURP
6. Project schedule (build year and construction schedule): 2024

B. PROJECT LOCATION:

1. Street address: 146-93 Guy Brewer Boulevard
2. Tax block(s): 13354 Tax Lot(s): 12, 19, 21, 22, and 23
3. Identify existing land use and zoning on the project site: R3-2; commercial
4. Identify proposed land use and zoning on the project site: R6A/C2-2; residential/commercial
5. Identify land use of adjacent sites (include any open space): Mixed-use commercial/residential, res
6. Describe existing density on the project site and the proposed density:

Existing Condition	Proposed Condition
Vacant Lot	37,475 GSF; 3.35 FAR

7. Is project within 100 or 500 year floodplain (specify)? ☐ **100 Year** ☐ **500 Year** ☒ **No**

C. GROUND AND GROUNDWATER

1. Total area of in-ground disturbance, if any (in square feet): 10,825
2. Will soil be removed (if so, what is the volume in cubic yards)? 99,276
3. Subsurface soil classification:
   (per the New York City Soil and Water Conservation Board): Urban land-Flatbush Complex; Urban
4. If project would change site grade, provide land contours (**attach** map showing existing in 1' contours and proposed in 1' contours).
5. Will groundwater be used (list volumes/rates)? ☐ **Yes** ☒ **No**

   Volumes: Rates:
6. Will project involve dewatering (list volumes/rates)? ☐ **Yes** ☒ **No**

   Volumes: Rates:
7. Describe site elevation above seasonal high groundwater:

   Site elevation is 0 to 190 feet per USDA NRSC mapper, with depth to groundwater greater than 80 inches.

D. HABITAT

1. Will vegetation be removed, particularly native vegetation? ☐ **Yes** ☒ **No**

   If YES,
   - **Attach** a detailed list (species, size and location on site) of vegetation to be removed (including trees >2" caliper, shrubs, understory planting and groundcover).
   - **List** species to remain on site.
   - **Provide** a detailed list (species and sizes) of proposed landscape restoration plan (including any wetland restoration plans).
2. Is the site used or inhabited by any rare, threatened or endangered species? ☐ **Yes** ☒ **No**
3. Will the project affect habitat characteristics? ☐ **Yes** ☒ **No**

   If YES, describe existing wildlife use and habitat classification using "Ecological Communities of New York State." at http://www.dec.ny.gov/animals/29392.html.
4. Will pesticides, rodenticides or herbicides be used during construction? ☐ **Yes** ☒ **No**

   If YES, estimate quantity, area and duration of application.
5. Will additional lighting be installed? ☒ **Yes** ☐ **No**

   If YES and near existing open space or natural areas, what measures would be taken to reduce light penetration into these areas?

   Not near existing open space or natural areas

E. SURFACE COVERAGE AND CHARACTERISTICS

(describe the following for both the existing and proposed condition):

	Existing Condition	Proposed Condition
1. ***Surface area:***		
Roof:	0	10,825 gsf
Pavement/walkway:	10,825 gsf	None
Grass/softscape:	None	None
Other (describe):	None	None
2. ***Wetland*** (regulated or non-regulated) area and classification:	N/A	N/A
3. ***Water surface area:***	N/A	N/A

4. ***Stormwater management*** (describe):

Existing – how is the site drained?

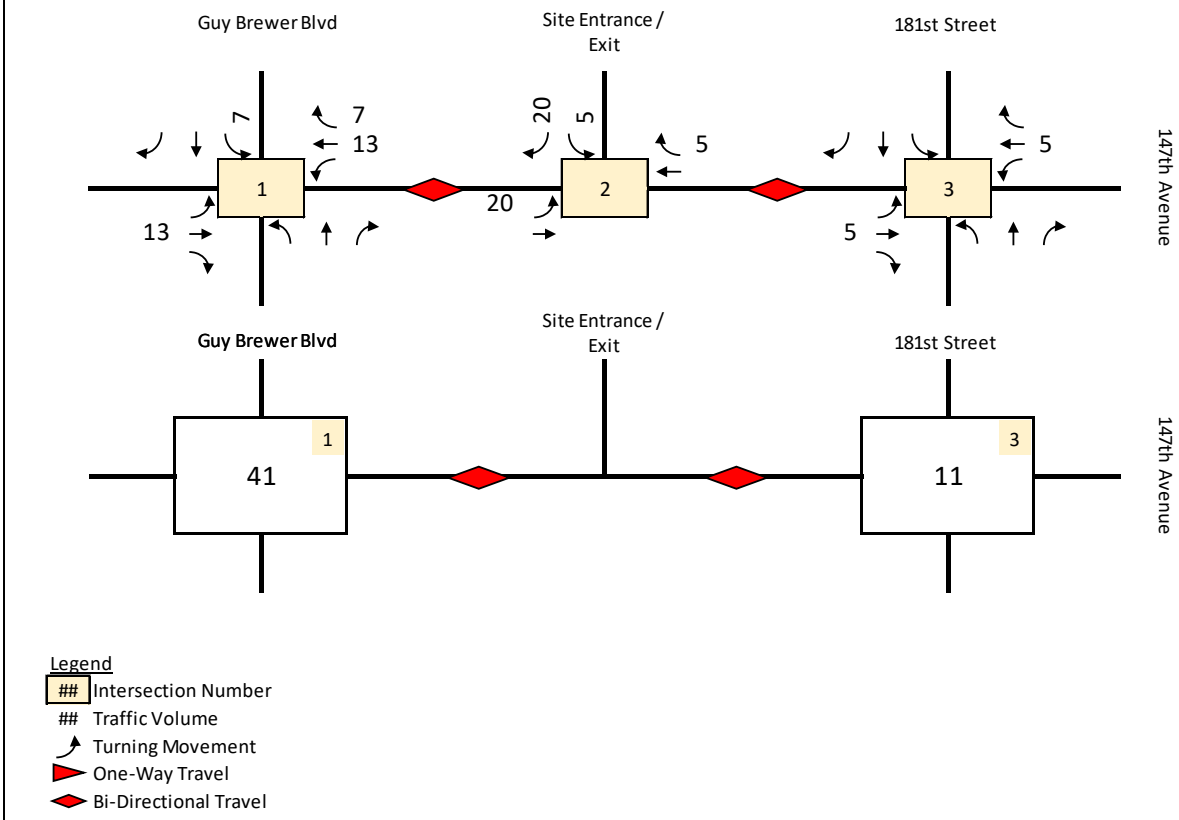
Combined city sewers

Proposed – describe, including any infrastructure improvements necessary off-site:

Combined city sewers

Appendix E: Transportation Backup

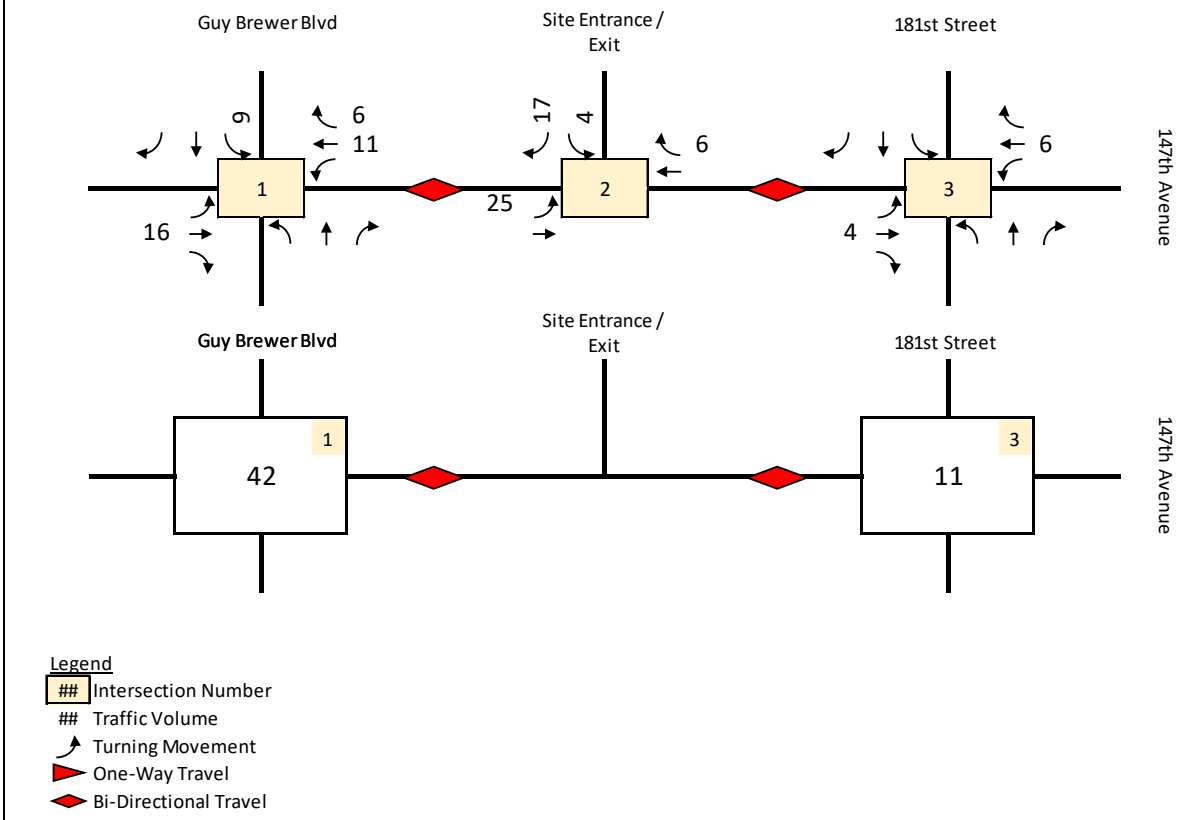
Weekday Midday Vehicles
Total/Intersection



Legend

##	Intersection Number
##	Traffic Volume
	Turning Movement
	One-Way Travel
	Bi-Directional Travel

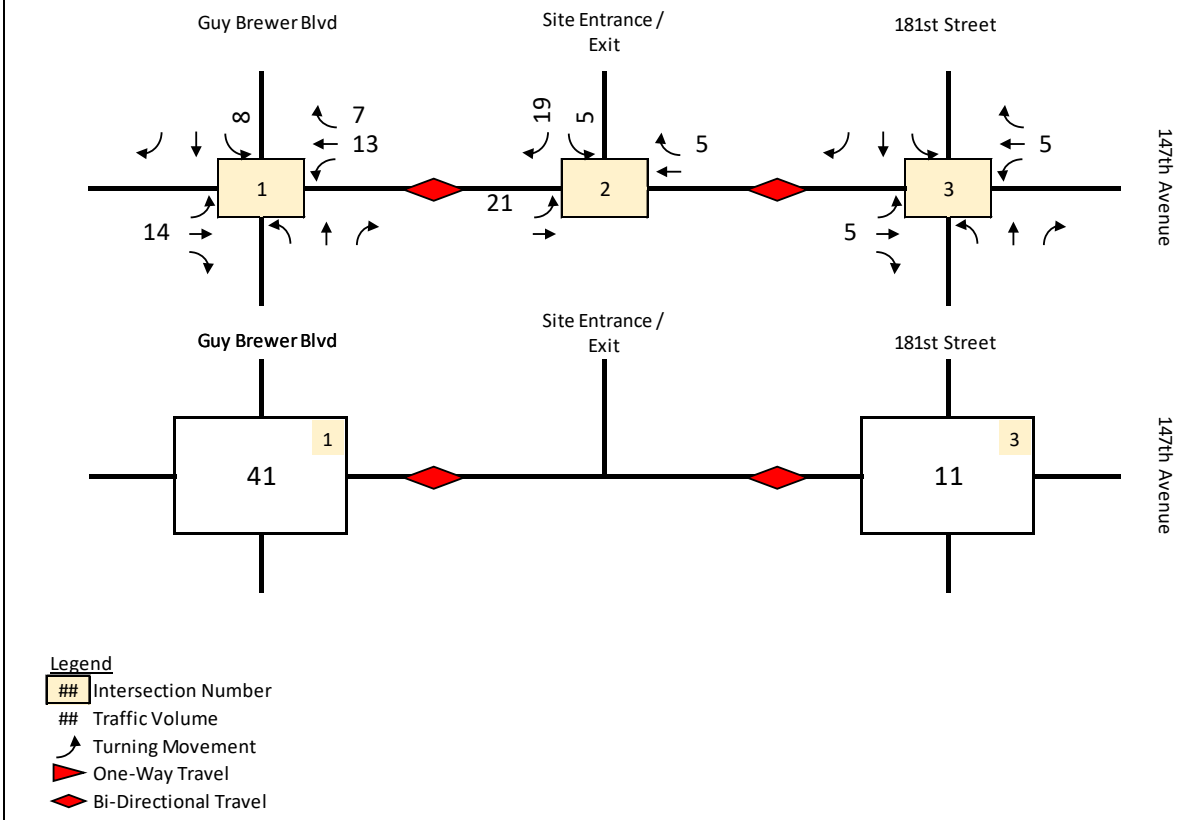
Weekday PM Vehicles
Total/Intersection



Legend

##	Intersection Number
##	Traffic Volume
	Turning Movement
	One-Way Travel
	Bi-Directional Travel

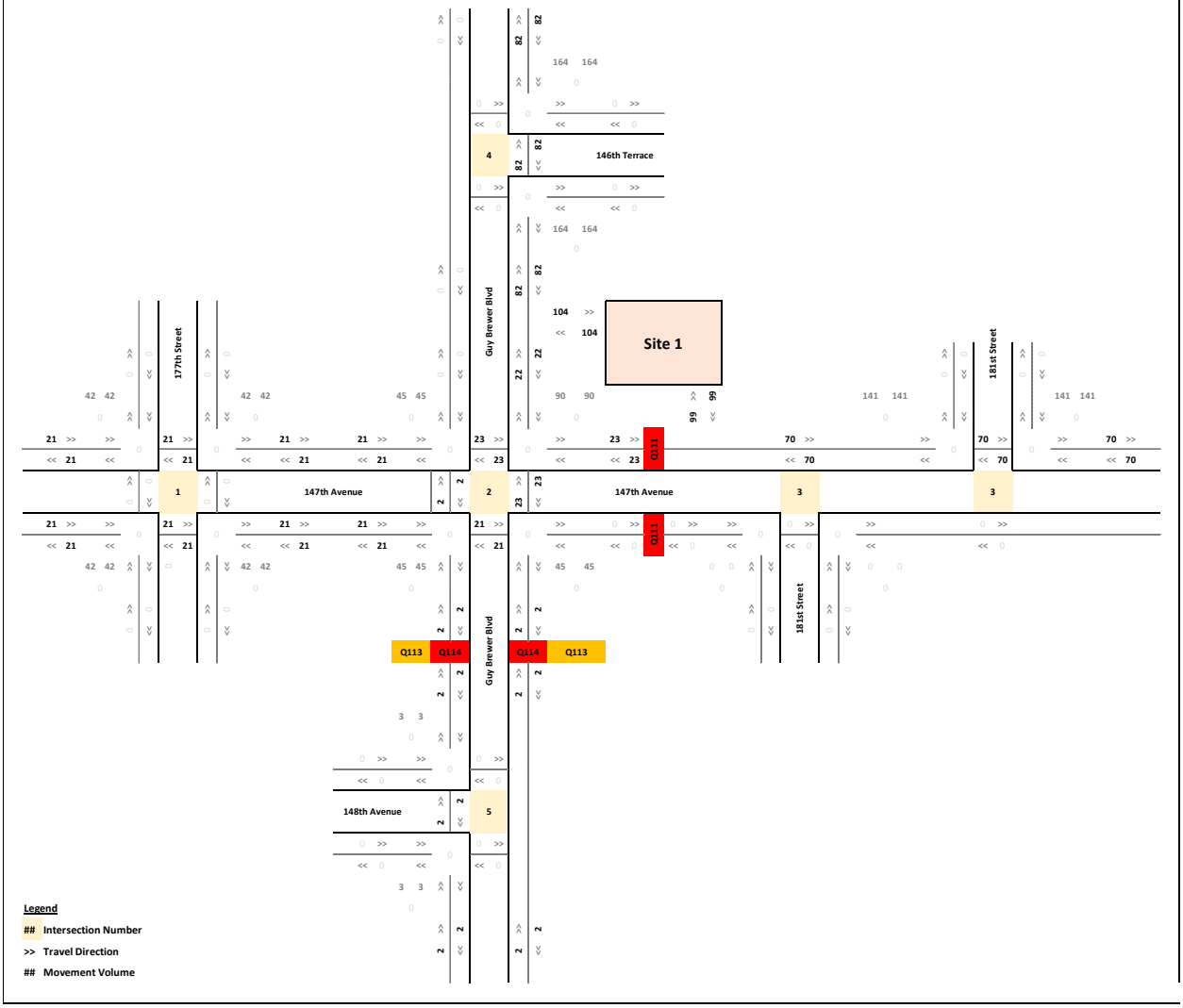
Saturday Midday Vehicles
Total/Intersection



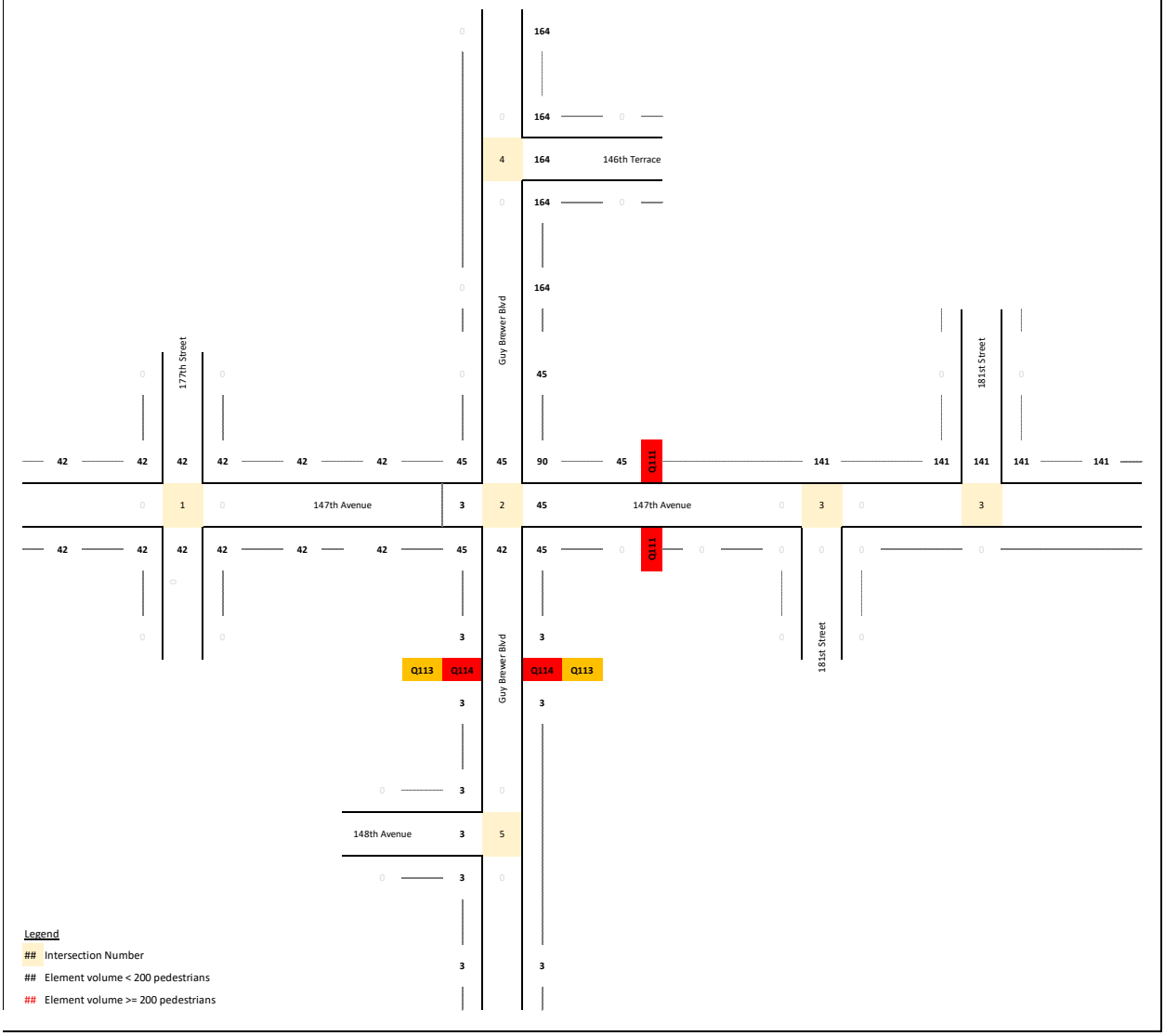
Legend

##	Intersection Number
##	Traffic Volume
	Turning Movement
	One-Way Travel
	Bi-Directional Travel

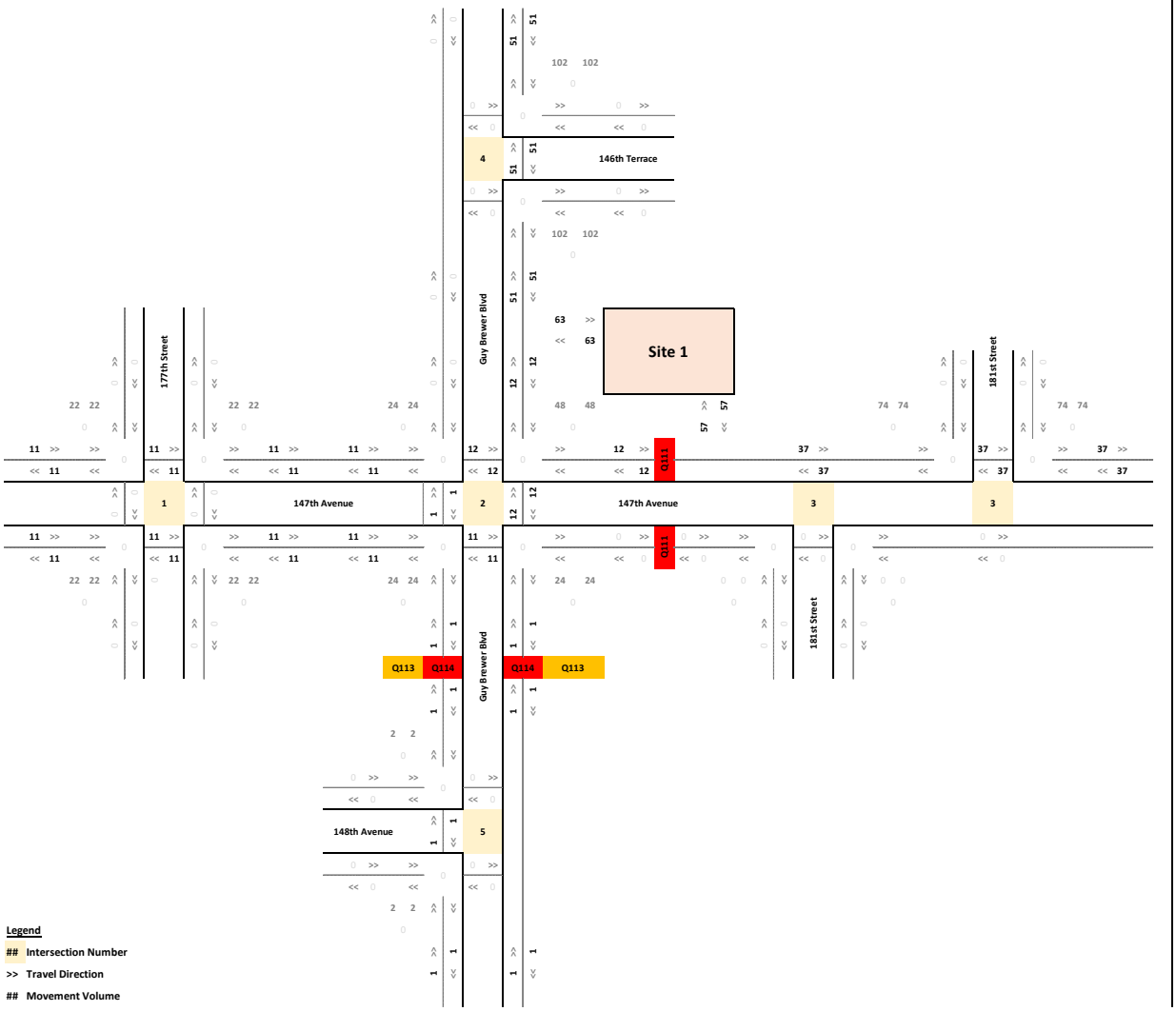
Weekday Midday Pedestrians
Total



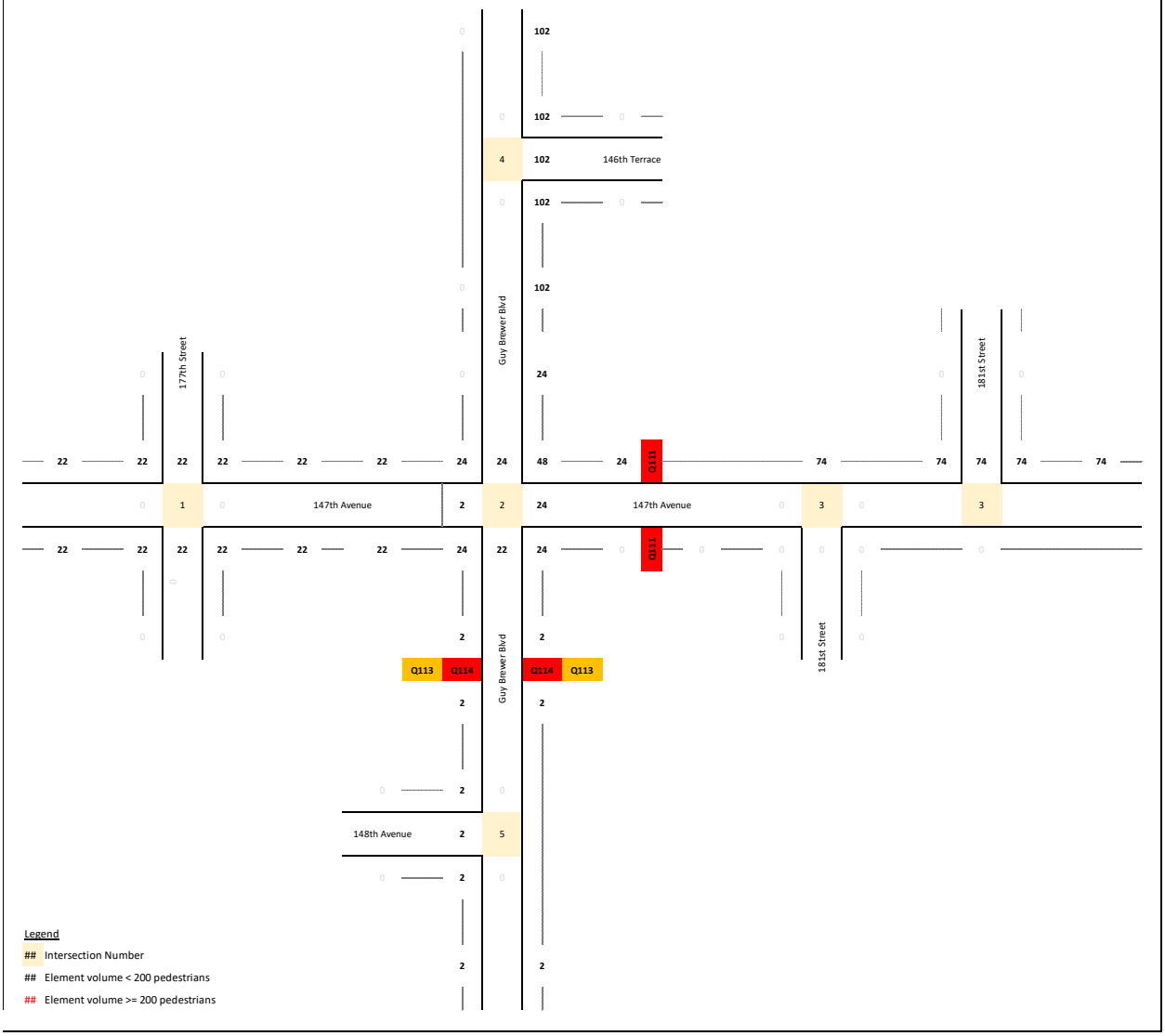
Weekday Midday Pedestrians
Element Totals



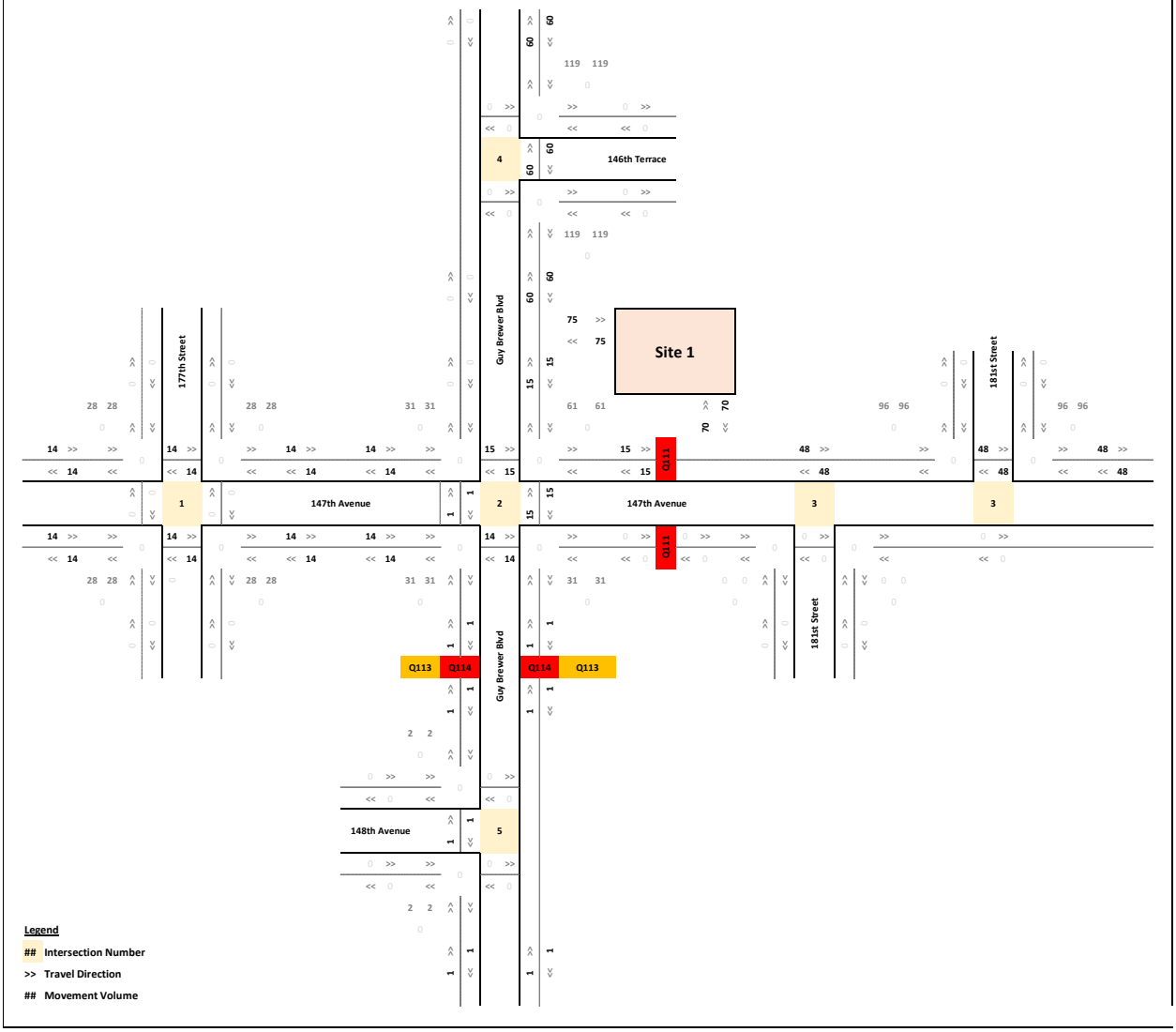
Weekday PM Pedestrians
Total



Weekday PM Pedestrians
Element Totals



Saturday Midday Pedestrians
Total



Saturday Midday Pedestrians
Element Totals

