Howard Avenue Rezoning

Howard Avenue
Brooklyn, NY
Block 1481, Lots 35, 39 and 43

CEQR Reference Number: 18DCP130K

Environmental Assessment Statement

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

Prepared for:
Merrick Capital Corp.
215-54 Jamaica Avenue
Queens Village, NY 11428

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

November 29, 2018

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APPENDICES

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* Howard Avenue Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency) 18DCP130K	BSA REFERENCE NUMBER (if applicable)
ULURP REFERENCE NUMBER (if applicable) N180293ZRK, 180292ZMK	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT Merrick Capital Corp.		
NAME OF LEAD AGENCY CONTACT PERSON Olga Abinader, Acting Director			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Kevin Williams		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 500 International Drive Suite 150		
CITY New York	STATE NY	ZIP 10271	CITY Mount Olive	STATE NJ	ZIP 07828
TELEPHONE 212-720-3493	EMAIL oabinad@planning.nyc.gov		TELEPHONE 9738640609x301	EMAIL kevin.williams@equityenvironmental.com	

5. *Project Description*

The Applicant, Merrick Capital Corp., is seeking two discretionary actions in order to facilitate the redevelopment of a site in the Stuyvesant Heights neighborhood of Brooklyn, Community District 3. The area affected by the proposed actions consists of Brooklyn Block 1481, Lots 35, 39, and 43 which comprise the west blockfront of Howard Avenue between Monroe and Madison Streets (the "Affected Area"). The discretionary actions include: (1) a zoning map amendment to rezone the Affected Area from an R6B district with a C2-4 overlay to a C4-4L district; and (2) a zoning text amendment to Appendix F of the Zoning Resolutions to designate the affected area as a Mandatory Inclusionary Housing ("MIH") area (together, the "Proposed Actions").

The applicant proposes to develop Block 1481, Lot 35 ("Development Site 1") with a six-story 38,610 GSF building containing commercial retail and residential uses with a total FAR of 4.50. 31,328 GSF of residential floor area will be provided containing 30 dwelling units, 9 of which would be designated as affordable. 7,282 GSF of commercial floor area would be provided.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 3	STREET ADDRESS 2 Howard Avenue
TAX BLOCK(S) AND LOT(S) Block 1481, Lots 35, 43 and 39		ZIP CODE 11221
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The affected area is located on the block bounded by Madison Avenue to the south, Howard Avenue to the east, Monroe Street to the north, and Ralph Avenue to the west.		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY The Affected Area is located within an R6B zoning district with a C2-4 overlay		ZONING SECTIONAL MAP NUMBER 17a

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

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

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

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

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

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

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

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

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

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

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

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

Physical Setting (both developed and undeveloped areas)
Total directly affected area (sq. ft.): 20,000
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): 38,610
NUMBER OF BUILDINGS: 1
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 44,585
HEIGHT OF EACH BUILDING (ft.): 65 foot
NUMBER OF STORIES OF EACH BUILDING: 6

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: 8,000
The total square feet not owned or controlled by the applicant: 12,000

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: 8,000 sq. ft. (width x length)
VOLUME OF DISTURBANCE: 160,000 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 8,000 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.)	31,328	7,282		
Type (*e.g.,* retail, office, school)	30 units			

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO
If "yes," please specify:
NUMBER OF ADDITIONAL RESIDENTS: 77
NUMBER OF ADDITIONAL WORKERS: 21
Provide a brief explanation of how these numbers were determined: 2.59 residents per dwelling unit per 2010 Census Data for Brooklyn CD 3/ 1 employee per 333 sq ft of commercial area

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): 2023

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: Approximately 4 years:
Projected Development Site 1: 18-24 build year 2021
Projected Development Site 2: 18-24 months build year 2023

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☐ YES ☒ NO | IF MULTIPLE PHASES, HOW MANY? 2

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Construction of the Proposed Development would commence subsequent to approvals expected in July or August of 2019 and would occur in a single phase expected to last approximately 18 to 24 months.

Projected Development Site 2 is not expected to begin construction until 2021. Projected Development Site 1 is already vacant--demolition is not necessary--and funding is already secured. Projected Development Site 2, however, is developed and tenanted, and construction is not expected to commence for several years. Both Sites are expected to require less than 24 months for construction, with no overlap. Therefore, no construction lasting longer than two years is expected to occur.

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

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

Part II: TECHNICAL ANALYSIS

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

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

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

	YES	NO
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. No affects on historic resources are anticipated. See Section 2.3		
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?	☐	☒
o 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?	☐	☒
o If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☐	☒
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☐	☒
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☐	☒
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: Equity identified one REC associated with the subject property. This REC relates to one (1) pipe with a cap protruding from the sidewalk, adjacent to the site, that was observed during the site visit. The observed pipe's characteristics are similar to those of a fill port, which are typically associated with the likely presence of an underground storage tank (UST).	☒	☐
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?	☐	☒

	YES	NO
(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?	☐	☒
(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): 2,889 = (30 households x 41 pounds per week) + (21 workers x 79 pounds per week)		
o 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): 5,544,353.6 = (31,328 SF x 126.7) + (7,282 SF x 216.3)		
(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:		
o 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.*	☐	☐
o 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?	☐	☐
o 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?	☒	☐
o If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐

	YES	NO
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; 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. The proposed project does not have the potential for a significant adverse impact in the technical areas above as noted in the attached Supplemental Analyses. In addition, the project would not result in the combination of moderate adverse impacts in the technical areas to have the potential to significantly affect public health. Therefore, an assessment of public health is not warranted.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. See Section 2.9		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	☒	☐
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
o The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
o Closure of a community facility or disruption in its services?	☐	☒
o Activities within 400 feet of a historic or cultural resource?	☐	☒
o Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☒	☐

(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.

Construction of the Proposed Development would commence subsequent to approvals expected in July or August of 2019 and would occur in a single phase expected to last approximately 18 to 24 months.

Projected Development Site 2 is not expected to begin construction until 2021. Projected Development Site 1 is already vacant--demolition is not necessary--and funding is already secured. Projected Development Site 2, however, is developed and tenanted, and construction is not expected to commence for several years. Both Sites are expected to require less than 24 months for construction, with no overlap. While construction is expected to last longer than 2 years, it is anticipated that there would be a gap between construction on Projected Development Sites 1 and 2 for the above reasons. Therefore a preliminary assessment of construction impacts is not warranted. The anticipated build year is 2023.

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
Robert Greene	November 26, 2018

SIGNATURE

Robert Greene

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.

	Potentially Significant Adverse Impact	
IMPACT CATEGORY	**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
Acting Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME	DATE
Olga Abinader	11/30/18

SIGNATURE

Project Name: 2 Howard Avenue Rezoning
CEQR #: 18DCP130K
SEQRA Classification: Unlisted

NEGATIVE DECLARATION (Use of this form is optional)

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Hazardous Materials, Air Quality, and Noise

To ensure that the proposed actions would not result in significant adverse hazardous materials, air quality, and noise impacts an (E) Designation (E-513) will be placed on Projected Development Site 1 (Block 1481, Lot 35) and Projected Development Site 2 (Block 1481, Lot 39). Refer to "Determination of Significance Appendix: (E) Designation" for the applicable (E) designation requirements. The analyses conducted for hazardous materials, air quality, and noise conclude that with the (E) Designation requirements in place, the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality, or noise.

Land Use, Zoning, and Public Policy

A detailed analysis of the effects of the proposed actions on Land Use, Zoning, and Public Policy was included in the EAS. The proposed actions would facilitate an increase in residential and commercial density on the projected development sites and would bring an existing residential use within the directly affected area into conformance with zoning. The proposed actions would be compatible with the land use pattern and zoning of the surrounding area and recent development trends. The analysis concludes that no significant adverse impacts related to Land Use, Zoning and Public Policy would result from the proposed actions.

Shadows

A detailed assessment of the potential for the proposed actions to result in significant adverse shadows impacts is included in the EAS. A shadow impact occurs when the incremental shadow would fall on a sunlight sensitive resource or feature and reduces its direct sunlight exposure. Determining whether this impact is significant or not depends on the extent and duration of the incremental shadow and the specific context in which the impact occurs. In the future with the proposed actions incremental shadows would be cast on a Greenstreet at the intersection of Broadway, Monroe Street, and Howard Avenue. Incremental shadows would generally be cast on portions of the Greenstreet containing vegetation during the growing season. However, the extent and duration of the incremental shadows would not significantly threaten the viability of vegetation within this Greenstreet. Therefore, it was determined that the proposed actions would not result in significant adverse impacts related to shadows.

Project Name: 2 Howard Avenue Rezoning
CEQR #: 18DCP130K
SEQRA Classification: Unlisted

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA)

TITLE	LEAD AGENCY
Acting Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME Olga Abinader	DATE 11/30/18
SIGNATURE Olga Abinader	

TITLE	
Chair, City Planning Commission	
NAME Marisa Lago	DATE 12/03/18
SIGNATURE	

Project Name: 2 Howard Avenue Rezoning
CEQR #: 18DCP130K
SEQRA Classification: Unlisted

Determination of Significance Appendix: (E) Designation

To ensure that the proposed actions would not result in significant adverse hazardous materials, air quality, and noise impacts, an (E) Designation **(E-513)** will be placed on **Projected Development Site 1 (Block 1481, Lot 35)** and **Projected Development Site 2 (Block 1481, Lot 39)** as described below:

Hazardous Materials

The (E) Designation requirements for hazardous materials would apply to **Projected Development Site 1 (Block 1481, Lot 35)** and **Projected Development Site 2 (Block 1481, Lot 39)** and are 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 are as follows:

Block 1481, Lot 35 (Projected Development Site 1): Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water system(s) to avoid any potential significant adverse air quality impacts. Stack shall be located at the highest tier, or at a minimum of 68 feet above grade, and at least 60 feet from the lot line facing Madison Street to avoid any potential significant adverse air quality impacts.

Block 1481, Lot 39 (Projected Development Site 2): Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level, and at a minimum of 98 feet above grade to avoid any potential significant adverse air quality impacts.

Noise

The (E) Designation requirements for noise are as follows:

Block 1481, Lot 35 (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 33 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 1481, Lot 39 (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 33 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.

Figure 1. Site Location

Figure 2. Tax Map

Figure 3. Zoning Map

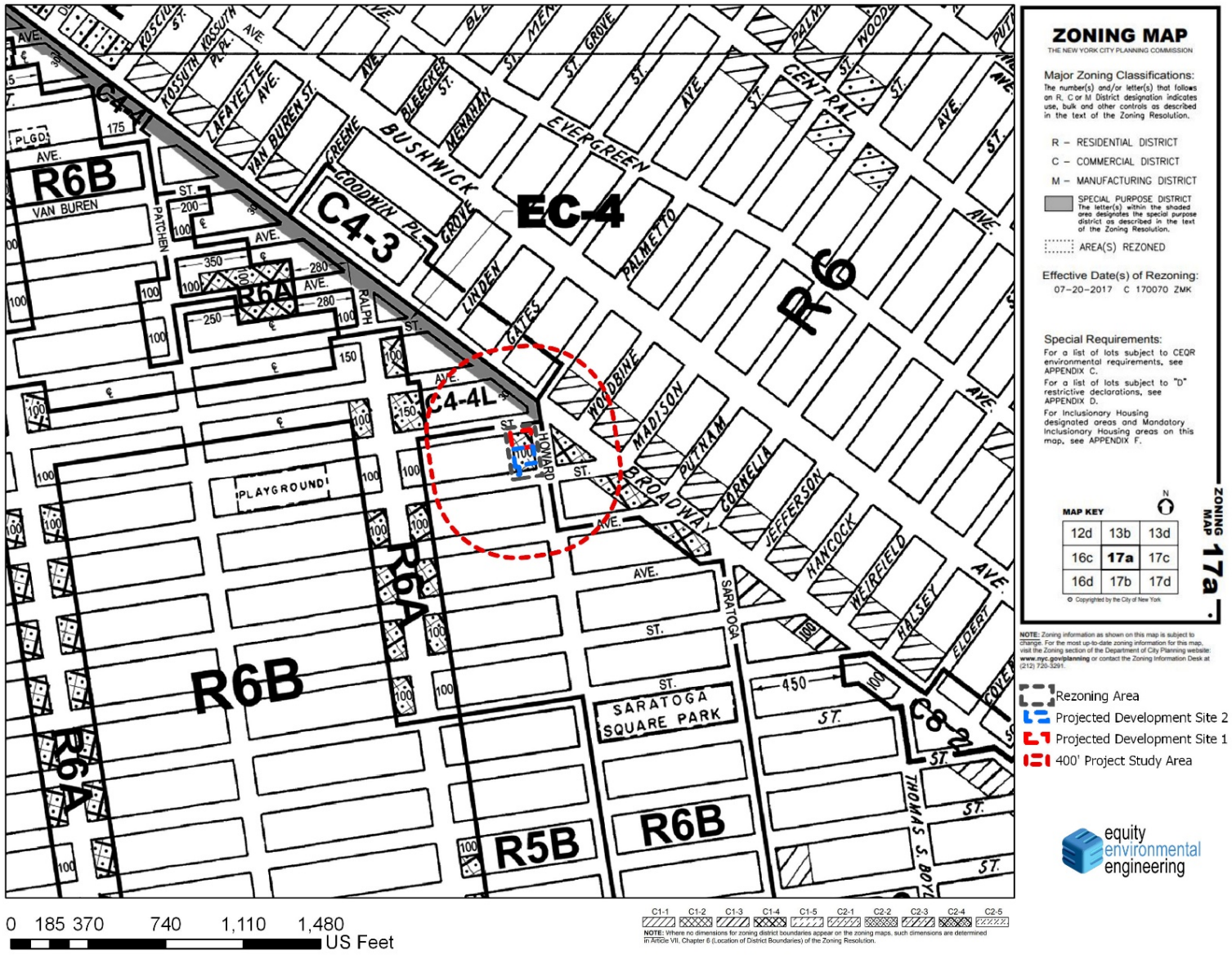
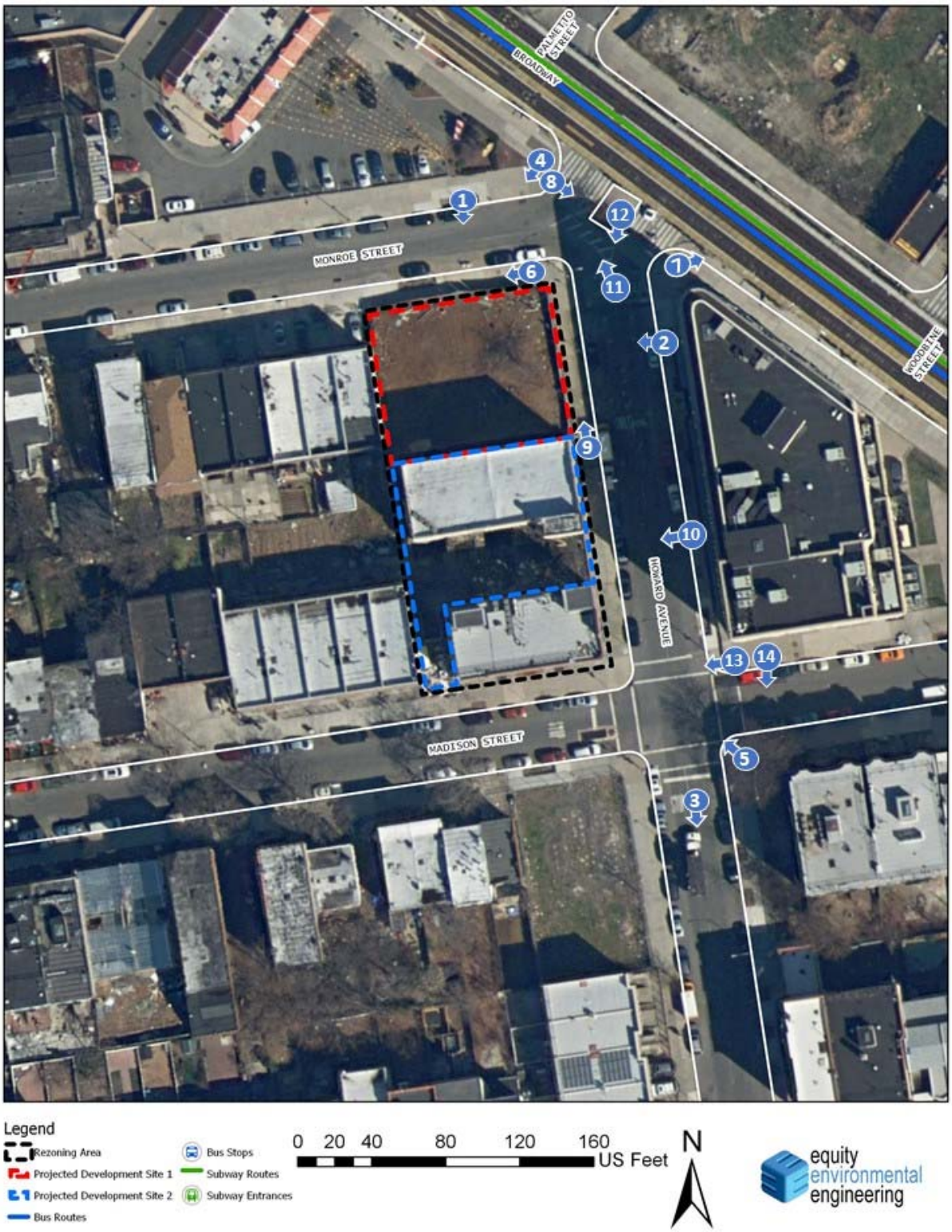


Figure 4. Land Use Map

Figure 5. Photo Key Map



Site Photographs

Photo 1: *View South from Monroe Street onto Projected Development Site 1 (Block 1481, Lot 35)*

Photo 2: *View West from Howard Avenue onto Projected Development Site 1 (Block 1481, Lot 35)*

Photo 3: *View South from Howard Avenue*

(approximately 50 feet from the intersection of Howard Avenue and Madison Street)

Photo 4: *View Southwest From Monroe Street (approximately 50 feet from the intersection of Howard Avenue, Monroe Street, and Broadway)*

Photo 5: *View West of Affected Area from the Intersection of Howard Avenue and Madison Street*

Photo 6: *View West on Monroe Street (from the Intersection of Howard Avenue and Monroe Street)*

Photo 7: *View East from the Intersection of Broadway with Monroe St and Howard Ave*

Photo 8: *View Northeast from the Intersection of Howard Avenue and Broadway*

Photo 9: *View North on Howard Avenue*

Photo 10: *View West of Projected Development Site 2 (left) and Projected Development Site 1 (right) from Howard Ave*

Photo 11: *View Northwest from Monroe Street in front of Projected Development Site 1 (Lot 35)*

Photo 12: *View South of the Affected Area from the Intersection of Howard Avenue and Monroe Street*

Photo 13: *View West from the Intersection of Howard Avenue and Madison Street*

Photo 14: *View South from the Intersection of Howard Avenue and Madison Street*

1.0 PROJECT DESCRIPTION

1.1 Introduction

The Applicant, Merrick Capital Corp., is seeking two discretionary actions in order to facilitate the redevelopment of a site in the Stuyvesant Heights neighborhood of Brooklyn, Community District 3. The area affected by the proposed actions consists of Brooklyn Block 1481, Lots 35, 39, and 43 which comprise the west blockfront of Howard Avenue between Monroe and Madison Streets (the "Affected Area"). The discretionary actions include: (1) a zoning map amendment to rezone the Affected Area from an R6B zoning district with a C2-4 overlay to a C4-4L district; and (2) a zoning text amendment to Appendix F of the Zoning Resolutions to designate the affected area as a Mandatory Inclusionary Housing ("MIH") area (together, the "Proposed Actions").

The applicant proposes to develop Block 1481, Lot 35 ("Development Site 1") with a six-story 38,610 gross square foot ("gsf") building containing commercial retail and residential uses with a total FAR of 4.50.

1.2 Actions Necessary to Facilitate the Project

The two actions necessary to facilitate the project are a Zoning Map Amendment and a Zoning Text Amendment.

1. A Zoning Map Amendment to rezone the portion of Block 1481, which contains Lots 35, 39, and 43, from an R6B/C2-4 zoning district to a C4-4L district.
2. A Zoning Text Amendment to ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas for Community District 3, Brooklyn, to establish the Affected Area as an MIH Area.

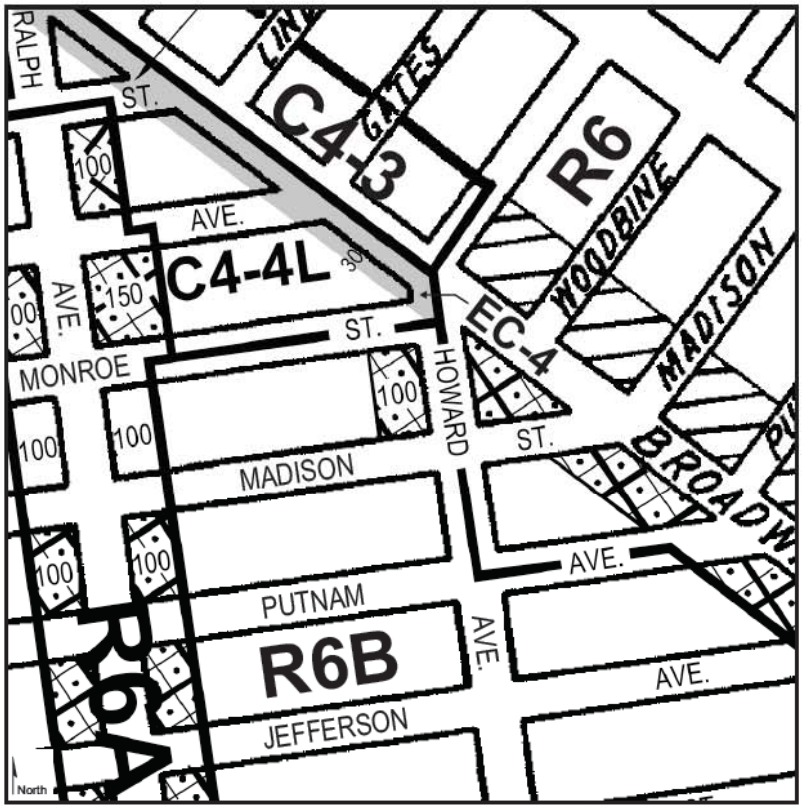
Figure 1.2-1: Zoning Change Map shows the existing and proposed zoning for the Affected Area. The proposed Zoning Text Amendment would establish the Mandatory Inclusionary Housing Program for an area coterminous with the rezoning area and would map the area for both Options 1 and 2.

Pursuant to Mandatory Inclusionary Housing, either Option 1: 25% of residential floor area would be required to be affordable to households with an average of 60% AMI, or Option 2: 30% of residential floor area would be required to be affordable to households with an average of 80% area median income (AMI).[1]

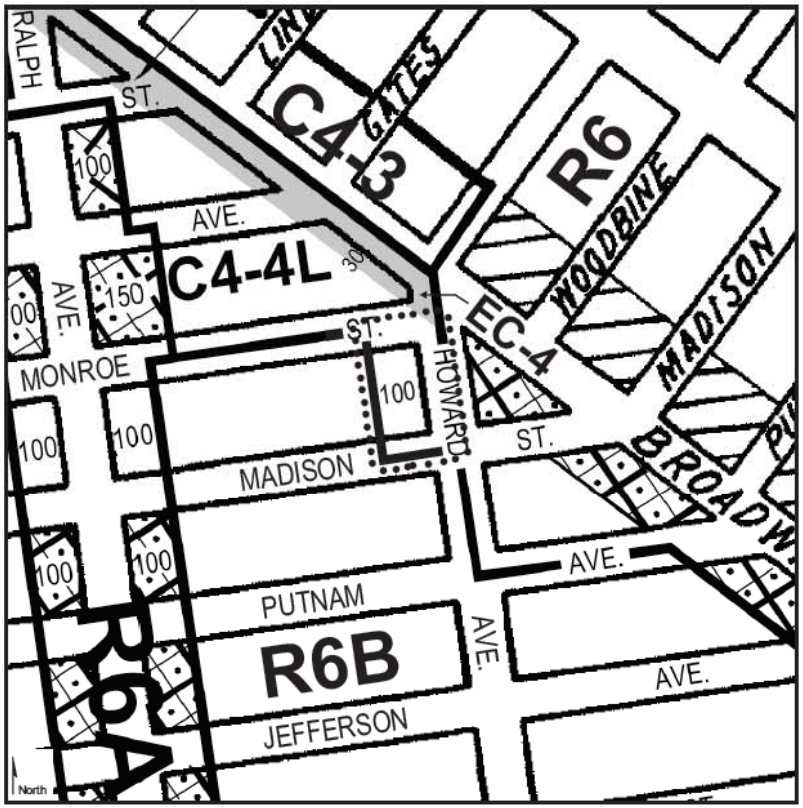
The above-referenced actions are subject to approval by the CPC pursuant to the Uniform Land Use Review Procedure (ULURP).

[1] The MIH option is determined through ULURP process. For conservative analysis the RWCDS analyzes 20 percent of residential floor area reserved as affordable to households with incomes at or below 80 percent of the AMI.

Figure 1.2-1: Zoning Change Map

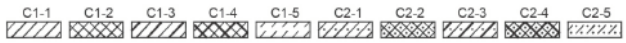


Current Zoning Map (17a)



Proposed Zoning Map (17a) - Area being rezoned is outlined with dotted line

Changing an R6B/C2-4 district to a C4-4L district



Proposed C4-4L

The Proposed C4-4L district is a zoning district created specifically for commercial corridors with elevated trains, similar to Fulton Street. The designation represents a contextual, regional commercial district that permits residential development at an R7A equivalent, as well as commercial and community facility. The proposed C4-4L district would allow for a wider range of uses and provide more building design along the elevated J/Z transit line.

The Proposed Actions would extend the existing C4-4L district mapped across Monroe Street and along Broadway to include the directly affected area.

C4-4L Commercial districts permit a FAR of 4.0 (4.6 with Inclusionary Housing Program) and a max building height of 85 feet, or 100 feet for lots fronting an elevated rail line. C4-4L is an R7A residential equivalent and per ZR §23-664, allows a maximum base height of 75-feet and a maximum building height of 95 feet and 9 stories. Parking is required for 50% of dwelling units (30% if zoning lot is less than 10,000 square feet; waived if 15 or fewer spaces).

The proposed C4-4L zone allows a range of uses similar to the existing R6B/C2-4, including residential, community facility, and commercial uses. Some larger-scale retail and entertainment (Use Groups 10 and 12) would be allowed under the C4-4L that are not currently allowed under the existing zoning. The proposed C4-4L would allow commercial uses at a higher density than the existing R6B/C2-4. The zoning resolution would also require a transition between new development in the Affected Area and the adjacent lower scale R6B district by requiring that within 25 feet of the R6B district boundary the maximum building height is 65 feet.

1.3 Background

Based on Department of Buildings (DOB) records, the applicant owned property on Lot 35 was previously improved with a 4-story storage and office building of approximately 19,000 SF. In 1998, an application was filed to change the first floor of the building to an eating and drinking establishment. This application was permitted but the project was never initiated. NYC Department of Finance records indicate the property has been vacant at least since January 2005, however no demolition permits are available to indicate when the building was demolished. The Affected Areas lies within the northern portion of the South Bedford-Stuyvesant Rezoning Area of 2007, and at this time it was rezoned to R6-B with a C2-4 overlay. Just south of the Affected Area, across Monroe Street, is the border of the North Bedford-Stuyvesant Rezoning of 2012.

The South Bedford-Stuyvesant Rezoning was triggered by a large increase in new commercial and residential construction in Bedford-Stuyvesant that, in some cases, resulted in new developments that were out of character with the surrounding neighborhood context, such as front yard parking pads, curb cuts, and deep front yards, all of which were permitted under the existing R5 and R6 zoning. The goal of the rezoning was to preserve neighborhood scale and character, maintain opportunities for mid-rise apartment building construction along appropriate corridors, and allow for residential growth with incentives for affordable housing along the Fulton Street transit and retail corridor.

The North Bedford-Stuyvesant Rezoning was undertaken in response to concerns that existing zoning in the area did not reflect established growth patterns. The consequent zoning map and text amendment for a 140-block area in the northern half of the Bedford-Sturvesant neighborhood

of Community District 3 sought to preserve existing character and building patterns in the residential core, direct new residential and mixed-use growth to commercial and transit corridors, promote vibrant and active pedestrian-friendly streets, and incentivize affordable housing creation in major corridors.

1.4 Description of Surrounding Area

The Affected Area (Block 1481, Lots 35, 39 and 43) is located in the Bedford-Stuyvesant neighborhood of Brooklyn, Community District 3. The zoning districts mapped within the Surrounding Area include R5B, R6, R6A, R6B and C4-4L with C1-3 and C2-4 commercial overlays mapped along portions of Broadway, Howard and Ralph Avenues.

The immediate surrounding area is characterized by single and multi-family residences, public facilities, and a commercial retail corridor along Broadway. Rowhouses occupy the mid-blocks surrounding Broadway. Many of these structures were built in the 1900s and range in height from two to four stories. Larger apartment buildings that are six and seven stories tall also exist within the surrounding area, including a seven-story residential building with 86 dwelling units located in the C4-4L district across the street from the Affected Area.

Public facilities and institutions are also present in the Surrounding Area, including elementary schools P.S. 75 at 95 Grove Street, P.S. 299 at 88-40 Woodbine Street, and P.S. 309 at 784 Monroe Street, as well as the six-story Brooklyn High School of Law and Technology located opposite the Affected Area to the east on Howard Avenue. The Scottish Rite Hall, a fraternal organization, is adjacent to the Projected Development Site 1 at 8 Howard Avenue.

Commercial uses are located along Broadway, including a post office, hardware store, beauty parlor, retail stores, restaurants, and pharmacies. An eating and drinking establishment with a drive-through is located opposite the Project Area to the north at the intersection of Monroe Street and Broadway. Opposite the Affected Area, on the east side of Broadway between Woodbine and Palmetto Streets is primarily undeveloped with a restaurant at the corner of Woodbine Street.

Parks and recreational facilities nearby include the 85,600 sf Reinaldo Salgado Playground one block west of the Affected Area. Community gardens in the area include the Madison Community Greenthumb Garden one block southwest of the Affected Area and the Umoja Garden two blocks to the southeast of the Affected Area.

The Affected Area is well-served by public transportation. The J, M and Z elevated subway lines run along Broadway, and the Gates Avenue Station is approximately two blocks north of the Project Area. In addition, the Queens Q24, and Brooklyn B52, and B47 bus lines provide service at stops within four blocks of the Affected Area.

1.5 Description of Proposed Project Area

The proposed Affected Area – shown in **Figure 1,** is located in the Stuyvesant Heights section of Brooklyn within Community District 3 and is located within an R6B zoning district with a C2-4 overlay that allows medium density residential development at 2.0 FAR, commercial development at 2.0 FAR and community facility development at 2.0 FAR. A minimum base height of 30', maximum base height of 40' (45' with a qualifying ground floor), and a maximum building height of 50' (55' with a qualifying ground floor) are permitted. The present zoning in the Affected Area allows a maximum lot coverage on an interior lot of 60% while allowing corner lots to have 100%

maximum lot coverage. Building height is limited to a base of 40-ft maximum with a setback of 15-feet on narrow streets and 10-ft on wide required to achieve a maximum total building height of 50-feet. The Affected Area is located within a Transit Zone; therefore, parking is required only for market rate units. The Affected Area is as follows:

Block 1481, Lot 35 (The applicant's property):
Block 1481, Lot 35 is located at 2 Howard Avenue and consists of an approximately 8,000 square foot undeveloped corner lot with frontage on Howard Avenue (80 feet) and Monroe Street (100 feet).

Block 1481, Lot 39:
Block 1481, Lot 39 is located at 8 Howard Avenue and is developed with an existing 4-story, 44-foot tall, 17,840-GSF commercial/office building located on an 8,655-square foot lot inhabited by the Grand Consistory of New York, a Scottish Rite fraternal organization, with a filed ground floor use of retail (food court). Currently, Lot 39 is built out to a 2.09 FAR with 58% lot coverage. The lot has frontage on Howard Avenue (80 feet) and Madison Street (17 feet).

Block 1481, Lot 43:
Block 1481, Lot 43 (16 Howard Avenue) is developed with an 4-story, 50-foot tall, 12,800-GSF building located on a 3,345-square foot lot and is owned by The Howard Day House. Lot 43 is built out to a total FAR of 3.83 with 100% lot coverage. The corner lot has frontage on Howard Avenue (40 feet) and Madison Street (83.5 feet).

Table 1.5-1: Affected Lots Existing Conditions

Block	Lot	Address	Owner	Lot Size (ft2)	Number of buildings	Number of Floors	Height	Existing Use	DU	Floor Area	Existing FAR	Maximum FAR Under Proposed Action**	Built FAR (percentage of proposed FAR)
1481	35	2 Howard Ave	Merrick Capital Corp	8,000	0	0	0	vacant	0	0	0	4.6	0%
1481	39	8 Howard Ave	Grand Consistory NY	8,655	1	4	44.39	Commercial	0	17,840	2.09	4.6	45%
1481	43	16 Howard Ave	The Howard Day House	3,345	1	4	50.63	residential	8	12,800	3.83	4.6	83%

DU = Dwelling Units; FAR = Floor Area Ratio
**4.6 under Inclusionary Housing Program

1.6 Description of the Proposed Development

Pursuant to the Proposed Actions, the applicant proposes to build one new building under the proposed zoning on Lot 35. As the Proposed Development Site is to be developed under MIH, it is proposed to have an FAR of 4.50. The Applicant's Proposed Development, is to be a 6-story 65-foot mixed-use building fronting the corner of Howard Avenue and Monroe Street as shown in **Figures 1.6-1 and 1.6-2**. The building would have a base height of 5-stories and then be set back 15-feet on both Howard Avenue and Monroe Street. The building is proposed to contain 31,328 GSF (29,007 ZSF) of residential space and 7,282 GSF (7,002 ZSF) of commercial space (1,440 SF will be for used for a loading ramp). As per the rqeuirements of the Quality Housing Program, 1,800 sf of outdoor recreation space will be provided on the roof of the first story. Pursuant to Mandatory Inclusionary Housing (MIH), either 30% of residential floor area would be required to be affordable to households with an average of 80% area median income (AMI), or 25% of

residential floor area would be required to be affordable to households with an average of 60% AMI. The MIH Option has not yet been determined, but The Applicant is requesting Options 1 and 2. The residential component of the Applicant's Proposed Development will have a total of 30 dwelling units – 9 of which, per MIH Option 2 would be affordable. The required parking per ZR §35-242 would be a space for 30% of market rate units or 7 spaces. No parking is required in a C4-4L if under 15 cars are required above. For the purposes of a reasonable and conservative analysis the EAS analyzes a slightly larger building than the Proposed Development.

Figure 1.6-1: Site Plan of the Applicant's Proposed Development (for illustrative purposes only)

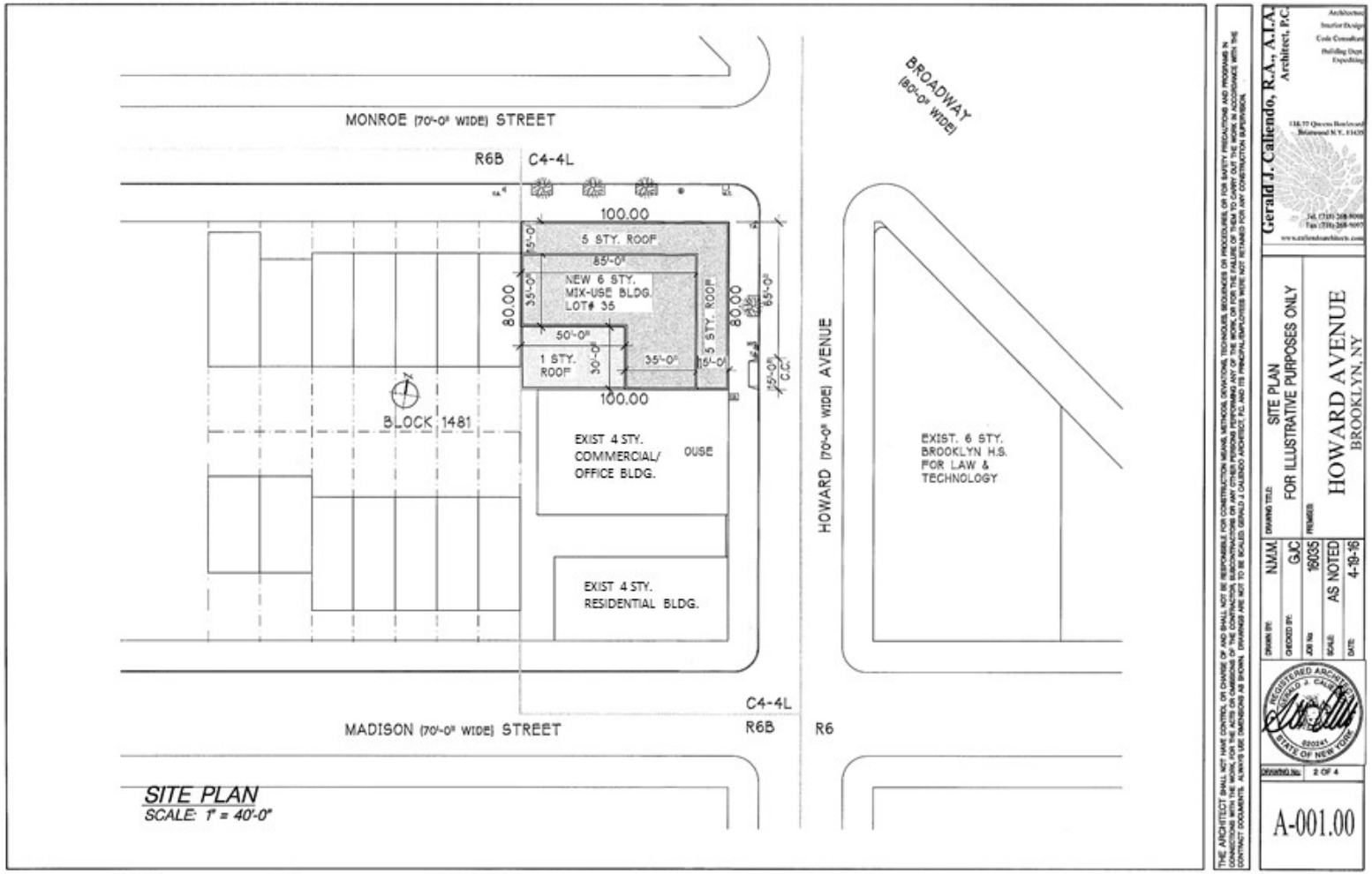
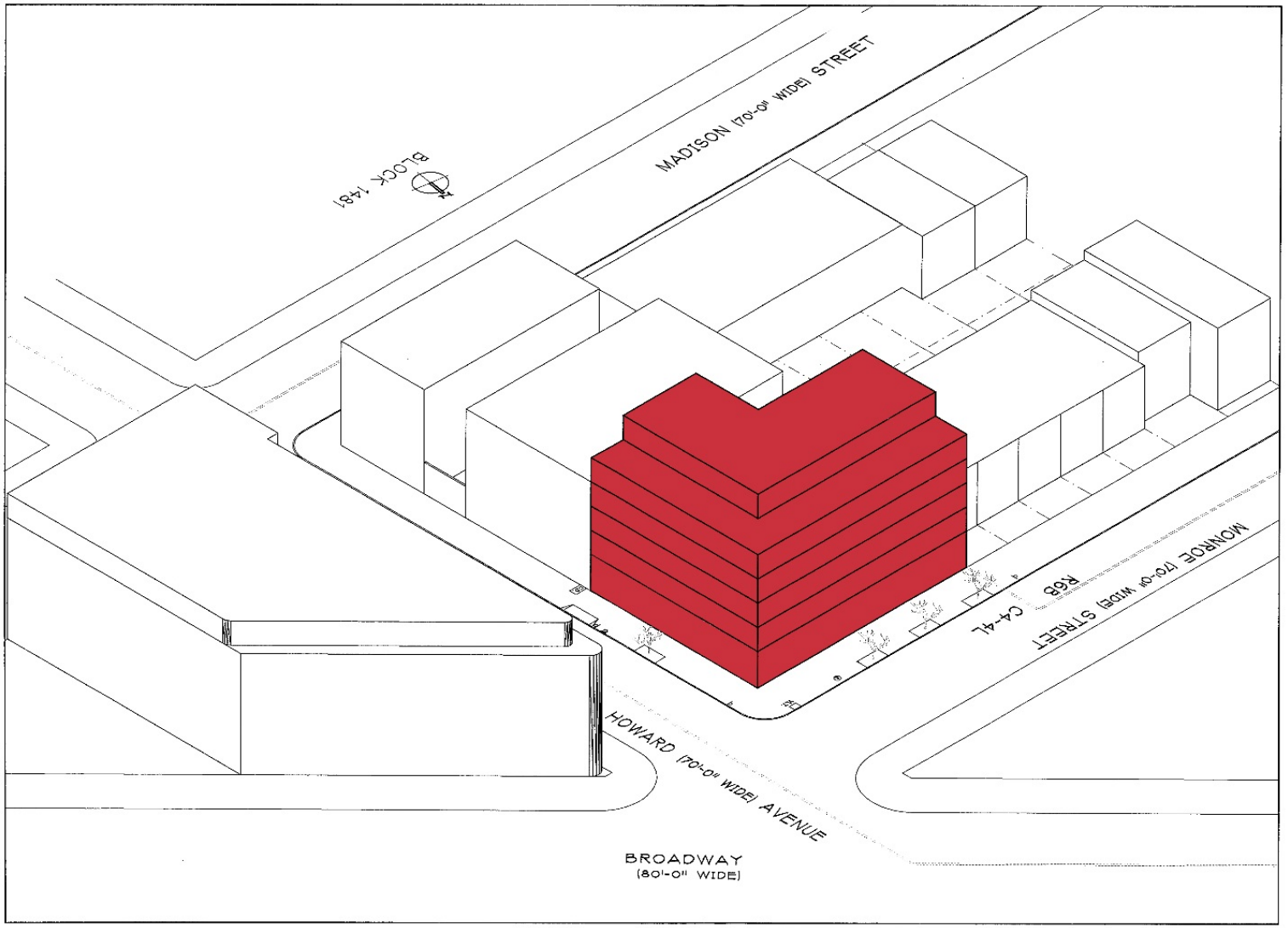


Figure 1.6-2: Birdseye Massing of the Applicant's Proposed Development (for illustrative purposes only)



1.7 Purpose and Need

The proposed Zoning Map Amendment would allow the extension of the existing C4-4L zoning district, which is generally bounded by Broadway and Monroe Street and located northwest of the Affected Area. The proposed C4-4L zone would facilitate the development of the applicant's property, known as Block 1481, Lot 35 on the New York City Tax Map. Pursuant to the proposed Zoning Map and Zoning Text Amendment, the applicant intends to develop a new 38,610 GSF (36,009 ZSF) 6-story mixed-use commercial and residential building, including Mandatory Inclusionary Housing to address the City's growing need for additional housing. The proposed ground floor retail establishment, as described in Section 1.6, would enliven the pedestrian experience and promote walkability and transit-oriented development.

Further, the current Proposed Development Site has been vacant for several decades and the previous R5 zoning and current R6B with C2-4 zoning overlay have both failed to induce this corner site to develop. As the cost of construction and economic constraints of the area challenge new development – it is the Applicant's opinion that the Proposed Rezoning is needed to induce optimal utilization of this lot. The extension of the adjacent C4-4L zone to the Affected Area meets the needs of inducing development that will provide affordable transit-oriented housing, create jobs, provide needed local commercial retail land uses and generally provide high-quality mixed-use development and redevelopment of vacant and underutilized land. The Proposed Action will facilitate development that will better service both the needs of the adjacent R6B zoned neighborhood as well as reinforce the viability of the adjacent Broadway mixed-use commercial/transportation corridor. Overall this rezoning would meet many of the City's stated policy goals for affordable housing, supportive transit-oriented housing, job creation and provision of first floor commercial development that serves the needs of the local community.

As the Affected Area is adjacent to the Elevated J and Z Subway Line, A C4-4L Zoning Map Amendment would encourage development at a density that is better-suited to a location with good access to mass transit. Additionally, due to the Affected Area's direct adjacency to the existing C4-4L commercial corridor along Broadway, the area is suited for a C4-4L extension. The extension of the C4-4L district would facilitate development that is more consistent with surrounding land use patterns.

1.8 Analysis Framework

This EAS studies the potential for individual and cumulative environmental impacts related to the Proposed Actions. This environmental assessment considers the potential effects of the Proposed Action by comparing the No-Action Scenario to the With-Action Scenario.

Existing Conditions

The existing conditions form a baseline to project the No-Action and With-Action Scenarios. The Proposed Rezoning Area includes 3 tax lots and comprises approximately 20,000 square feet of land, and is described in more detail in **Section 1.5** above.

Reasonable Worst-Case Devlopment Scenario

In order to assess the possible effects of the Proposed Actions, a Reasonable Worst-Case Development Scenario ("RWCDS") was developed for both the future without the Proposed Actions (Future No-Action) and the future with the Propose Actions (Future With-Action) for a four-year build period (build year 2023). The framework for analysis considers the difference between

the future absent the Proposed Actions (the "Future No-Action Condition") and the future with the Proposed Actions ("the Future With-Action Condition") in the 2022 build year.

The development of the no-action scenario and with-action scenario – follow the soft site criteria as established in 2-6 and 2-7 CEQR Technical Manual. Two sites were identified as Projected Development Sites consistent with the soft site criteria: Projected Development Site 1 (Block 1481, Lot 35) and Projected Development Site 2 (Block 1481, Lot 39).

In order to ensure a conservative analysis, Projected Development Site 1 is assessed at a build-out that is slightly larger than the Proposed Development.

Future No-Action Scenario

In the future No-Action condition the existing R6B zoning with a C2-4 overlay would remain in place. Under the Affected Area's existing R6B/C2-4 zoning designation, development for residential and commercial use at up to 2.0 FAR and community facilities at up to 2.0 FAR would be permitted. Based on the soft site criteria of the 2014 CEQR Technical Manual, the development potential of sites within the Affected Area under existing zoning was assessed. Lot 39 and 43 are currently in an overbuilt condition, developed at more than 100 percent of permitted FAR. As such, in the Future absent the Proposed Actions, as the sites would be unable to achieve a greater FAR, it is expected that Lots 39 and 43 would remain as per their existing conditions. Lot 35, which has stayed vacant since before it was rezoned in 2007, would be expected to remain vacant without the Proposed Actions.

Projected Development Site 1 (*Applicant's Development Site*): Block 1481, Lot 35

Absent the Proposed Actions Projected Development Site 1 would remain in its existing condition and undeveloped. As this site has not been developed over the last ten years since it was rezoned, nor was developed under the previous zoning prior to 2007 – going back over 20 years – it is not expected that the site would redevelop absent the Proposed Actions.

Projected Development Site 2: Block 1481, Lot 39

Under CEQR Technical Manual Methodology those sites that currently have more than 50% of the FAR allowable under current or proposed rezoning are generally not considered 'soft' and therefore would likely not be projected to develop. Absent the Proposed Actions Projected Development Site 2 would remain in its existing condition developed with a 4-story 17,840 gsf non-conforming commercial office building.

Other Affected Sites: Block 1481, Lot 43

Absent the Proposed Actions Lot 43 is expected to remain in its current state as a 4-story 12,800 gsf building.

With-Action Scenario

The full projected program for the With-Action Conditions is shown below in **Table 1.8-1**: ***Existing, No-Action, and With Action Programs for the Proposed Rezoning Area.***

Projected Development Site 1 (Applicant's Development Site): Block 1481, Lot 35

Under the RWCDS, total development on Projected Development Site 1 would consist of a 9-story 95 foot high building (with a 65-foot transition max height within 25 feet of the R6B district) containing 44,585 gross square feet of floor area.[2] The Building would contain 38,085 gross square feet ("GSF") of residential floor area (30,085 ZSF) and 6,500 GSF/ZSF of commercial space. For purposes of environmental review and per NYC DCP guidance it is assumed that 20% of the dwelling units would be affordable at 80% of the AMI. As such, 8 of the 38 units[3] will be considered affordable under MIH. Fewer than 15 parking spaces would be required, and therefore parking is waived for this site. A bulkhead height of 10 feet will be assumed.

Projected Development Site 2: Block 1481, Lot 39

Redevelopment of Lot 39 is expected as a result of the proposed actions and would follow a similar development program to Projected Development Site 1. Under the Proposed Rezoning the C4-4L residential zoning equivalent is an R7A which allows up to 65% lot coverage for an interior lot[4]. Under such a scenario, Lot 39 is Projected to have 5,500 GSF/ZSF of ground floor commercial area (given 65% lot coverage of 8,551 SF allowed under MIH) and 41,044 GSF (33,835 ZSF) of residential use. The maximum height under the Proposed Rezoning would allow for 95-feet, a 9 story, 95-foot building with a 65-foot maximum height within 25 feet of the R6B district, and is considered the reasonable worst case in terms of height for Projected Development Site 2. The total development size would be approximately 46,544 GSF. Development of Lot 39 would generate 41-dwelling units[5], 8 of which would be affordable (pursuant to MIH). Fewer than 15 parking spaces would be required, and therefore parking is waived for this site. A bulkhead height of 10 feet is assumed for this building and is factored into the shadows analysis.

Other Affected Sites

No other sites are projected to develop within the Affected Area. The other lot within the Affected Area is not considered a likely development site because Lot 43 is a 12,800 GSF development on a 3,340 SF Lot and has an existing FAR of 3.83 or 85% of the FAR available under the Proposed Rezoning. Therefore, Lot 43 is expected to remain as per existing conditions in the future No-Action and With-Action Scenarios.

[2] In order to ensure a reasonable and conservative analysis the RWCDS analyzes a taller building than the proposed project. However, for Air Quality it is more conservative to assess a shorter building, and as such, the proposed development is assessed for stationary sources.
[3] The RWCDS Projected Development Site residential gross square footage is divided by 1000 to determine the number of units.
[4] §23-156 ZR
[5] The RWCDS Projected Development Site residential gross square footage is divided by 1000 to determine the number of units.

Table 1.8-1: Existing, No-Action, and With Action for the Proposed Rezoning Area

Site Info				Existing/No-Action Conditions		With-Action Condition				
#	Block	Lot	Lot Area (gsf)	Zoning	Commercial (gsf)	Zoning	Residential (gsf)	Dwelling Units	Affordable Dwelling Units	Commercial (sf)
1	1481	35	8,000	R6B/C2-4	0	C4-4L	38,085	38	8	6,500
2		39	8,655		17,840		41,044	41	8	5,500
Total			**16,655**		**17,840**		**79,129**	**79**	**16**	**12,000**

Table 1.8-2: Comparative Existing, No-Action, Build Worksheet

Use	No-Action Condition	With-Action Condition	Increment
Residential[1]	0	79 DUs (79,129 gsf)	79 DUs (79,129 gsf)
Market Rate (DUs)	0	63	63
Affordable (DUs)[2]	0	16	16
Commercial (gsf)	17,840	12,000	-5,840
Vacant (gsf)	8,000	0	-8,000
Residents[3]	0	205	205
Workers[4]	54	36	-18

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

[1] Average Unit Size assumed to be 1,000 gsf

[2] Assumed 20 percent of residential floor area is reserved as affordable to households with incomes at or below 80 percent of the AMI

[3] Assumes 2.50 persons per residential dwelling unit per Brooklyn Community District 3 Census Data

[4] Assumes 1 employee per 333 sf of retail space and community facility space. Lot 39 is considered community facility for employee density purposes due to the nature of the tenant

2.0 SUPPLEMENTAL ANALYSES

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

In the following technical sections, where a preliminary or more detailed assessment was necessary, the discussion is divided into Existing Conditions, the Future No-Action Scenario (The Future without the Proposed Actions), and the Future With-Action Scenario (The Future with the Proposed Actions).

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.

Methodology
Following CEQR Technical Manual guidance, a preliminary assessment, which includes a basic description of existing and future land uses and zoning, including any future changes in zoning that could cause changes in land use, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. In addition, the preliminary assessment should include a basic description of the project facilitated by the proposed actions in order to determine whether a more detailed assessment of land use would be appropriate. This information is essential for conducting the other environmental analyses and provides a baseline for determining whether detailed analysis is appropriate. CEQR requires an assessment of land use conditions if a detailed assessment has been deemed appropriate for other technical areas. Additionally, an assessment of public policy should accompany the assessment which includes any public policies including formal or published plans in the study area. A preliminary assessment of land use, zoning and public policy is provided for informational purposes and to determine if a more detailed analysis is warranted. This preliminary assessment of land use, zoning, and public policy focuses on an overview of conditions in the affected area and a detailed review of the 400-foot radius study area.

2.1.1 Land Use

Pursuant to Chapter 4, Section 111 of the *2014 CEQR Technical Manual*, land use refers to the activity that is occurring on land and within the structures that occupy it. Types of uses include residential, retail, commercial, industrial, vacant land, and parks. DCP's Primary Land Use Tax Lot Output (PLUTO) database provides data on the following land use types: one- and two-family residential buildings, multi-family walk-up residential buildings, multi-family elevator residential buildings, mixed residential and commercial buildings, commercial and office buildings, industrial and manufacturing, transportation and utility, public facilities and institutions, open space and outdoor recreation, parking facilities, and vacant land.

Existing land use patterns of city blocks within approximately 400 feet of the rezoning area are presented in **Figure 2.1-1**. The *CEQR Technical Manual* suggests that an appropriate study area for land use and zoning is related to the type and size of the project being proposed as well as the location and neighborhood context of the area that could be affected by the project. Unless the project involves large scale, high density development or is a generic project, the study area should generally include at least the project site and the area within 400 feet of the site's boundaries.

Figure 2.1-1 Land Use

Existing Conditions-Affected Area

The Affected Area, known as Block 1481, Lots 35, 39, and 43 on the New York City Tax Map, is located in the Stuyvesant Heights Section of Brooklyn between Monroe Street and Madison Avenue.

Projected Development Site 1

The Applicant's Site, 2 Howard Avenue (Block 1481, Lot 35) is an 8,000 SF corner lot with frontage on Monroe Street and Howard Avenue. The lot is currently vacant.

Projected Development Site 2

Adjacent to Projected Develoment Site 1, 8 Howard Avenue (Block 1481, Lot 39) is an irregular 8,655 SF lot with frontage on Howard Avenue and Madison Street. The lot is developed with a 17,840-GSF building constructed in 1931. The 4-story, 44-foot tall building is occupied by the Scottish Rite Ballroom, a fraternal organization. The building is built at an FAR of 2.09, with 58 percent lot coverage.

Other Affected Areas

Located on the corner of Howard Avenue and Madison Street, 16 Howard Avenue (Block 1481, Lot 43) is a rectangular 3,345 SF corner lot developed with a 12,800-GSF building constructed in 1931, with alterations in 1992 and 2013. The 4-story, 50-foot tall building is built at a total FAR of 3.83, with 100 percent lot coverage.

Existing Conditions-Surrounding Area

Within the Study Area mid-block land use is predominantly one- and two-family and multi-family residential homes on interior lots along narrower east-west streets, including Monroe Street, Madison Street, and Putnam Avenue. On the lots fronting on Broadway, land use is institutional, commercial, and mixed use commercial and residential. Along Howard Avenue, land use is predominantly residential, with institutional and mixed commercial and residential. There are numerous vacant parcels within the Study Area. Madison Street, to the south, has three vacant corner lots and three vacant mid-block lots. There are two more vacant lots on the south side of Broadway, and then a 22,000 GSF vacant lot north of Broadway. There are 8 active construction projects in the Study Area, 2 of which are occurring on vacant lots described above. Of the construction projects, 7 are construction of new residential buildings, and 1, occurring across Broadway, northeast of the Affected Area, is an enlargement of an existing apartment building.

Table 2.1-1: Active Construction Projects

Address	Permit Type	SF	DU	Stories	Occupancy Class
846 Monroe Street	New Building	7,276	8	4	Residential
832 Monroe Street	New Building	7,309	7	4	Residential
847 Madison Street	New Building	6,671	7	4	Residential
814 Monroe Street	Alt 1 Enlargement	1,845	7	4	Residential
831 Monroe Street	New Building	9,189	10	5	Residential
10 Palmetto Street	Alt 1 Enlargement	0	7	4	Residential
951 Madison Street	New Building	36,652	37	7	Residential
864 Madison Street	Alt 1 Enlargement	3,670	7	4	Residential

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Future No-Action Scenario

There are no other land use applications or pending projects within the Study Area. Various as-of-right residential developments are in progress. In the future without the Proposed Actions, it is presumed that no additional floor area or changes in use would occur at any site within the Affected Area. Therefore, for the purposes of this analysis, it is assumed that conditions in the No-Action scenario would be consistent with the existing conditions, and that continued as-of-right development will occur.

Future With-Action Scenario

Under the With Action Scenario, both the Applicant Development Site –Projected Development Site 1 and Block 1481, Lot 39- Projected Development Site 2 would be developed with new mixed residential and commercial uses.

The proposed C4-4L zone allows a range of uses similar to the existing R6B/C2-4, including residential, community facility, and commercial uses. Some larger-scale retail and entertainment (Use Groups 10 and 12) would be allowed under the C4-4L that are not currently allowed in the existing zoning. And the proposed C4-4L would allow commercial uses at a higher density than the existing R6B/C2-4.

Projected Development Site 1 (Applicant's Development Site): Block 1481, Lot 35
Total development on the Projected Development Site 1 would provide 38,085 GSF (30,085 ZSF) of residential floor area and 6,500 GSF/ZSF of commercial space. The total development size would be approximately 44,585 GSF. It is assumed for this analysis that 20% of the units would be affordable.The RWCDS assesses 38 units at an average size of 1,000 GSF, 8 of which would be affordable. No parking would be required.

Projected Development Site 2: Block 1481, Lot 39
Under a With-Action Build Scenario, Projected Development Site 2 is projected to have 5,500 GSF/ZSF of ground floor commercial area and 41,044 GSF (33,835 ZSF) of residential use. The total development size would be approximately 46,544 GSF. Development of Lot 39 would generate 41-dwelling units, 8 of which would be affordable. No parking would be required.

Other Affected Sites
In the future With-Action condition Lot 43 would remain developed as under existing and the No-Action condition with a 4-story 12,800-sf building.

Assessment

The Proposed Action would result in the development of the Affected Area with two mixed use residential buildings with local retail uses. The development resulting from the Proposed Actions would be consistent with the area's on-going trend of residential development and would maintain existing land use character within the Study Area. The proposed development's ground floor local retail would help activate the Howard Avenue frontage located near Broadway, a major commercial corridor, and across from the Brooklyn High School for Law and Technology. The provision of higher density affordable housing at or near a mass transit hub father contributes to the mission and purpose of integrated housing with transportation and jobs, thus encouraging live-work communities and transit-oriented development. No other changes to land use within the

Affected Area or parcels adjacent to the Affected Area or within the 400-foot Study Area are foreseen as a result of the action or resulting from other known actions in the area. Therefore, the Proposed Project would not result in any significant adverse impacts to land use.

2.1.2 Zoning

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

Zoning designations within and around the project study area are depicted in **Figure 2.1-2**, while **Table 2.1-1** summarizes use, floor area and parking requirements for the zoning districts in the study area.

Existing Conditions-Affected Area
The Affected Area is located in an R6B/C2-4 zoning district. The existing R6B/C2-4 zoning district permits a maximum residential, commercial and community facility FAR of 2.0 with 100% corner lot coverage and 65% interior lot coverage. For R6B zones, maximum permitted building height is 50 feet and parking is required for 50% of dwelling units.

Existing Conditions-Surrounding Area
There is a C4-4L commercial/Special Enhanced Commercial District ("EC-4") located approximately 100 feet north of the Affected Area with boundaries beginning at the intersection of Monroe Street and Broadway and extending west. The purpose of the EC-4 district is to promote and maintain a lively and engaging pedestrian experience along commercial avenues. The EC-4 district located along Broadway in Bedford-Stuyvesant North was created to foster a safe and engaging pedestrian experience along the commercial corridor and reinforce the existing commercial character of the area by establishing regulations governing ground floor use, transparency on the ground floor and limiting curb cuts on lots that are at least 20 feet wide. The regulations apply to new development and enlargements along the street, except for schools and churches. The ground floor regulations require uses fronting on Broadway, or within 30 feet of Broadway to be non-residential, such as retail establishments, offices and community facilities. In order to strengthen the continuity of active uses along the corridor, curb cuts to access off-street parking are not permitted on or within 30 feet of Broadway, and residential lobbies are limited to a maximum width of 25 feet. Ground floor uses on Broadway are required to provide glazing or other transparent treatments. A minimum of 50 percent of the streetwall area between 2 and 12 feet above curb level is required to be transparent, with no blank walls to exceed more than ten feet in width. [6]

Broadway is the main commercial thoroughfare in the study area. Medium-density commercial zoning districts (C4-4L and C4-3) and low-density commercial overlays (R6/C2-4 and R6/C1-3) are mapped along the corridor. Smaller cross-streets both to the north and south are mapped with medium-density non-contextual (R6, to the north) and contextual (R6B, to the south) residential districts.

[6] https://www1.nyc.gov/site/planning/zoning/districts-tools

R6B
R6B districts are often traditional row house districts, which preserve the scale and harmonious streetscape of neighborhoods of four-story attached buildings developed during the 19th century. Many of these houses are set back from the street with stoops and small front yards that are typical of Brooklyn's "brownstone" neighborhoods, such as Park Slope, Boerum Hill and Bedford Stuyvesant. The Floor Area Ratio (FAR) of 2.0 and the mandatory Quality Housing regulations also accommodate apartment buildings at a similar four- to five-story scale. The base height of a new building before setback must be between 30 and 40 feet; the maximum height is 50 feet. Curb cuts are prohibited on zoning lot frontages less than 40 feet. The street wall of a new building, on any lot up to 50 feet wide, must be as deep as one adjacent street wall but no deeper than the other. Off-street parking is required for 50% of dwelling units and is not allowed in front of a building.

R6
R6 zoning districts are widely mapped in built-up, medium-density areas in Brooklyn, Queens and the Bronx. The character of R6 districts can range from neighborhoods with a diverse mix of building types and heights to large-scale "tower in the park" developments such as Ravenswood in Queens and Homecrest in Brooklyn. Developers can choose between two sets of bulk regulations. Standard height factor regulations, introduced in 1961, produce small multi-family buildings on small zoning lots and, on larger lots, tall buildings that are set back from the street. Optional Quality Housing regulations produce high lot coverage buildings within height limits that often reflect the scale of older, pre-1961 apartment buildings in the neighborhood.

C1-3
A commercial overlay district mapped within residential districts to serve local retail needs (grocery stores, dry cleaners, restaurants, for example). Unless otherwise specified on the zoning maps, the depth of C1-3 overlay districts, measured from the nearest street, is 150 feet. In mixed-buildings, commercial uses are limited to one or two floors and must always be located below the residential use. Permitted Commercial Maximum FAR is 2.0 in R6-R10 Districts with C1-3 overlays.

C2-4
C2-4 districts are commercial overlays mapped within residential districts. They are mapped along streets that serve local retail needs and are found extensively throughout the city's lower- and medium-density areas and occasionally in higher-density districts. Typical retail uses include neighborhood grocery stores, restaurants and beauty parlors. C2 districts permit a slightly wider range of uses, such as funeral homes and repair services. In mixed-buildings, commercial uses are limited to one or two floors and must always be located below the residential use. Permitted Commercial FAR is 2.0 in C2-4 R6B districts.

C4-4L
The C4-4L district is tailored for significant commercial corridors with elevated trains. A contextual, regional commercial district, C4-4L allows residential development at R7A density, as well as mixed commercial/residential, community facility/residential, and community facility/commercial buildings. Use Groups 1-6, 8-10, and 12 are permitted. A commercial and community facility FAR of 4.0 is permitted, while residential development is limited to an FAR of 4.6 (with MIH) or 3.45.

C4-3
C4 districts are mapped in regional commercial centers, such as Flushing in Queens and the Hub in the Bronx, that are located outside of the central business districts. In these areas, specialty and department stores, theaters and other commercial and office uses serve a larger region and

generate more traffic than neighborhood shopping areas. Use Groups 5, 6, 8, 9, 10 and 12, which include most retail establishments, are permitted in C4 districts. Uses that would interrupt the desired continuous retail frontage, such as home maintenance and repair service stores listed in Use Group 7, are not allowed. The C4-3 zoning designation is an R6 district equivalent and allows a commercial FAR of 3.4; residential FAR of 3.0 on wide streets outside Manhattan Core; 2.43 FAR on wide streets within the Manhattan Core; 2.2 FAR on narrow streets (under Quality Housing Program) and 4.3 Community Facility FAR

Table 2.1-1 Summary of Existing Study Area Zoning Regulations

Zoning District	Type and Use Group (UG)	Floor Area Ratio (FAR)	Building Height	Parking (Required Spaces)	Lot Coverage	Yards
R6B	Medium Density Residential UGs 1-4	2.0 FAR – Residential 2.0 FAR – Community Facility 2.2 FAR -- Residential with inclusionary housing bonus	50-feet (55 w/QGF)	50% of dwelling units (waived if 5 or fewer spaces required)	Corner—100% Other—60%	Rear yard—30 ft min
***R6**	Medium Density Residential UGs 1-4	3.0 FAR – Residential wide street (outside Manhattan core) 3.6 FAR – MIH on wide street .78 - 2.43 FAR -- Residential 4.8 FAR -- Community Facility	Height Factor	50% of dwelling units (waived if 5 or fewer spaces required)	Corner—100% Other lot—60% (narrow street or Inclussionary Housing) 65% (wide street and basic)	Rear yard—30 ft min
***C2-4**	Commercial Overlay UGs 1-9 & 14	1.0 FAR -- Commercial in (R3-2, R4 & R5) 2.0 FAR -- Commercial in (R6-R10)		1 space per 1,000 sf of floor area		
C4-4L	Commercial District UGs 1-6, 8-10, & 12 R7-2 equivalent	4.0 -- Commercial FAR 4.0 -- Residential FAR 4.6 -- Residential with inclusionary housing bonus	90-feet with non-qualifying ground floor 95-feet with qualifying ground floor	50% of dwelling units (30 percent if zoning lot is 10,00 sf or less) Waived if 15 of fewer spaces required	Corner—80% Other—60%	
C1-3	Commercial Overlay UGs 1-6	1.0 FAR – Commercial in (R3-2, R4 & R5) 2.0 FAR -- Commercial in (R6-R10)		1 space per 400 sq. ft. of floor area		

C4-3	Commercial District UGs 1-6, 8-10, 12 R6 Equivalent	3.4 FAR --Commercial 3.0 FAR – Residential on wide street outside Manhattan Core; 2.43 on wide street within the Manhattan Core; 2.2 on narrow streets (under Quality Housing Program) 4.8 FAR – Community Facilities	Height Factor	Varies for all districts PRC-B—1 per 400SF		

Source: Zoning Handbook, New York City Department of City Planning, 2018
*Current Zoning designation within the Affected Are

ANALYSIS

Future No-Action Scenario

In the Future No-Action condition, no zoning changes are anticipated in the proposed rezoning area. As such, the affected area would remain mapped with the existing R6B zoning district with a C2-4 overlay which permits development for residential and commercial use at up to 2.0 FAR and community facilities at up to 2.0 FAR.

Future With-Action Scenario

Under the With-Action Scenario, the Proposed Actions would change the underlying zoning of the affected area to a C4-4L district (See Figure 1.2-1).

Proposed C4-4L

C4-4L Commercial districts permit a FAR of 4.0 (4.6 with Inclusionary Housing Program) and a max building height of 85 feet (for Inclusionary Housing Program, a max building height of 90 feet without a qualifying ground floor or 95 feet with a qualifying ground floor are permitted) or 100 feet for lots fronting an elevated rail line. Buildings must set back above the maximum base height of 65 feet to a depth of 15 feet. Parking is required for 50% of dwelling units (30% if zoning lot is less than 10,000 square feet; waived if 15 or fewer spaces).

The proposed C4-4L zone allows a range of uses similar to the existing R6B/C2-4, including residential, community facility, and commercial uses. Some larger-scale retail and entertainment (Use Groups 10 and 12) would be allowed under the C4-4L that are not currently allowed in the existing zoning. And the proposed C4-4L would allow commercial uses at a higher density than the existing R6B/C2-4.

The zoning resolution would also require a transition between new development in the Affected Area and the lower scale R6B district by requiring that within 25 feet of the R6B district boundary the maximum building height is 65 feet.

Proposed Zoning Text Amendment

The Proposed Actions would establish an MIH area coteniminous with the rezoning area through ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas for Community District 16, Brooklyn.

The proposed text amendment would require the Applicant to develop in accordance with the MIH program. Further, all future qualifying development of all sites within the Affected Area would be required to adhere to the requirements of the MIH program. Pursuant to the MIH program, a percentage of the new dwelling units in the proposed development must be affordable units, resulting in an affordable housing set-aside for either 25 percent of the residential floor area at an average of 60 percent of the Average Median Income (“AMI”) (“Option 1”) or 30 percent of the residential floor area at an average of 80 percent AMI) (“Option 2”). For purposes of environmental review and per NYC DCP guidance – it is assumed that 20% of the dwelling units would be affordable at 80% of AMI. The proposed affordable housing set asides ensure that the development within the Affected Area would address the need for housing to serve a broad range of the City’s diverse incomes.

Conclusion

The proposed C4-4L district suits the Project Area's proximity to Broadway, the neighborhood's primary commercial corridor. Compared to the existing R6B/C2-4 district, the proposed C4-4L district allows a higher FAR and a more flexible mixed-use building design, and therefore is a designation appropriate for regional commercial centers. In contrast, the existing underlying R6B district allows modestly-scaled buildings and is a designation typically used to preserve row houses located on side streets and mid-blocks. The increased FAR and height allowed in C4-4L districts are fitting for the Project's Area's position at the intersection of Monroe Street, Howard Avenue and Broadway. The large intersection (Monroe Street and Howard Avenue are each 70' wide and Broadway is 80' wide) provides adequate light and air to accommodate taller buildings. The area is well served by commercial and retail establishments and by public transportation that would support the additional density allowed in the proposed C4-4L district.

The proposed C4-4L district would maintain continuity by extending the existing C4-4L district situated along the southwestern side of Broadway and north of Monroe Street. The scale of enlargements and new construction expected in the proposed C4-4L district would be compatible with buildings opposite the Project Area, including the six-story school on Howard Avenue and the new seven-story residential building on Monroe Street. The zoning resolution would also require a transition between new development in the Project Area and the lower scale R6B district by requiring that within 25 feet of the R6B district boundary, the maximum building height is 65 feet. In addition, the proposed C4-4L district would bring an existing building within the Project Area into compliance. The building on Lot 43, known as 16 Howard Avenue, has a total lot area of approximately 3,340 square feet and is improved with a building containing an estimated 12,800 square feet of floor area.

2.1.3 Public Policy

Officially adopted and promulgated public policies describe the intended use applicable to an area or particular site(s) in the City. The Affected Area 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 Affected Area is not located within the Waterfront Revitalization Program boundaries or the Jamaica Bay Watershed boundaries.

Public Policies within the Affected Area

Mixed-Use & Transit-Oriented Development, and the Provision of Affordable Housing

Public policies applicable to the proposed project include the New York City Department of Housing Preservation and Development ("HPD") initiatives to develop affordable high-quality housing on underutilized public land as described in 'Housing New York.' The Proposed Actions would promote mixed-use medium density development with affordable housing along key corridors and adjacent to transit where new residential development is currently restricted to low densities. Medium-density residential districts would be mapped along key corridors with commercial overlays to allow mixed-use development with affordable housing as well as local retail and community facility uses. Overall this rezoning would meet many of the City's stated policy goals for affordable housing, supportive transit-oriented housing, job creation and provision of first floor commercial development that serves the needs of the local community.

Housing New York 2.0

Housing New York 2.0 expands on the original *Housing New York* Plan from 2014 to create more homes for seniors, help New Yorkers buy a piece of their neighborhoods, build a firewall against displacement, protect affordability at Mitchell-Lama buildings, capitalize on advances in technology and innovative design to expand modular building and micro-units, and unlock the potential of vacant lots.

Bushwick Neighborhood Plan

The Plan is a coordinated, collaborative planning effort of community residents, stakeholders, City Council Members, and City agencies to promote a thriving and inclusive neighborhood with strategies for affordable housing, economic development, community resources, and land use and zoning changes. The Plan seeks to:

- Plan thoughtfully about how and where development should happen;
- Create and preserve housing that is affordable to low-income New Yorkers;
- Maintain Bushwick's character and allow for growth in appropriate locations;
- Increase opportunities for small businesses to grow and locate in Bushwick;
- Identify open space, infrastructure, transportation, and other neighborhood needs and opportunities for improvements.

Food Retail Expansion to Support Health Program (FRESH)

The Affected Area is located in a Food Retail Expansion to Support Health Program (FRESH) area. The goal of the FRESH Program is to encourage the development and retention of convenient, accessible stores that provide fresh meat, fruit and vegetables, and other perishable goods in addition to a full range of grocery products. The program offers a set of zoning incentives that provide additional floor area in mixed buildings that include a FRESH food store to reduce the amount of required parking for food stores and permit larger grocery stores as-of-right in light manufacturing districts.

ANALYSIS

Future No-Action Scenario

There are no relevant changes to public policy expected in the study area in the future No-Action condition.

Future With-Action Scenario

There are no relevant changes to public policy expected in the study area in the future With-Action condition.

Conclusion

Housing New York 2.0
The Proposed Actions would change zoning designations within the rezoning area and would support the development of new permanently affordable housing, which is consistent with the policies of *Housing New York.* The Project Site is currently a vacant lot, and the Proposed Actions would lead to the development of a mixed-use building with ground floor commercial use. The development of this vacant lot is also in line with the provisions of *Housing New York 2.0.*

Bushwick Neighborhood Plan
The Proposed Actions further the goals of the Bushwick Neighborhood Plan by creating affordable housing units and mapping the area for MIH, allowing growth in an appropriate location, and increasing opportunities for small businesses to grow and locate in Bushwick.

Food Retail Expansion to Support Health Program (FRESH)
Under the RWCDS no FRESH supermarket is anticipated, but the Proposed Actions would not alter or conflict with the objectives of the FRESH program.

The Proposed Action would not adversely affect the neighborhood, impair the appropriate use or development of adjacent property or be detrimental to the public welfare. Additionally, the Proposed Action would not create a conflict with stated NYC Public Policy goals but support the creation up affordable housing with close access to transit. Therefore the Proposed Action would not pose a potential significant adverse affect to public policy.

2.2 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 *2014 CEQR Technical Manual* for a preliminary assessment (**Section 310**). According to the *2014 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 *2014 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 Site 1 and 2 would each be developed with a building of 95 feet in height with an additional 10 feet for mechanical bulkheads in the proximity of sunlight sensitive resources. Accordingly, a preliminary assessment of shadows is warranted.

2.2.1 Preliminary Shadow Screening Assessment

The shadow assessment begins with a preliminary screening assessment to ascertain whether a project's shadow may reach any sunlight-sensitive resources at any time of the year. If the screening assessment does not eliminate this possibility, a detailed shadow analysis 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 Proposed and 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 2.2-1** 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 408.5 feet, which could be cast from each Proposed or Projected Development site in the proposed rezoning area. This shadow cast was derived by multiplying the height of 105 feet (the maximum possible height under the proposed C4-4L rezoning with MIH bonus plus a 10-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 2.2.1**, it was determined that three open space resources are 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: the Madison Community Greenthumb Garden located on Block 1483 Lot 24, a greenstreet located at the intersection of Monroe Street and Howard Avenue, and the Umoja Garden (Garden Beautiful) between Broadway and Putnam Avenue. A small section of shadow would be cast on the northwest corner of the Umoja Garden (Garden Beautiful) that contains no vegetation and is surrounded by 4-story buildings; therefore no impacts from incremental shadows would occur as a result of the Proposed Actions.

Figure 2.2-1: Tier 1 Screening

Shadow impacts occur when a new shadow intersects an existing public open space or historic resources for a significant period during the day. The length of the longest shadow is 4.3 times the maximum height allowed by the proposed rezoning, or (105 feet times 4.3) approximately 451.5 feet. Projected Development Site 1 and Projected Development Site 2 would reach 3 sunlight sensitive resources, and therefore a Tier 2 assessment is required.

2.2.2 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 project 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.

Conclusion

As shown in **Figure 2.2-2**, the Tier 2 screening assessment showed that the Madison Community Green Thumb open space resource identified under the Tier 1 analysis cannot be reached by a potential shadow cast by the projected developments in the future with-action condition. The greenstreet located at the intersection of Monroe Street and Howard Avenue and the Umoja Garden (Garden Beautiful), however, are both inside of the -108/ + 108 area, so a Tier 3 screening would be required.

Figure 2.2-2 Tier 2 Screening

2.2.3 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 Project 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 project site. 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.

The below graphics are not representative of a typical Tier 3 Shadows assessment as defined in the CEQR Technical Manual. However, the Tier 3 analysis applies to a small green street immediately adjacent to the Affected Area, and the Projected buildings would cast the same shadow with or without intervening buildings. Therefore, for the purposes of this analysis the same graphics are being used for Tier 3 and the Detailed Shadows Analysis below.

Figure 2.2-3 Tier 3 Screening: December 21st AM

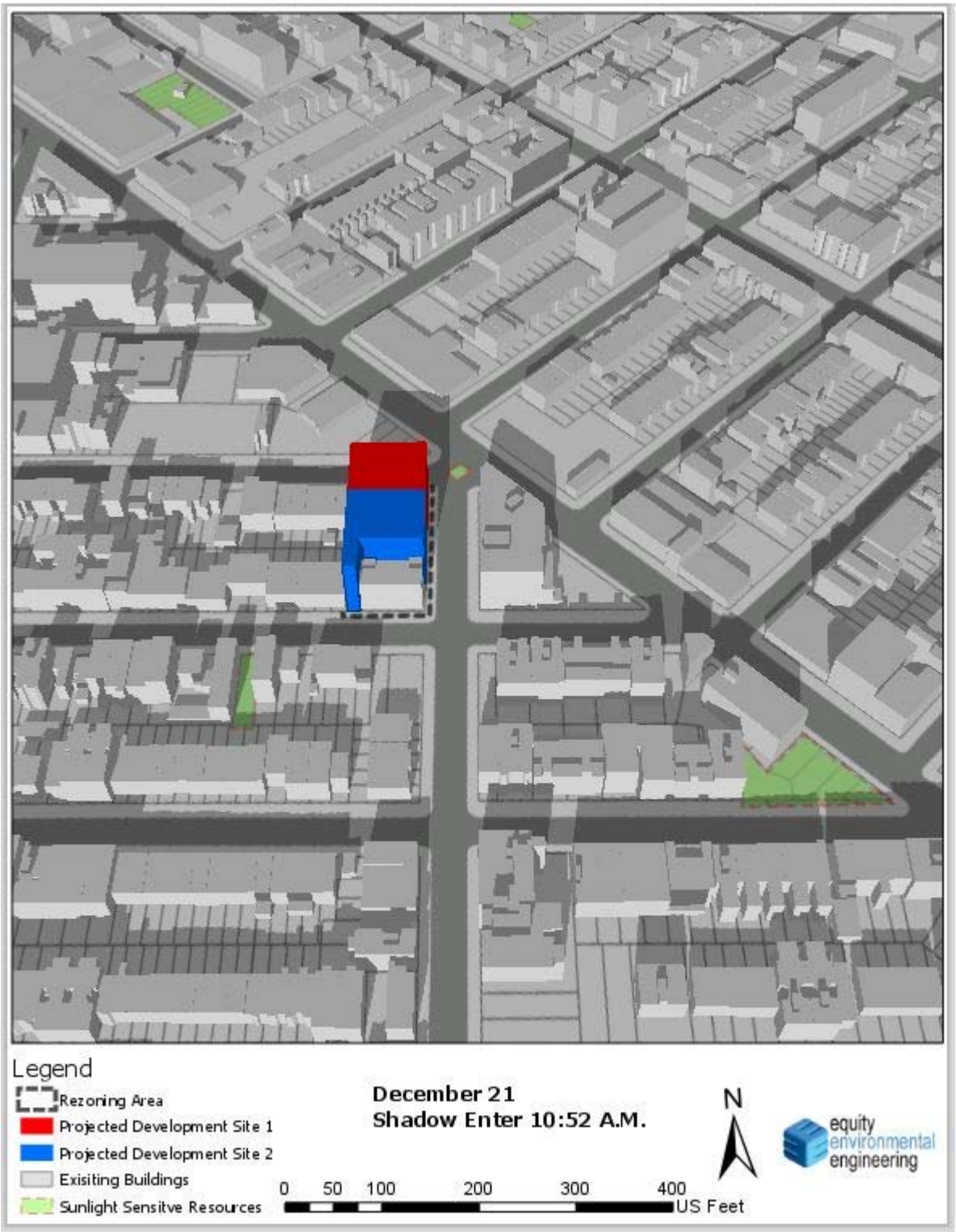


Figure 2.2-4 Tier 3 Screening: December 21st PM

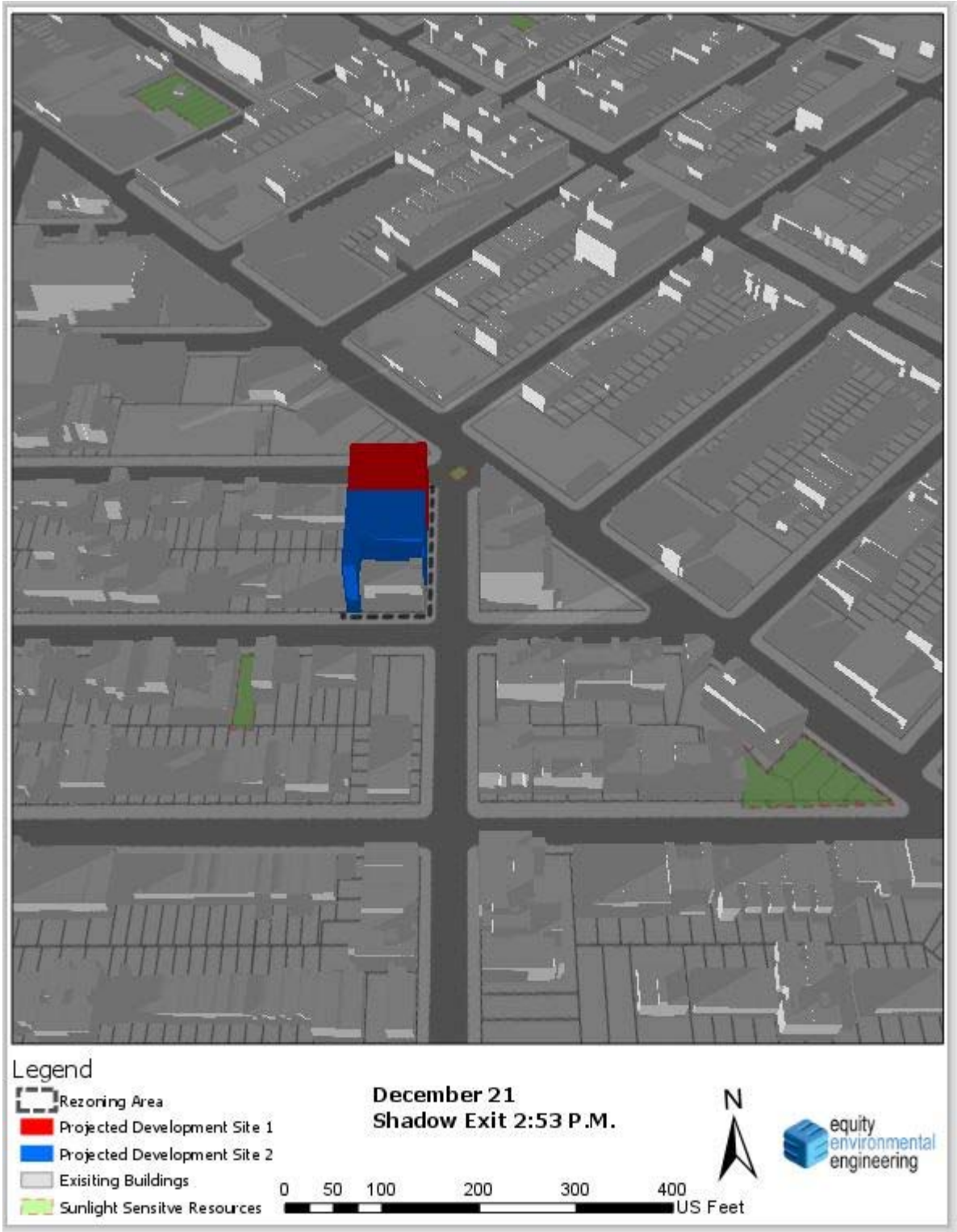


Figure 2.2-5 Tier 3 Screening: March 21st/September 21st AM

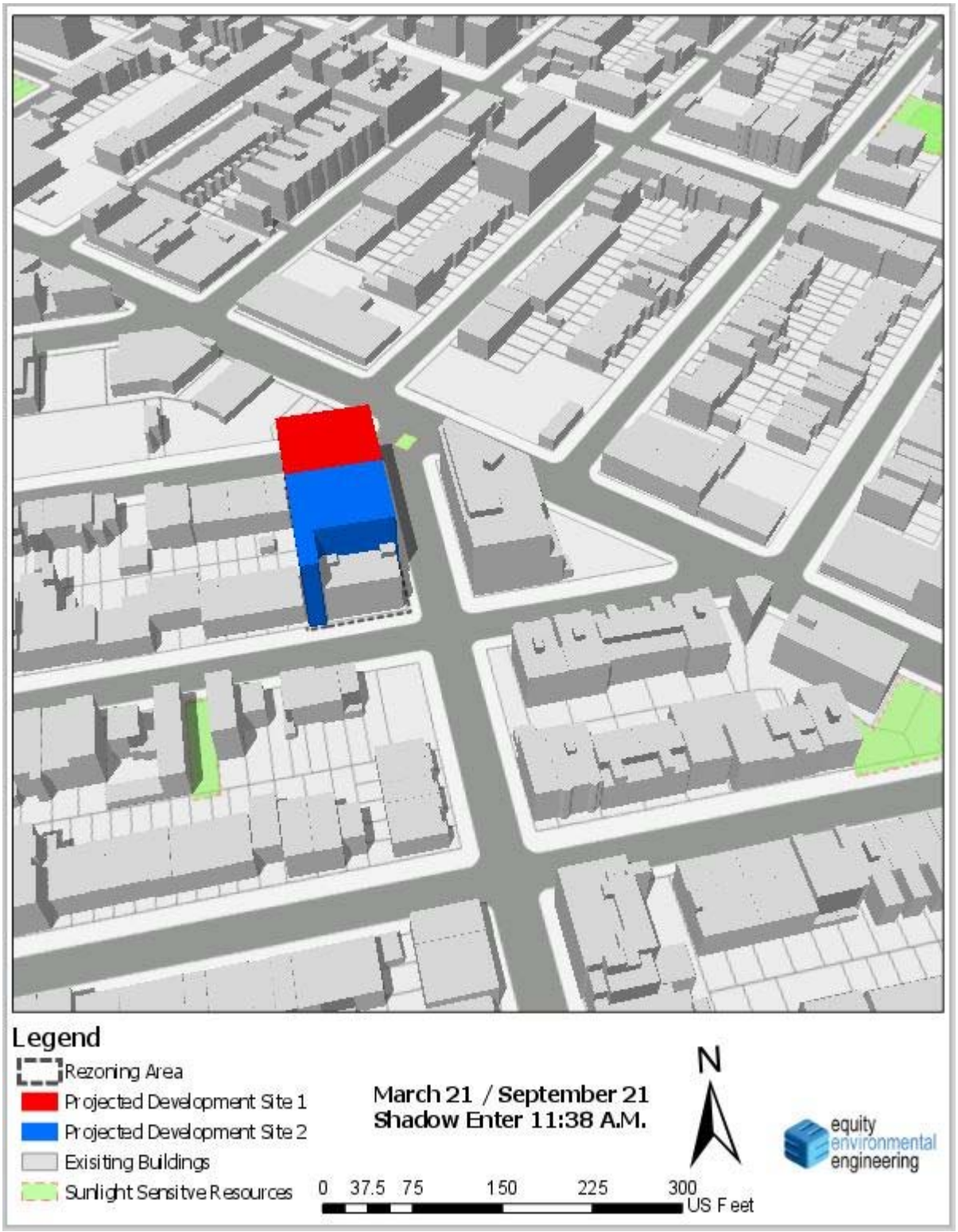


Figure 2.2-6 Tier 3 Screening: March 21st/September 21st PM

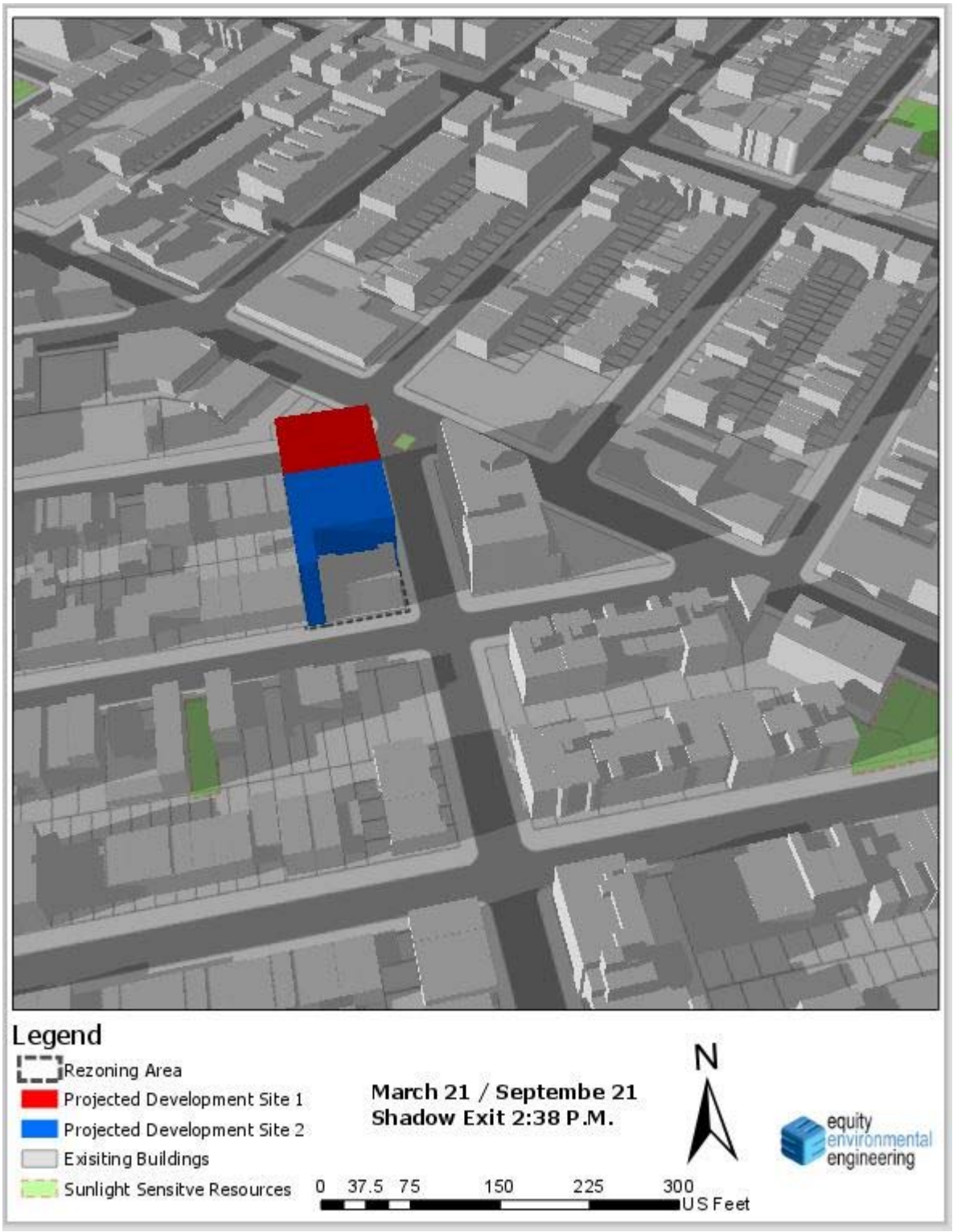


Figure 2.2-7 Tier 3 Screening: May 6th/August 6th AM

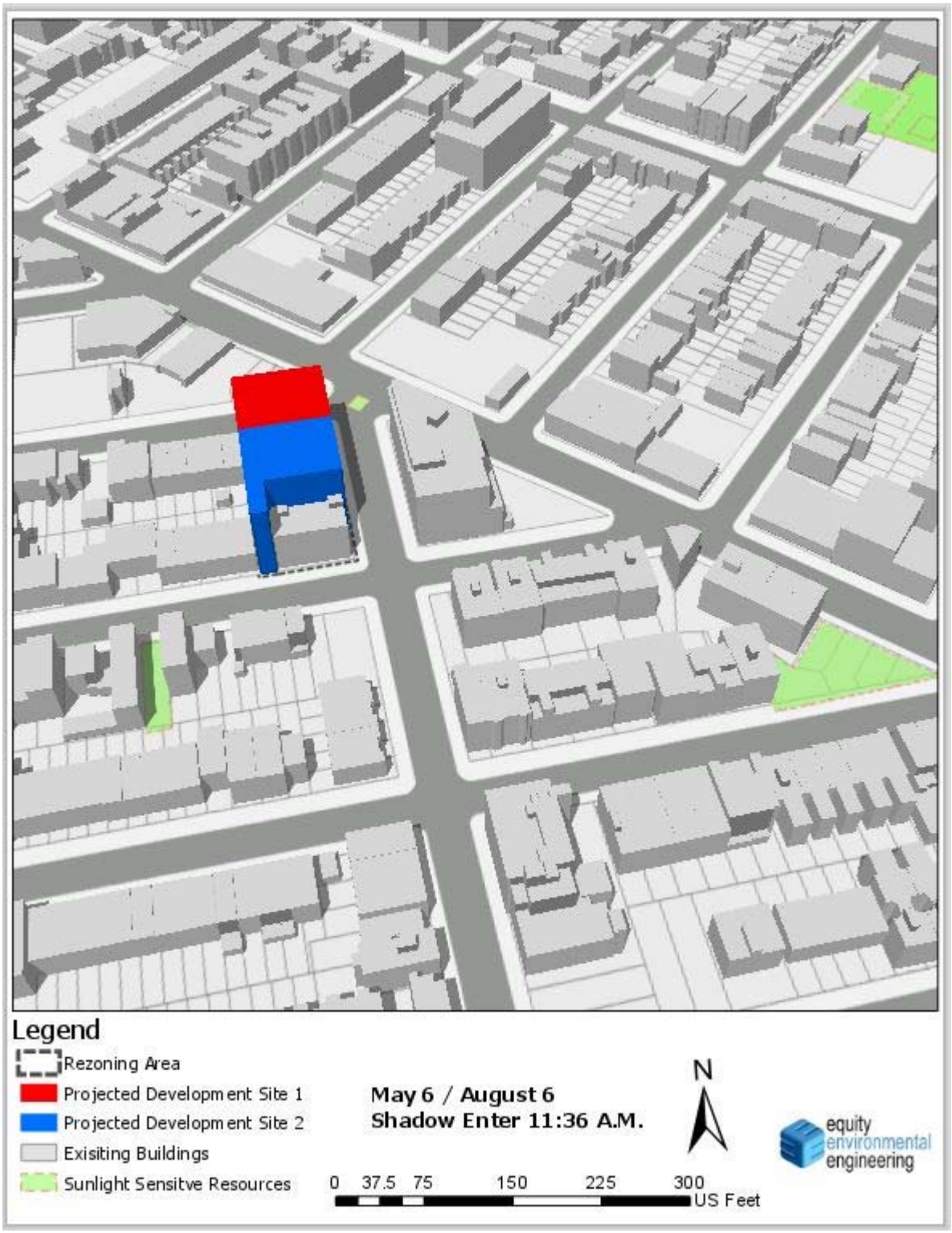
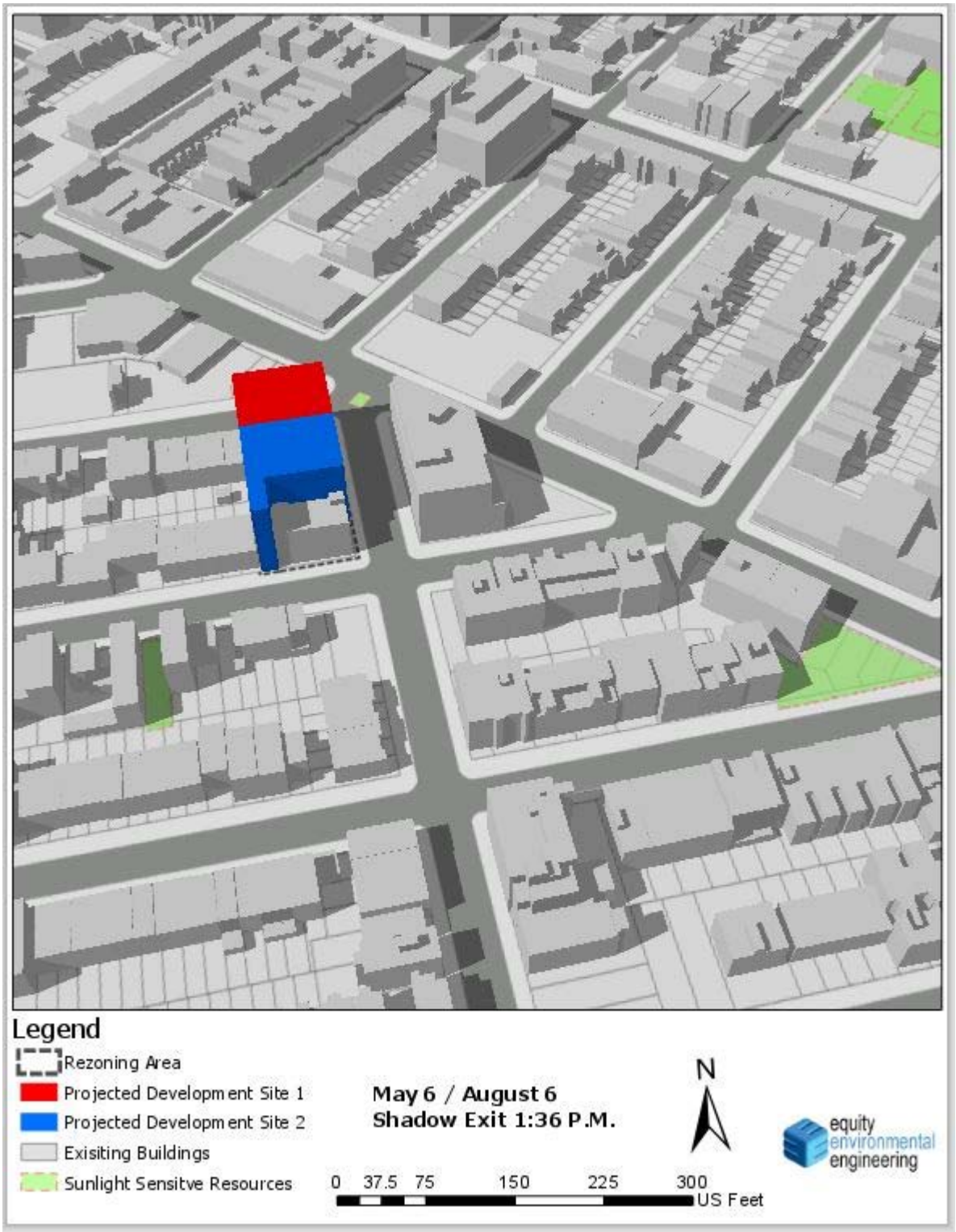


Figure 2.2-8 Tier 3 Screening: May 6th/August 6th PM



Conclusion

As shown in **Figures 2.2.3-2.2.8** the Tier 3 screening assessment showed that shadows from the proposed buildings would reach the greenstreet open space resource located at the intersection of Monroe Street and Howard Avenue on three of the representative analysis days, and, therefore, a detailed shadow analysis is warranted for those three days.

2.2.4 Detailed Shadows 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 resource of concern is summarized in **Table 2.2-1,** and the shadows cast by the Projected Development Sites is shown above in **Figures 2.2.3-2.2.8**. The shadows of intervening buildings were including in the detailed shadow analysis in order to identify the incremental shadows cast by the Proposed Buildings.

Based on the Findings of the Detailed Shadow Analysis, the Proposed Action would cast shadows on the Broadway/Monroe/Howard intersection Greenstreet.

Table 2.2-1 Tier 3 Shadows Table

Analysis Day	21-Dec	March 21 / September 21	May 6 / August 6	21-Jun
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 GreenStreet	Greenstreet (Broadway/Monroe/Howard)			
Shadow enter - exit times	10:52 a.m. - 2:53 p.m.	11:38 a.m. - 2:38 p.m.	11:36 a.m. - 1:36 p.m.	Does Not Enter
Incremental Shadow Duration	4 Hours 1 Minute	3 Hours	2 Hours	0
Note: Daylight savings time not used				

Greenstreet (Broadway/Monroe/Howard)

The Greenstreet located at the intersection of Broadway, Monroe, and Howard is an approximately 82 SF converted traffic island planted with a tree and shrubs in an effort to capture stormwater. The Greenstreet is overseen by the NYC Department of Parks & Recreation. There are no benches or bike paths provided on the Greenstreet, and it is not used for active or passive recreation.

Photo 2.2-1 Broadway/Monroe/Howard Greenstreet

2.2.5 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.

Conclusion

As mentioned above, the Greenstreet at the intersection of Broadway, Monroe, and Howard does not contain any active or passive resources, and therefore, any incremental shadows would not impact the Open Space Utilization of this resource, nor would the shadows cast by the Projected Developments result in the complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource. The shadows cast on the Greenstreet in December (4 hours and 1 minute) would not affect vegetation because the analysis period is outside the growing season. Shadows cast on March 21st/September 21st (3 hours) would have minimal impact on vegetation as 5 hours and 53 minutes of sunlight would still be available, while vegetation typically requires 4 to 6 hours a day of sunlight. The greenstreets would be cast in shadows for 2 hours during the May 6th and August 6th analysis periods and would still receive 8 hours and 51 minutes of sunlight, while vegetation typically requires 4 to 6 hours a day of sunlight. Therefore, the incremental shadows

would not result in a substantial reduction in sunlight available to the vegetation that exists on the Greenstreet. As such, the Proposed Action would not affect the vitality or usage of the sunlight sensitive resources identified in the Study Area, and significant adverse impacts from shadows would not result from the Proposed Actions.

2.3 HISTORIC AND CULTURAL RESOURCES

An assessment of historic and cultural resources is usually necessary for projects that are located in close proximity to historic or landmark structures or districts, or for projects that require in-ground disturbance, unless such disturbance occurs in an area that has been formerly excavated. The term “historic resources” defines districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, architectural and archaeological importance. In assessing both historic and cultural resources, the findings of the appropriate city, state, and federal agencies are consulted. Historic resources include: the New York City Landmarks Preservation Commission (LPC) designated landmarks, interior landmarks, scenic landmarks, and historic districts; locations being considered for landmark status by the LPC; properties/districts listed on, or formally determined eligible for, inclusion on the State and/or National Register (S/NR) of Historic Places; locations recommended by the New York State Board for Listings on the State and/or National Register of Historic Places and National Historic Landmarks.

2.3.1 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. Generally, architectural resources should be surveyed and assessed if the proposed project would result in any of the following, whether or not any known historic resources are located near the site of the project:

- New construction, demolition, or significant physical alteration to any building, structure, or object.
- A change in scale, visual prominence, or visual context of any building, structure, or object or landscape feature. Visual prominence is generally the way in which a building, structure, object, or landscape feature is viewed. For example, a building may be part of an open setting, such as a tower within a plaza, which is either conforming or non-conforming with the street wall in terms of its height, footprint, and/or setback. Visual context is the character of the surrounding built or natural environment. This may include the following: the architectural components of an area's buildings (e.g., height, scale, proportion, massing, fenestration, ground-floor configuration, style), streetscapes, skyline, landforms, vegetation, and openness to the sky.
- Construction, including but not limited to, excavating vibration, subsidence, dewatering, and the possibility of falling objects.
- Additions to or significant removal, grading, or replanting of significant historic landscape features.
- Screening or elimination of publicly accessible views.
- Introduction of significant new shadows or significant lengthening of the duration of existing shadows on an historic landscape or on an historic structure if the features that make the structure significant depend on sunlight.

The architectural resources Study Area is defined as the project site, plus an approximately 400-foot radius around the area. To determine whether the Projected Developments have the potential to affect nearby off-site historic or architectural resources, the Study Area was screened. 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 May 15th, 2017 indicating that no architectural resources were found within the Affected Area that would be considered historic or significant (see **Appendix A**).

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 Blocks 1481 Lots 31 and 35, respectively, could be developed with buildings of up to nine stories and 95 feet in height. As indicated by the LPC in Appendix A, there are no known sites with architectural or archeological significance within the Study Area. However, the S/NR-eligible Stuyvesant East Historic District is located within the study area for architectural resources. Because new construction, a change in scale, and construction activities will occur, an assessment of potential effects to architectural resources is required.

ASSESSMENT

The Stuyvesant East Historic District is roughly bounded by Malcolm X Boulevard to the west; Monroe Street, Putnam Avenue, and Hancock Street on the north; Ralph, Howard, and Saratoga Avenues to the east; and Bainbridge and Chauncey Streets to the south. The district was determined to be eligible in February 2016 due to its association with events that have made a significant contribution to the broad patterns of our history and because it embodies the distinctive characteristics of a type, period or method of construction—namely lower scale and slightly more modest row houses with brick and brownstone and elaborate stone carvings.

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 of 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 Proposed Actions would not result in any types of visual and contextual impacts to the known historic resource within the Study Area. As all of the new buildings that could be developed under the Proposed Action would be residential, commercial, or community facility structures of heights and bulk consistent with those urban design features of the area. The Proposed Actions would not introduce any incompatible visual, audible, or atmospheric elements to the settings of historic resources. As discussed in the Urban Design section below (See Section 2.4, Urban Design and Visual Resources), the proposed building has been designed to be visually compatible and consistent with existing developments. Additionally, the significant views of each of the historic architectural resources identified above will not be adversely affected by the Proposed Actions. The historic district located within the Study Area does not contain any sunlight sensitive resources, and would therefore not be impacted by shadows cast by the Proposed Development sites.

Because the Projected Development Sites do not contain, are not adjacent to, nor are they within 90 feet of, the identified historic architectural resources, no direct or construction-related effects via ground-borne construction activities will occur as a result of the Proposed Actions.

2.3.2 Archaeological Resources

Unlike the architectural evaluation of a Study Area that extends beyond the footprint of a project's block and lot lines, the analysis of potential and/or projected impacts to archaeological resources is controlled by the actual footprint of the limits of soil disturbance. Archeological resources are physical remains, usually subsurface, of the prehistoric and historic periods such as burials, foundations, artifacts, wells and privies. The *CEQR Technical Manual* 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. As noted, the LPC was contacted for their initial review of the project's potential to impact archeological resources, and a response was received by letter dated May 15th, 2017. The LPC letter indicates that there are no known sites of archeological significance within the Affected Area (see **Appendix A**).

2.4 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 2014 *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 project 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 existing publicly accessible view corridors, but there is a potential visual resource in the Stuyvesant East Historic District. An assessment of visual and contextual effects of the Proposed Actions on the historic district was made in **Section 2.3, Historic and Cultural Resources**. Therefore there would be no significant adverse effects to visual resources as a result of the Proposed Actions.

2.4.1 Preliminary Assessment

Existing Conditions

The Project Area consists of a vacant corner lot at the corner of Monroe Street and Howard Avenue, a 4-story midblock public facility, and a 4-story structure located on the corner of Madison Street and Howard Avenue.

Within the Study Area, mid-block land use is predominantly one- and two-family and multi-family attached residential homes on interior lots which feature a mix of small front yards, stoops, and driveways. Built form on these lots ranges from brick and stone, townhome style one- and two-family buildings ranging from one to three floors, to more modern, large-scale multi-family elevator buildings ranging from four to six floors. Institutional land use on the corners along Broadway and Howard Avenue includes large stone buildings with masonry and more modern utilitarian-style buildings along Broadway. A fast-food restaurant with a drive-through is located across the street from the Affected Area. Numerous vacant parcels exist along Madison Street, with three vacant corner lots and three vacant mid-block lots. Two more vacant lots are on the south side of Broadway, and a 22,000 GSF vacant lot exists just north of Broadway, northeast of the Affected Area. Most buildings are arranged regular with respect to their lot placement, and are generally not built out to their lot lines.

The street grid is regular, with streets that are narrower east to west which feed into wider north to south collector roads. Monroe Street, Madison Street, and Putnam Avenue are one-way streets with a single moving lane and curbside parking. Traffic runs westbound on Monroe Street, eastbound on Madison Street, and westbound on Putnam Avenue. Howard Avenue is a one-way street with two moving lanes running northbound, and also features curbside parking. Broadway, running northwest-southeast within the Study Area, is a major transit and commercial corridor, featuring two-way traffic and four moving lanes. The Monroe Street and Howard Avenue

intersection is larger than typical, and is oddly shaped as it meets Broadway to the northeast, which also cuts off and creates irregularly shaped blocks. There is an above-grade track running along Broadway and it is the dominating feature of the Surrounding Area, culminating in the Gates Avenue Station. On the eastern side of Broadway the street grid runs at a disjointed alignment as compared to west of Broadway resulting in a discontinuous and offset street grid and irregular intersections.

Figure 2.4-1 below shows an aerial view of the Affected Area and the Study Area (400' buffer around the Affected Area).

Figure 2.4-1: Aerial Map

Existing Conditions

Photo 1: *View South from Monroe Street onto Projected Development Site 1 (Block 1481, Lot 35)*

Photo 2: View west from Howard Avenue onto Projected Development Site 2 (*Block 1481, Lot 39)*

Photo 3: *View northwest from the Intersection of Howard Ave onto Affected Area (Block 1481, Lot 43)*

Photo 4: *View southwest of Affected Area from the Intersection of Howard Avenue and Monroe Street*

The following figures show the reasonable-worst case development (as described in Section 1.7) building massing and compares these massings to existing conditions. The massing figures below portray the reasonable worst-case development scenario allowed by the proposed Rezoning Action (95 feet) with a setback at 75 feet in the future With-Action condition.

Figure 2.4-2 No-Action Looking North from Madison St and Howard Ave

Figure 2.4-3 With-Action Looking North from Howard Ave and Madison St

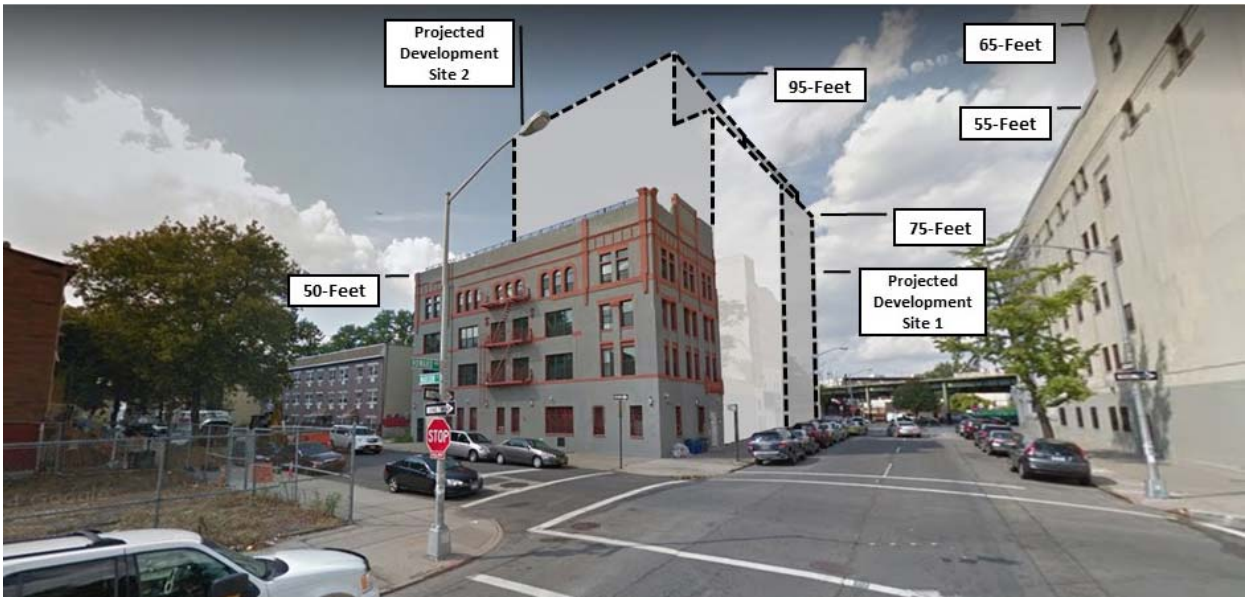


Figure 2.4-5 No-Action Looking East from Monroe toward Howard Ave and Broadway

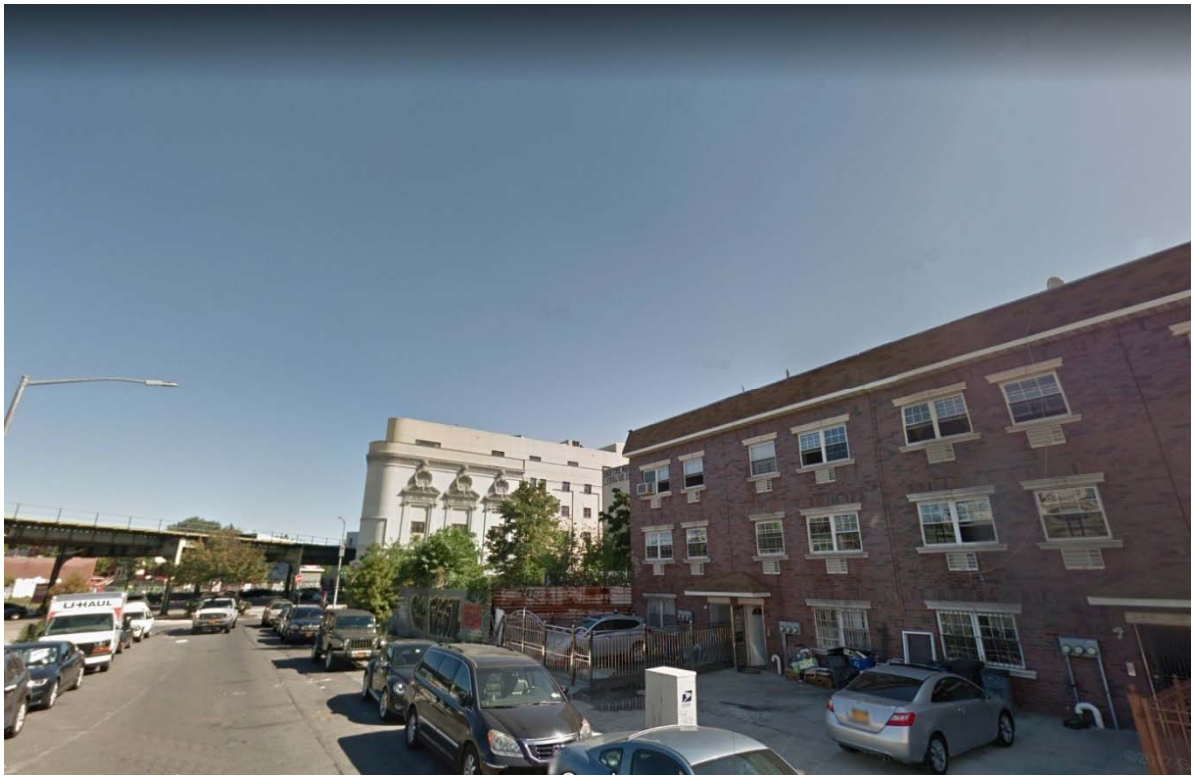


Figure 2.4-6 With-Action Looking East from Monroe toward Howard Ave and Broadway

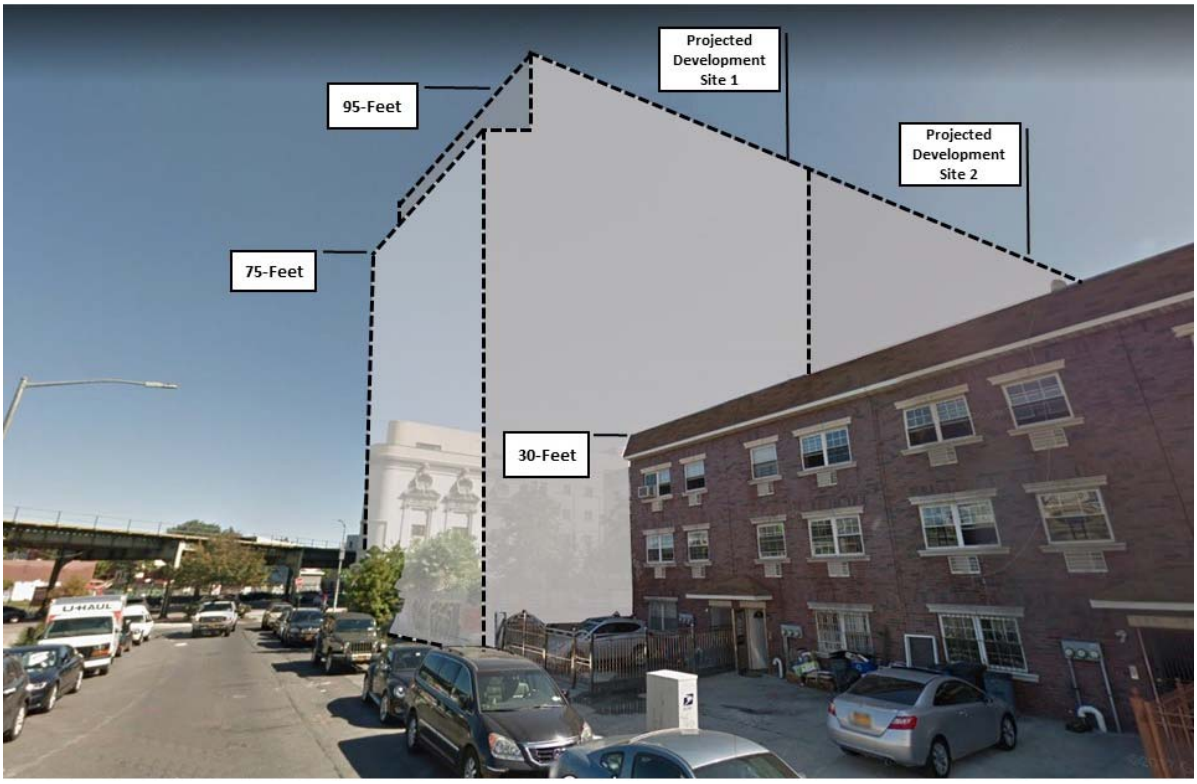
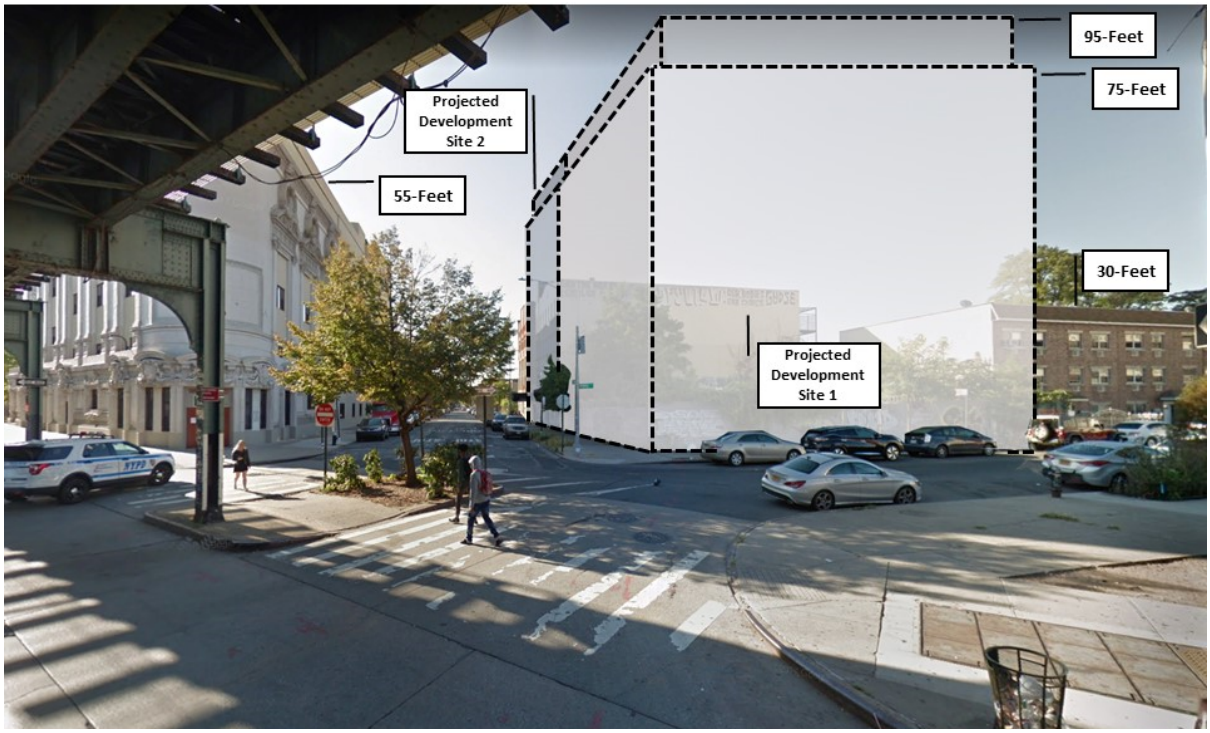


Figure 2.4-7 No-Action Looking South from Broadway and Monroe St

Figure 2.4-8 With-Action Looking South from Broadway and Monroe St



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. As discussed in **Section 2.**1, several as-of-right residential developments have occurred recently within the Study Area and could be expected to continue in the future without the Proposed Actions. There are 8 active construction projects in the Study Area, 2 of which are occurring on vacant lots described above. Of the construction projects, 7 are construction of new residential buildings, and 1, occurring across Broadway, northeast of the Affected Area, is an enlargement of an existing apartment building. 951 Madison Street, located east of the Affected Area across Broadway, is a large new development consisting of 36,652 GSF and a proposed 37 total dwelling units.

Table 2.4-1: Active Construction Projects

Address	Permit Type	SF	DU	Stories	Occupancy Class
846 Monroe Street	New Building	7,276	8	4	Residential
832 Monroe Street	New Building	7,309	7	4	Residential
847 Madison Street	New Building	6,671	7	4	Residential
814 Monroe Street	Alt 1 Enlargement	1,845	7	4	Residential
831 Monroe Street	New Building	9,189	10	5	Residential
10 Palmetto Street	Alt 1 Enlargement	0	7	4	Residential
951 Madison Street	New Building	36,652	37	7	Residential
864 Madison Street	Alt 1 Enlargement	3,670	7	4	Residential

Future With-Action Scenario

The Projected Development Sites on Blocks 1481 Lots 35 and 39, respectively, could be developed with buildings of up to nine stories and 95 feet in height. It is expected that Lot 35 would be developed at an FAR of 4.57 to maximize available bulk and floor area. Lot 35 would provide 38,085 GSF of residential floor area and 6,500 GSF of commercial space while providing 38 dwelling units. Lot 39 would be built at 4.60 FAR, providing 41,044 GSF of residential floor area and 5,500 GSF of commercial space, with 41 total dwelling units. The zoning resolution would also require a transition between new development in the Affected Area and the lower scale R6B district by requiring that within 25 feet of the R6B district boundary the maximum building height is 65 feet. The corner lots could be developed to the lot line with 80% lot coverage, and the interior lot could be developed to the lot line with up to 65% lot coverage.[7]

As shown in **Figures 2.4-2** through **Figure 2.4-9,** the Projected Developments effectuated by the Proposed Actions would serve as both a transition to the adjacent contextual residential R6B neighborhood and as a mixed-use extension of the adjacent C4-4L zone.

[7] The Proposed Development is 38,610 GSF and 4.50 FAR but for the purposes of a conservative analysis the RWCDS assesses the maximum available bulk under the Proposed Actions.

Conclusion

The Proposed Rezoning would assist in reinforcing and complementing the relationship between the Affected Area with Broadway, the adjacent commercial/transit corridor. Additionally, the Proposed Action would facilitate the redevelopment of a parcel within the Affected Area that has remained vacant for over a decade. Thus, the Projected Developments, as described above, would increase the level of activity along Howard Avenue and Monroe Street. 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. 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.

2.5 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.

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 for the subject site.

2.5.1 Summary of Phase I ESA

Equity was retained by Mr. Joseph Atari of Merrick Capital Corp to conduct a Phase I Environmental Site Assessment (ESA) of the subject property located at 2 Howard Avenue, Brooklyn, New York in accordance with the American Society for Testing and Materials (ASTM) Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The ASTM Standard constitutes all appropriate inquiry into previous ownership and uses of the property consistent with good commercial or customary practice. The ASTM Standard also satisfies the requirements of the United States Environmental Protection Agency (EPA) All Appropriate Inquiry Standard, 40 CFR Part 312, which is required to qualify for certain landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

The purpose of the Phase I ESA was to evaluate the current and historical conditions of the subject property in an effort to identify recognized environmental conditions (RECs) in connection with the subject property. A recognized environmental condition is defined by ASTM as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment; or conditions that pose a material threat of a future release to the environment. Recognized Environmental Conditions (RECs) are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release, or a material threat of a release into structures on the property or into the ground, groundwater or surface waters of the property. De minimis RECs are those that do not present a threat to health or the environment, and would not be the subject of an enforcement action by a government agency. All RECs, excluding de minimus RECs were considered in the Phase I.

The identification of RECs in connection with the subject property may impose an environmental liability on owners or operators of the site, reduce the value of the site, or restrict the use or marketability of the site, and therefore, further investigation may be warranted to evaluate the scope and extent of potential environmental liabilities. One REC was identified in association with the Affected Area.

2.5.2 Phase I ESA Findings

Recognized Environmental Conditions (RECs)

One (1) pipe with a cap protruding from the sidewalk, adjacent to the site, was observed during the site visit. The observed pipe's characteristics are similar to those of a fill port, which are typically associated with the likely presence of an underground storage tank (UST). As such, the presence of the piping is identified as a REC.

Vapor Encroachment Condition (VECs)

Equity conducted an analysis of the various properties listed in the Phase I database search with respect to the Vapor Encroachment Screening (VES) in accordance with the requirements of the American Society for Testing and Materials (ASTM) 2600-10. A Tier I screen was done within the required database search distances from the subject property boundary for the items listed in Section 8 of the standard.

Based on the evidence provided by the database report, observations made during the site reconnaissance, and professional judgement, it is Equity's conclusion that a Vapor Encroachment Condition (VEC) cannot be ruled out for the subject property due to records of LUST, Historical Dry-Cleaning facilities and NY Spills proximate the site.

2.5.3 Phase I ESA Recommendations

- Prior to any future development of the Property that involves subsurface disturbance, a subsurface (Phase II) investigation (e.g., sampling of soil, soil vapor, and groundwater) is recommended prior to such activities to ensure that soil excavation and/or groundwater dewatering activities are conducted in accordance with applicable regulations and to determine if vapor mitigation and/or additional remediation is warranted for the future use of the Property.
- Prior to and/or during any activities with the potential to disturb the known tank, it should be closed and removed, along with any contaminated soil, if present, from the Property in accordance with all federal, state and local requirements. The tank should be properly registered, if required, with the New York State Department of Environmental Conservation (NYSDEC), and the New York City Fire Department and evidence of a petroleum spill must be reported to NYSDEC and addressed in accordance with applicable requirements.
- During any future subsurface disturbance, excavated soil should be handled and disposed of properly in accordance with all applicable regulatory requirements (and a Remedial Action Plan, if warranted). Any evidence of a petroleum spill must be reported to the NYSDEC and addressed in accordance with applicable requirements. If any unexpected USTs are encountered, they should be properly assessed, closed, and removed in accordance with state, and local regulations. Transportation of material leaving the site for off-site disposal should be in accordance with federal, state and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.
- If dewatering is required during potential future construction activities, water must be discharged in accordance with the New York City Department of Environmental Protection (NYCDEP) and/or New York State Department of Environmental Conservation (NYSDEC) requirements.
- Debris at the Property should be removed, and any potential remaining chemicals should be disposed of in accordance with applicable requirements.

- Any potential remaining chemicals should be disposed of in accordance with applicable requirements.

2.5.4 Phase II Remedial Investigation Workplan

Based on the RECs identified in the Phase I ESA for the above referenced site, a Phase II Remedial Investigation Workplan (RIWP) and a Site-Specific Health and Safety Plan (HASP) were prepared by Equity Environmental Engineering, LLC (Equity) on June 14, 2017. An investigation of soil, soil vapor, and groundwater will be performed to properly characterize the site for potential environmental impacts from historic on-site/off-site uses, operations, etc. The sampling procedures of this investigation will be performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10.

Four (4) test borings will be completed at the site. Figure 2 depicts the sample locations, where soil, groundwater, and soil vapor samples will be collected. At a minimum, a total of two soil samples will be collected from each soil boring. Two (2) groundwater samples will be collected if groundwater is encountered. A total of three (3) soil vapor/sub-slab samples will be collected. The depth of groundwater is unknown. Each sample point location at the site will be accurately measured to fixed benchmarks (i.e., select properly lines, adjacent structures, etc.).

A Phase II Investigation Report will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative activities and findings. Soil, groundwater and soil vapor analytical results will be compared to the appropriate New York State Department of Environmental Conservation (NYSDEC) Part 375 soil criteria and applicable NYSDEC Groundwater Quality Standards and NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices. The report will include actual sampling locations, deviations from the original workplan, spider diagrams, analytical data tables for all reported constituent compounds and remedial recommendations, as warranted.

Conclusion

Based on the RECs Identified in the Phase I ESA, further investigation and coordination with New York City Department of Environmental Protection (See Appendix D) is ongoing. A Phase II Remedial Investigation will be performed, and a Phase II Remedial Investigation Report will be prepared. Should any remediation be warranted, the applicant commits to perform the necessary mitigation in order to ensure that construction and occupancy of action-induced development does not result in significant adverse impacts related to hazardous materials. An (E) Designation for hazardous materials (E-513) would be applied to Projected Development Site 1 (Block 1481, Lot 35) and Projected Development Site 2 (Block 1481, Lot 39) to ensure the proposed actions would not result in any significant adverse hazardous materials impacts.

The text for the (E) designation E-513 related to hazardous materials is 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.

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

2.6 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 (PM10), fine particulate matter (PM2.5), 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.

2.6.1 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 Action 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 (Table 16-1, Transportation Threshold) of the CEQR Technical Manual as potentially warranting further assessment. The project would not generate HDDV equivalent traffic volume more than 12 – 23 per hour depending on the road types. 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. Therefore, no further assessment of the potential for mobile source air quality impacts is warranted.

2.6.2 Stationary Sources

According to the *2014 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 2014 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

Three lots are affected by the Proposed Actions: Projected Development Site 1 located at 2 Howard Avenue (Block 1481, Lot 35), Projected Development Site 2 located at 8 Howard Avenue (Block 1481, Lot 39), and the 4-story building located at 16 Howard Avenue (Block 1481, Lot 43).

The 4-story building at 16 Howard Avenue is anticipated to remain in the future with the Proposed Actions, and is therefore not included in the analysis.

In the future No-Action condition it is anticipated that Lot 35, Lot 39, and Lot 43 would remain in their current state with no further development.

Future With-Action

Projected Development Site 1 (Block 1481, Lot 35)
Projected Development Site 1, the Applicant owned property, would facilitate a mixed-use, predominantly residential, 6-story building. The building would rise to a height of 65 feet and would contain 44,585 gsf of floor area, of which 38,085 gsf are residential floor area and 6,500 gsf are commercial floor area. The building Reasonable Worst-Case Development Scenario (RWCDS) would facilitate a 95 feet high building, but, for the purposes of a conservative analysis, the Applicant's proposed 6-story building will be assessed.

Projected Development Site 2 (Block 1481, Lot 39)
Projected Development Site 2 would facilitate a mixed-use, predominantly residential, 9-story building. The building RWCDS is a 46,544 gsf of floor area, a height of 95 feet.

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 2.7-1.**

Table 2.6-1. 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 are then gradually converted to NO_2, which is the pollutant of concern, in the atmosphere (in the presence of ozone and sunlight as these emissions travel downwind of a source).

The 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 follow:

- 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.

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 NO2, SO2, and PM2.5—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 (Project Area distances to JHS 45 and JHS 126 are equal). **Table 2.6-2** shows the background concentrations.

Table 2.6-2: Background Concentration at the Queens College Monitoring Station (NYSDEC 2017 Report)

Pollutant	Averaging Period	Background Concentration	Monitoring Station
NO_2	1-Hour Concentration	112.2 µg/m^3	Queens College
	Annual Arithmetic Average	32.4 µg/m^3	
$PM_{2.5}$	24-Hour Concentration	19.6 µg/m^3	JHS 126
	Average of 3 Consecutive Annual Means	8.2 µg/m^3	
SO_2	1-Hour Concentration	6.93 ppb (18.1 µg/m^3)	Queens College
	Annual Arithmetic Mean	0.75 ppb (2.00 µg/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 $PM_{2.5}$ 7.7 µg/m^3
- Annual $PM_{2.5}$ 0.3 µg/m^3

PROJECT HVAC SYSTEMS ANALYSIS

Per *CEQR TM*, 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) within 400 feet, and the potential of the Proposed Actions to significantly impact each other (project-on-project).

As outlined in the *CEQR TM*, the analysis of buildings' HVAC systems follows stationary sources methodology, and based on CEQR recommendations, 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. 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 buildings heights considered in the analysis were the Projected Development Site 2 RWCDS height of 95 feet, and the Projected Development Site 1 actual (as described in Section 1.7) and RWCDS (as described in Section 1.8) heights of 65 and 95 feet respectively.

Screening Analysis

As outlined in the *CEQR TM,* the potential for stationary source emissions from heat and hot water systems to have a significant adverse impact on nearby receptors depends on the type of fuel that would be used, the height of the stack venting the emissions, the distance to the nearest building whose height is at least as great as the venting stack height, the building residential or non-residential use, and the square footage of the development that would be served by the system. The *CEQR TM* provides a screening analysis based on these factors, which was utilized to determine the potential for significant impacts from the proposed buildings' HVAC systems.

If the actual distance between a stack and the affected building is greater than the threshold distance for a building size, then that building passes the screening analysis (and no significant

impact is predicted). However, if the actual distance is less than the threshold distance for a building, then there is a potential for a significant impact and a detailed analysis would be required. The anticipated development within the proposed rezoning area would consist of two buildings, each with its own separate natural gas fueled heat and hot water system. As such, screening analyses were performed for natural gas use and environmental designations added to specify use of natural gas only.

Screening analysis is only applicable to a single smokestack. However, for purpose of a cumulative analysis, emissions from multiple stacks could be combined in a single stack situated as close as possible to the receiving building. As such, the following screening analyses were conducted:

1. The Proposed Development Site 1 impact on existing land uses that are at least 65 feet high.
2. The cumulative impact of the proposed project on existing land uses that are at least 95 feet high.

Per the CEQR TM, the CEQR nomographs depicted on Figure 17-5 or 17-7 of the Appendices for a 30-foot stack height were applied (as the 30 feet curve height is closest to but not higher than the proposed stack height of any of the proposed buildings.) The Stationary Source Screen in Figure 17-5 is a generic screen that considers the type of fuel oil used. According to 15 RCNY 2-15, no new boiler or burner installations may use No. 6 or No. 4 fuel oils. Therefore, the highest-emitting fuel that could be used in the RWCDS building is No. 2 fuel oil. The Stationary Source Screen Figure 17-7 referenced in the Appendices of the CEQR TM is a generic screen assuming the HVAC system is fueled by natural gas. These nomographs depict the size of the development versus distance below which the potential impact can occur and provides a conservative estimate of the threshold distance. In addition, the distance to the nearest building of similar or greater height was assumed to be 400 feet if the actual distance is greater. **Figures 2.6-1 and 2.6-2** show the screening analyses nomographs.

Figure 2.6-1: Projected Development Site 1—HVAC Screen Natural Gas

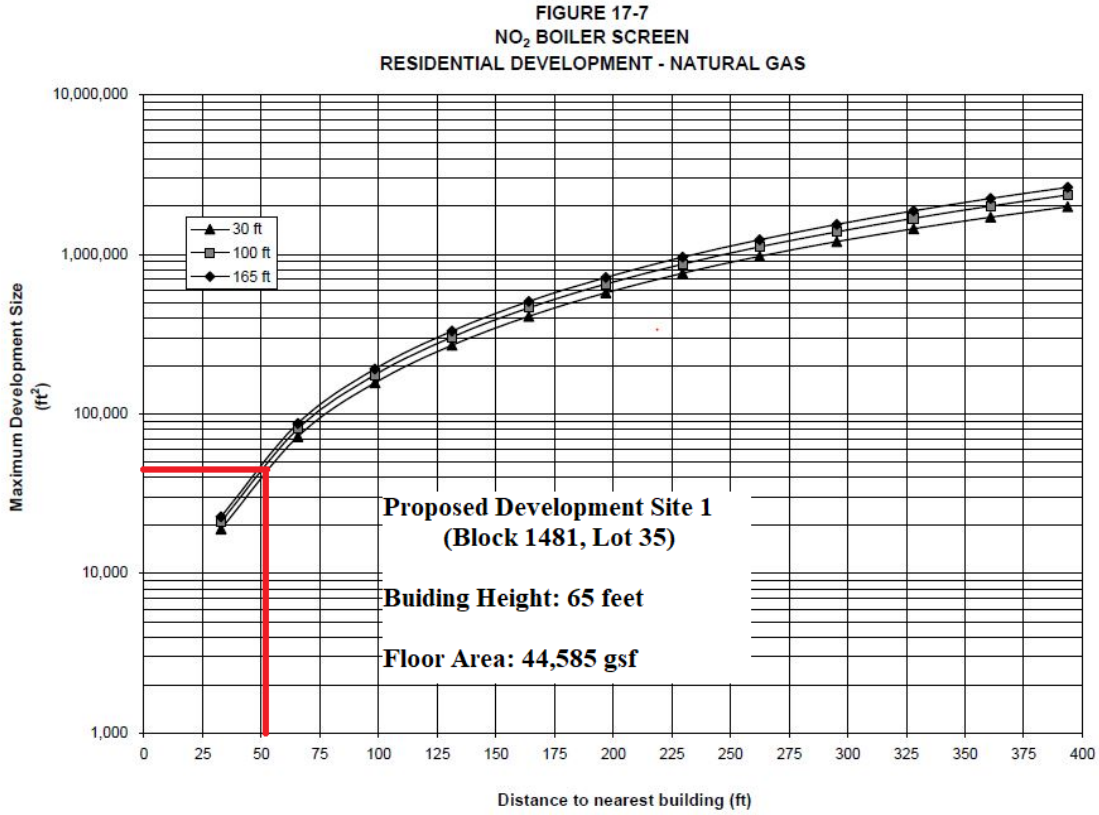


Figure 2.6-2: The Combined Projected Development—HVAC Screen Oil #2

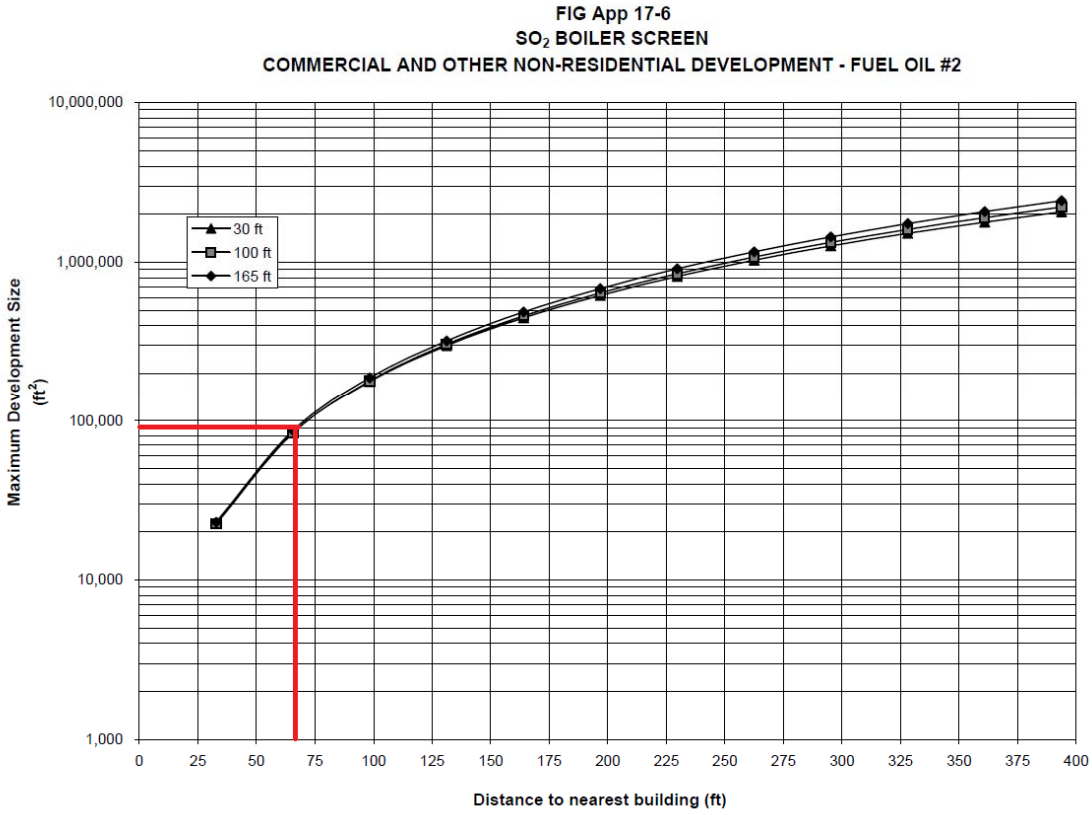


Table 2.6-3 depict the buildings' heights and the screening analyses results, where "Use AERMOD" indicate that a detailed analysis using AERMOD dispersion analysis is required.

Table 2.6-3: Screening Analysis Results

Projected Development Site ID	Lot	Building Height (ft.)	Heated Area (sq. ft.)	Screen Distance (ft.)	Receptor Building (Site ID or Block/Lot)	Receiving Building Distance (ft.)	Pass/ Fail
Projected Development Site 1	35	65	44,585	N.A.	Proposed Development Site 2	0	Use AERMOD
				52	Existing Land Uses > 65 ft. high	70 ft. (Block 1482, Lot 1)	Screens Out
Projected Development Site 2	39	95	46,544	N.A.	Proposed Development Site 1 RWCDS	0	Use AERMOD
Projected Project	35, 39	95	91,129	70	Existing > 95 ft. high	No Result Within 400 ft.	Screens Out

Figure 2.6-1 screening analysis shows that a detailed analysis would be required for any existing or planned land uses that are 65 feet or higher and at a distance of less than 52 feet from the

Projected Development Site 1. A review of existing land uses shows that the nearest building of similar or greater height is the 6-story, 75.8 feet high, school building, located at 1396 Broadway (Block 1482, Lot 1). The school building is located on the east side of Howard Avenue and directly across the street from the Project Area. The school building distance to the proposed project is 70 feet. As such, the Projected Development Site 1 passes the screening analysis on existing land uses. As previously mentioned, the Projected Development Site 1 abuts the Projected Development Site 2, hence it fails the screening analysis, and a detailed analysis using AERMOD is required.

Figure 2.6-2 screening analysis shows that a detailed analysis would be required for any existing or planned land uses that are 95 feet or higher and at a distance of less than 75 feet from any of the projected developments. No existing or planned building higher than 95 feet is located within 400 feet of the combined projected project. As such, the cumulative impact of the proposed project on existing land uses passes the screening analysis.

As presented in **Table 2.6-3**, the proposed project potential impact on existing land uses screened out, and the project-on-project requires detailed analysis.

Detailed Analysis

Two dispersion modeling analyses were conducted to estimate the impacts from the buildings' stacks emissions: The Projected Development Site 1 actual design dimensions on the Projected Development Site 2, and the Projected Development Site 2 impact on the Projected Development Site 1 RWCDS. These analyses were conducted using the latest version of EPA's AERMOD dispersion model. In accordance with CEQR guidance, these analyses were conducted assuming stack tip downwash, urban dispersion surface roughness length of 1.0 meter, elimination of calms, and with and without downwash effect on plume dispersion.

Per the CEQR TM, the pollutants of concern for natural gas fueled boilers are NO2 and PM2.5. The boilers' energy intensities were calculated from the annual fuel usage, the developments' gross floor area, and the assumption that the developments' fuel use would resemble that of a residential building. Pertinent values were obtained from the CEQR TM Appendix for residential buildings, and the assumption that all fuel would be consumed during the 100-day (or 2,400 hour) heating season.

The pollutants of concern for oil #2 fueled boilers are SO2 and PM2.5. However, NO2 was analyzed too as a conservative measure. Projected Development Site 2's boiler energy intensity was calculated from the annual fuel usage, the development's gross floor area, and the assumption that the development's fuel use would resemble that of a residential building. Pertinent values were obtained from the CEQR TM Appendix for residential buildings, and the assumption that all fuel would be consumed during the 100-day (or 2,400 hour) heating season. Per the guidance from the Department of City Planning for similar projects, SO2 emission was assumed to be 30 ppm. **Table 2.6-4** shows the calculated emission rates, both short-term and annual.

Table 2.6-4: Estimated Short-term and Annual Emission Rates of Each Building

Site ID	Fuel	Pollutant	Averaging Time	Emission Rate (g/s)
Projected Development Site 1	Natural Gas	NO_2	1-hour	1.38E-02
			Annual	3.79E-03
		$PM_{2.5}$	24-hour	1.05E-03
			Annual	2.88E-04
Projected Development Site 2	Fuel Oil #2	NO_2	1-hour	2.12E-02
			Annual	5.82E-03
		$PM_{2.5}$	24-hour	2.26E-03
			Annual	6.20E-04
		SO_2	1-hour	7.87E-03
			Annual	2.16E-03

As seen in **Table 2.6-4** the NO2 and PM2.5 emission rates of Projected Development Site 2 are greater than for the Projected Development Site 1 (the buildings are almost similar in size as previously mentioned). Therefore, the assumption that the Projected Development Site 2 would use oil #2 as the type of fuel is conservative.

The diameters of the stacks and the exhaust exit velocities were estimated based on values obtained from the New York City Department of Environmental Protection (DEP) "CA Permit" database for the corresponding boiler size (i.e., rated heat input or million Btu per hour). The stack exit temperatures was assumed to be 300°F (423 K), which is appropriate for boilers. The New York City Building Code (Building Code) requires that a rooftop stack should be at least 10 feet away from the edge of the roof and at least 3 feet higher than the roofline. These parameters were specified in the AERMOD models. In addition, the stack of the source building was situated as close as possible to the receiving building. If the modeled pollutant concentration exceeded the significant impact criteria, the stack distance from the receiving building was increased, until the dispersion model showed no significant impact.

Receptors on the receiving building were placed all around the receiving building envelope, at 10 foot increments and at all floor levels. Ground floor receptors were placed at a height of 6 feet above grade, 2nd floor receptors at 21 feet high (assuming 15 feet high ground floor). Floors above the 2nd floor were assumed to be 10 feet high, and receptors were placed 6 feet above each of these floor levels. Receptors on top floors were placed 3 feet below the roof line.

The 1-hour with no downwash effect of the Projected Development Site 1 impact on the Projected Development Site 2 utilized a Tier 3 approach. All other scenarios, for simplicity and yet more conservative analysis, were run with a generic 1 gram per second emission rate for the 1-hour, 24-hour, and annual averaging times, and maximum output concentrations.

The NO2 1-hour with no downwash effect on plum dispersion utilized a Tier 3 with NO2 and ozone background concentrations. 2013-2017 Ozone hourly background concentrations were obtained from the NYSDEC Queens College monitoring station. The maximum ozone hourly concentration was filled for missing values. 2015-2017 NO2 hourly background concentrations were obtained from the NYSDEC for Queens College monitoring station. The 3-year of data was compiled, and a 5-year of hourly background concentrations file created following the EPA March 2011 Memorandum (Page 17) .

All analyses were conducted using the latest five consecutive years of meteorological data (2013-2017). Surface data was obtained from La Guardia Airport and upper air data was obtained from

Brookhaven station, New York. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. Meteorological data were combined to develop a 5-year set of meteorological conditions, which was used for the AERMOD modeling runs and Anemometer height of 9.4 meters was specified per Lakes Environmental Software Inc.

Results of Dispersion Analyses

The 1-hour NO2 models were initially run using a Tier 1 approach, accounting for a full NOx to NO2 conversion. Both NO2 1-hour and annual averaging times modeled concentrations were added to the background concentration at the NYSDEC Queens College monitoring station. A Tier 2 and 3 approached followed if exceedance of the NAAQS were predicted. The reported concentrations are the maximum predicted concentrations of the building wake effects abled/disabled scenarios. The PM2.5 24-hour and annual averaging times modeled concentrations were compared with the NYC Interim Guidelines threshold criterions. Results of the HVAC dispersion NO2 and PM2.5 analyses are shown in **Table 2.6-5**.

Table 2.6-5. The Proposed Project HVAC Dispersion Analysis Results

Pollutant and Averaging Time	Modeled Concentration ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Evaluated Concentration ($\mu g/m^3$)	Threshold Concentration ($\mu g/m^3$)	Threshold Standard
Projected Development Site 1 – on - Projected Development Site 2					
1-hour NO_2	178		**178**	**188**	NAAQS
Annual NO_2	1.91	32.4	**34.3**	**100**	NAAQS
24-hour $PM_{2.5}$	6.52	N.A.	**6.52**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.15	N.A.	**0.15**	**0.3**	*de minimis*
Projected Development Site 2 – on - Projected Development Site 1					
1-hour NO_2	28.6	112.2	**141**	**188**	NAAQS
Annual NO_2	0.41	32.4	**32.8**	**100**	NAAQS
24-hour $PM_{2.5}$	0.89	N.A.	**0.89**	**7.70**	*de minimis*
Annual $PM_{2.5}$	0.04	N.A.	**0.04**	**0.3**	*de minimis*
1-hour SO_2	10.6	18.1	**29**	**196**	NAAQS
Annual SO_2	0.15	2.00	**2.15**	**80**	NAAQS

The Projected Development Site 1 impact on the Projected Development Site 2 required a stack setback and a NO2 1-hour Tier 3 approach for the without building wake effect scenario. The concentration of the NO2 1-hour Tier 1 approach with building wake effect abled were below the NAAQS. Ultimately, the 1-hour NO2 Tier 3 analysis determined the stack setback distance from Projected Development Site 2.

As seen in **Table 2.6-5**, the NO2 and SO2 predicted concentrations are less than the NAAQS and the PM2.5 concentrations are less than the de minimis. Therefore, with (E) Designations in place, the emissions of either projected development would not significantly impact the other projected development.

(E) Designation (E-513)

The HVAC analysis for the Proposed Actions concluded that fuel would need to be restricted to the exclusive use of natural gas in its HVAC system and stacks' heights would need to be specified. No stack setback distances are required. E-513 is listed below.

The (E) Designation language is as follows:

> **Block 1481, Lot 35 (Projected Development Site 1)**: *Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water system(s) to avoid any potential significant adverse air quality impacts. Stack shall be located at the highest tier, or at a minimum of 68 feet above grade, and at least 60 feet from the lot line facing Madison Street to avoid any potential significant adverse air quality impacts.*
>
> **Block 1481, Lot 39 (Projected Development Site 2)**: *Any new residential or commercial development on the above-referenced property must ensure that the heating, ventilating, air conditioning (HVAC), and hot water system(s) stack is located at the building's highest level, and at a minimum of 98 feet above grade to avoid any potential significant adverse air quality impacts.*

Conclusion

The air quality analysis addressed the stationary HVAC systems. The results of the analysis are shown below:

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

2.6.3 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 R6B zoning district with a C2-4 overlay. The surrounding area within a radius of 400 feet consists primarily of multi-family residential, commercial, and institutional uses. The 400-foot radius was screened for potential sources of industrial emissions. One industrial use, 841 Madison Street, was located, and is shown below in **Table 2.6-6.**

1,000 Foot Study Area

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

Based on field observations and reviews of DCP land use maps, a list of two possible Industrial uses was identified-one within the 400 foot study area (841 Madison Street) and one within the 1,000 foot study area (866 Madison Street). These uses were compiled and are listed below in **Table 2.6-6** and identified in **Figure 2.6-3**.

Table 2.6-6: Industrial/Manufacturing Lots within 1,000 feet of the Affected Area			
Block	**Lot**	**Address**	**Permit Search**
1481	56	841 Madison Street	*No Record Found*
1483	13	866 Madison Street	*No Record Found*

Figure 2.6-2 Air Toxics Study Area

Conclusion

As indicated above, there are no active industrial emissions permits or large 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.

2.7 NOISE

Introduction

Equity Environmental Engineering, LLC (Equity) conducted Noise Monitoring to support a proposed Zoning Map Amendment and Zoning Text Amendment to Zoning Resolution ("ZR") Appendix F: Inclusionary Housing Designated Areas for Community District 3, Brooklyn to establish the area proposed for rezoning as a Mandatory Inclusionary Housing ("MIH"). The Proposed Actions would affect Block 1481, Lots 35, 39 and 43 on Howard Avenue. The future With-Action condition assumes new residential development on Projected Development Sites 1 (Lot 35) and 2 (Lot 39). An Elevated J and Z Subway Line runs along Broadway and is located approximately 50 feet north of Lot 35. Vehicular and elevated subway traffic are the predominant source of noise in the area, and therefore the proposed development warrants an assessment of the potential for adverse effects on project occupants from ambient noise.

The proposed redevelopment of the currently vacant lot 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 2014 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 2.7-1** 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.

2.7.1 Mobile Sources

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

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. No significant adverse mobile source noise impacts due to vehicular traffic are anticipated because of the Proposed Actions as It does not increase existing passenger equivalent values by more than 100 percent.

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.

2.7.2 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. As the project site is not subject to high ambient noise levels from any nearby stationary source, no stationary source noise impacts from surrounding uses are anticipated. Additionally, 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, and no further analysis is warranted.

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 L10 measured directly outside the projected development site:

Table 2.7-1 Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				**Clearly Unacceptable**
Noise Level with Proposed Project	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation[1]	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	$36 + (L_{10} - 80)^2$ dB(A)

Source: *CEQR Technical Manual*

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

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

Table 2.7-2: 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: 2014 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 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 source in the area of the proposed project is elevated subway traffic, noise monitoring was conducted during peak vehicular travel periods, 8:00-9:00 am, 12:00 pm-1:00 pm, and 5:00-6:00 pm. Noise monitoring data is also being referenced from a separate project (241st Street Rezoning EAS, 18DCP094X) to assess the elevated subway noise levels on the Projected Development, and is presented in **Table 2.7-5**. Pursuant to CEQR Technical Manual methodology, readings on the intersection of Howard Avenue and Monroe Street were conducted for 1-hour periods during each peak hour. Noise monitoring was conducted using a Type 1 Casella CEL633C1 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 surfaces. The monitor was calibrated prior to and following each monitoring session. Elevated subway traffic proximate to Projected Development Site 1 constitutes a worst-case condition for noise at the site.

Noise monitoring was conducted at the elevated center platform of an MTA subway by Langan Engineering from 7:00AM – 9:00AM (AM), 12:00PM – 2:00PM (MD), and 4:00PM – 6:00PM (PM). The microphone was mounted on a tripod at an approximate elevation of 5 feet above the platform and 35 feet above street level. The microphone was approximately 5 feet in distance from the elevated train.

Figure 2.7-1 Noise Monitoring Location

Figure 2.7-2 Howard Avenue Frontage Monitoring Location—1 hour

Measurement Conditions

Monitoring was conducted during typical midweek conditions, on Wednesday, February 8, 2016. The weather was dry and wind speeds were low throughout the day. Neighboring properties were not a significant source of ambient noise. Traffic volumes and vehicle classification were documented during the noise monitoring. The sound meter was calibrated before and after each monitoring session.

Existing Conditions

Based on the noise measurements taken at the Affected Area, the predominant source of noise is commercial vehicular traffic. The volume of traffic, and its corresponding level of noise, is moderate on the Howard Avenue frontage. **Table 2.7-3** contains the results for the measurements taken at the site.**Table 2.7-5** contains the results for the elevated measurements taken at a nearby location.

Table 2.7-3: Noise (dB) Levels at Howard Avenue Frontage

	Wednesday, February 8th, 2017		
	8:00 – 9:00 am	12:00 - 1:02 pm	5:00 – 6:00 pm
L_{max}	91.0	90.5	96.1
L_{10}	**74.0**	**71.5**	**75.0**
L_{eq}	72.0	71.3	73.9
L_{50}	64.5	62.5	64.5
L_{90}	60.5	58.0	60.0
L_{min}	55.0	52.5	55.1

Table 2.7-4: Traffic Volumes and Vehicle Classifications (vehicle counts for duration of the noise monitoring sessions)

	Morning	Midday	Evening
Car/ Taxi	142	59	98
Van/ Light Truck/SUV	106	76	121
Heavy Truck	0	0	0
Bus	22	2	3
Mini-Bus	0	0	0
Train	19	21	21

As discussed previously, a noise study performed by Langan Engineering at a site with similar characteristics is being referenced to assess the elevated subway noise levels on the Projected Development and is presented below.

Table 2.7-5: Noise (dB) Levels at Elevated Center Platform of MTA Subway[8]

Measurement Location	Day	Time	L_{eq}	L_{MAX}	L_{10}	L_{50}	L_{90}
Elevated Center Platform of MTA Subway	Weekday	AM	75.7	89	79.3	69	62.8
		MD	75.6	90.4	79.6	71.9	62.5
		PM	81.1	69.8	84.7	80.1	63.6

In their report, Langan Engineering noted that:

> At receptor location 4 (elevated center platform of MTA subway), platform announcements for the elevated No. 2 subway train were the dominant noise source as well as idling subway trains. Vehicular traffic from White Plains Road also contributed to the measured noise levels.

The 2014 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the Proposed Action, an L_{10} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure. The highest recorded L_{10} at the Howard Avenue frontage was 75.0 dB(A) during the evening period and the highest recorded L_{10} for the subway platform was 84.7 dB (A) during the evening period.

Per The 2014 *CEQR Technical Manual, Chapter 19, Section 332.1* measured data from a site in the area may sometimes be adjusted assuming a 3 dB(A) attenuation per doubling of distance to estimate existing noise levels at the receptor location. The elevated subway line is approximately 75 feet north of Lot 35 and the noise monitoring took place 5 feet from the train, therefore 3 dB(A) of attenuation would occur 10 feet away from the train (5 feet x 2), an additional 20 feet away from the train (10 feet x 2), and then another 3 dB(A) at an additional 40 feet from the train(20 feet x 2). Total attenuation from the 75-foot distance between the elevated subway platform and Lot 35 would be 9 dB(A), or an L_{10} at Projected Development Site 1 of 75.7 dB(A).

Based on **Table 2.7-1** and **Tables 2.7-3 and 2.7-5** above, a composite window-wall noise attenuation of 33 dB(A) would be required for all building facades.

Because the proposed Zoning Map Amendment and Zoning Text Amendment would affect multiple lots on Howard Avenue, an (E) Designation, E-513, is being placed on the Projected Sites. The requirements of (E) Designation E-513 related to noise would apply to Projected Development Site 1 (Block 1481, Lot 35) and Projected Development Site 2(Block 1481, Lot 39).

The text for E-Designation would be as follows:

Block 1481, Lot 35 (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 33 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

[8] Receptor location 4 of the 241st Street Rezoning EAS, 18DCP094X

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 1481, Lot 39 (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 33 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.

2.8 NEIGHBORHOOD CHARACTER

According to the *2014 CEQR Technical Manual*, a neighborhood character assessment considers how elements of the environment combine to create the context and feeling of a neighborhood and how a project may affect that context and feeling. Thus, to determine a project's effects on the neighborhood character, the elements that contribute to a neighborhood's context and feeling are considered together. These elements may include land use, zoning, public policy, socioeconomic conditions, open space, historic and cultural resources, urban design, visual resources, shadows, transportation and noise. The study area for a preliminary analysis of neighborhood character is typically consistent with the study areas of the relevant technical areas under CEQR that contribute to the defining elements of the neighborhood. The study area should generally include at least the Project Site and the area within 400 feet of the Project Site boundaries as indicated in **Figure 2.1.1**.

2.8.1 Preliminary Analysis

Existing Conditions

The Study Area is defined by the elevated subway running along Broadway, the irregular blocks that it creates, and the commercial corridor to the east; and by the residential nature of the mid-block one- and two-family row homes to the south and west.

The Affected Area is located in the Stuyvesant Heights neighborhood of Brooklyn, an area that has experienced recent redevelopment near the Affected Area and the neighborhood. However, as shown in **Table 2.1-1**, a large amount of vacant land remains both in the neighborhood at large as well as within the Study Area. The Affected Area is in close proximity to an elevated subway, adjacent to a predominantly commercial corridor and is directly abutting an institutional land use.

The street grid is regular, with streets that are narrower east to west which feed into wider north to south collector roads. Monroe Street, Madison Street, and Putnam Avenue are one-way streets with a single moving lane and curbside parking. Traffic runs westbound on Monroe Street, eastbound on Madison Street, and westbound on Putnam Avenue. Howard Avenue is a one-way street with two moving lanes running northbound, and also features curbside parking. Broadway, running northwest-southeast within the Study Area, is a major transit and commercial corridor, featuring two-way traffic and four moving lanes.

Within the Study Area, mid-block land use is predominantly one- and two-family and multi-family attached residential homes on interior lots which feature a mix of small front yards, stoops, and driveways. Built form on these lots ranges from brick and stone, townhome style one- and two-family buildings ranging from one to three floors, to more modern, large-scale multi-family elevator buildings ranging from four to six floors. Institutional land use on the corners along Broadway and Howard Avenue includes large stone buildings with masonry and more modern utilitarian-style buildings along Broadway.

ANALYSIS

Future No-Action Scenario

It is expected that existing uses within the affected area would remain in the future without the Proposed Action. Therefore, for the purposes of this analysis, it is assumed that the constituent elements of neighborhood character in the No-Action scenario would be consistent with the existing conditions.

Future With-Action Scenario

Under the With Action Scenario, both the Applicant Development Site – Projected Development Site 1 and Block 1481, Lot 39- Projected Development Site 2 are projected develop. While Projected Development Site 1 is intended to develop as described in Section 1.7, for the purposes of this analysis, the maximum development potential permitted pursuant to the Proposed Action was considered. Both Sites are anticipated to utilize the maximum development potential of the Proposed C2-4 rezoning, resulting in new mixed-use residential and local commercial land uses.

The proposed actions would result in two new mixed residential and commercial use buildings. Projected Development would be consistent with neighborhood character and be located near Broadway, a major commercial and transit corridor.

In order to determine the Proposed Actions potential effects on neighborhood character, the elements that contribute to a neighborhood's context and feeling are considered both separately and cumulatively. The examination focuses on whether a defining feature of the neighborhood's character may be significantly affected, as further described below:

Land Use, Zoning, and Public Policy: As indicated in Section 2.1 above, the Proposed Actions would not adversely impact the neighborhood in terms of land use, zoning or public policy – as the land uses and zoning proposed are identical to adjacent land uses.
Socioeconomics: The Proposed Action would not adversely impact the neighborhood in terms of socioeconomic elements as the development is a relatively small residential addition and would add both market rate and affordable options – similar to what currently exists in the neighborhood;
Open Space: The Proposed Action would not impact either access to or significantly reduce the open space ratio available to residents in the neighborhood.
Shadows: As indicated above in Section 2.2, the Proposed Action would not result in impacts from shadows cast from the Projected Developments.
Historic and Cultural Resources: As indicated in Appendix A by LPC letter dated May 15, 2017, the LPC review did not identify any known Architectural or Archeological resources. Therefore, the Proposed Actions would not introduce any impacts to Historic or Cultural Resources.
Urban Design and Visual Resources: The Proposed Action would have a favorable impact on Urban Design and Visual Resources by providing a new attractive mixed-use development where an overgrown long-vacant lot sits prominently at the corner of the block with a fenced in blighted parcel.
Transportation: Pursuant to Table 16-1 of the *2014 CEQR Technical Manual*, the maximum development that could occur pursuant to the Proposed Action falls below the minimum development density requiring a Transportation Analysis.
Noise: The Proposed Action would not result in a development that would produce a significant source of noise.

Combination of Moderate Effects: Based on the above findings, there would be no combination of moderate effects to several elements that cumulatively may affect neighborhood character.

Conclusion

It is The Applicant's opinion that the Proposed Actions would significantly enhance the social fabric of the community and the overall constituent elements of neighborhood character by transforming and revitalizing a blighted and vacant lot into a vibrant mixed-use community-oriented development. As discussed above, the Proposed Actions would not in whole or from a specific technical study stand point result in a significant impact to the neighborhood character, nor would cumulative effects of two or more of the above technical areas have any significant impacts to the Study Area

***Appendix A**: LPC Environmental Review Letter*

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-K
Project: HOWARD AVE REZONING
Date received: 5/4/2017

Properties with no Architectural or Archaeological significance:

1) ADDRESS: HOWARD AVENUE, BBL: 3014810035
2) ADDRESS: 8 HOWARD AVENUE, BBL: 3014810039
3) ADDRESS: 16 HOWARD AVENUE, BBL: 3014810043

Gina Santucci 5/15/2017

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 32379_FSO_DNP_05112017.doc

***Appendix B**: ARCHITECTURAL AND SITE DRAWINGS*

ZONING CALCULATIONS AS PER M.I.H. & ZQA
TAX LOT No.: 35
LOT AREA = 8,000 sf
EXIST. ZONE: C2-4 in R6B
PROPOSED ZONE: C4-4L (R7A EQUIVALENT - 35-23(b) ZR)
MAX. F.A.R.:
COMMERCIAL (33-122 ZR) = 4.0
COMMUNITY FACILITY (33-122 ZR) = 4.0
RESIDENTIAL (23-154 ZR) = 3.45 BASE & 4.60 MAX.

MAX. LOT COVERAGE RES. (23-154 ZR) = 65% INTERIOR, 100% CORNER

MAX. F.A.:
COMM. (33-122 ZR) = 4.0 x 8,000 = 32,000 SF
COMM. FAC. (33-123 ZR) = 4.0 x 8,000 = 32,000 SF
RESIDENTIAL (23-154 ZR) = 4.60 x 8,000 = 36,800 SF

PROPOSED F.A.:

FIRST	8,000 - 1,440 ramp = 6,560 SF
SECOND	6,500 SF
THIRD	6,500 SF
FOURTH	6,500 SF
FIFTH	6,500 SF
SIXTH	4,025 SF
TOTAL F.A.=	36,585 SF

MAX. LOT COVERAGE (RES. USE ONLY):
CORNER LOT = 100% = 8,000 SF

PROP. LOT COVERAGE:
CORNER LOT = 6,500 SF - 81%

MIN. REQ'D. SIDE YARD (35-52 ZR) = NONE OR 8'-0" MIN.
MIN. REQ'D. REAR YARD (23-47 & 33-26 ZR): NONE W/IN 100' OF CORNER

DENSITY (23-22 ZR) = 680
MAX. NUMBER OF D.U.'s = 36,800 - 8,000 = 28,800 SF / 680 = 42
PROP. NUMBER OF D.U.'s = (7 PER FL. x 4 FLS.) + 6 = 33 D.U.'s
PROP. NUMBER OF AFFORDABLE UNITS (30% x 28,800 = 8,640 / 850) = 10 UNITS APPROX.

MAX. HEIGHT OF WALL & REQ'D. SETBACKS (23-664 ZR):
MIN. BASE PLANE = 40'-0"
MAX. BASE PLANE = 75'-0"
MAX. BUILDING HEIGHT = 95-0" - 9 STORIES (w/. qualifying ground floor)
SETBACKS: NARROW STREET = 15'-0"
WIDE STREET = 10'-0"

PROPOSED HEIGHT OF BLDG. = 65'-0"

REQUIRED PARKING (36-21 ZR) = GENERAL RETAIL USES, DOCTOR'S OFFICES & HOTELS = NONE
REQUIRED PARKING (36-342 ZR) = MARKET RATE D.U's = 30% OF 23 D.U's = 7 SPACES
= AFFORDABLE D.U's = NONE WITHIN TRANSIT ZONE
WAIVER (36-362 ZR) = 7 < 15, THEREFORE NONE REQ'D.
PROP. PARKING IN CELLAR = 7 SPACES

REQ'D. BICYCLE PARKING (36-362 ZR):
GENERAL RETAIL USES = 1 PER 10,000 SF OF F.A.
DOCTOR'S OFFICES = 1 PER 10,000 SF OF F.A.
RESIDENTIAL = 1 PER 2 D.U.'s = 33 / 2 = 17 BIKES

REQ'D. LOADING (36-62 ZR): GENERAL RETAIL & DOCTOR'S OFFICES
FIRST 100,000 = NONE
NEXT 2000 SF = 1

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

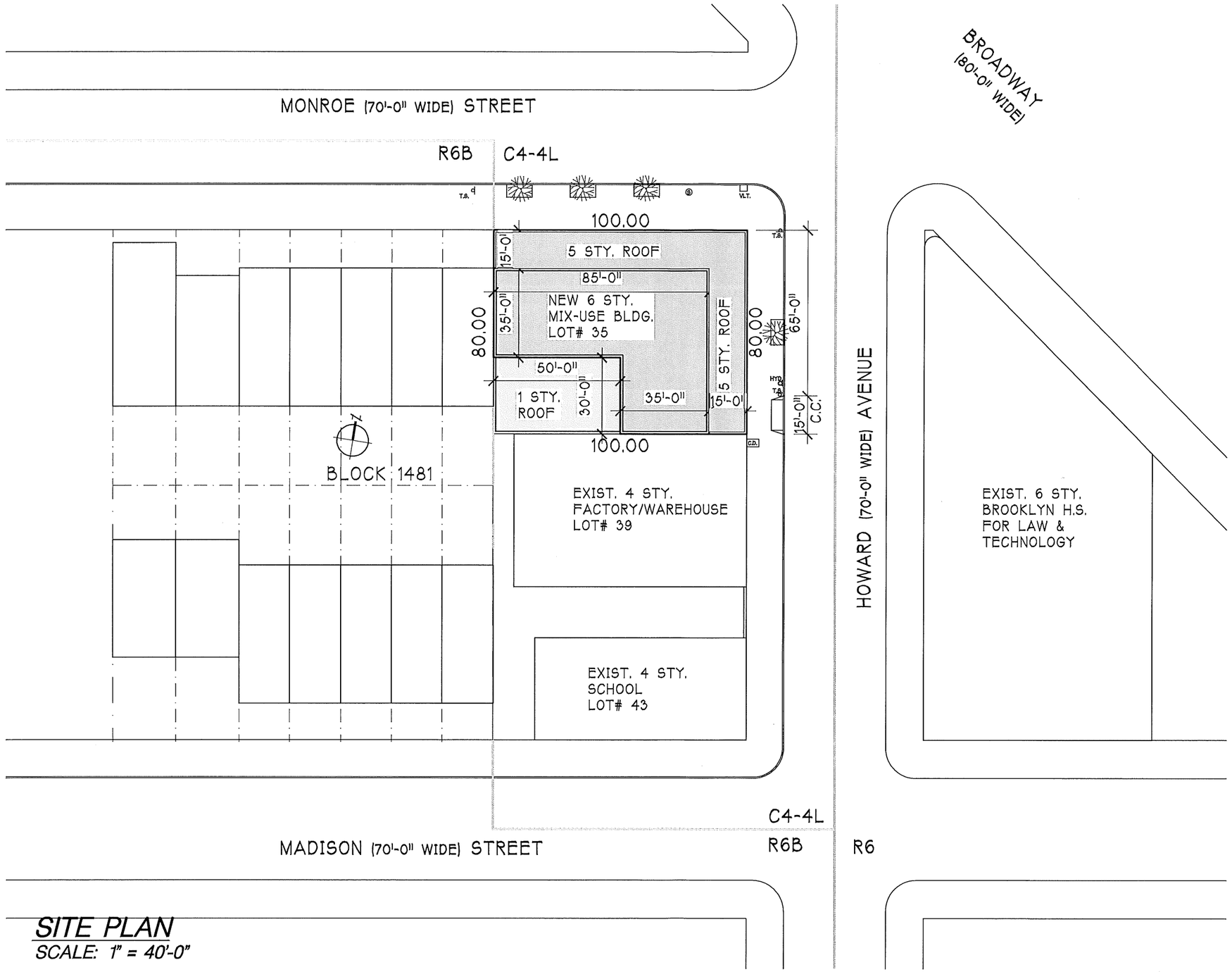
DRAWING TITLE: ZONING ANALYSIS FOR ILLUSTRATIVE PURPOSES ONLY
PREMISES: HOWARD AVENUE BROOKLYN, NY

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	16035
SCALE:	AS NOTED
DATE:	REV 4-18-16

REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 1 OF 4

Z-001.00



SITE PLAN
SCALE: 1" = 40'-0"

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
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Interior Design
Code Consultant
Building Dept. Expediting
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Briarwood N.Y. 11435
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www.caliendoarchitects.com

DRAWING TITLE: FOR ILLUSTRATIVE PURPOSES ONLY

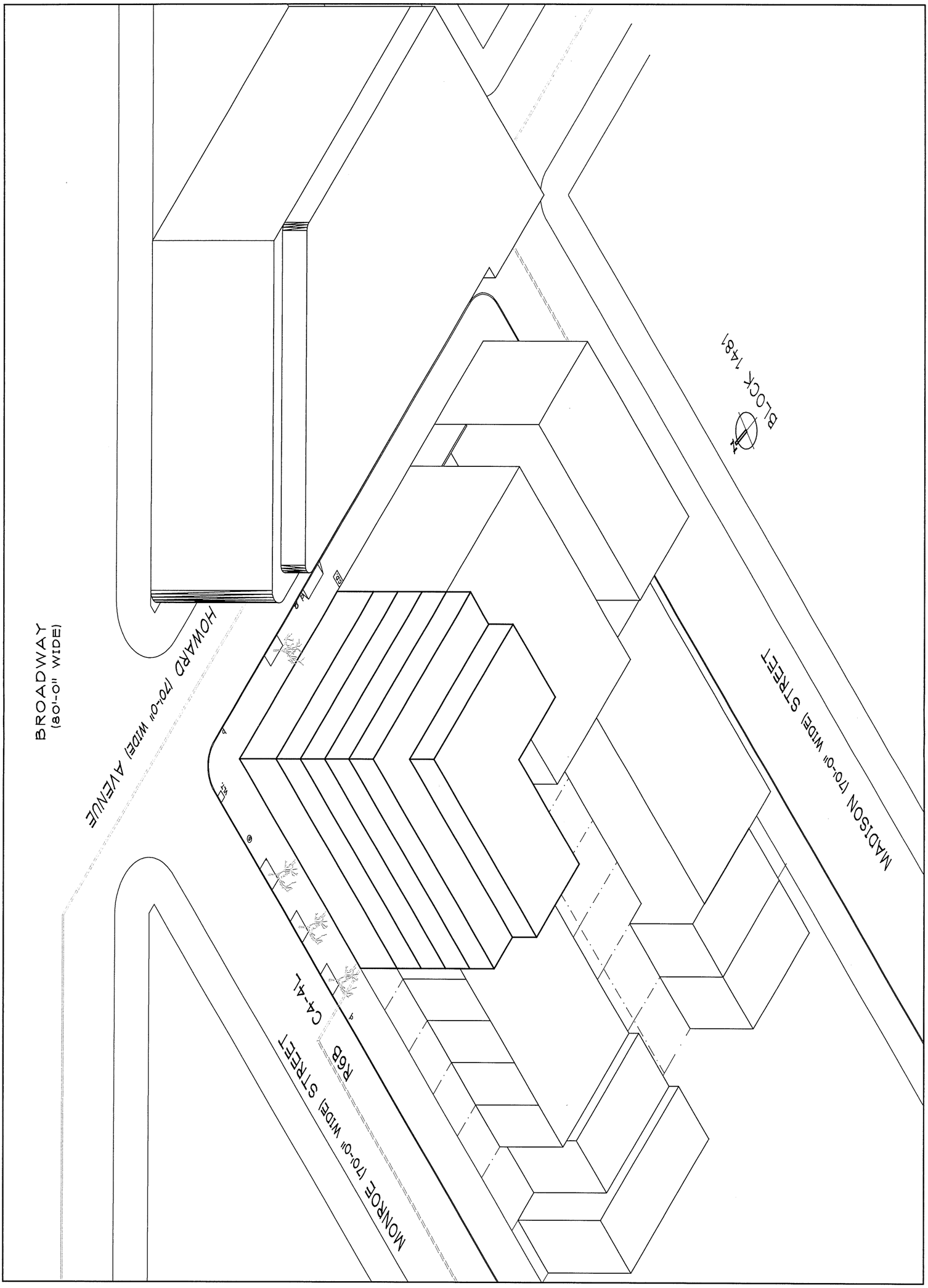
PREMISES: HOWARD AVENUE
BROOKLYN, NY

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	16035
SCALE:	AS NOTED
DATE:	4-19-16

REGISTERED ARCHITECT
GERALD J. CALIENDO
020241
STATE OF NEW YORK

DRAWING No: 2 OF 4

A-001.00



A-002.00

DRAWING No: 2 OF 4

SEAL:

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	16035
SCALE:	AS NOTED
DATE:	4-19-16

DRAWING TITLE: 3-DIMENSIONAL VIEW #1
FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES:

HOWARD AVE.
BROOKLYN, NY

Gerald J. Caliendo, R.A., A.I.A.
Architect, P.C.
Architecture
Interior Design
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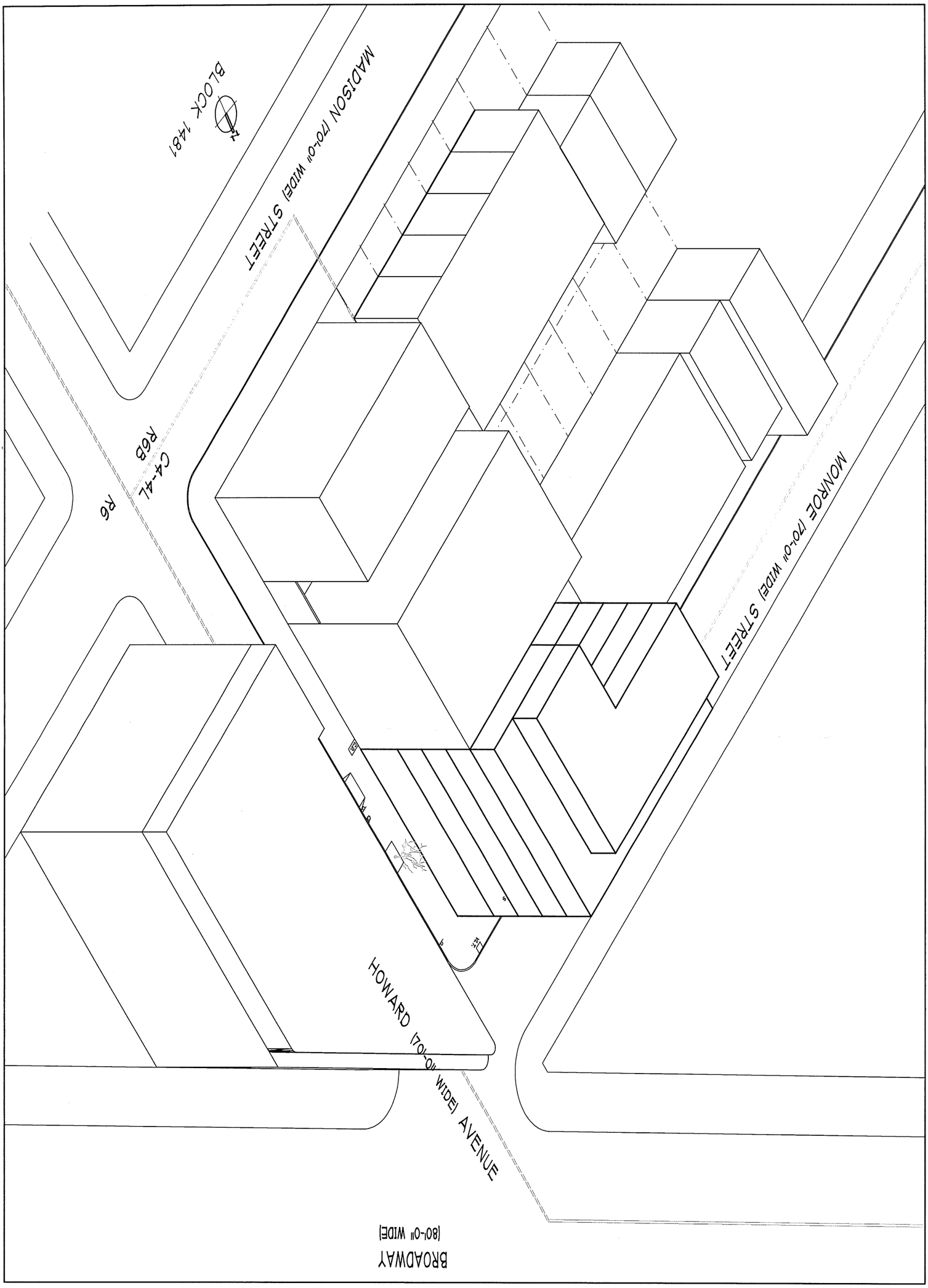

A-003.00

DRAWING No: 2 OF 4

SEAL:

DRAWN BY:	N.M.M.
CHECKED BY:	GJC
JOB No:	16035
SCALE:	AS NOTED
DATE:	4-19-16

DRAWING TITLE: 3-DIMENSIONAL VIEW #2
FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES:

HOWARD AVE.
BROOKLYN, NY

Gerald J. Caliendo, R.A., A.I.A.
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Architecture
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***Appendix C**: Phase 1 and Remedial Action Work Plan*

Equity Environmental Engineering

June 19, 2018

Atari Realty
Mr. Joseph Atari
215-54 Jamaica Avenue
Jamaica, NY 11428

Re: Environmental Site Assessment, Phase I
Howard Avenue C4-4 L Rezoning
2 Howard Avenue
Brooklyn, NY

Please find enclosed the Phase I Environmental Site Assessment we have completed for the above referenced site. We appreciate this opportunity to serve you. Please contact me if you have any questions about the report.

Robert L. Jackson
Managing Director

Phase I Environmental Site Assessment Report

Howard Avenue
2 Howard Avenue
Brooklyn, NY 11221

Prepared for

Mr. Joseph Atari
215-54 Jamaica Avenue
Jamaica, NY 11428

Prepared by

Equity Environmental Engineering
500 International Drive, Suite 150
Mount Olive, NJ 07828
Phone: (973) 527-7451

Job Number: 2017007
05/03/2017

TABLE OF CONTENTS

1.0 GENERAL INFORMATION

Project Information:
Howard Avenue C4-4 L Rezoning
Project Number:
2017007

Site Information:
Howard Avenue
2 Howard Avenue
Brooklyn, NY 11221
Latitude, Longitude: 40.688624, -73.921417
Site Access Contact:

Consultant Information:
Equity Environmental Engineering
500 International Drive, Suite 150
Mount Olive, NJ 07828
Phone: (973) 527-7451
Fax: (973) 858-0280
E-mail Address: bob.jackson@equityenvironmental.com
Inspection Date: 02/08/2017
Report Date: 05/03/2017

Client Information:
Mr. Joseph Atari
Atari Realty
215-54 Jamaica Avenue
Jamaica, NY 11428

Site Assessor

Frank Urilov

Senior Reviewer

Robert L. Jackson
Managing Director

Certification:

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR Part 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Robert L. Jackson - Managing Director

2.0 EXECUTIVE SUMMARY

2.1 Subject Property Description

The subject property is an 8,000 square foot undeveloped, grass covered, lot owned by Merrick Capital Corp. The subject property is identified as Block 1481, Lot 35, and is located in a R6B zoning district with C2-4 commercial overlay. The subject property was utilized as an outdoor painting studio.

2.2 Data Gaps

One data gap was identified during this environmental assessment. This data gap relates to the lack of a response from the New York State Department of Environmental Conservation regarding the FOIL request that was submitted on February 7, 2017

2.3 Environmental Report Summary

Report Section		No Further Action	REC	HREC	CREC	Issue/Further Investigation	Comments
4.4	**Current Use of Property**	X					
4.6	**Adjoining Property Information**	X					
6.1	**Standard Environmental Records Sources**	X					
6.4.1	**Historical Summary**	X					
6.4.7	**Other Environmental Reports**	X					
7.3.1	**Hazardous Substances**	X					
7.3.2	**Petroleum Products**	X					
7.3.3	**USTs**		X				One (1) pipe with a cap protruding from the sidewalk, adjacent to the site, was observed during the site visit. The observed pipe's characteristics are similar to pipes that are typically associated with the likely presence of an underground storage tank (UST). As such, the presence of the observed piping is a REC.
7.3.4	**ASTs**	X					
7.3.5	**Other Suspect Containers**	X					
7.3.6	**Equipment Likely to Contain PCBs**	X					
7.3.7	**Interior Staining/Corrosion**	X					
7.3.8	**Discharge Features**	X					
7.3.9	**Pits, Ponds, And Lagoons**	X					
7.3.10	**Solid Waste Dumping/Landfills**	X					Neighbors dumping trash
7.3.11	**Stained Soil/Stressed Vegetation**	X					
7.3.12	**Wells**	X					

2.4 Recommendations

Recognized Environmental Conditions (RECs) are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release or a material threat of a release into structures on the property or into the ground, groundwater or surface waters of the property. Historic RECs are RECs previously remediated to government standards. De minimis RECs are those that do not present a threat to

2.4 Recommendations (continued)

health or the environment, and would not be the subject of an enforcement action by a government agency. All RECs, excluding de minimis and Historic RECs, are discussed. No significant data gaps were identified by this assessment.

Equity performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 at the subject property. Any exceptions to, or deviations from, this practice are described in Section 3.0 of this report. This assessment has revealed the following information in connection with the subject property:

RECs - Equity identified one REC associated with the subject property. This REC relates to one (1) pipe with a cap protruding from the sidewalk, adjacent to the site, that was observed during the site visit. The observed pipe's characteristics are similar to those of a fill port, which are typically associated with the likely presence of an underground storage tank (UST). The presence of the piping is identified as a REC.

HRECs - Equity found no HRECs associated with the subject property.

CRECs - Equity found no CRECs associated with the subject property.

VECs - Based on the evidence provided by the database report, observations made during the site reconnaissance, and professional judgement, it is Equity's conclusion that a Vapor Encroachment Condition (VEC) cannot be ruled out for the subject property due to records of LUST, Historical Dry Cleaning facilities and NY Spills proximate the site.

3.0 INTRODUCTION

3.1 Purpose

Equity was retained by Mr. Joseph Atari of Merrick Capital Corp to conduct a Phase I Environmental Site Assessment (ESA) of the subject property located at 2 Howard Avenue, Brooklyn, New York in accordance with the American Society for Testing and Materials (ASTM) Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The ASTM Standard constitutes all appropriate inquiry into previous ownership and uses of the property consistent with good commercial or customary practice. The ASTM Standard also satisfies the requirements of the United States Environmental Protection Agency (EPA) All Appropriate Inquiry Standard, 40 CFR Part 312, which is required to qualify for certain landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

The purpose of the Phase I ESA was to evaluate the current and historical conditions of the subject property in an effort to identify recognized environmental conditions (RECs) in connection with the subject property. A recognized environmental condition is defined by ASTM as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment; or conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

The identification of RECs in connection with the subject property may impose an environmental liability on owners or operators of the site, reduce the value of the site, or restrict the use or marketability of the site, and therefore, further investigation may be warranted to evaluate the scope and extent of potential environmental liabilities.

3.2 Scope of Work

The Phase I ESA conducted at the subject property was in accordance with ASTM Standard E 1527-13 and included the following:

- Review of historic environmental and regulatory records;
- Interview with the owner (and client) of the property;
- Site Reconnaissance; and
- Evaluation of information and preparation of the report provided herein.

Typically, a Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water, or building materials. For this Phase I ESA, no additions to the ASTM E 1527-13 standard were made.

3.3 Significant Assumptions

Equity has prepared this Phase I ESA report in accordance with the contractual scope of work, using reasonable efforts to attempt to identify RECs. The conclusions presented in this report are based solely on visual observations, readily available records, interviews, and other secondary sources, which are assumed accurate unless otherwise documented. Equity does not warrant the accuracy or completeness of information provided by secondary sources. Equity does not warrant that contamination that may exist on the site has been discovered, that the site is suitable for any particular purpose, or that the site is clear and free of liability.

This report is intended for use in its entirety. No excerpts may be taken to be representative of the findings of this assessment. Opinions and recommendations presented in this report apply to the site conditions and features, as they existed at the time of the site visit, and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which Equity is unaware and has not had an opportunity to evaluate.

3.4 Limitations and Exceptions

The environmental assessment is non-invasive, and does not include any testing or sampling of materials, such as soil, water, air, or building materials such as asbestos containing material (ACM) and lead-based paint (LBP). The environmental assessment does not include a review of the following: Industrial Hygiene, Health and Safety, Indoor Air Quality, Soil Gas, Radon, Lead in Drinking Water, Mold, Wetlands, Regulatory Compliance, Cultural and Historic Resources, Ecological Resources, Endangered Species, and Biological Agents. RECs do not include de minimis conditions that do not present a threat to health or the environment, and that would not be subject to an enforcement action by government agencies.

3.5 Deviations

No deviations from the recommended scope of ASTM Standard E 1527-13 were performed as part of this Phase I ESA with the exception of any additions noted in Detailed Scope of Services.

3.6 Special Terms and Conditions

Authorization to perform this assessment was given by Mr. Joseph Atari on January 16, 2017. Instructions as to the location, access, and an explanation of the property and facilities to be assessed were provided by Mr. Joseph Atari of Merrick Capital Corp. No additional services were requested.

3.7 Reliance

This Phase I report has been prepared for the exclusive use, and sole benefit, of Mr. Joseph Atari, Merrick Capital Corp. Photocopying this document, in part or in whole, by parties other than those designated by Mr. Joseph Atari, or use of this document for purposes other than its intended use, is prohibited. The report may not be relied upon by any other person or entity without the express written consent of Equity and Mr. Joseph Atari

4.0 SITE DESCRIPTION

4.1 Location and Legal Description

The subject property is located at 2 Howard Avenue (Block 1481, Lot 35), Brooklyn, New York. According to the New York City Open Accessible Space Information System (OASIS), the subject property is owned by Merrick Capital Corp. The site is an undeveloped, grass covered, vacant lot with an eight (8) foot security fence. Site maps and photographs may be found in Appendices A and B, respectively.

4.2 Activity/Use Limitations

Equity has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 of the property located at 2 Howard Avenue, Brooklyn, NY.

4.3 Site and Vicinity Description

The subject property consists of an approximately 8,000 square-foot undeveloped lot. The lot is covered in grass and enclosed by an 8-foot construction fence. The adjacent properties include mixed-use residential and commercial properties. The area in which the subject property is located in is residential, commercial and institutional.

4.4 Current Use of Property

The subject property is an undeveloped lot used as an outdoor spray painting workshop/gallery.

4.5 Description of Structures and Other Improvements

There are no structures or improvements on the subject property.

4.6 Adjoining Property Information

During the site reconnaissance, Equity observed the following land use on properties in the immediate vicinity of the subject property:

- North -McDonalds Restaurant
- South - Scottish Rite Ballroom
- East - Brooklyn High School for Law and Technology
- West - Residential

5.0 USER PROVIDED INFORMATION

5.1 Specialized Knowledge

Equity has no specialized knowledge of the subject property outside of the research which was conducted and reported herein. The tenant, Mr. Marc Casola was interviewed as part of this ESA. Mr. Casola uses the property to create artwork with paint on wooden/metal canvases.Mr. Casola has been affiliated with the property for 12 months and stated that neighborhood residents and pedestrians throw their trash over the fence.

5.2 Valuation Reduction for Environmental Issues

Equity has not been provided with an appraisal for the subject property. No environmental issues were identified by the client that could result in property value reduction.

5.3 Owner, Property Manager, and Occupant Information

The subject property is presently owned by Merrick Capital Corp according to NYC Open Accessible Space Information System OASIS. The subject property is currently an undeveloped lot.

5.4 Reason For Performing Phase I ESA

This Phase I Environmental Site Assessment (ESA) is being conducted as part of the due diligence process for development of the property.

6.0 RECORDS REVIEW

6.1 Standard Environmental Records Sources

Equity contracted Environmental Data Resources, Inc. (EDR) to conduct a search of Federal and State databases containing known and suspected sites of environmental contamination. The number of listed sites identified within the approximate minimum search distance (AMSD) from the Federal and State environmental records database listings specified in ASTM Standard E 1527-13 are summarized in the following table. Detailed information for sites identified within the AMSDs is provided below, along with an opinion about the significance of the listing to the analysis of recognized environmental conditions in connection with the subject property. Copies of the EDR research data and a description of the databases are included in Appendix D of this report.

The database provides the topographic elevations and can be used to assess the potential impacts of nearby uses on the subject property. Although groundwater flow often follows the topographic gradient of the ground surface, its flow direction can be affected by other variables, such as soils, geology, seasonal fluctuations, production wells, and underground structures. On-site groundwater monitoring wells are required to determine the actual flow direction at a particular site.

The database search is a tool to identify various environmental situations and/or activities within the required radius of the subject property. Many of these databases will only acknowledge the presence of a specific item on a property such as an underground storage tank or a dry cleaner. They do not determine the potential impact to the subject property and cannot take into account natural and man-made impediments that would limit or prevent the migration of contaminants from one site to another. Other databases provide sufficient knowledge to determine if there was an incident and what the severity of that incident was. For example, the majority of items within the LTANKS (leaking tanks) and/or HIST LTANKS (historic leaking tanks) deal with tank test failures that have de minimis releases or small enough quantity releases that are addressed by the owner/operator and do not migrate beyond the location of the tank.

Please note that the target property for this EDR search was 2 Howard Avenue, Brooklyn, New York

Map Findings Summary

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1	0	0	0	0	NR	0
Proposed NPL		1	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Delisted NPL		1	0	0	0	0	NR	0
CORRACTS		1	0	0	0	0	NR	0
RCRA-TSDF		0.5	0	0	0	NR	NR	0
RCRA-LQG		0.25	2	5	NR	NR	NR	7
RCRA-SQG		0.25	1	0	NR	NR	NR	1
RCRA-CESQG		0.25	0	3	NR	NR	NR	3
US ENG CONTROLS		0.5	0	0	0	NR	NR	0
US INST CONTROL		0.5	0	0	0	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
LUCIS		0.5	0	0	0	NR	NR	0
SEMS		0.5	0	0	0	NR	NR	0
SEMS-ARCHIVE		0.5	0	0	0	NR	NR	0
FEDERAL FACILITY		0.5	0	0	0	NR	NR	0
FEMA UST		0.25	0	0	NR	NR	NR	0
NY TANKS NASSAU		0.25	0	0	NR	NR	NR	0
NY MOSF		0.5	0	0	0	NR	NR	0
NY CBS AST		0.25	0	0	NR	NR	NR	0
NY LTANKS		0.5	4	8	26	NR	NR	38
NY RES DECL		0.125	0	NR	NR	NR	NR	0
NY CBS UST		0.25	0	0	NR	NR	NR	0
NY HIST LTANKS		0.5	0	0	0	NR	NR	0
NY VAPOR REOPENED		1	0	0	0	0	NR	0
NY TANKS		0.25	0	1	NR	NR	NR	1
NY ENV RES DECL		0.125	0	NR	NR	NR	NR	0
NY SWF/LF		0.5	0	0	0	NR	NR	0
NY AST		0.25	4	16	NR	NR	NR	20

6.1 Standard Environmental Records Sources (continued)

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY UST		0.25	2	6	NR	NR	NR	8
NY ERP		0.5	0	0	0	NR	NR	0
NY BROWNFIELDS		0.5	0	1	3	NR	NR	4
NY SHWS		1	0	0	1	0	NR	1
NY MOSF AST		0.5	0	0	0	NR	NR	0
NY INST CONTROL		0.5	0	1	0	NR	NR	1
NY CBS		0.25	0	0	NR	NR	NR	0
NY MOSF UST		0.5	0	0	0	NR	NR	0
NY ENG CONTROLS		0.5	0	0	0	NR	NR	0
INDIAN LUST		0.5	0	0	0	NR	NR	0
INDIAN UST		0.25	0	0	NR	NR	NR	0
INDIAN VCP		0.5	0	0	0	NR	NR	0

6.1.1 Regulatory File Review

No records were identified for the subject Site, located at 2 Howard Avenue. One NY Spill located 72-feet down gradient of the Site was identified, NY Spill #9503168. This Spill relates to an unknown amount of petroleum which was stated to have impacted the soil. The Spill was closed on June 9, 2008 after the NYSDEC visited the site which has been redeveloped into a 3-story residential building with a new sidewalk since the date of the Spill(June 13, 1995) and no additional complaints have been made. This record does not represent a REC due to the nature of the Spill, the distance away and down gradient location from the site and the NY Spill closure in June 9, 2008.

6.2 Additional Environmental Record Sources

Equity has sent Freedom of Information Law (FOIL) request for the subject property to the NYS Department of Environmental Conservation (DEC)and the NYC Department of Environmental Protection (DEP) for information pertaining to any potential environmental concerns (i.e.hazardous waste storage, spills, storage tanks, etc). At the time of this report no response has been received by the NYSDEC or the DEP. A letter of addendum will be prepared should any relevant information pertaining to the subject property be received.

6.3 General Site Setting

The general site setting in which the subject property is located is primarily commercial and residential.

6.3.1 Topography

Based on a review of the 1995 USGS 7.5 Minute topographic map for the subject property area, the general topographic gradient is to the south. The elevation of the subject property is approximately fifty-two (52) feet above mean sea level. The topography varies from 28-98 feet in a north-south direction and 38-69 feet in a west-east direction.

6.3.2 Surface Water Bodies

The nearest surface water to the subject property is the Ridgewood Reserviour located approximately 1 mile northeast of the subject property. No surface water and/or wetlands are located on-site.

6.3.3 Geology and Hydrology

Based on the soil survey maps published by the USDA Soil Conservation Service, the subsurface soils expected at the site include urban land, which does not qualify as hydric soil. Urban land soils are those which have lost original characteristics due to human activity (construction, development, demolition debris, etc.).

No on-site water wells or springs were observed during the site reconnaissance. No settling ponds, lagoons, surface impoundments, wetlands or natural catch basins were observed at the property during this investigation.

6.4 Historical Use

6.4.1 Historical Summary

Historical information identifying the past site use was obtained from a variety of sources as detailed in Appendix C of this report and included: City Directories, Aerial Photographs, Sanborn Fire Insurance Maps, and Topographic Maps.

Source Reviewed	Date(s)	Source Details
EDR Aerial Photo Decade Package (Inquiry Number 4835810.9S)	1924, 1951, 1954, 1961, 1966, 1976, 1980, 1984, 1991, 1994, 2006, 2009, 2011	EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.
EDR City Directory Abstract (Inquiry Number 4835810.5S)	1928, 1934, 1940, 1945, 1949, 1960, 1965, 1970, 1973, 1976, 1980, 1985, 1992, 1997, 2000, 2005, 2008, 2013	EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.
EDR Historical Topo Map (Inquiry Number 4835810.4S)	1897, 1898, 1900, 1947, 1956, 1967, 1979, 1995, 2013	EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.
EDR Sanborn Map Search/Print (Inquiry Number 4835810.3S)	1888, 1907, 1908, 1932, 1951, 1962, 1965, 1976, 1978, 1979, 1980, 1982, 1987, 1988, 1991, 1992, 1993, 1995, 2001, 2002, 2003, 2004, 2005, 2006, 2007	EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.
EDR Radius Map Report (Inquiry Number 4835810.2S)		EDR, 6 Armstrong Road, Shelton, CT 06484, (800) 352-0050.

6.4.2 Title Records

Recorded Land Title Records - Equity was not provided record land title records as part of this assessment.

Zoning/Land Use Records - The subject property is located in a R6B zoning district with C2-4 commercial overlay. R6B districts typically include townhouses and small multifamily buildings of up to 4-5 stories. C2-4 commercial overlay typically include grocery stores, resturants and beauty parlors.

6.4.3 City Directories

Equity reviewed local street directory listings for the subject property as well as for the immediate area around the subject property from 1928 through 2013. Directory information lists various occupants of 2 Howard Avenue and adjacent properties throughout this timeframe.

The subject property was occupied by commercial properties since development. The commercial properties include a dentist's office, real estate business, podiatrists, lawyers, barber/beauty shops, and hat renovations and sales from 1928 to 1945. In 1949 and 1960 the subject property was occupied by Colonial Bus SVCE, Inc and US Army Transptn Termnl Command Atlantic Bklyn Army Termnl in addition to various commercial properties. In 1970 the subject property was developed as the Monroe Movie Theater. According to Historical Sanborn Maps, the building was demolished by 1976.

6.4.4 Aerial Photos

Equity reviewed eleven (11) aerial photographs provided from 1951 to 2011.

6.4.4 Aerial Photos (continued)

Summary

Date(s)	Property Comments	Surrounding Area Comments

6.4.4 Aerial Photos (continued)

Date(s)	Property Comments	Surrounding Area Comments
1951, 1954, 1961, and 1966	The Site is developed with one structure.	The east, west and south adjacent properties are developed with structures. The north adjacent property is undeveloped.
1980, 1984, 1991 and 1994	The site is undeveloped	The north adjacent property is developed with a vacant lot attached to a structure. The west adjacent property is undeveloped.
2006, 2009 and 2011	The Site is undeveloped	The west adjacent property is developed with row houses.

6.4.5 Sanborn/Historical Maps

Equity reviewed a total of twenty five (25) Sanborn Fire Insurance maps from 1888 through 2007. The table below summarizes the observations made based on the Sanborn provided by EDR.

Summary

Date(s)	Property Comments	Surrounding Area Comments
1888	The subject property is developed with one dwelling.	The north adjacent property is developed with an office. The east, west and south adjacent properties are undeveloped.
1908	The subject property is developed with Bushwick Central Hospital. A fire alarm box is depicted on the southern boundary of the building.	The north adjacent properties are developed with multiple row stores within the Terra Cotta Store Partitions. The east adjacent property is developed with stores and one office. The south and west adjacent properties are undeveloped.
1932-1965	The subject property is developed with a movie theater with seven stores located around the perimeter.	The east adjacent property is developed with Bushwick Theaters and is upgraded with a Balcony, asbestos curtain and a 7,500-gal water tank on the roof. The west adjacent property is developed with Shubert Theater and is upgraded with a 55,000-gal, 7,500-gal and 5,000 gal water tank on the eastern boundary of the roof and asbestos curtain. The south adjacent property is developed with a furniture store and general storage facility.
1976-1978	The subject property is undeveloped	The north adjacent property is developed with multiple stores. The east adjacent property is developed with a church. The west adjacent property is developed with multiple stores. The south adjacent property is developed with a furniture store.
1979	The subject property is undeveloped	The west adjacent property is undeveloped.
1980	The subject property is undeveloped	No Sanborn Fire Insurance map coverage on the north adjacent property.
1982-1988	The subject property is undeveloped.	The north adjacent property is developed with multiple stores.
1991-1992	The subject property is undeveloped.	The north adjacent property is undeveloped.The west adjacent property is developed with 3-story residential properties. The south adjacent property is a Day Care and a Church.
1993-2002	The subject property is undeveloped.	The south adjacent property is developed with a church
2003-2006	The subject property is undeveloped.	The north adjacent property is developed with a commercial property.

6.4.6 Historical Topographic Maps

Equity reviewed a total of nine (9) historic topographic maps (Brooklyn quads) from 1897 through 2013. No pertinent information within the scope of this assessment was obtained from the historical topographic maps.

6.4.7 Other Environmental Reports

No previous environmental reports were identified or provided for Equity review. Equity has sent Freedom of Information Law (FOIL) request for the subject property to the New York State Department of Environmental Conservation , New York Department of Health and the NYC Department of Environmental Protection (DEP) for information pertaining to any potential environmental concerns (i.e.hazardous waste storage, spills, storage tanks, etc). At the time of this report no response has been received by the FDNY or the DEP. A letter of addendum will be sent out should any relevant information pertaining to the subject property be received.

6.4.8 Building Department Records

Several NYC Building Department (DOB) violations were identified with the subject regarding the construction fence and the use of parking on the site. NYC Building Department Complaint Number 3018239 is associated with the use of the grass covered lot as a parking lot. This complaint was inspected on 09/10/1991 and was deemed unsubstantiated. As such, this NYC DOB Complaint does not represent a REC due to the lack of evidence that vehicles were parked and/or stored on the property. One violation, regarding a defective fence: ECB Violation Number 34698150Y, has an open status with a certificate pending. Refer to Appendix H for the respective DOB violation docomentation.

6.4.9 Other Land Use Records

No other sources of historical information about the site and its surroundings were reviewed.

6.5 Environmental Liens and Activity/Use Limitations

No Environmtal Lien and Acitivity/Use Limitations were identified.

6.6 Vapor Encroachment Evaluation

Equity conducted an analysis of the various properties listed in the Phase I database search with respect to the Vapor Encroachment Screening (VES) in accordance with the requirements of the American Society for Testing and Materials (ASTM) 2600-10. A Tier I screen was done within the required database search distances from the subject property boundary for the items listed in Section 8 of the standard.

Based on the evidence provided by the database report, observations made during the site reconnaissance, and professional judgement, it is Equity's conclusion that a Vapor Encroachment Condition (VEC) cannot be ruled out for the subject property due to records of LUST, Historical Dry Cleaning facilities and NY Spills proximate the site.

7.0 SITE RECONNAISSANCE

7.1 Methodology and Limiting Conditions

The site reconnaissance of the subject property was conducted by Mr. Frank Urilov of Equity Environmental Engineering with Mr. Marc Casola (Tenant). Mr. Casola was interviewed during the site assessment and provided access to the subject property. The subject property was assessed on February 8, 2017.

7.2 General Site Setting

The subject property is a vacant, grass covered, lot with large wooden and metal canvas.

7.3 Site Visit Findings

7.3.1 Hazardous Substances

More than 50 spray paint canisters and several one (1) galleon paint containers were observed throughout the site. The paints are used for artistic purposes. Paints were placed on wooden platforms and disposed of in large garbage bags off-site.

7.3.2 Petroleum Products

No petroleum products were identified during the site visit.

7.3.3 USTs

One (1) pipe with a cap protruding from the sidewalk, adjacent to the site, was observed during the site visit. The observed pipe's characteristics are similar to those of a fill port, which are typically associated with the likely presence of an underground storage tank (UST). As such, the presence of the piping is identified as a REC.

7.3.4 ASTs

No ASTs were observed at the time of the site visit.

7.3.5 Other Suspect Containers

No other suspect containers were observed at the time of the site visit.

7.3.6 Equipment Likely to Contain PCBs

No PCB equipment was identified on the subject property during the site visit.

7.3.7 Interior Staining/Corrosion

No interior staining/corrosion was identified on the subject property during the site reconnaissance.

7.3.8 Discharge Features

No discharge features were identified on the subject property during the site reconnaissance.

7.3.9 Pits, Ponds, And Lagoons

No pits, ponds or lagoons were identified on the subject property during the site reconnaissance.

7.3.10 Solid Waste Dumping/Landfills

Household trash and litter are scattered throughout the site. Mr. Casola states that trash bags randomly are tossed over the fencing while he is working. Due to the nature of the trash being mostly common litter, this dumping does not appear to be a REC.

7.3.11 Stained Soil/Stressed Vegetation

No areas of stained soil or stressed vegetation were identified on the subject property during the site reconnaissance.

7.3.12 Wells

No wells were identified on the subject property during the site reconnaissance.

8.0 INTERVIEWS

During the time of the site reconnaissance, Mr. Frank Urilov of Equity interviewed Mr. Casola to gain further information regarding the subject property on July 18, 2016. According to the interview conducted, Mr. Casola reported that the subject property was utilized as a workshop for his art. Mr. Casola also stated that all spray-paints were free of chlorofluorocarbons (CFCs).

9.0 OTHER ENVIRONMENTAL CONSIDERATIONS

No other environmental conditions such as asbestos-containing materials, lead-based paint, radon, wetlands and microbial contamination (mold) were identified during the site reconnaissance of the subject property.

FINDINGS

Recognized Environmental Conditions (RECs) are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release or a material threat of a release into structures on the property or into the ground, groundwater or surface waters of the property. Historic RECs are RECs previously remediated to government standards. De minimis RECs are those that do not present a threat to health or the environment, and would not be the subject of an enforcement action by a government agency. All RECs, excluding de minimis and Historic RECs, are discussed. No significant data gaps were identified by this assessment.

Equity performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 at the subject property. Any exceptions to, or deviations from, this practice are described in Section 3.0 of this report. This assessment has revealed the following information in connection with the subject property:

RECs - Equity identified one REC associated with the subject property. This REC relates to one (1) pipe with a cap protruding from the sidewalk, adjacent to the site, that was observed during the site visit. The observed pipe's characteristics are similar to those of a fill port, which are typically associated with the likely presence of an underground storage tank (UST). The presence of the piping is identified as a REC.

HRECs -Equity found no HRECs associated with the subject property.

CRECs - Equity found no CRECs associated with the subject property.

VECs - Based on the evidence provided by the database report, observations made during the site reconnaissance, and professional judgement, it is Equity's conclusion that a Vapor Encroachment Condition (VEC) cannot be ruled out for the subject property due to records of LUST, Historical Dry Cleaning facilities and NY Spills proximate the site.

CONCLUSIONS

Equity concludes that further investigation is required at the subject property.

REFERENCES

The following references were used in the preparation of this report:

1. EDR Environmental Databases
2. Aerial Photographs
3. City Directories
4. Historic Topographic Maps
5. Sanborn Maps
6. NYC Oasis Database
7. NYC Department of Finance records
8. NYC Department of Buildings records

Phase II Remedial Investigation Work Plan

For

2 Howard Avenue

Block 1481/Lot 35

Brooklyn, NY 11221

Prepared for:

Atari Realty

215-54 Jamaica Avenue

Jamaica, NY 11428

Prepared by:

Equity Environmental Engineering LLC

500 International Drive, Suite 150

Mt. Olive, NJ 07828

June 20, 2017

Introduction

This Phase II Investigation Work Plan has been developed for the above referenced Site. The Site is located on southwest corner of the intersection between Howard Avenue and Monroe Street in Brooklyn, NY.

Site Location, Current Use, and Proposed Development Plan

The Site is a vacant lot identified as Block 1481/Lot 35. Figure 1 shows the approximate site location and Figure 2 shows the property boundary.

Phase II Investigation Work Scope

Soil, Groundwater and Soil Vapor Summary

An investigation of soil, soil vapor, and groundwater will be performed to characterize the site for potential environmental impacts from historic onsite and/or offsite uses, operations, etc. A Phase I Environmental Site Assessment was conducted in May 2017 by Equity Environmental Engineering LLC (Equity). An underground storage tank (UST) may exist onsite as there was what was thought to be a fill port for an UST in the sidewalk. The sampling procedures of this investigation will be performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10.

A surface geophysics survey of the site will be done to search for buried objects such as underground storage tanks, piping, old foundations, etc. The findings of the survey will be used to bias the location of soil borings.

Four (4) test borings will be completed at the site. Figure 2 depicts the sample locations, where soil, groundwater, and soil vapor samples will be collected. At a minimum, two soil samples will be collected from each soil boring. Two (2) groundwater samples will be collected if groundwater is encountered. The depth of groundwater is unknown. A total of three (3) soil vapor/sub-slab samples will be collected. Each sample point location at the site will be accurately measured to fixed benchmarks (i.e., select properly lines, adjacent structures, etc.).

Soil Sampling

The soil will screened during borehole advancement for organic vapors with a photo-ionization detector (PID) and evaluated for visual and olfactory impacts prior to collecting environmental samples. All field work will be recorded in a field log. A direct-push drilling rig will be used and if necessary, more advanced drilling technology will be used to complete the site investigation. The borings will be installed to a maximum depth of 30 feet below the proposed foundation depth.

At a minimum, two soil samples will be collected from each test boring (for a minimum of 8 soil samples) for laboratory analysis. A surface soil sample (from the 0-2 feet bgs interval) and subsurface soil sample from the 2-foot interval at the bottom of the boring will be collected. If groundwater is encountered a sample will be collected at the groundwater interface. Discrete (grab) samples will be taken from the aforementioned sampling interval. A third soil sample may be collected from each or several test boring(s) if elevated PID readings and/or visual and olfactory observations are noted during borehole advancement and/or field observations identify an upper fill layer underlain by native material. The additional soil sample from the upper zone of the native layer will help delineate the vertical migration of impacts (if any), as well as determine a more detailed remedy and potentially provide a cost savings for disposal options.

Monitoring Well Installation and Groundwater Sampling

Should groundwater be encountered, two temporary monitoring wells will be installed using 1-1/4 inch-diameter PVC well screen and riser. Representative groundwater samples will be collected using low-flow sampling techniques. A representative groundwater sample will be collected from the temporary well with a peristaltic pump and dedicated tubing. Sampling will be conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and Sampling Guidelines and Protocols, dated March 1991. Groundwater wells will be gauged with a water level meter to record a

depth to groundwater reading (1/100 foot), and if necessary, an interface meter will be used to determine the presence and/or thickness of LNAPL or DNAPL.

Soil Vapor Sampling

Soil vapor samples will be collected in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Three soil vapor samples will be collected in the vacant lot. Soil vapor implants will be set at a depth of approximately 10 feet. The vapor implants will be installed with the same drilling equipment used to install the soil borings. Soil vapor sampling will occur for a duration of 2-hours.

Samples will be collected in appropriate sized Summa canisters that have been certified clean by the laboratory and samples will be analyzed by using USEPA Method TO-15. Flow rate for both purging and sampling will not exceed 0.2 L/min. Following the temporary soil vapor probe installation, one to three implant volumes shall be purged prior to the collection of any soil-gas samples. A sample log sheet will be maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, apparent moisture content of the sampling zone, and chain of custody protocols.

As part of the vapor intrusion evaluation, helium will be used as the tracer gas in accordance with NYSDOH protocols to serve as a quality assurance/quality control (QA/QC) device to verify the integrity of the soil vapor probe seal. A container (box, plastic pail, etc.) will serve to keep the tracer gas in contact with the probe during testing. A portable monitoring device will be used to analyze a sample of soil vapor for the tracer gas prior to sampling. If the tracer sample results show a significant presence of the tracer, the probe seals will be adjusted to prevent infiltration. At the conclusion of the sampling round, tracer monitoring will be performed a second time to confirm the integrity of the probe seals.

Sample Analysis

Soil, groundwater, and soil vapor samples will be submitted to a NYSDOH Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for Full analysis:

- Volatile Organic Compounds by EPA Method 8260;
- Semi-volatile organic compounds by EPA Method 8270;
- Pesticides/PCBs by EPA Method 8081/8082; and
- Target Analyte List metals by EPA Method 6010 and 7471;
- Soil vapor samples will be analyzed for VOCs by using USEPA Method TO-15.

All groundwater samples will be analyzed for the same suite of parameters including both filtered (dissolved) and unfiltered (total) metals.

If either LNAPL and/or DNAPL are detected, appropriate samples will be collected for characterization and “finger print analysis” and required regulatory reporting (i.e. NYSDEC spills hotline) will be performed.

Quality Assurance/Quality Control Procedures

Field QA/QC procedures will be used (1) to document that samples are representative of actual conditions at the Site and (2) identify possible cross-contamination from field activities or sample transit. Laboratory QA/QC procedures and analyses will be used to demonstrate whether analytical results have been biased either by interfering compounds in the sample matrix, or by laboratory techniques that may have introduced systematic or random errors to the analytical process. QA/QC samples (field and trip blanks, duplicates, etc.) will be collected and analyzed at an ELAP-certified laboratory.

Investigation Derived Waste

Soil cuttings will be disposed at the site within the borehole that generated them to within 24 inches of the surface unless:

- Free product or grossly contaminated soil, are present in the cuttings;
- The borehole has penetrated an aquitard or other confining layer; or extends significantly into bedrock;
- Backfilling the borehole with cuttings will create a significant path for vertical movement of contaminants. Soil additives (bentonite) may be added to the cuttings to reduce permeability;
- The soil cannot fit into the borehole.

Those soil cuttings needing to be managed on-site will be containerized in properly labeled DOT approved 55-gallon drums for future off-site disposal at a permitted facility. All boreholes which require drill cuttings disposal would ultimately be filled with bentonite chips (hydrated) and asphalt/concrete capping. Disposable sampling equipment including, spoons, gloves, bags, paper towels, etc. that came in contact with environmental media will be double bagged and disposed as municipal trash.

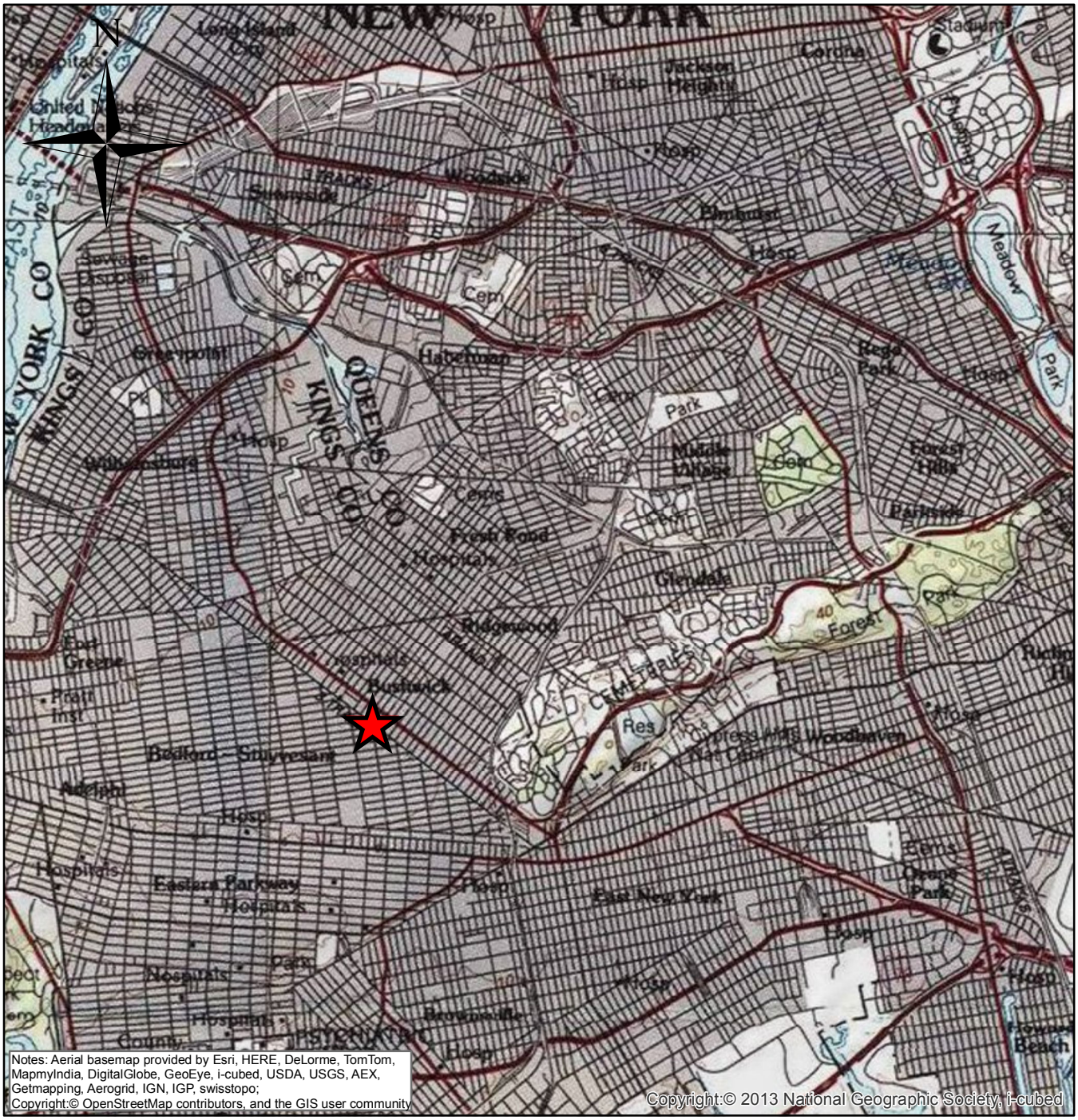
Reporting

A Phase II Investigation Report will be prepared following completion of the field activities and receipt of the laboratory data. The report will provide detailed summaries of the investigative activities and findings. Soil, groundwater and soil vapor analytical results will be compared to the appropriate New York State Department of Environmental Conservation (NYSDEC) Part 375 soil criteria and applicable NYSDEC Groundwater Quality Standards and NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion Matrices. The report will include actual sampling locations, deviations from the original workplan, spider diagrams, analytical data tables for all reported constituent compounds and remedial recommendations, as warranted.

Investigation HASP

An OSHA compliant Health and Safety Plan that meets all OSHA HAZWOPER requirements will be implemented during the site work to protect worker safety. The Site Safety Coordinator will ensure full compliance of the HASP in accordance with applicable health and safety laws and regulations. All field personnel involved in investigation activities will participate in training required under OSHA HAZWOPER 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Emergency telephone numbers will be posted at the site location before any work begins. A safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics including a highlighted route map to the nearest hospital/emergency room. Meetings will be documented in a log book or specific form. A copy of this HASP will be on-site during each sampling event.

Figures



0 0.325 0.65 1.3 1.95 2.6 Miles

1 inch = 1 miles

Legend

Site Location

FIGURE 1
USGS SITE LOCATION MAP

2 HOWARD AVENUE
BROOKLYN, NY

equity environmental engineering
227 Route 206, Suite 6, Flanders, NJ 07836, (973) 527-7451

DRAWN BY/ DATE	CHK/DATE	DRAWING NUMBER
FU 12212016		

Notes: Aerial basemap provided by Esri, HERE, DeLorme, TomTom, MapmyIndia, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo; Copyright:© OpenStreetMap contributors, and the GIS user community

0 0.00250.005 0.01 0.015 0.02 Miles

1 inch = 0 miles

Legend

- Soil Boring
- Soil Gas
- Temporary Well
- Property Boundary

FIGURE 2
SITE SAMPLING PLAN

2 HOWARD AVENUE
BROOKLYN, NY

equity environmental engineering
227 Route 206, Suite 6, Flanders, NJ 07836, (973) 527-7451

DRAWN BY/ DATE	CHK/DATE	DRAWING NUMBER
JV 06192017		

***Appendix D**: DEP Correspondence*

NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

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October 16, 2017

Robert Dobruskin
Director, Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, New York 10271

Re: 2 Howard Avenue
Block 1481, Lots 35, 39 and 43
CEQR # 77DCP409K

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the September 2017 Environmental Assessment Statement, the May 2017 Phase I Environmental Site Assessment (Phase I), the June 2017 Phase II Remedial Investigation Work Plan (Phase II Work Plan) and the Site-Specific Health and Safety Plan (HASP) prepared by Equity Environmental Engineering, LLC., on behalf of Atari Realty (applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment from the New York City Department of City Planning (DCP) to rezone Block 1481, Lots 35, 39 and 43 from a R6B/C2-4 zoning district to a C4-4L zoning district. The applicant is also seeking a zoning text amendment to amend Appendix F of the Zoning Resolution in order to map the project area as a Mandatory Inclusionary Housing Area. The proposed actions would facilitate redevelopment of the applicant's property (Proposed Development Site 1) on Block 1481, Lot 35 with a 6-story mixed-use building, containing approximately 38,085 gross square feet (gsf) of residential uses (33 dwelling units) and 6,500 gsf of commercial uses. Redevelopment of Block 1481, Lot 39 (Projected Development Site 2) with a total development size of approximately 46,544 square feet (sf) and 38-dwelling units is considered likely under the proposed action. Block 1481, Lot 43 is developed with a 4-story, 50-foot tall, 12,800 sf residential building located on a 3,340-square foot lot and has an existing Floor Area Ratio (FAR) of 3.83 or 85% of the FAR available under the proposed rezoning and therefore is unlikely to be induced to develop under the proposed action. Proposed Development Site 1 is currently undeveloped and is located between Madison Avenue and Monroe Street in the Stuyvesant Heights neighborhood of Brooklyn Community District 3.

The June 2017 Phase I report revealed that historical on-site and surrounding area land uses consists of residential and commercial uses including, a storage and office building, a restaurant, a gas station, a day care, a church, Brooklyn High School of Law and Technology, a McDonalds restaurant, Scottish Rite Ballroom, Bushwick Theatre, Shubert Theatre, a United States Postal Service facility, Roosevelt Savings Bank as well as several residential dwellings. Regulatory databases such as the New York State Department of Environmental Conservation (NYSDEC) SPILLS, Leaking Underground Storage Tanks, 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 11 spills within a 1/8-mile radius of the project site, the PBS USTs and the PBS ASTs databases reported 8 USTs and 20 ASTs within a 1/4-mile radius of the project site and the LTANKS database reported 38 LTANKS within a 1/2-mile radius of the project site. The Phase I also reported three Historical Cleaners within a 1/8-mile radius of the project and six Historical USTs within a 1/2-mile radius of the project site.

The June 2017 Phase II Work Plan proposes to install four soil borings, two groundwater monitoring wells and three soil vapor probes at the project site. Soil borings will be installed to a maximum depth of 30 feet below the proposed foundation depth. Two soil samples will be collected from each soil boring; one soil sample will be collected from 0 to 2 feet below grade surface and the second sample from the two foot interval at the bottom of the boring. A third soil sample may be collected from each or several test boring(s) if elevated photoionization detector readings and/or visual and olfactory observations are noted during borehole advancement and/or field observations identify an upper fill layer underlain by native material. If encountered, two groundwater samples will be collected at the groundwater interface. Soil and groundwater samples will be collected and analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds via EPA Method 8270, pesticides via EPA Method 8081, polychlorinated biphenyls via EPA Method 8082 and Target Analyte List metals via EPA Method 6010 and 7471 (filtered and unfiltered for groundwater samples). Soil vapor samples will also be collected and analyzed for VOCs via EPA Method TO-15.

Based upon our review of the submitted documentation, we have the following comments and recommendations to DCP:

Proposed Development Site 1: Block 1481, Lot 35 (Site under the control or ownership of the applicant)

Work Plan

- DCP should instruct the applicant that the proposed soil, groundwater and soil vapor sampling locations should be individually labeled on Figure 2, Site Sampling Plan (e.g. SB-1, SB-2, SB-3 etc.).

HASP

- DCP should instruct the applicant to include the name and phone number of an alternate Site Health and Safety Officer in the HASP.

Projected Development Site 2: Block 1481, Lot 39 (Site not under the control or ownership of the applicant)

- Since this site is not under the control or ownership of the applicant, 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 property. 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.

DEP finds the June 2017 Phase II Work Plan and HASP for the proposed investigation acceptable, as along as the aforementioned information is incorporated into the Phase II Work Plan and HASP. DCP should inform the applicant that upon completion of the investigation activities, the applicant should submit a detailed Phase II report to DEP for review and approval. The report should include, at a minimum, an executive summary, narrative of the field activities, laboratory data and conclusions, comparison of soil, groundwater, and soil vapor analytical results (i.e., NYSDEC 6NYCRR Part 375, NYSDEC Water Quality Regulations, and New York State Department of Health's October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York), updated site plans depicting sample locations, boring logs, and remedial recommendations, if warranted.

Future correspondence related to this project should include the following CEQR # **77DCP409K**. If you have any questions, you may contact Ms. Cassandra Scantlebury at (718) 595-6756.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

cc: R. Weissbard
T. Estesen
M. Wimbish
C. Scantlebury
S. Nourieli (DCP)
O. Abinader (DCP)
M. Bertini (OER)

***Appendix E**: Proposed Mandatory Inclusionary Housing Text Amendment*

2 Howard Avenue Rezoning
Community District 3, Brooklyn
4/28/18
Zoning Map 17a

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

* * *

APPENDIX F
Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

* * *

Brooklyn

* * *

Brooklyn Community District 3

* * *

Map 6 - [date of adoption]

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

Area **4** — [date of adoption] — MIH Program Option 1 and Option 2

Portion of Community District 3, Brooklyn

* * *

***Appendix F**: Air Quality Back-Up*