equity environmental engineering
A Division of GZA

150 Mill Street Rezoning

Environmental Assessment Statement

Address: 150 Mill Street, Brooklyn, NY 11231

Block 552: Lots 13, 21, 22, 23, 24, 25, and p/o 5, p/o 17, p/o 18, p/o 29, p/o 31 and p/o 34

CEQR Reference: 22DCP016K

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

Prepared for:
150 Mill Street LLC

Prepared by:
Equity Environmental Engineering, a Division of GZA



Date Submitted:
March 1, 2024

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EAS LONG FORM

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

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

Part I: GENERAL INFORMATION

PROJECT NAME 150 Mill Street Rezoning

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
22DCP016K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
220080ZMK	

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY Department of City Planning			NAME OF APPLICANT 150 Mill Street LLC		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shellooe, AICP, Director			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Amber Kartalyan, Equity Environmental Engineering, a Division of GZA		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 55 Lane Road		
CITY New York	STATE NY	ZIP 10271	CITY Fairfield	STATE NJ	ZIP 07004
TELEPHONE 212-720-3328	EMAIL sshellooe@planning.nyc.gov		TELEPHONE 973-774-3300	EMAIL amber.kartalyan@gza.com	

3. *Action Classification and Type*

SEQRA Classification

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

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

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

4. *Project Description*

The Applicant, 150 Mill Street LLC, requests approval of a zoning map amendment (the Proposed Action) to facilitate the development of Block 552, Lot 13 (the Project Site or Projected Development Site 1) with a 10-story plus cellar, 67,336 gross-square-foot (gsf) mixed-use commercial and community facility building in the Red Hook neighborhood of Brooklyn, Community District 6.

The zoning map amendment would rezone Block 552, Lots 13, 21, 22, 23, 24, 25, and p/o 5, p/o 17, p/o 18, p/o 29, p/o 31, and p/o 34 (the Affected Area) from the existing M1-1 zoning district to an M1-5 zoning district.

The Proposed Action is a discretionary action subject to environmental review. The NYC Department of City Planning is the lead agency on behalf of the City Planning Commission for environmental review under CEQR.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 6	STREET ADDRESS 150 Mill Street
TAX BLOCK(S) AND LOT(S) Block 552, Lots 13, 21, 22, 23, 24, 25, p/o 5, p/o 17, p/o 18, p/o 29, p/o 31, and p/o 34		ZIP CODE 11231

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Project Site is a corner lot along Mill Street and Hamilton Avenue, and is bounded by Mill Street to the north, Hamilton Avenue to the east, Centre Street to the south, and Clinton Street to the west.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-1 | ZONING SECTIONAL MAP NUMBER 16c

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

***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 ☐ Cogeneration Facility ☐ Title V Permit

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:

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

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

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

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 42,021 within Affected Area; 9,903 on Project Site

Waterbody area (sq. ft.) and type:

Roads, buildings, and other paved surfaces (sq. ft.): 42,021 within Affected Area; 9,903 on Project Site

Other, describe (sq. ft.):

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 67,336

NUMBER OF BUILDINGS: 1

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 67,336

HEIGHT OF EACH BUILDING (ft.): 143

NUMBER OF STORIES OF EACH BUILDING: 10 Stories

Does the proposed project involve changes in zoning on one or more sites? ☒ YES ☐ NO

If "yes," specify: The total square feet owned or controlled by the applicant: 9,903

The total square feet not owned or controlled by the applicant: 32,118

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

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

AREA OF TEMPORARY DISTURBANCE: 9,903 sq. ft. (width x length)

VOLUME OF DISTURBANCE: 99,030 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 9,903 sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2026

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: The analysis year for the Proposed Action is 2026 based on an 18-month period for the environmental review and ULURP processes and an 18-month construction schedule for the Proposed Development.

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Construction would occur in one phase with an approximately 18 month construction schedule

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

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

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

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

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Describe type of residential structures				
No. of dwelling units				
No. of low- to moderate-income units				
Gross floor area (sq. ft.)				
Commercial	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)			Retail and Office	Retail and Office
Gross floor area (sq. ft.)			52,189	52,189
Manufacturing/Industrial	☒ YES ☐ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use	Light Industrial	Light Industrial		Light Industrial
Gross floor area (sq. ft.)	1,020	1,020		-1,020
Open storage area (sq. ft.)	NA	NA		
If any unenclosed activities, specify:	Scaffolding Storage	Scaffolding Storage		
Community Facility	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Type			UG 4A Medical Office	UG 4A Medical Office
Gross floor area (sq. ft.)			15,144	15,144
Vacant Land	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
Publicly Accessible Open Space	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):				
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
PARKING				
Garages	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Attended or non-attended				
Lots	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Other (includes street parking)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
POPULATION				
Residents	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify number:				
Briefly explain how the number of residents was calculated:				

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Businesses	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	1 Construction Rental	1 Construction Rental	3 medical offices; 4 local retail; 8 offices	
No. and type of workers by business	2	2	23 local retail; 60 medical office; 173 office	254
No. and type of non-residents who are not workers	15	15	3185	3170
Briefly explain how the number of businesses was calculated:	Employees: 3 employees per 1,000 sf for local retail; 1 employee per 250 sf for medical office; 1 employee per 250 sf office use Patrons: 205 per 1,000 sf local retail; 103 per 1,000 sf medical office; 15 per 1,000 sf light industrial			
Other (students, visitors, concert-goers, *etc.*)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If any, specify type and number:				
Briefly explain how the number was calculated:				
ZONING				
Zoning classification	M1-1	M1-1	M1-5	
Maximum amount of floor area that can be developed	1.00 Man. and Comm.; 2.40 Com. Facility	1.00 Man. and Comm.; 2.40 Com. Facility	5.00 Man. and Comm.; 6.50 Com. Facility	
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Industrial, Commercial, Residential, Community Facility; M1-1, C1-3, R5, C2-4, R6B, R6A	Industrial, Commercial, Residential, Community Facility; M1-1, C1-3, R5, C2-4, R6B, R6A	Industrial, Commercial, Residential, Community Facility; M1-1, C1-3, R5, C2-4, R6B, R6A	
Attach any additional information that may be needed to describe the project. If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

Part II: TECHNICAL ANALYSIS

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

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

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☐	☒
(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. See attached		
(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. See attached		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of more than 200 residential units *or* 200,000 square feet of commercial space?	☐	☒
▪ If "yes," answer *both* questions 2(b)(ii) and 2(b)(iv) below.		
o Directly displace 500 or more residents?	☐	☒
▪ If "yes," answer questions 2(b)(i), 2(b)(ii), and 2(b)(iv) below.		
o Directly displace more than 100 employees?	☐	☒
▪ If "yes," answer questions under 2(b)(iii) and 2(b)(iv) below.		
o Affect conditions in a specific industry?	☐	☒
▪ If "yes," answer question 2(b)(v) below.		
(b) If "yes" to any of the above, attach supporting information to answer the relevant questions below. If "no" was checked for each category above, the remaining questions in this technical area do not need to be answered.		
i. Direct Residential Displacement		
o If more than 500 residents would be displaced, would these residents represent more than 5% of the primary study area population?	☐	☐
o If "yes," is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?	☐	☐
ii. Indirect Residential Displacement		
o Would expected average incomes of the new population exceed the average incomes of study area populations?	☐	☐
o If "yes:"		
▪ Would the population of the primary study area increase by more than 10 percent?	☐	☐
▪ Would the population of the primary study area increase by more than 5 percent in an area where there is the potential to accelerate trends toward increasing rents?	☐	☐
o If "yes" to either of the preceding questions, would more than 5 percent of all housing units be renter-occupied and unprotected?	☐	☐
iii. Direct Business Displacement		
o Do any of the displaced businesses provide goods or services that otherwise would not be found within the trade area, either under existing conditions or in the future with the proposed project?	☐	☐
o Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve,	☐	☐

	YES	NO
enhance, or otherwise protect it?		
iv. Indirect Business Displacement		
o Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☐
o Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☐
v. Effects on Industry		
o Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	☐	☐
o Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	☐	☐
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, health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
i. Early Childhood Programs		
o 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 If "yes," would the project result in a collective utilization rate of the Early Childhood Programs in the study area that is greater than 100 percent?	☐	☐
o If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. Public Schools		
o 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 If "yes," would the project result in a utilization rate of the elementary or middle schools that is equal to or greater than 100 percent?	☐	☐
o If "yes," would the project generate 100 or more elementary or middle school students past the 100% utilization rate?	☐	☐
o If "yes," would the project result in a utilization rate of the high schools that is equal to or greater than 100 percent?	☐	☐
o If "yes," would the project increase the high school utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
iii. Libraries		
o 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 If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
o If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iv. Health Care Facilities		
o Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
o If "yes," would the project affect the operation of health care facilities in the area?	☐	☐
v. Fire and Police Protection		
o Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
o If "yes," would the project affect the operation of fire or police protection in the area?	☐	☐
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	☐	☒
(b) Would the project generate more than 200 additional residents or 500 additional employees?	☐	☒
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. See attached		

	YES	NO
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☒	☐
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See attached		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
(c) If "yes" to either of the above, please provide the information requested in Chapter 10. See attached		
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 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 Protection Plan Project Tracking 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) Would the proposed project introduce new activities or processes using hazardous materials and increase the risk of human or environmental exposure?	☐	☒
(c) 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?	☐	☒
(d) 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 the Hazardous Materials Appendix (including nonconforming uses)?	☒	☐
(e) 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?	☐	☒
(f) 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)?	☐	☒
(g) 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?	☐	☒
(h) 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?	☐	☒
(i) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: No RECs were identified. The presence of VECs could not be ruled out. See attached Phase I in Appendix C.	☐	☒
(j) Based on the Phase I Assessment, is a Phase II Investigation needed?	☒	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than that listed in Table 13-1 in Chapter 13?	☐	☐
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒

	YES	NO
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation.		
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 4,846 = (23 retail employees X 79 pounds per week) + (233 office building employees X 13 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?	☐	☒
o If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☐
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 15,085,082 = (216.3 commercial X 52,189) + (250.7 institutional X 15,144)		
(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 appropriate screening analyses, attach 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, bus trips, or 50 Citywide Ferry Service ferry 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), 200 subway/rail trips per station or line, or 25 or more Citywide Ferry Service ferry trips on a single route (in one direction), or 50 or more passengers at a Citywide Ferry Service landing?	☐	☐
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, bus stop, or Citywide Ferry Service landing?	☒	☐
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?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See attached		
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) Would the proposed project result in the development of 350,000 square feet or more?	☐	☒
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18?	☐	☐
o If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐

	YES	NO
(b) Would the proposed project introduce new or additional receptors (see Section 114 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation.		
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 significant adverse impacts 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. An assessment of neighborhood character is generally recommended when a proposed project has the potential to result in significant adverse impacts in any technical area presented above, or when the project may have moderate effects on several of the elements that define a neighborhood's character. There would be no significant impacts to any of the constituent elements of Neighborhood Character.		
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. See attached		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	SIGNATURE	DATE
Amber Kartalyan	Amber Kartalyan	2/29/2024

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

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

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

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

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

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

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

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

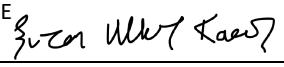
☐ **Positive Declaration**: If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a *Positive Declaration* and prepares a draft Scope of Work for the Environmental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

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

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

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

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission
NAME	DATE
Evren Ulker-Kacar, AICP	March 1, 2024

SIGNATURE 

NEGATIVE DECLARATION

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS. The applicant, 150 Mill LLC, seeks a zoning map amendment to rezone Brooklyn Block 552 Lots 13, 21, 22, 23, 24, 25 and portions of (p/o) Lots 5, 17, 18, 29, 31, and 34 (the "Affected Area") from M1-1 to M1-5 (the "Proposed Action"). The Proposed Action would facilitate the development of a new 10-story, approximately 67,336 gross square foot (gsf) mixed-use commercial and community facility building on the applicant-owned Block 552, Lot 13 (the "Projected Development Site 1") that would include approximately 9,462 gsf of ground floor commercial retail, 15,144 gsf of community facility, and 41,727 gsf of commercial office (the "Proposed Project").

The Proposed Action would not result in significant adverse impacts to Land Use, Zoning, and Public Policy. The Proposed Action would facilitate the development of a mixed-use commercial and community facility building that would be compatible with the existing commercial uses located on Hamilton Avenue immediately south of the Proposed Project and existing community facility uses adjacent to the west and the north of the Proposed Project. The proposed M1-5 district would allow the same range of uses as the existing M1-1 while increasing the allowable floor area ratio (FAR) for commercial and manufacturing uses from 1.0 to 5.0 and the allowable FAR for community facility uses from 2.4 to 6.5. The Proposed Action would be consistent with public policies relevant to the Affected Area. The Affected Area is within the Southwest Brooklyn Industrial Business Zone (IBZ) and the proposed rezoning to a M1-5 district would not facilitate the development of residential dwelling units nor allow new uses within the IBZ. The Proposed Action would be consistent with the policies set forth in the Waterfront Revitalization Program (WRP# 18-169). Therefore, the analysis concludes that the Proposed Action would not result in significant adverse impacts related to Land Use, Zoning, and Public Policy.

Shadows

A detailed analysis related to shadows is included in this EAS. The detailed shadows analysis indicates that of six sunlight-sensitive resources identified within the shadows study area, development facilitated by the Proposed Action would cast incremental shadows on five sunlight-sensitive resources during at least one of the analysis days mandated by the CEQR Technical Manual. The five sunlight-sensitive resources that would receive incremental shadows are the Admiral Triangle, two Green Streets along Clinton Street to the west of Projected Development Site 1, the Cough Triangle, and the Red Hook Recreation Area.

Incremental shadows resulting from the Proposed Action would reach the Admiral Triangle on the December 21st analysis day for one hour and 15 minutes. No incremental shadows were identified for other analysis days. The incremental shadows resulting from the Proposed Action would not significantly reduce sunlight exposure on this resource and would not affect the public's usability or enjoyment of the Admiral Triangle.

Incremental shadows resulting from the Proposed Action would reach two Green Streets (Sunlight-Sensitive Resource 2 and 3). Both Sunlight-Sensitive Resource 2 and 3 consist of plantings of trees and bushes located within the median of Clinton Street to the west and northwest of the Proposed Project. Incremental shadows would reach Sunlight-Sensitive Resource 2 for two hours between 8:51 a.m. and 10:51 a.m. on the December 21st analysis day, one hour and 18 minutes between 6:27 a.m. to 7:45 a.m. on the May 6th and August 6th analysis days, and for 10 minutes from 6:57 a.m. to 7:07 a.m. on the June 21st analysis day. There are no passive nor active recreation assets within either Sunlight-Sensitive Resource 2 or 3. Both resources would continue to receive eight hours of direct sunlight during the growing season.

Incremental shadows resulting from the Proposed Action would reach the Cough Triangle for one hour on the June 21st analysis day. The Cough Triangle, consisting of benches and tree plantings, would continue to receive 11 hours and four minutes of direct sunlight on the June 21st analysis day. The incremental shadow resulting from the Proposed Project would not significantly reduce sunlight exposure on this resource and would not affect the public's usability or enjoyment of the Cough Triangle.

Incremental shadows resulting from the Proposed Action would reach the Red Hook Recreation Area on the June 21st analysis day for one hour between 5:57 a.m. and 6:57 a.m. Incremental shadows would be cast on two outdoor basketball courts and the northern portion of an outdoor sports field. The incremental shadows would occur within the first 1.5 hours of sunrise and would not affect the public's usability or enjoyment of the sunlight-sensitive resource.

Incremental shadows resulting from the Proposed Action would not significantly reduce the amount of direct sunlight available to any sunlight-sensitive resource including specific features that define any resource's character, use, or survival of the resource's vegetation. Incremental shadows resulting from the Proposed Action would not significantly affect the public's enjoyment of the sunlight-sensitive resources. Therefore, no significant adverse impacts related to shadows would occur as a result of the Proposed Action and no further analysis is required.

Historic and Cultural Resources

An analysis related to historic and cultural resources is included in this EAS. No architectural resources were identified within the Affected Area, however, two architectural resources, the Red Hook Houses and 604 Clinton Street (located within the Red Hook Houses campus) were identified within a 400-foot study area of the Affected Area. The Proposed Project would not introduce incompatible visual, audible, or atmospheric elements, eliminate or screen publicly accessible views of these

resources, or introduce significant shadows to either architectural resource. Therefore, the Proposed Action would not result in significant adverse impacts to architectural resources and no further analysis is necessary.

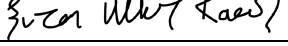
The Proposed Action would result in new in-ground construction on the Applicant-owned Block 552, Lot 13 ("Projected Development Site 1"). A Phase 1A Archaeological Documentary Study was prepared and determined that it is possible that privies and cisterns may have been in use by residents that occupied the five historic lots that compose what is currently Projected Development Site 1 beginning with the area's residential development in the mid-1850s. The Phase 1A concluded that Projected Development Site 1 is potentially sensitive for archaeological resources and that a program of archaeological field testing be undertaken to determine the presence or absence of 19th-century shaft features and possible yard deposits associated with former residents and commercial endeavors.

In a letter dated January 24th, 2020, the New York City Landmarks Preservation Commission (LPC) stated that the Projected Development Site 1 may be archaeologically significant as there is the potential for the recovery of remains from 19th Century and Native American occupation on Projected Development Site 1 based on archaeological sensitivity models and historic maps.

To ensure that the potential archaeological resources within Projected Development Site 1 are not adversely impacted by construction related to the Proposed Project, the applicant will enter a Restrictive Declaration, to be recorded against Block 552, Lot 13 (Projected Development Site 1) in association with the Proposed Action. The archaeological work will be overseen by LPC prior to the disturbance of Projected Development Site 1. With the implementation of the Restrictive Declaration, the Proposed Action would not result in significant adverse impacts on archaeological resources.

Hazardous Materials, Air Quality, and Noise
An (E) designation (E-699) related to hazardous materials, air quality, and noise would be established as part of the approval of the proposed actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The hazardous materials, air quality, and noise analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to hazardous materials, air quality, or noise.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Sean O'Rourke at sorourke@planning.nyc.gov.

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3493
NAME Evren Ulker-Kacar, AICP	DATE 3/1/2024
SIGNATURE 	
TITLE Chair, City Planning Commission	
NAME Daniel R. Garodnick	DATE 3/4/2024
SIGNATURE	

Project Name: 150 Mill Street Rezoning
CEQR # 22DCP016K
SEQRA Classification: Unlisted

Determination of Significance Appendix

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

Development Site	Borough	Block and Lot
Projected Development Site 1	Brooklyn	Block 552, Lot 13

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality, and noise an (E) designation (**E-699**) would be established as part of approval of the proposed actions on **Projected Development Site 1** as described below:

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

Hazardous Materials

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

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

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

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

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

Project Name: 150 Mill Street Rezoning
CEQR # 22DCP016K
SEQRA Classification: Unlisted

Air Quality

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

> **Projected Development Site 1:** Any new commercial and/or community facility development on the above-referenced property must ensure the heating, ventilating, and air conditioning (HVAC) system and hot water equipment stack is located at the building's highest tier and at least 158 feet above grade to avoid any potential significant adverse air quality impacts.

Noise

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

> **Projected Development Site 1:** In order to ensure an acceptable interior noise environment, future community facility/commercial office uses must provide a closed window condition with a minimum of 35 dBA window/wall attenuation on the northern facades facing Mill Street for floors below the BQE and the northeastern facades facing Hamilton Avenue for floors below the BQE and the southeastern facades within 50 feet of Hamilton Avenue for floors below the BQE and 38 dBA of attenuation on the northern facades facing Mill Street for floors at or above the BQE and on the northeastern facades facing Hamilton Avenue for floors at or above the BQE and on the southeastern and eastern facades for floors at or above the BQE and 31 dBA of attenuation on the western facades facing Clinton Street for floors above 15 feet from the ground and 28 dBA of attenuation on the southern facades facing Centre Street within 35 feet from the western lot line for floors above 15 feet from the ground in order to maintain an interior L10 noise level not greater than 45 dBA for community facility uses or not greater than 50 dBA for commercial office uses as illustrated in the EAS Figure 2.87. 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: Project Location Map



Figure 2: Land Use Map

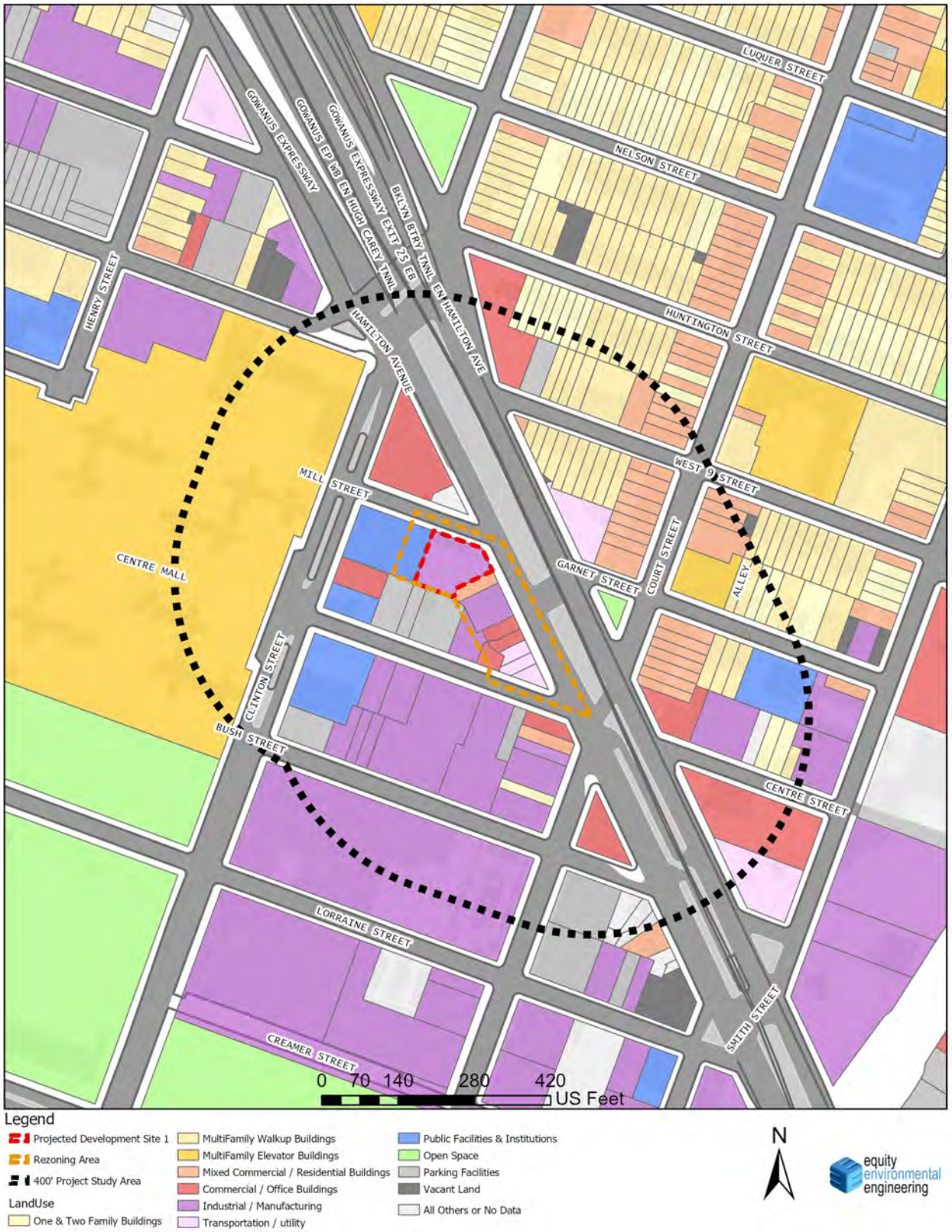


Figure 3: Tax Map

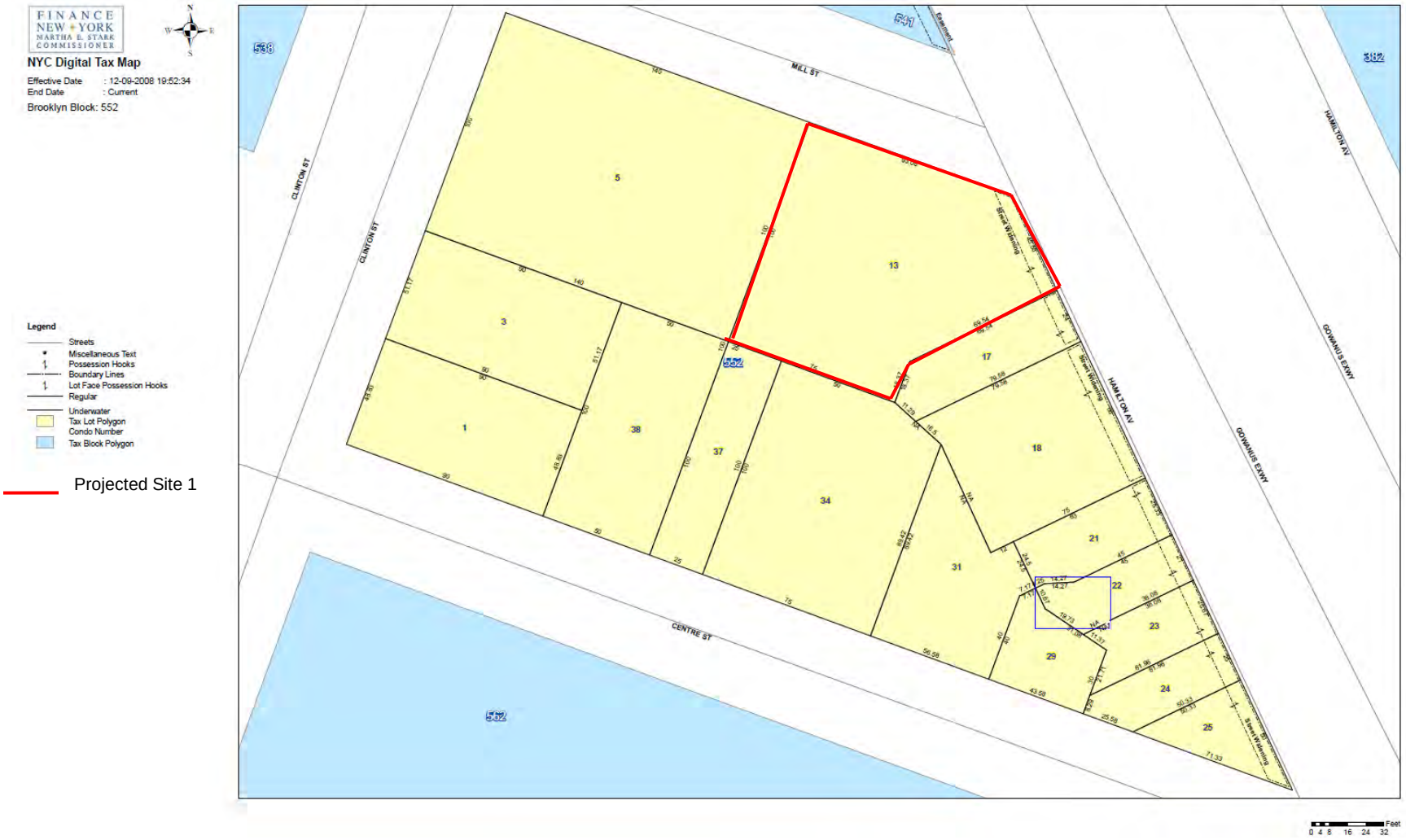


Figure 4: Zoning Map

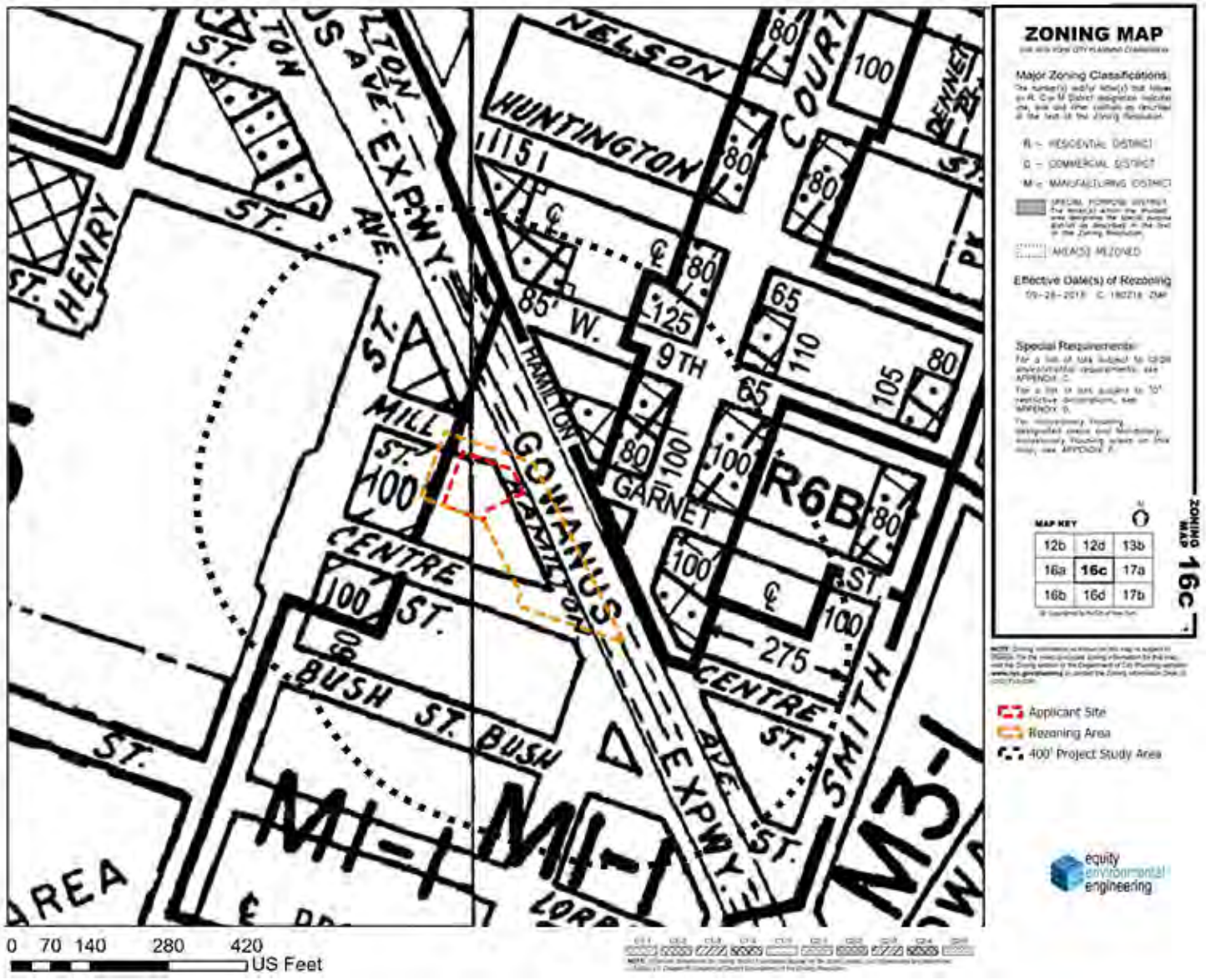


Figure 5: Zoning Change Map

Zoning Change Map



Existing M1-1 Zoning District

Proposed M1-5 Zoning District

Figure 6: Photo Key



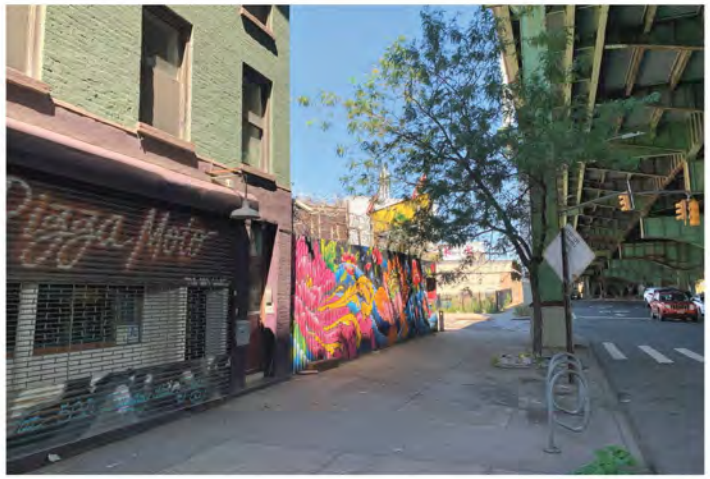
1 View of the Projected Development Site frontage on Mill Street



Study Area Map with Photo Key



2 View of Mill Street facing southeast



3 View of Hamilton Avenue facing northwest



4 View of gas station across Hamilton Avenue facing northeast



Study Area Map with Photo Key



5 View of Mill Street facing west



6 View of Clinton Street facing south



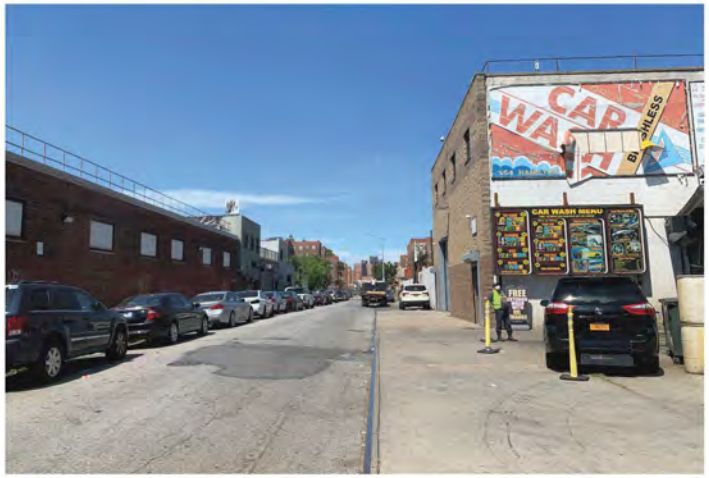
7 View of gas station to the south of the Projected Development Site



Study Area Map with Photo Key



8 View of Hamilton Ave facing southeast



9 View of Centre Street facing west

1.0 PROJECT DESCRIPTION

1.1 Introduction

The Applicant, 150 Mill Street LLC, requests approval of a zoning map amendment (the Proposed Action) to facilitate the development of Block 552, Lot 13 (the Projected Development Site) with a 10-story plus cellar, 67,336 gross-square-foot (gsf) mixed-use commercial and community facility building in the Red Hook neighborhood of Brooklyn, Community District 6.

The zoning map amendment would rezone Block 552, Lots 13, 21, 22, 23, 24, 25, and p/o 5, p/o 17, p/o 18, p/o 29, p/o 31, and p/o 34 (the Affected Area) from the existing M1-1 zoning district to an M1-5 zoning district.

The Proposed Action is a discretionary action subject to environmental review. The NYC Department of City Planning is the lead agency on behalf of the City Planning Commission for environmental review under City Environmental Quality Review ("CEQR").

1.2 Background

The Affected Area is shown in **Figures 1 and 4**. Immediately across Hamilton Avenue from the Affected Area is the southern portion of the approximately 86-block area that was rezoned as part of the Carroll Gardens/Columbia Street Rezoning that the City Council adopted on October 28, 2009 (090462 ZMK). The rezoning sought to support and promote local, vibrant retail corridors while protecting the residential character of nearby side streets.

The Project Area has been zoned M1-1 since 1961. According to historic aerials, Lot 13 was improved with a building as far back as 1924. A Certificate of Occupancy is on file for a three-car garage in 1945. A subsequent Certificate of Occupancy is on file for an office and open auto parking for 33 cars in 1996 (existing structure). The increase in FAR and reduction of parking requirements permitted by the proposed M1-5 zoning district would complement the intentions of the Carroll Gardens/Columbia Street Rezoning by promoting the development of lots along retail corridors that are underdeveloped.

1.3 Description of Surrounding Area

The Affected Area is in the Red Hook neighborhood of Brooklyn, Community District 6. The Carroll Gardens neighborhood is also considered part of the surrounding area. Court Street and Clinton Street are significant corridors in this area of Brooklyn and are both wide roads running southwest to northeast parallel to each other; Clinton Street is developed with medium-density community facilities and commercial buildings, and Court Street is developed with medium-density multi-family buildings and commercial buildings.

Land uses within the 400-foot surrounding area are predominantly medium-density residential uses north of Mill Street and low-density industrial uses south of Centre Street. Low- and medium-density commercial uses are developed along Clinton Street and Court Street. The surrounding area also includes several community facilities: a City-owned daycare, a Baptist church, a United States Postal Service post office, and a senior living facility.

The surrounding area is generally developed with low-rise light industrial buildings along Centre Street, Bush Street, and Lorraine Street; mid-rise multi-family buildings along Court Street, and low- and mid-rise one- and two-family buildings and multi-family buildings along Garnet Street and West 9th Street. Larger buildings in the area include a mid-rise storage facility that encompasses the entirety of Block 572, and a high-rise multi-family building at the corner of Huntington Street and Court Street. The area is defined by its proximity to the elevated BQE roadway running along Hamilton Avenue immediately to the east of the Affected Area, as well as the New York City Housing Authority's (NYCHA) Red Hook East public housing development to the west of the Affected Area across Clinton Street; the development spans four city blocks and includes 23 buildings and 1,836 dwelling units.

Zoning in the surrounding area is medium-density residential to the west, north, and east of the Affected Area, and includes commercial overlays along Court Street and Clinton Street. The Affected Area is located in the northern portion of an M1-1 zoning district (**see Figure 4**). Zoning to the south of the Affected Area, including east of Smith Street, is M3-1.

Clinton Street, bounding the Affected Area to the west, is a major collector roadway running southwest-northeast with one moving lane of traffic in each direction and curbside parking. At 80 feet in width, it is a wide street.

The area is within the Transit Zone, but is served modestly by public transit, as there is bus and subway access, but not within a half-mile of the Affected Area. Immediately adjacent to the Affected Area is a bus stop for the B57 and B61 buses. Approximately .2 miles east of the Affected Area, along West 9th Street, the Smith-9th Street Station is served by the MTA F and G subway lines.

1.4 Description of Affected Area

The Affected Area is shown in **Figures 1 through 7** and summarized below. The Affected Area is entirely zoned M1-1, which permits light manufacturing and commercial uses up to 1.00 FAR and community facility development up to 2.40 FAR (Lot 5 is a split zoning lot, with a portion inside the M1-1 zoning district and a portion inside an R5/C1-3 zoning district). The lots within the rezoning area are described below in **Table 1.4-1.**

Table 1.4-1: Affected Area Existing Conditions

Block	Lot	Lot Area (ft)	Site ID	Zoning	Existing Land Use	Ownership
552	13	9,903	Projected Site 1	M1-1	Light Industrial	150 Mill Street LLC
	21, 22, 23, 24, 25, 29	7,738	Other Affected Lot		Commercial	354 Hamilton LLC
	17	1,897	Other Affected Lot		Residential/Commercial	Ficoria 338 Hamilton, LLC
	18	4,480	Other Affected Lot		Light Industrial	Gabjoe Contracting Corp.
	5	14,000	Other Affected Lot	M1-1; R5/C1-3	Community Facility	NYC Administration for Childrens Services
	31	3,825	Other Affected Lot	M1-1	Light Industrial	Triangle Acoustics Corp.
	34	7,346	Other Affected Lot	M1-1	Transportation/Utility	A S J N Realty, LLC

ft = Feet

1.5 Description of the Development Site

The Applicant-Owned Development Site is Block 552, Lot 13, and is located at 150 Mill Street. The Site contains approximately 9,903 square feet of lot area[1]. According to Department of Building records the site was previously improved with a three-car garage in 1945. The existing structure on site was built in 1995 and is used as an office, with the remainder of the site used as auto and scaffolding storage.

1.6 Description of Proposed Development

The Proposed Project is the demolition of the building on site and the construction of a 67,336 GSF (64,345 ZSF; 6.50 FAR), 10-story plus cellar building that rises to a height of 143 feet (155 feet to the top of the bulkhead). The building would include 9,462 GSF (7,779 ZSF) of ground floor commercial retail, 15,144 GSF (14,832 ZSF) of community facility floor area on floors 2 and 3, and 42,727 GSF (41,729 ZSF) of office space on floors 4 through 10. No parking spaces are required within the proposed M1-5 zoning district, and no parking spaces would be provided.

1.7 Action(s) Necessary to Facilitate the Project

The action necessary to facilitate the Proposed Project is a zoning map amendment to rezone the Affected Area (Block 552, Lots 13, 21, 22, 23, 24, 25, and p/o 5, p/o 17, p/o 18, p/o 29, p/o 31, and p/o 34) from the existing M1-1 zoning district to an M1-5 zoning district.

1.8 Purpose and Need

The Applicant believes that the increased bulk (1.00 to 5.00 FAR for commercial and industrial; 2.40 to 6.50 FAR for limited community facility uses) under the proposed M1-5 zoning district and removal of parking requirements (1 per 300 SF to none) would induce the development of an underutilized lot along a major thoroughfare in the area. The rezoning would also help strengthen the permitted industrial uses within a mixed-use neighborhood within a Project Area that has been historically industrial by permitting a larger FAR.

The Proposed Project could not be developed under existing zoning regulations because of the limited amount of FAR available for commercial development (1.00 FAR commercial) and high parking requirements (1 space per 300 SF).

[1]The lot area referenced for Projected Development Site 1 is inconsistent with ZoLa, which lists the lot area as 9,242 sf. The 9,903 sf lot area referenced is based on a survey completed by the Applicant and is consistent with the lot area listed in the Proposed Development Plans.

1.9 Analysis Framework

Build Year

The analysis year for the Proposed Action is 2026, based on an 18-month period for the environmental review and ULURP processes and an 18-month construction schedule for the Proposed Development. No other sites are expected to redevelop as a result of the Proposed Action in the foreseeable future, as discussed in detail below and as reflected by the analysis year.

The Technical Manual categorizes soft sites as either "projected" or "potential" development sites. Projected development sites are defined as those sites that are more likely to be developed as a result of the proposed project. Potential sites are defined as sites that could be developed but have been determined to have less development potential than the projected development sites, based on observed historic and current market conditions, location, site configuration, proximity to transit, infrastructure and other facilities, and other factors that affect the likelihood that they would be developed under the Proposed Action. Projected development sites are analyzed for both site-specific and density-related effects, whereas potential development sites are only analyzed for site-specific effects.

Pursuant to *2021 CEQR Technical Manual* methodology, sites may be considered 'soft' if they are built to substantially less than the maximum permitted floor area ratio and are of a sufficient size or could be assembled into a parcel of sufficient size, to support a feasible development. Sites that have recently been developed or redeveloped are considered less likely to be soft, due to the significant recent investment in the current use.

The analysis which follows compares the difference between the future without the Proposed Action (no-action condition) and the future with the Proposed Action (with-action condition) for the 2026 analysis year. This EAS studies the potential for individual and cumulative environmental impacts related to the Proposed Action.

Future Without the Proposed Action

In the future without the Proposed Action existing conditions are expected to continue. Under the existing M1-1 zoning, a majority of the lots within the Affected Area would be significantly developed, and based on current neighborhood trends, existing active use of buildings, and high parking requirement (1 space per 300 sf), no new development is expected to occur.

Future With the Proposed Action

In the future with the Proposed Action Block 552, Lots 13, 21, 22, 23, 24, 25, and a portion of lots 5, 17, 18, 29, 31, and 34 would be rezoned from the existing M1-1 zoning district to a M1-5 zoning district. The Applicant-Owned Lot 13 would be developed with the Proposed Development.

Projected Development Site 1

The projected development is the same as The Applicant's proposed development. A 10-story, 143-foot-tall, 67,336 GSF building would be constructed. The building would be a 67,336 GSF (64,345 ZSF; 6.50 FAR), 10-story plus cellar building that rises to a height of 143 feet (155 feet to the top of the bulkhead). The building would include 9,462 GSF (7,779 ZSF) of ground floor commercial retail, 15,144 GSF (14,832 ZSF) of community facility floor area on floors 2 and 3, and 42,727 GSF (41,729 ZSF) of office space on floors 4 through 10. No parking spaces are required within the proposed M1-5 zoning district, and no parking spaces would be provided.

It is assumed that ground-floor commercial use would be local retail, that community facility uses would be Use Group (UG) 4 medical office, and floors 4 through 10 would be general office space.

For purposes of a conservative analysis, the RWCDS will assess the maximum permitted envelope for the shadows assessment. The shadows assessment will utilize the 155-foot height of the bulkhead that The Applicant is proposing.

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

The existing, no-action, and with-action conditions for Projected Development Site 1 is shown in **Table 1.9-2 Incremental Analysis Table**.

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

Site Info				Existing/No-Action Conditions		With-Action Condition		
Site ID	Block	Lot	Lot Area (gsf)	Zoning	Industrial (gsf)	Zoning	CF (gsf)	Com. (gsf)
Projected Site 1	552	13	9,903	M1-1	1,020	M1-5	15,144	52,189
Total			**9,903**		**1,020**		**15,144**	**52,189**

CF = Community Facility

gsf = gross square feet

Com. = Commercial

Table 1.9-2: Incremental Analysis Table

Use	No-Action Condition	With-Action Condition	Increment
Comm. Facility (gsf)	0	15,144	15,144
Industrial (gsf)	1,020	0	-1,020
Commercial (gsf)	0	52, 189	52,189
Workers[1]	2	256	254

[1] Assumes 3 employees per 1,000 gsf for local retail; 1 employee per 250 gsf for medical office; 1 employee per 250 gsf office use

Increments showing only Projected Development

2.0 ENVIRONMENTAL REVIEW

2.1 Land Use, Zoning, and Public Policy

The *2021 CEQR Technical Manual* recommends procedures for analysis of land use, zoning and public policy to ascertain the impacts of a project on the surrounding area. Land use, zoning and public policy are described in detail below. This section considers existing conditions, development trends, and zoning and other public policies in relation to the Projected Development Site and the area in which the Proposed Action may have an effect. Because the Proposed Action would permit development of uses at a higher density than is currently allowed under the area's existing M1-1 zoning district, a preliminary assessment of Land Use, Zoning, and Public Policy is provided.

Methodology

Existing land uses were determined by reference to the New York City Zoning and Land Use (Zola) database and PLUTOTM 19v2 shapefiles. These uses were then confirmed through site visits. The evaluation of lots within the 400-foot Study Area was performed with reference to New York City Zoning Maps and the Zoning Resolution of the City of New York and served as the basis for the zoning evaluation of the Future No-Action and Future With-Action Conditions. Public Policy research was performed through an evaluation of New York City Department of City Planning (NYCDCP) and other city agencies programs and documentation.

2.1.1 Land Use

The *2021 CEQR Technical Manual* suggests that a land use, zoning and public policy study area should generally extend 400 feet from the Affected Area. Existing land use patterns of city blocks within approximately 400 feet of the affected area are presented in **Figure 2.** The proposed zoning map amendment would affect the following lots: Block 552, Lots 13, 21, 22, 23, 24, 25, and a portion of lots 5, 17, 18, 29, 31 and 34.

Existing Conditions

Land Use Study Area

The Affected Area is located in the Red Hook neighborhood within Community District 6 in the Borough of Brooklyn. Existing land uses within the 400-foot surrounding area are primarily medium-density residential uses north of Mill Street and low-density industrial uses south of Centre Street. The surrounding area includes several community facilities: a City-owned daycare (Strong Place for Hope Day Care), the New Brown Memorial Baptist Church, a United States Postal Service post office, and a senior living facility. The surrounding area is generally developed with low-rise light industrial buildings along Centre Street, Bush Street, and Lorraine Street; mid-rise multi-family buildings along Court Street, and low- and mid-rise one- and two-family buildings and multi-family buildings along Garnet Street and West 9th Street. Larger

atypical buildings in the area include a mid-rise storage facility that encompasses the entirety of Block 572, a high-rise multi-family building at the corner of Huntington Street and Court Street, and a 4-story, 4.00 FAR commercial building adjacent to the BQE on an irregularly shaped triangular lot taking up the entirety of Block 481. Across Hamilton Avenue from the Affected Area is a BP gas station; Cough Triangle; Choo Choo Train Project, a daycare; and an auto repair shop. Development along Centre Street includes the previously mentioned post office building, an auto repair shop and a home concept store. Across Mill Street from the Affected Area is a small vacant corner lot and a liquor store.

There is one active construction project within the Study Area at the southeast corner of the Red Hook Houses to the west of the Project Site.

Affected Area

A full breakdown of each site within the Affected Area can be found in **Section 1.4**, **Description of Affected Area** or **Table 2.1-1** below**.** Three of the sites are improved with industrial buildings, one is improved with an auto-body use, one is improved with a community facility, one is improved with a mixed-use commercial and residential building, and one is improved with a commercial building.

Table 2.1-1: Land Use in the Affected Area

Address	Lot (Block 552)	Lot Area	Built SF	Existing FAR	Use
150 Mill Street	13	9,903	1,020	0.10	Industrial
348, 350, 352, 354 Hamilton Avenue; 159 Centre Street	21, 22, 23, 24, 25, 29	7,738	2,300	0.3	Commercial
338 Hamilton Avenue	17	1,897	3,744	1.97	Commercial/Residential
340 Hamilton Avenue	18	4,480	4,480	1	Industrial
595 Clinton Street	5	14,000	23,000	1.64	Community Facility
157 Centre Street	31	3,825	3,789	0.99	Industrial
149 Centre Street	34	7,346	1,125	0.15	Transportation/Utility

Projected Development Site 1 (Lot 13) is an irregularly shaped corner lot with frontage on Mill Street and Hamilton Avenue.

Analysis

Future No-Action Condition

Land Use Study Area

Existing land use patterns are expected to continue in the surrounding area in the future without the Proposed Action. There are no known major land use changes anticipated in the foreseeable future within the land use study area. Any new development in surrounding areas would be governed by the underlying M1-1 light manufacturing zoning district, the low-density

non-contextual R5 zoning district to the west across Clinton Street, and the medium-density contextual R6A and R6B zoning districts to the north and east across Hamilton Avenue.

There is one active construction project within the Study Area at the southeast corner of the Red Hook Houses to the west of the Project Site.

Affected Area

Conditions would remain as they currently exist within the Affected Area. Redevelopment of the lots within the Affected Area is not economically feasible in the absence of the Proposed Action due to the limited bulk (1.00 FAR commercial and industrial uses; 2.40 FAR limited community facility uses) and high parking requirements (1 per 300 sf) within the existing M1-1 zoning district.

Future With-Action Condition

Land Use Study Area

Land use and development patterns in the surrounding area are anticipated to remain unchanged in the future with the Proposed Action. Any new development in surrounding areas would be governed by the underlying M1-1 light manufacturing zoning district, the low-density non-contextual R5 zoning district to the west across Clinton Street, and the medium-density contextual R6A and R6B zoning districts to the north and east, across Hamilton Avenue.

There is one active construction project within the Study Area at the southeast corner of the Red Hook Houses to the west of the Project Site.

Affected Area

The existing industrial structure on Block 552, Lot 13 would be demolished in place, and the lot would be redeveloped with a 67,336 gsf (64,345 zsf; 6.50 FAR) 10-story plus cellar, 143-foot-tall mixed-use building. The building would include 9,462 GSF (7,779 ZSF) of ground floor commercial retail, 15,144 GSF (14,832 ZSF) of community facility floor area on floors 2 and 3, and 42,727 GSF (41,729 ZSF) of office space on floors 4 through 10.

It is assumed that ground-floor commercial use would be local retail, that community facility uses would be Use Group (UG) 4 medical office, and floors 4 through 10 would be general office space.

The remaining lots within the rezoning area are expected to remain as per existing conditions.

The proposed rezoning would result in the development of the Affected Area with a mixed-use commercial and community facility building with local retail, community facility, and office uses. The Proposed Action would be consistent with existing land use patterns within the surrounding area and would permit medium-density mixed-use development on a wide street

appropriate for such development and use. Therefore, the Proposed Action would not result in any significant adverse impacts on land use.

2.1.2 Zoning

The *CEQR Technical Manual* suggests that a zoning study area should generally extend 400 feet from the Affected Area. Existing zoning districts within approximately 400 feet of the Affected Area are presented in **Figure 4.** The proposed zoning map amendment would affect the following lots: Block 552, Lots 13, 21, 22, 23, 24, 25, and a portion of lots 5, 17, 18, 29, 31, and 34.

Existing Conditions

Zoning Study Area

The zoning districts within 400 feet of the Affected Area are R5, R5/C1-3 R6A, R6A/C2-4, R6B, R6B/C2-4, and M1-1. The Affected Area is zoned M1-1. **Figure 5** shows existing zoning in the surrounding area.

Table 2.1-2: Summary of Existing Zoning Regulations

Zoning District	Type and Use Group (UG)	Floor Area Ratio (FAR)	Required Parking
R5	Non-Contextual Residential	1.25 FAR – Residential	85 percent of dwelling units and 42.5 percent of IRHUs (waived if 15 or fewer spaces required)
	UGs 1-4	2.00 FAR – Community Facility	
R6A	Contextual Residential	3.00 FAR – Residential (Basic)	50 percent of dwelling units and 25 percent of IRHUs (waived if 15 or fewer spaces required)
	UGs 1-4	3.00 FAR – Community Facility	
R6B	Contextual Residential	2.00 FAR – Residential (Basic)	50 percent of dwelling units and 25 percent of IRHUs (waived if 15 or fewer spaces required)
	UGs 1-4	2.00 FAR – Community Facility	
M1-1	Light Manufacturing	1.00 FAR - Manufacturing and Commercial	Varies by use 1 per 300 square feet of uses commercial
	UGs 4-14, 16, 17	2.40 FAR – Community Facility	
C1-3	Commercial Overlay	1.00 FAR - Commercial (within R1-R5)	Varies by use 1 per 400 square feet of commercial
	UGs 1-6	2.00 FAR - Commercial (within R6-R10)	
C2-4	Commercial Overlay	1.00 FAR - Commercial (within R1-R5)	Varies by use 1 per 1,000 square feet of commercial
	UGs 1-9, 14	2.00 FAR - Commercial (within R6-R10)	

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

Existing zoning districts in the surrounding area include:

R5

R5 districts allow a variety of housing at a higher density than permitted in R3-2 and R4 districts. The floor area ratio (FAR) of 1.25 typically produces three-and four-story attached houses and small apartment houses. With a height limit of 40 feet, R5 districts provide a transition between lower- and higher-density neighborhoods and are widely mapped in Brooklyn, Queens and the Bronx.

To ensure compatibility with neighborhood scale, the maximum street wall height of a new building is 30 feet and the maximum building height is 40 feet. Above a height of 30 feet, a setback of 15 feet is required from the street wall of the building; in addition, any portion of the building that exceeds a height of 33 feet must be set back from a rear or side yard line. Detached houses must have two side yards that total at least 13 feet, each with a minimum width of five feet. Semi-detached houses need one eight-foot-wide side yard. Apartment houses need two side yards, each at least eight feet wide. Front yards must be 10 feet deep or, if deeper, a minimum of 18 feet to prevent cars parked on-site from protruding onto the sidewalk. Cars may park in the side or rear yard, in the garage or in the front yard within the side lot ribbon; parking is also allowed within the front yard when the lot is wider than 35 feet. Off-street parking is required for 85% of the dwelling units in the building, but requirements are lower for income-restricted housing units (IRHU) and are further modified within the Transit Zone

R6A

R6A is a contextual district where the Quality Housing bulk regulations are mandatory. These regulations produce high lot coverage, six- to eight-story apartment buildings set at or near the street line. Designed to be compatible with older buildings found in medium-density neighborhoods, R6A districts are mapped in the Bronx, Brooklyn and Queens. Parts of Kingsbridge in the Bronx and Williamsburg in Brooklyn are typical R6A areas.

The floor area ratio (FAR) in R6A districts is 3.0. Above a minimum base height of 40 feet, the building must set back by at least 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 70 feet, or 75 feet if providing a qualifying ground floor. To preserve the traditional streetscape, the street wall of a new building can be no closer to the street line than any adjacent street wall, but need not be farther than 10 feet. The area between a building's street wall and the street line must be planted. R6A buildings must have interior amenities for the residents pursuant to the Quality Housing Program.

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 and the maximum height is 50 feet. For buildings providing a qualifying ground floor, the maximum base height and overall height increase by five 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. Buildings must have interior amenities for the residents pursuant to the Quality Housing Program.

M1-1

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

Building height and setbacks are controlled by a sky exposure plane which may be penetrated by a tower in certain districts. New industrial buildings are usually low-rise structures that fit within sky exposure plane. Rear yards at least 20 feet deep are usually required, except within 100 feet of a corner.

Buildings within M1-1 zoning districts can be built to an FAR of 1.00 for manufacturing and commercial uses and 2.40 for community facility uses (only community facilities within UG 4 are permitted).

Parking and loading requirements vary with district and use. M1-1 districts are subject to parking requirements based on the type of use and size of an establishment. For example, a warehouse in an M1-1 district requires one off-street parking space per 2,000 square feet of floor area or per every three employees, whichever would be less. For local retail and office uses, which are proposed as part of the Applicant's development, 1 parking space per 300 sf of uses is required.

C1-3 and C2-4 Commercial Overlays

C1-1 through C1-5 and C2-1 through C2-5 districts are commercial overlays mapped within

residence districts. Mapped along streets that serve local retail needs, they 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.

When commercial overlays are mapped in R1 through R5 districts, the maximum commercial floor area ratio (FAR) is 1.0; when mapped in R6 through R10 districts, the maximum commercial FAR is 2.0. Commercial buildings are subject to commercial bulk rules.

Overlay districts differ from other commercial districts in that residential bulk is governed by the residence district within which the overlay is mapped. All other commercial districts that permit residential use are assigned a specific residential district equivalent. Unless otherwise indicated on the zoning maps, the depth of overlay districts ranges from 100 to 200 feet.

Affected Area

The Affected Area is zoned M1-1, which permits high performance light industrial development up to 1.00 FAR and limited community facility development up to 2.40 FAR.

Analysis

Future No-Action Condition

Zoning Study Area

No changes to zoning are anticipated in the future without the Proposed Action in the surrounding area. Existing zoning patterns would remain.

Affected Area

No changes to zoning are anticipated in the future without the Proposed Action within the Affected Area. The Affected Area would continue to be subject to M1-1 zoning.

Future With-Action Condition

Zoning Study Area

No changes to zoning would occur in the surrounding area in the future with the Proposed Action.

Affected Area – M1-5

The Proposed Action would rezone an M1-1 district to an M1-5 district as shown in **Figure 5**.

The proposed zoning is consistent with surrounding commercial and industrial uses and the Carroll Gardens/Columbia Street Rezoning (090462 ZMK), which sought to support local, vibrant retail corridors while protecting the residential character or nearby side streets. The M1-5 zoning designation would permit medium-density commercial, community facility, and industrial development at a maximum FAR of 6.50. The maximum building height is governed by the sky exposure plane, with a maximum height 85-foot-tall front wall, or 6 stories, whichever is less, after an initial setback of 20 feet. No parking is required.

The proposed zoning district would be mapped along a wide street (Hamilton Avenue) classified as Principal Arterial Other by the New York State Department of Transportation with an elevated roadway (Gowanus Expressway) above. This location is well-suited to the higher density of commercial, community facility, and industrial uses permitted by the proposed zoning district. The proposed M1-5 district would be cohesive with the M1-1 zoning district to the south of the Affected Area. The proposed rezoning would induce the development of a mixed-use building with local retail, community facility (UG-4 medical office), and office uses. The local retail would be consistent with the surrounding retail uses and along with the proposed community facility and office uses would serve the adjacent residential districts to the east, north, and west of the Affected Area. The rezoning would not adversely affect surrounding land uses, nor would it be incompatible with those land uses. Therefore, no potentially significant adverse impacts related to land use are expected to occur as a result of the Proposed Actions, and further analysis of land use is not warranted.

2.1.3 Public Policy

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), or the New York City Landmarks Law. The Proposed Action is also not a large publicly sponsored project, and as such, consistency with the City's PlaNYC 2050 for sustainability is not warranted.

Public Policies within the Affected Area

New York Works Plan

In 2017, Mayor Bill de Blasio set a goal to use city actions to spur 100,000 new quality jobs citywide over the next ten years. The plan's goals are to invest in the creation of middle-class jobs, ensure those jobs are accessible to New Yorkers, and prepare for the jobs of the future. Of the 100,000 new jobs, 20,000 would be specific to the New York City industrial and manufacturing ecosystem. Jobs would be earmarked through initiatives promoting investment to modernize and expand manufacturing facilities, and by facilitating the movement of goods into, around, and out of New York City.

The Proposed Action would support the industrial and manufacturing strategy by providing an additional 1,020 gsf of manufacturing area compared to the No-Action condition and approximately 52,189 gsf of additional office and retail space compared to the No-Action condition. The Proposed Action is consistent with the policies of the New York Works Plan.

Transit Zone

Areas where special lower accessory parking requirements apply for various types of affordable housing including income-restricted housing units. These are generally areas of the city beyond the Manhattan Core within one-half mile of a subway station, where auto ownership rates are among the lowest in the city.

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.

Industrial Business Zone

The Affected Area is within the Southwest Brooklyn Industrial Business Zone (IBZ). The IBZs were created in early 2006 in areas of the Bronx, Brooklyn and Queens. The IBZ program evolved from the City's earlier policies focused on In-Place Industrial Parks (IPIP), which provided business support services to industrial and manufacturing businesses located within the IPIP and addressed issues related to infrastructure and the business environment. Like the IPIPs, policies applying to the IBZs continue to offer targeted support services for industrial firms and attend to area-wide improvements. The designation also provides relocation tax credits to qualifying businesses that locate within an IBZ to direct investment to New York City's strongest industrial areas. To create more certainty on land use policy, IBZ designation also carries a commitment not to support a rezoning permitting new residences. Only manufacturing districts may be designated as IBZs.

Appendix J Designated M Districts are areas in IBZs where development of new self-storage facilities is subject to restrictions. Areas that are within Subarea 2 are subject to special permit of the City Planning Commission pursuant to Section 74-932.

Waterfront Revitalization Program

The project is within the Coastal Zone Boundary, which is subject to review under the Waterfront Revitalization Program (WRP). The WRP establishes the City's policies for

waterfront planning, preservation, and development projects to ensure consistency over the long term. The goal of the program is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing any potential conflicts among these objectives.

Analysis

Future No-Action Condition

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

Future With-Action Condition

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

Conclusion

Transit Zone

No residential development is proposed within the rezoning area, and residential development is not permitted within manufacturing districts. The Proposed Action would not alter or conflict with the objectives of the Transit Zone.

Food Retail Expansion to Support Health Program (FRESH)

Under the RWCDS no FRESH supermarket is anticipated, and the Proposed Action would not alter or conflict with the objectives of the FRESH program.

Appendix J Designated M District (Subarea 2)

The Affected Area is located within the Southwest Brooklyn Subarea 2 Appendix J Designated M District. The Proposed Action would induce the development of a mixed-use commercial and community facility building with local retail and office uses. No self-storage space is anticipated to be developed as a result of the rezoning. The Proposed Action would not conflict with the objectives of this public policy.

Industrial Business Zone

As noted above, the Affected Area is located within the Southwest Brooklyn IBZ. The IBZ includes portions of the Sunset Park, Gowanus, Carroll Gardens, Cobble Hill, and Red Hook neighborhoods, and is generally bounded by the Buttermilk Channel to the west, Atlantic Avenue to the north, Third Avenue to the east, and the Belt Parkway to the south. IBZs offer

various incentives to prevent industrial uses from relocating outside of the City and represent a commitment by the City not to rezone these areas for residential uses. Within an IBZ, Industrial Business Solutions Providers offer industrial firms guidance accessing appropriate financial and business assistance programs, navigating and complying with regulatory requirements, developing workforces, and ensuring the neighborhood is well-maintained. The Industrial Business Solutions Provider for the Southwest Brooklyn IBZ is the Southwest Brooklyn Industrial Business Development Corporation.

The proposed rezoning would not interfere with the Industrial Business Zone public policy as the Proposed Action is a rezoning from M1-1 to M1-5 and would not rezone any industrial or manufacturing sites to allow residential uses. The Proposed Project is expected to serve a variety of office uses in addition to a medical facility and supermarket, encourage job creation in areas near transit, provide increased walk-to-work opportunities in Brooklyn CD 6, strengthen the economic base of the City, contribute to a diverse mix of business uses and employment in the area, and protect the City's tax revenues.

Waterfront Revitalization Program

Because the Affected Area is located within the boundaries of the New York City Coastal Zone and is subject to CEQR discretionary review procedures, the Proposed Action must be reviewed and assessed for consistency with the policies and conditions set forth in the New York City WRP. A WRP Assessment is provided in **Appendix B**.

2.2 Shadows

The *2021 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 *2021 CEQR Technical Manual* for a preliminary assessment (Section 310). According to the *2021 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 *2021 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

In the future with the Proposed Action, Projected Development Site 1 would be developed with a building 168 feet in height (143-foot building plus an additional 25 feet for mechanical bulkheads) in the proximity of sunlight-sensitive resources. Accordingly, a preliminary assessment of shadows is warranted.

2.2.1 Tier 1 Shadow Screening Assessment

The shadow assessment begins with a preliminary screening assessment to ascertain whether a project's shadow may reach any sunlight-sensitive resources at any time of the year. If the screening assessment does not eliminate this possibility, a detailed shadow analysis may be warranted to determine the extent and duration of the net incremental shadow resulting from the project.

The effects of shadows on a sunlight-sensitive resource are site-specific; therefore, as directed in the *CEQR Technical Manual*, the screening assessment was performed for the relevant Projected Development Sites to determine whether they fall within the range of maximum possible shadow cast on potential sunlight-sensitive resources as described above. To determine this, a Tier 1 Screening Assessment was performed in accordance with the CEQR Technical Manual. A base map is developed that illustrates the proposed site location in relationship to any sunlight-sensitive resources. The longest shadow study area is then determined, which encompasses the site of the proposed project(s) and a perimeter around the site's boundary with a radius equal to the longest shadow that could be cast by the proposed structure, which is 4.3 times the height of the structure that occurs on December 21st, the winter solstice. A map, as shown in **Figure 2.2-1,** was prepared by placing NYC Department of Parks Resources as well as Selected Facilities and Program Sites provided on NYC.gov Department of City Planning GIS portal, a list of park and public spaces provided from NYC.gov DOITT- GIS and Mapping Portal, and a screen of SHPO and NYC Landmark Listed Properties. After this, a buffer map was prepared to display the maximum possible shadow of 722.4 feet,

which could be cast from each Projected Development Site in the proposed rezoning area. This shadow cast was derived by multiplying the height of 168 feet 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 Projected Development Site 1 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 six open space resources are within reach of the longest possible shadow that could be cast from the Projected Development building associated with the requested rezoning within the Affected Area:

- Sunlight Sensitive Resource 1: Admiral Triangle, located at the intersection of Hamilton Avenue, Nelson Street, and Clinton Street.
- Sunlight Sensitive Resource 2: Green Street, located along Clinton Street.
- Sunlight Sensitive Resource 3: Green Street, located along Clinton Street.
- Sunlight Sensitive Resource 4: Green Street, located along Clinton Street.
- Sunlight Sensitive Resource 5: Cough Triangle, located at the intersection of Garnet Street, Court Street, and Hamilton Avenue.
- Sunlight Sensitive Resource 6: Red Hook Recreation Area, located along Lorraine Street.

Accordingly, a Tier 2 shadow assessment is required.

Figure 2.2-1: Tier 1 Screening Assessment

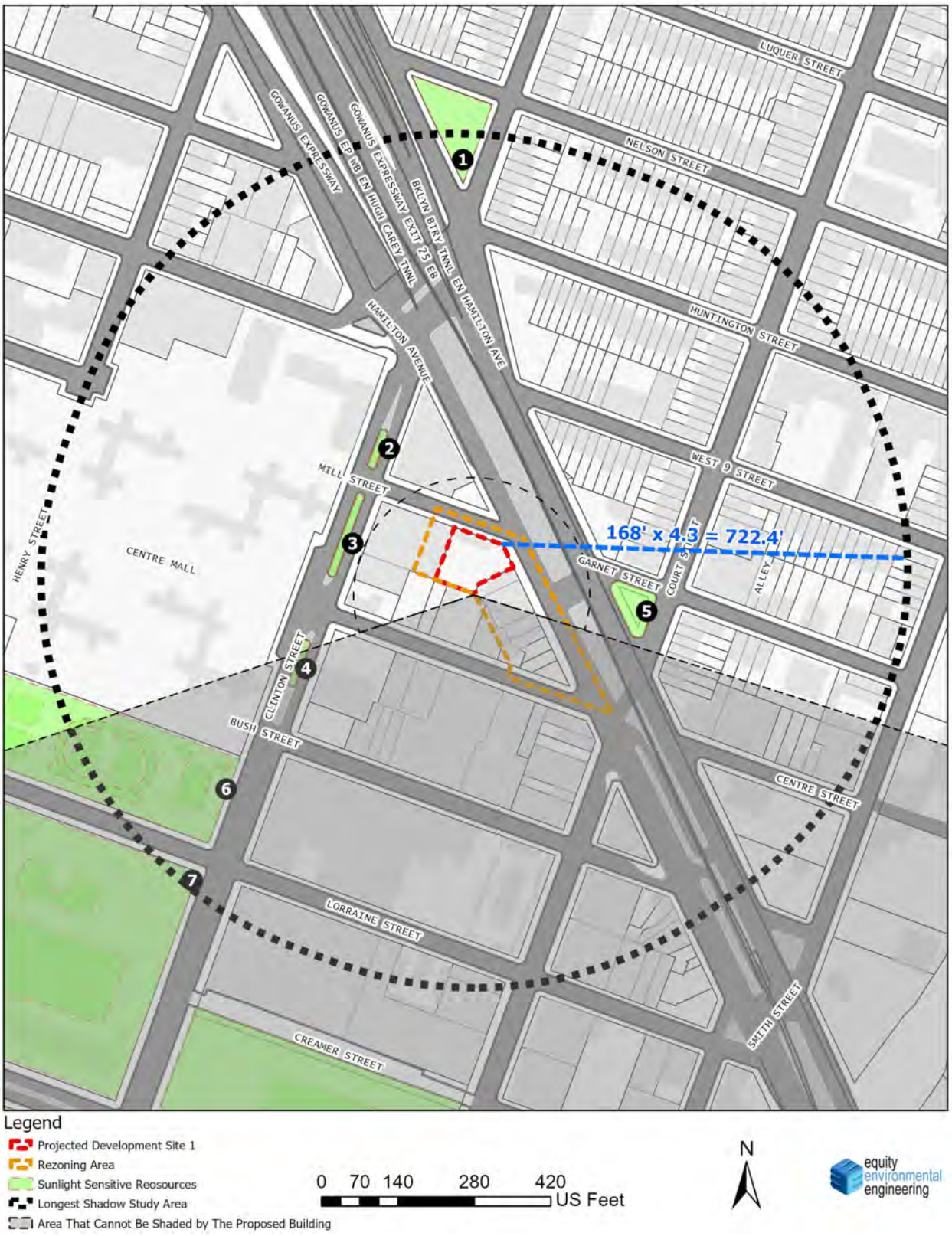


2.2.2 Tier 2 Shadow Screening Assessment

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

As shown in **Figure 2.2-2,** the Tier 2 screening assessment showed that Sunlight Sensitive Resources 1 through 6 are all inside of the -108/+108 area, and therefore a Tier 3 screening would be required.

Figure 2.2-2: Tier 2 Screening Assessment



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 on the location of the resource in relation to the Projected Development 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.

As shown in **Figures 2.2-3 to 2.2-6** below, shadows from the Projected Development would reach all of the Sunlight Sensitive Resources in the area, and a detailed shadow analysis for Sunlight Sensitive Resources 1 through 6 is required.

Figure 2.2-3: Tier 3 Screening - December 21



Figure 2.2-4: Tier 3 Screening - June 21



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

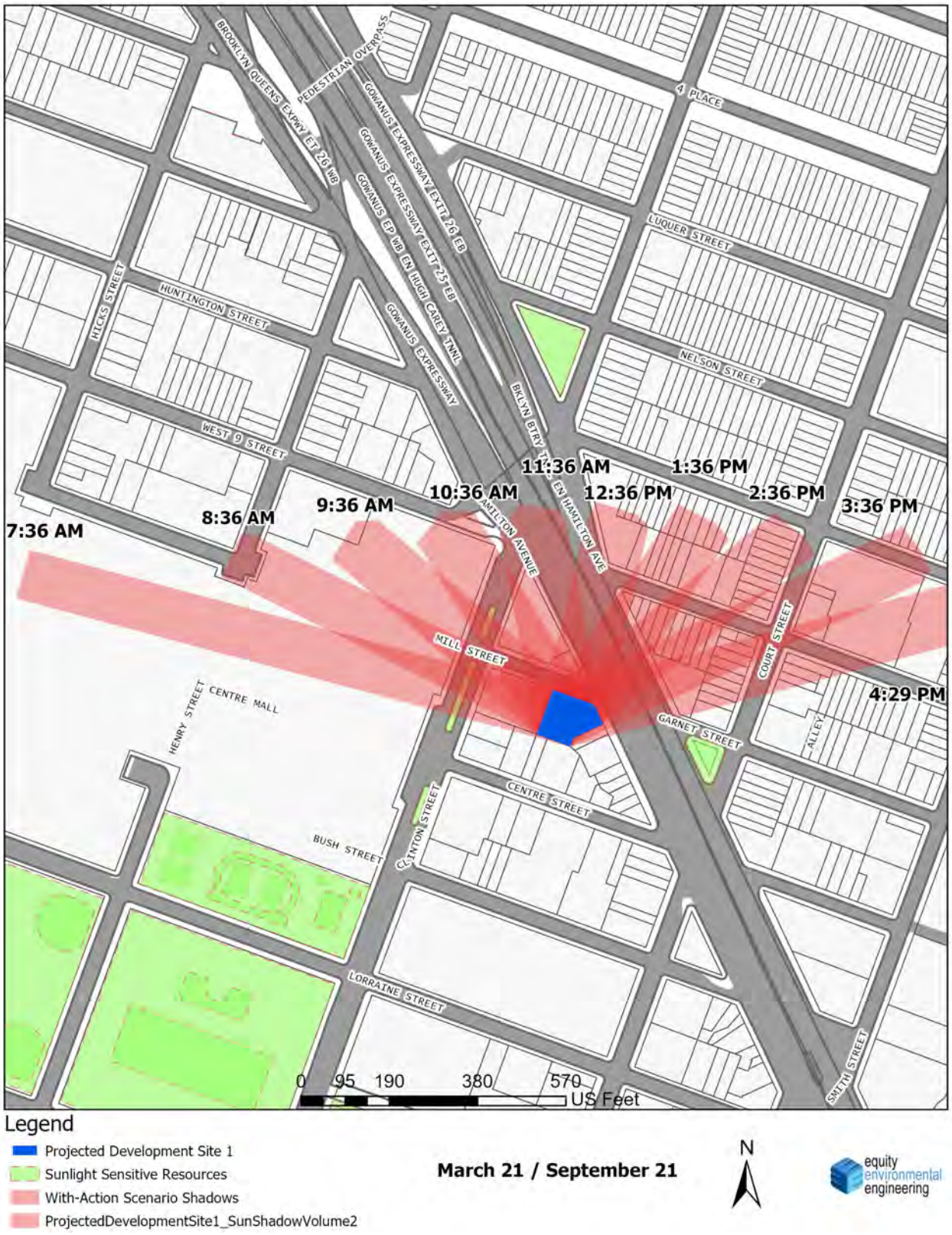
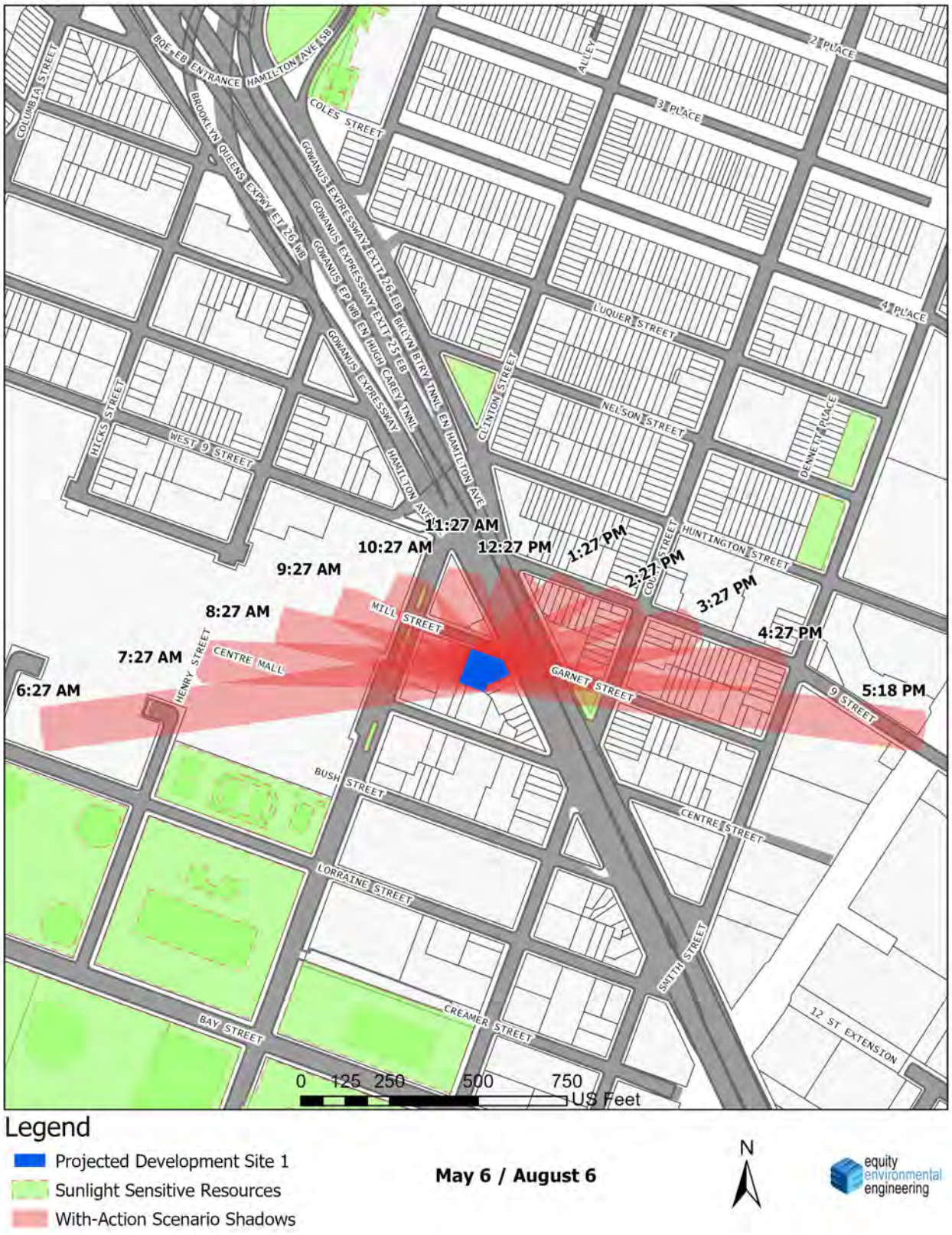


Figure 2.2-6: Tier 3 Screening - May 6/August 6



2.2.4 Detailed Shadow Analysis

The *CEQR Technical Manual* states that a detailed shadow analysis is warranted when the screening analyses do not rule out the possibility that project-generated shadows would reach any sunlight-sensitive resources. The purpose of the detailed analysis is to determine the extent and duration of shadows that fall on a sunlight-sensitive resource as a result of the proposed project. The results of the detailed shadow analyses on the identified resources of concern are summarized in **Table 2.2-1**, and the incremental shadows cast by the Projected Development Site are shown below in **Figures 2.2-7** through **2.2-28**. The shadows of intervening buildings were included in the detailed shadow analysis in order to identify the incremental shadows cast by the Projected Building.

Based on the Findings of the Detailed Shadow Analysis, the Projected Development would cast shadows on Sunlight Sensitive Resource 1 (Admiral Triangle), Sunlight Sensitive Resource 2 (Green Street), Sunlight Sensitive 3 (Green Street), Sunlight Sensitive 5 (Cough Triangle), and Sunlight Sensitive Resource 6 (Red Hook Recreation Area). A determination of the shadow impacts on these resources is required.

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	Admiral Triangle			
Shadow enter - exit times	11:00 am - 12:15 pm	-	-	-
Incremental Shadow Duration	1 Hour 15 Minutes	-	-	-
Sunlight Sensitive Resource 2	Green Street			
Shadow enter - exit times	8:51 am - 10:51 am	-	6:27 am - 7:45 am	6:57 am - 7:07 am
Incremental Shadow Duration	2 Hours	-	1 Hour 18 Minutes	10 Minutes
Sunlight Sensitive Resource 3	Green Street			
Shadow enter - exit times	-	7:36 am - 7:46 am	9:36 am - 10:06 am	10:57 am - 11:07 am
Incremental Shadow Duration	-	10 Minutes	30 Minutes	10 Minutes
Sunlight Sensitive Resource 4	Green Street			
Shadow enter - exit times	-	-	-	-
Incremental Shadow Duration	-	-	-	-
Sunlight Sensitive Resource 5	Cough Triangle			
Shadow enter - exit times	-	-	-	3:57 pm - 4:57 pm
Incremental Shadow Duration	-	-	-	1 Hour
Sunlight Sensitive Resource 6	Red Hook Recreation Area			
Shadow enter - exit times	-	-	-	5:57 am - 6:57 am
Incremental Shadow Duration	-	-	-	1 Hour
Note: Daylight savings time not used				

Figure 2.2-7: December Detailed Analysis (8:51 AM)

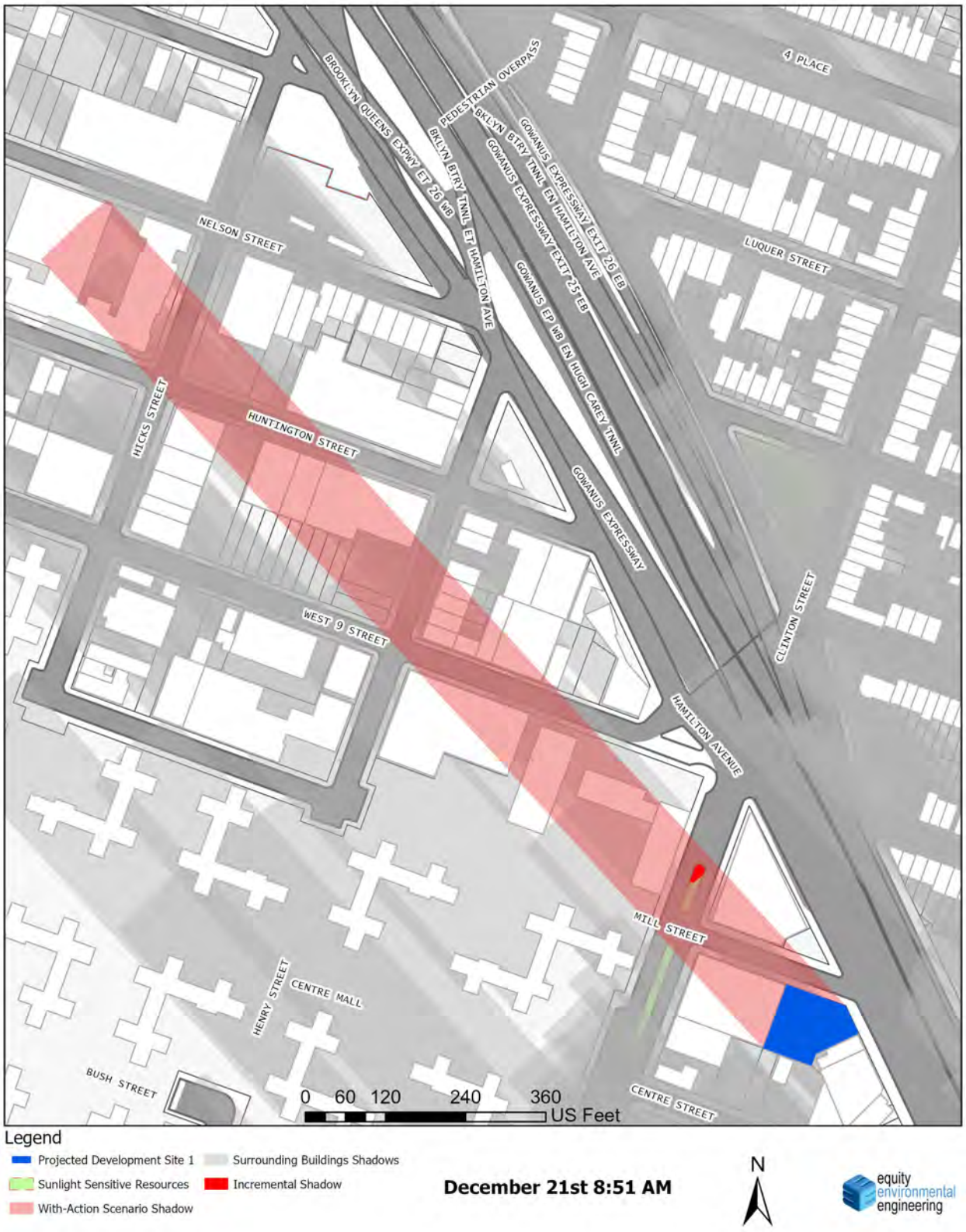


Figure 2.2-8: December Detailed Analysis (9:51 AM)

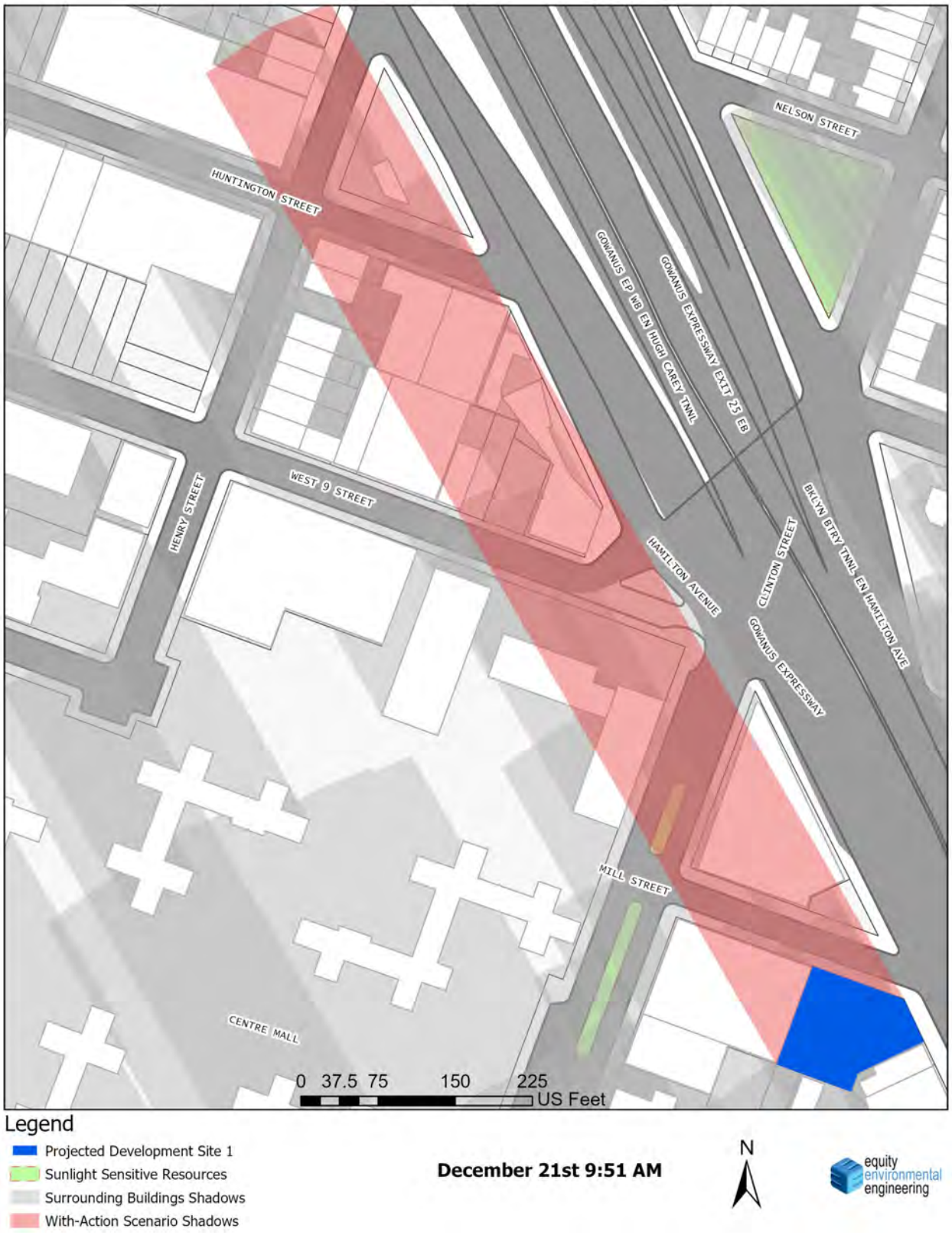


Figure 2.2-9: December Detailed Analysis (11:51 AM)

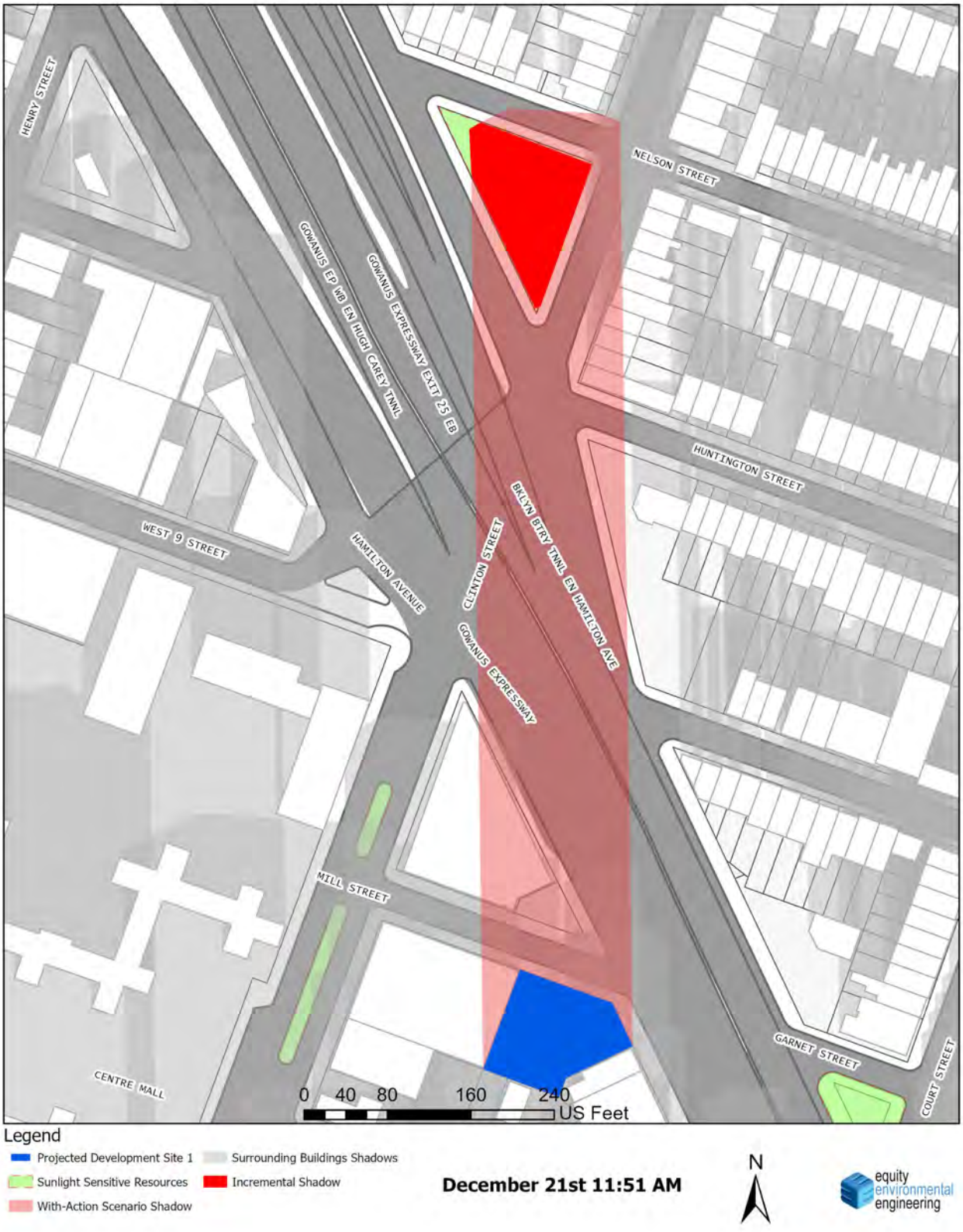


Figure 2.2-10: June Detailed Analysis (5:57 AM)

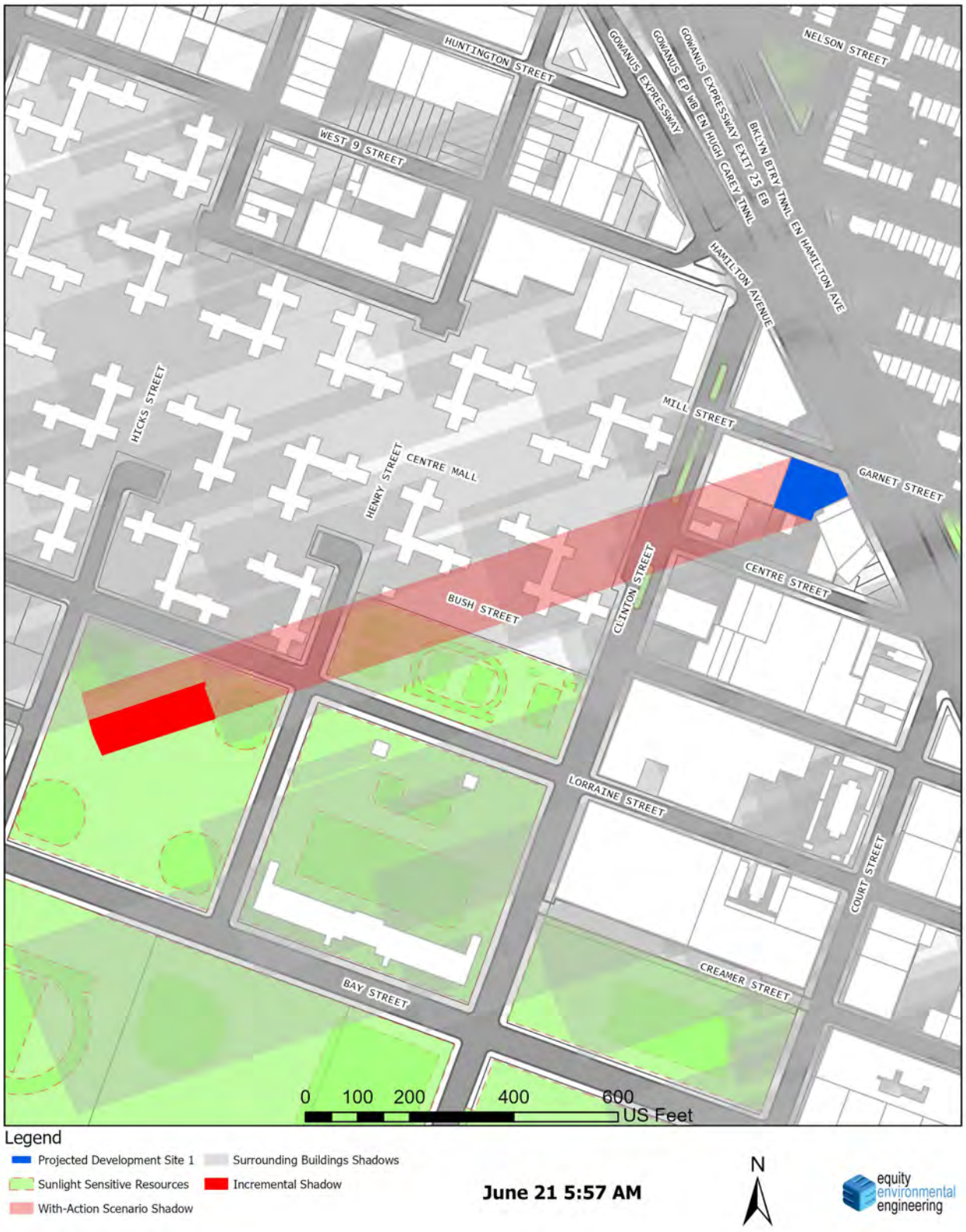


Figure 2.2-11: June Detailed Analysis (6:57 AM)

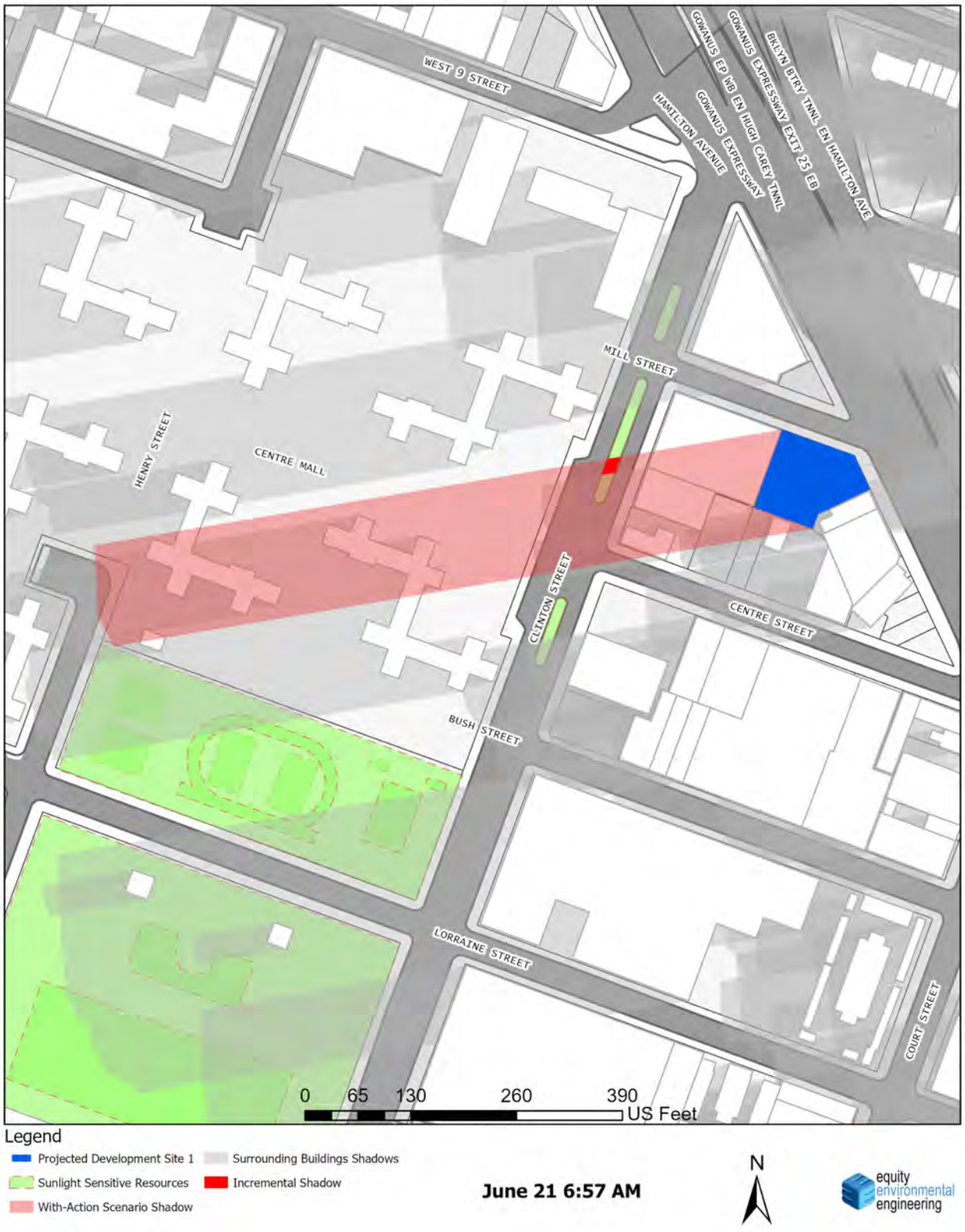


Figure 2.2-12: June Detailed Analysis (7:57 AM)



Figure 2.2-13: June Detailed Analysis (8:57 AM)

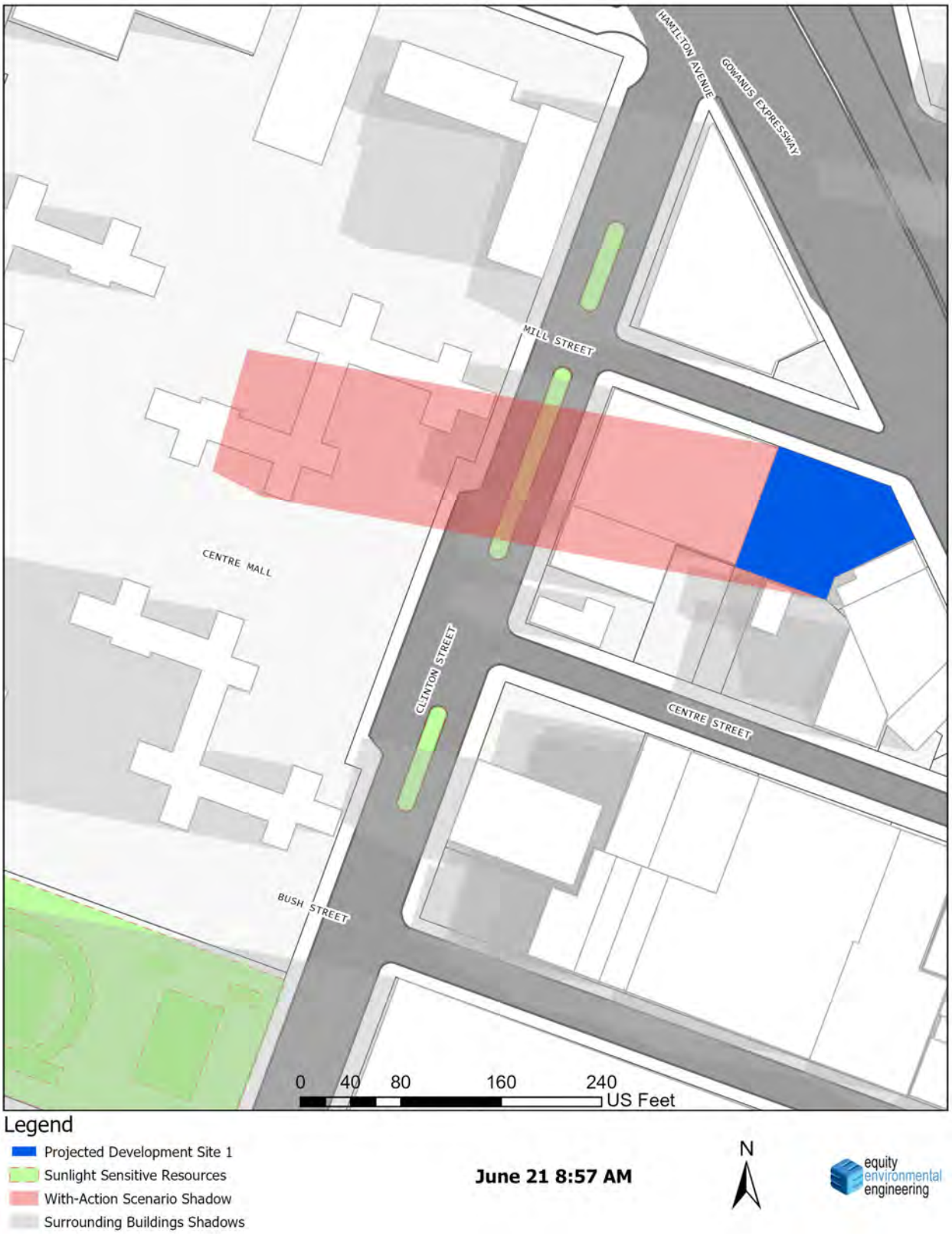


Figure 2.2-14: June Detailed Analysis (9:57 AM)

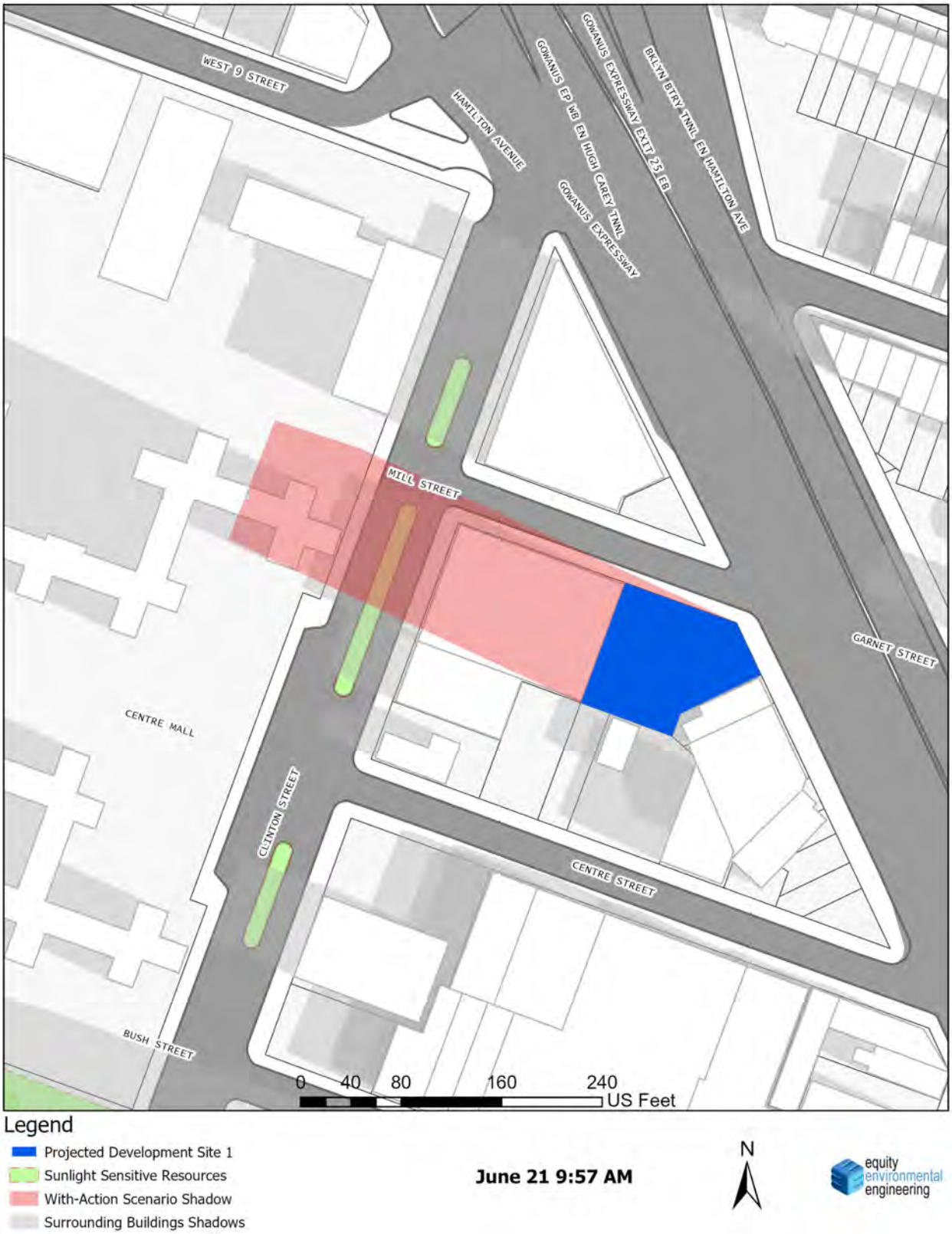


Figure 2.2-15: June Detailed Analysis (10:57 AM)



Figure 2.2-16: June Detailed Analysis (3:57 PM)

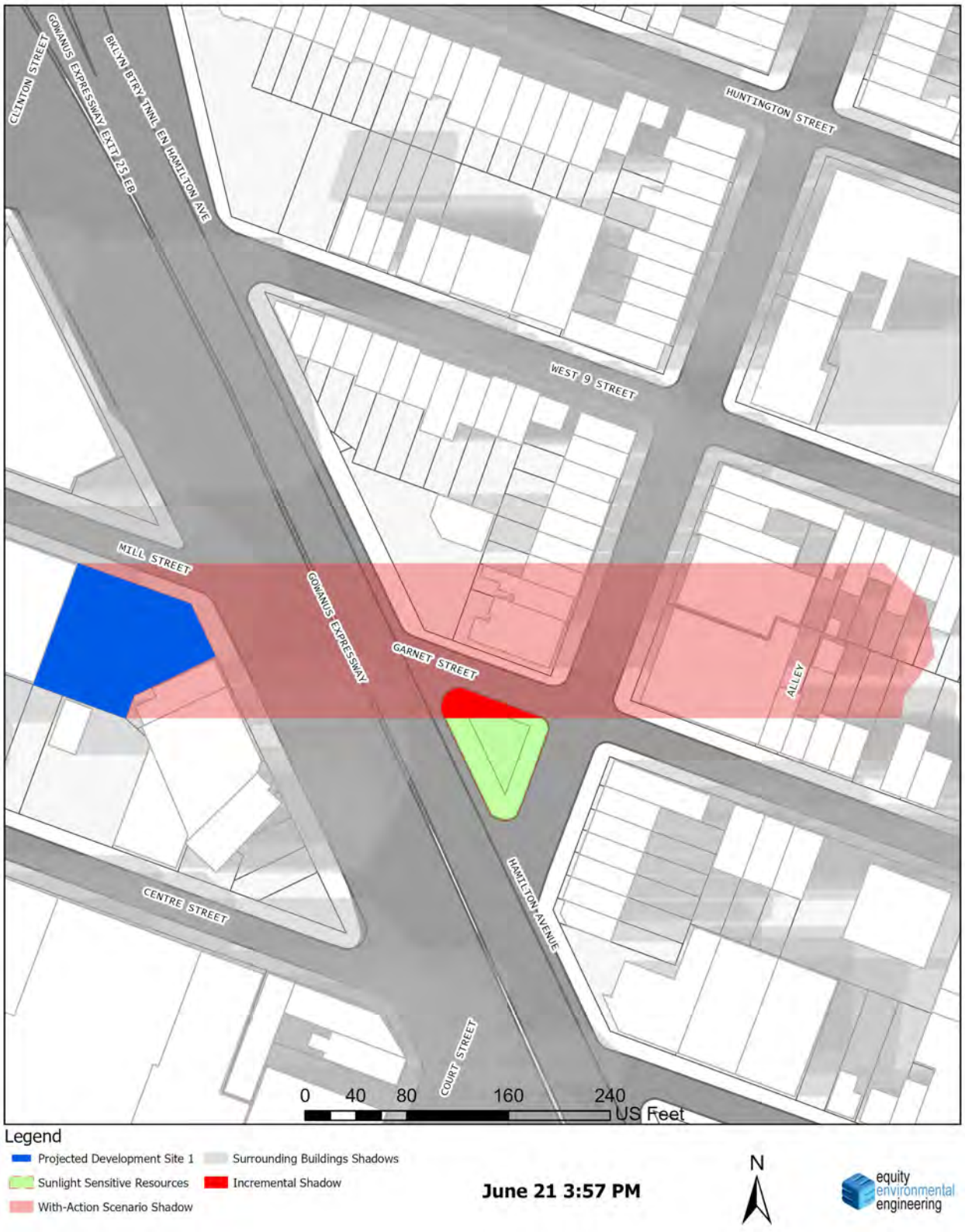


Figure 2.2-17: June Detailed Analysis (4:57 PM)

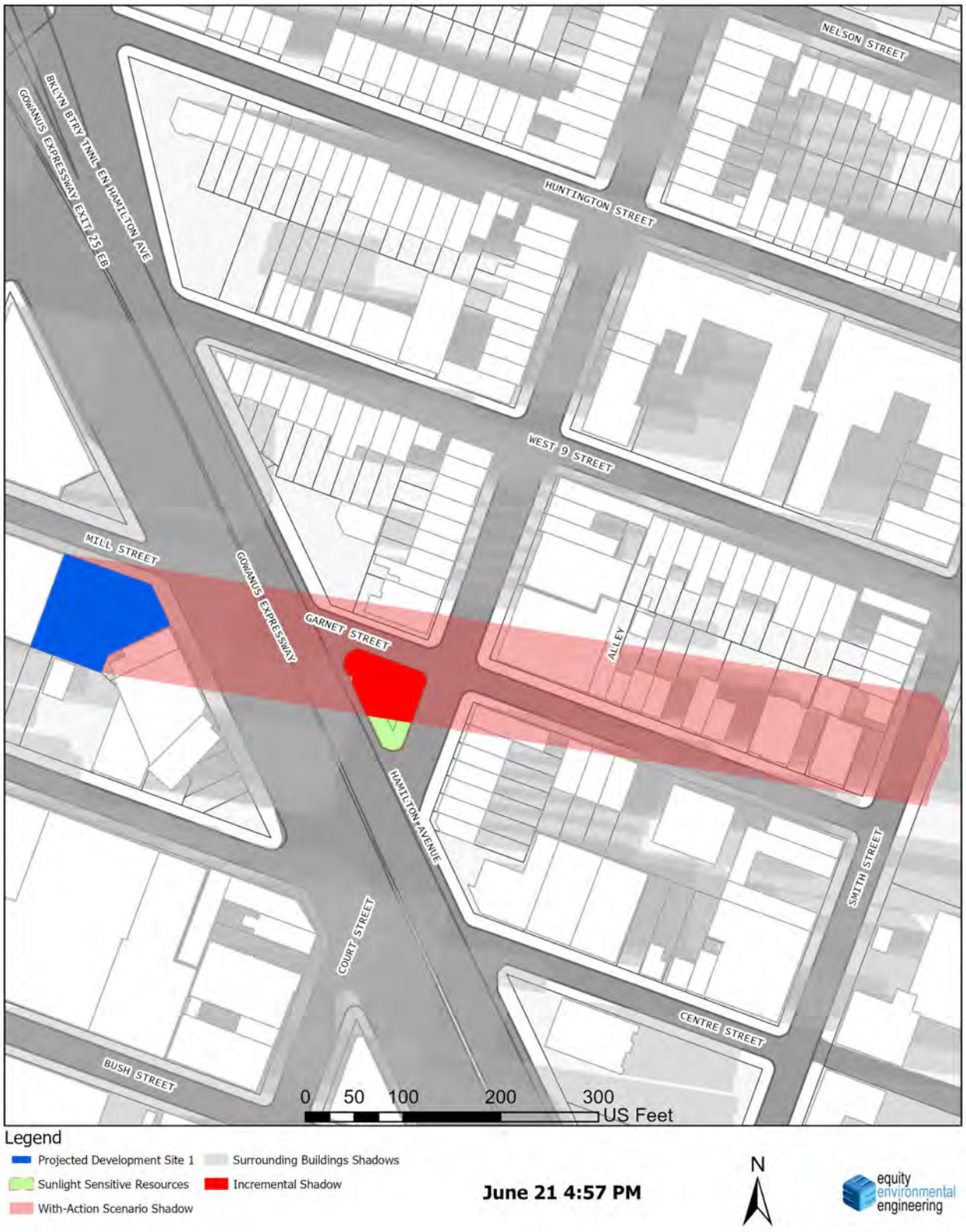


Figure 2.2-18: June Detailed Analysis (5:57 PM)



Figure 2.2-19: March/September Detailed Analysis (7:36 AM)

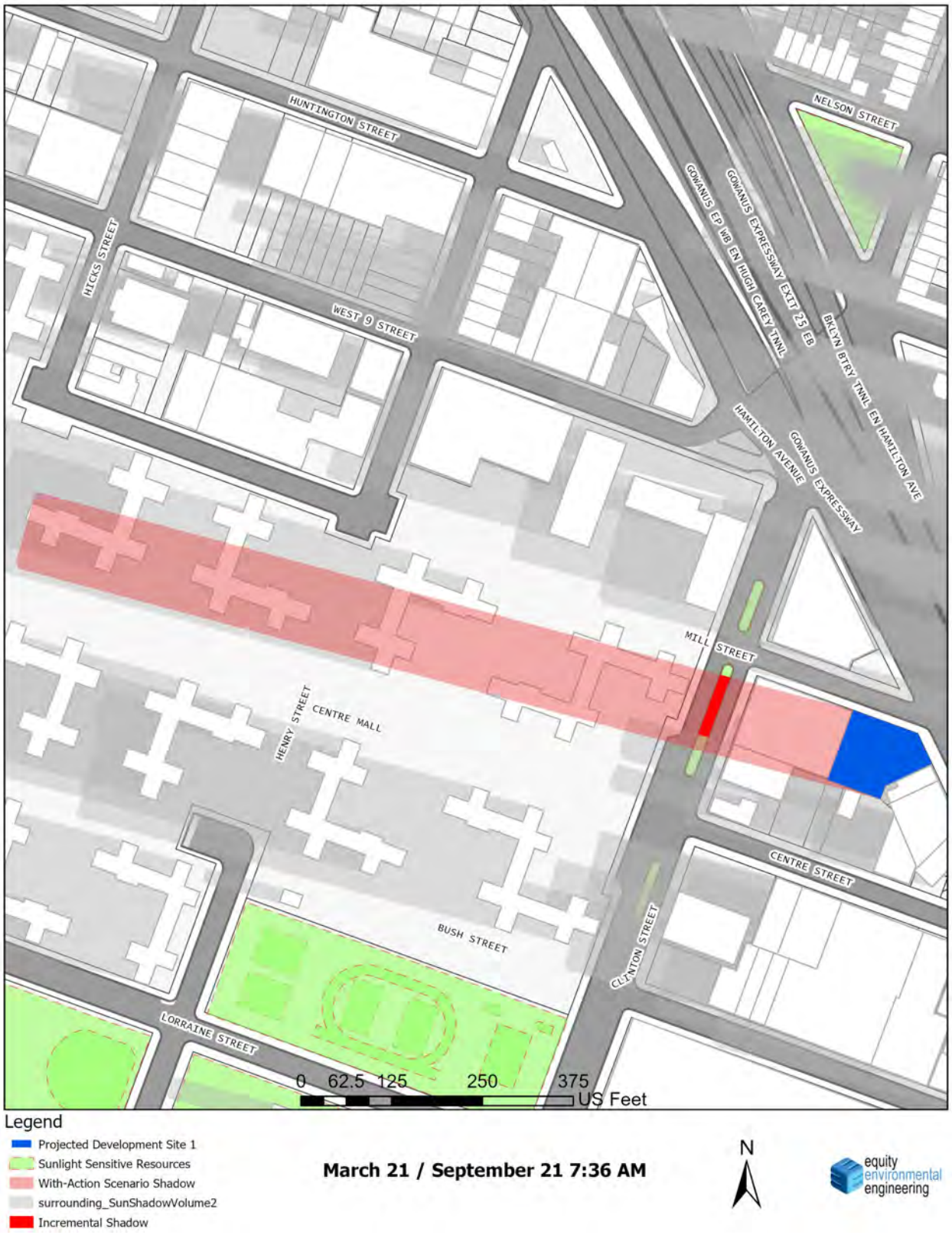


Figure 2.2-20: March/September Detailed Analysis (8:36 AM)



Figure 2.2-21: March/September Detailed Analysis (9:36 AM)

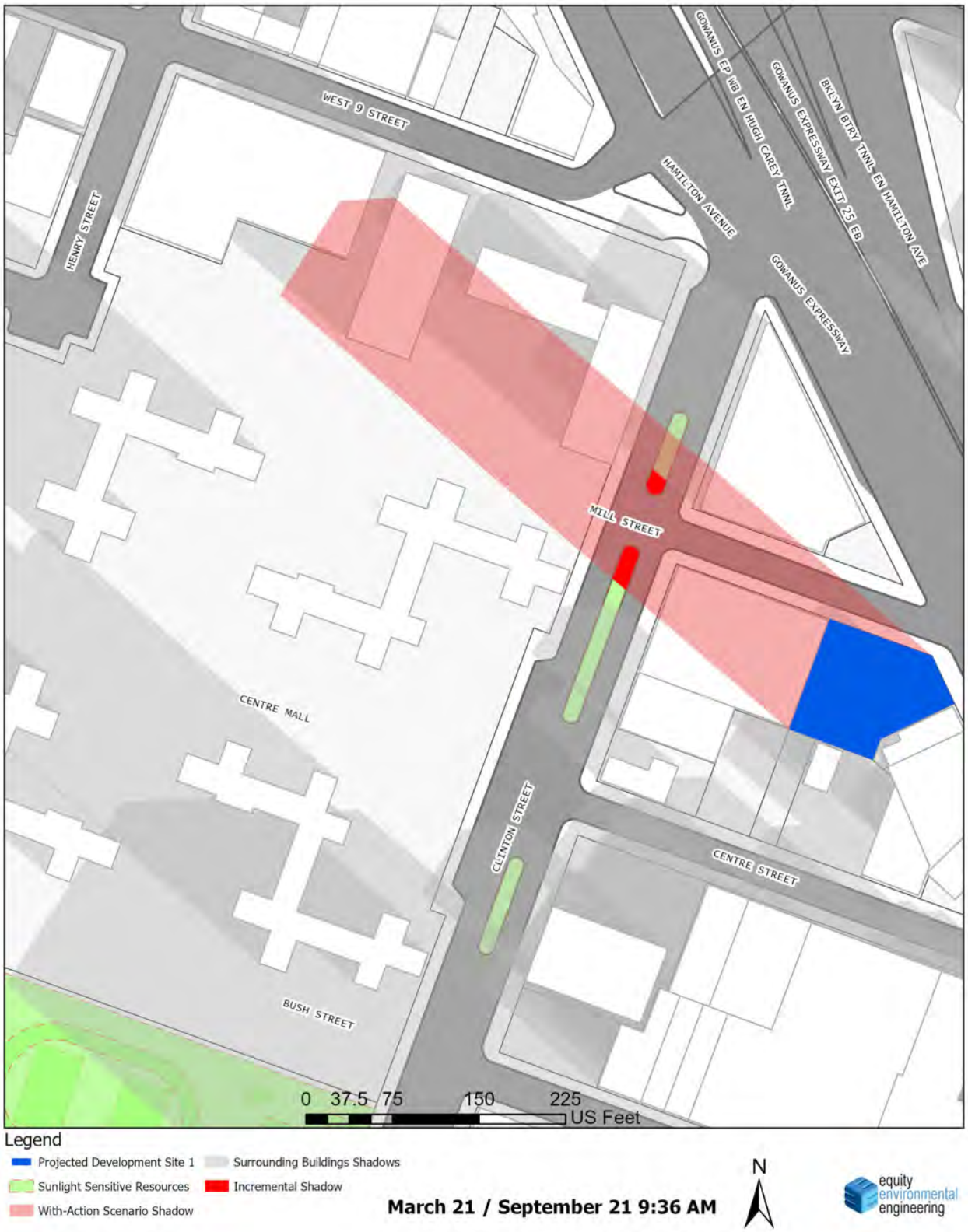


Figure 2.2-22: March/September Detailed Analysis (10:36 AM)

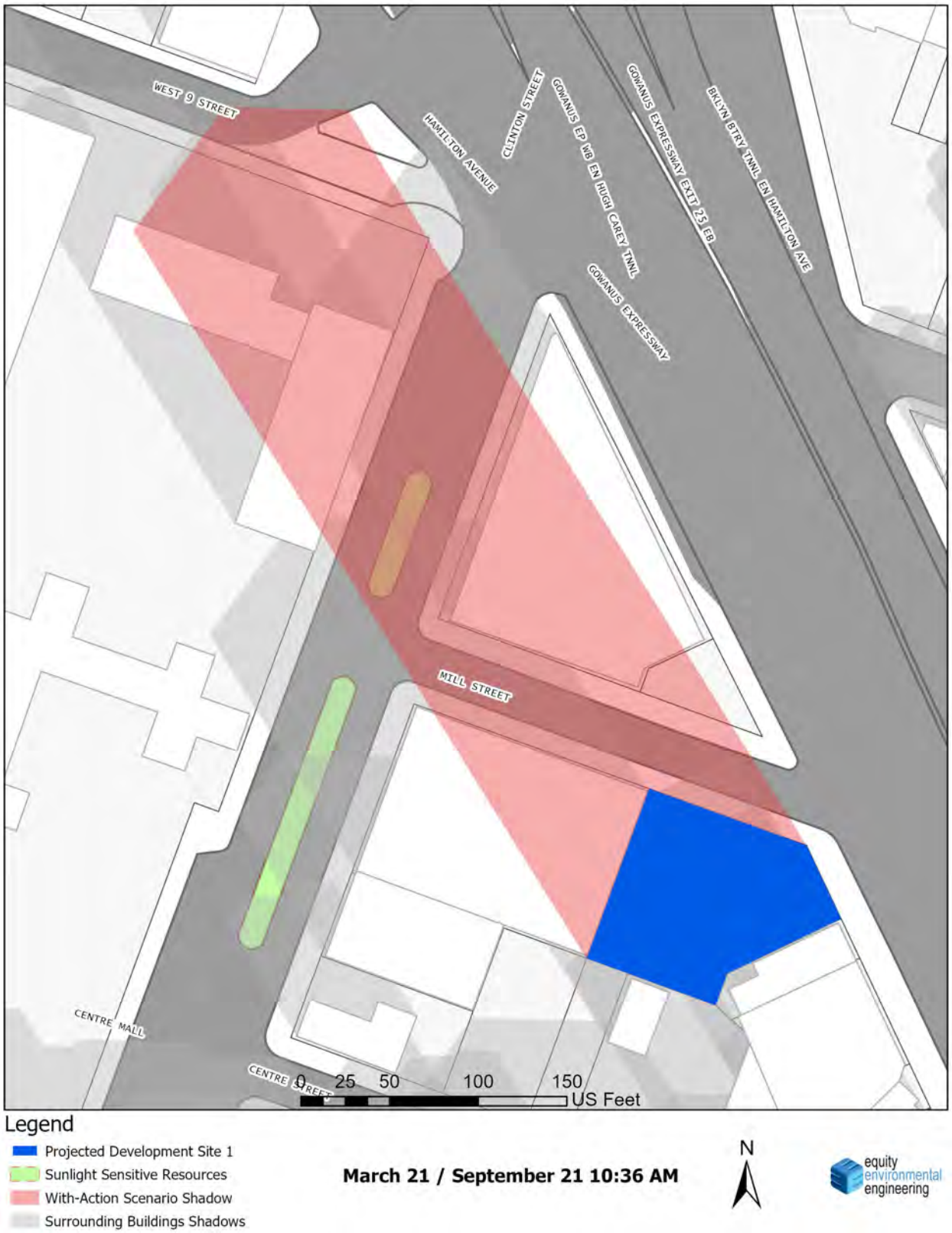


Figure 2.2-23: May/August Detailed Analysis (6:27 AM)

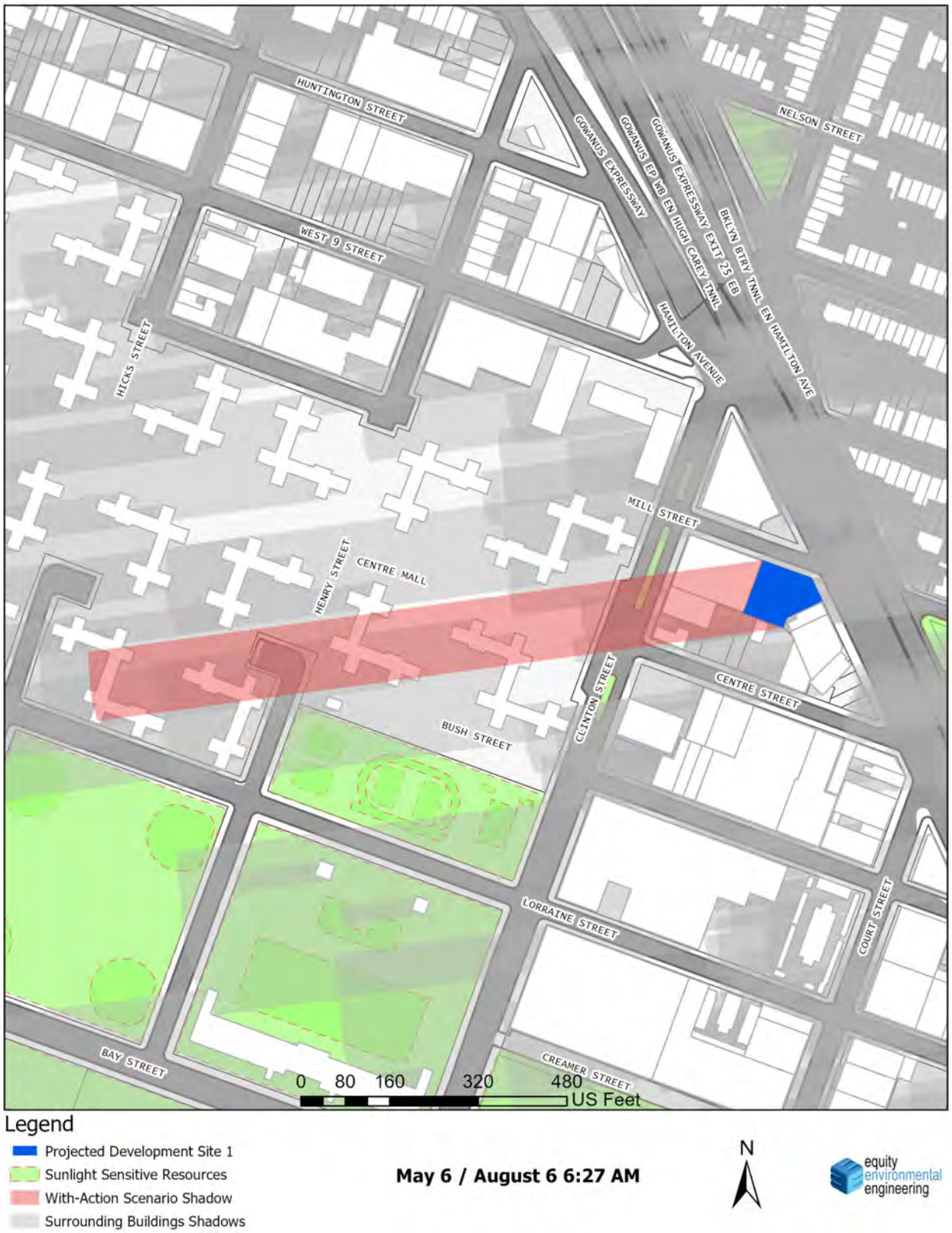


Figure 2.2-24: May/August Detailed Analysis (7:27 AM)

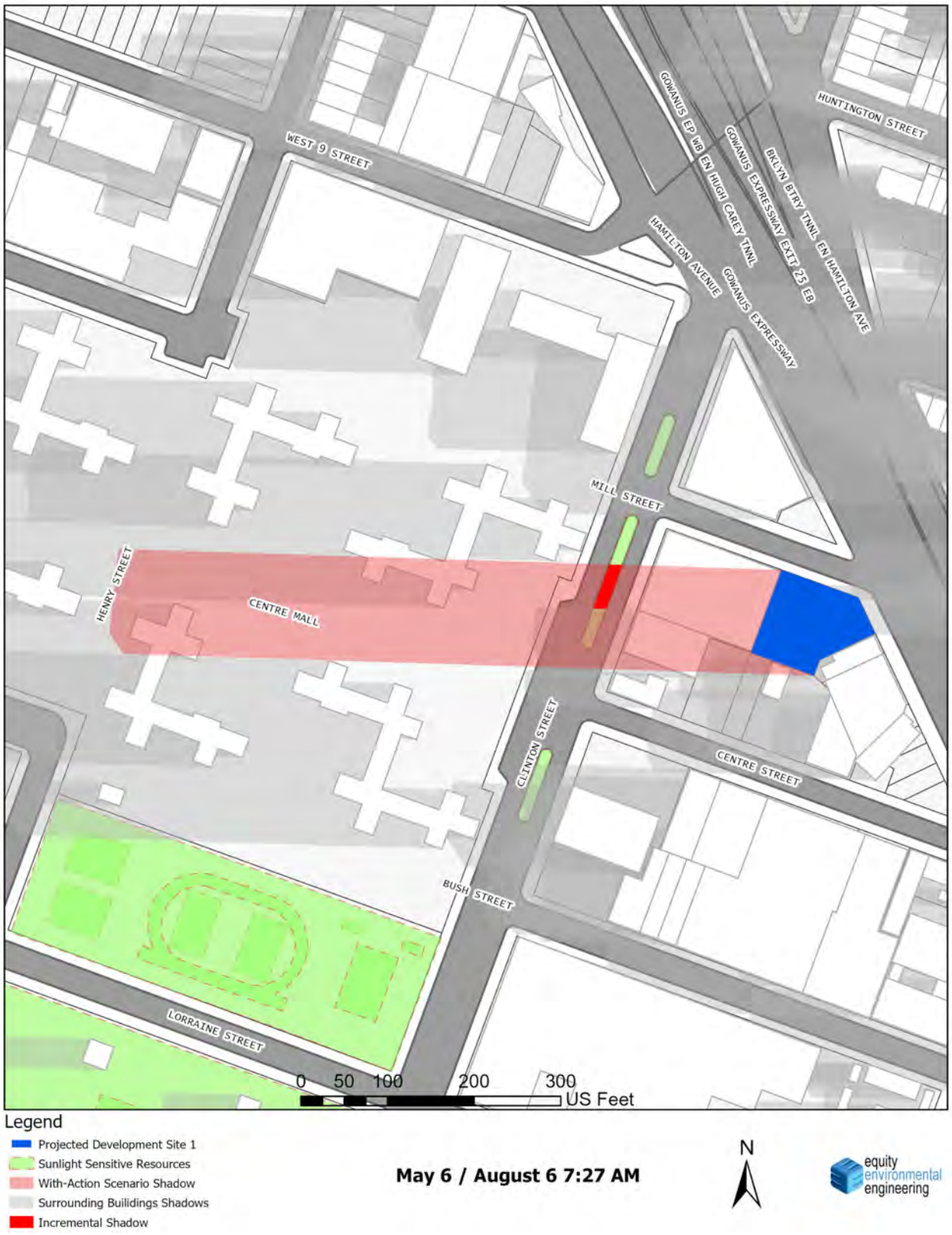


Figure 2.2-25: May/August Detailed Analysis (8:27 AM)



Figure 2.2-26: May/August Detailed Analysis (9:27 AM)

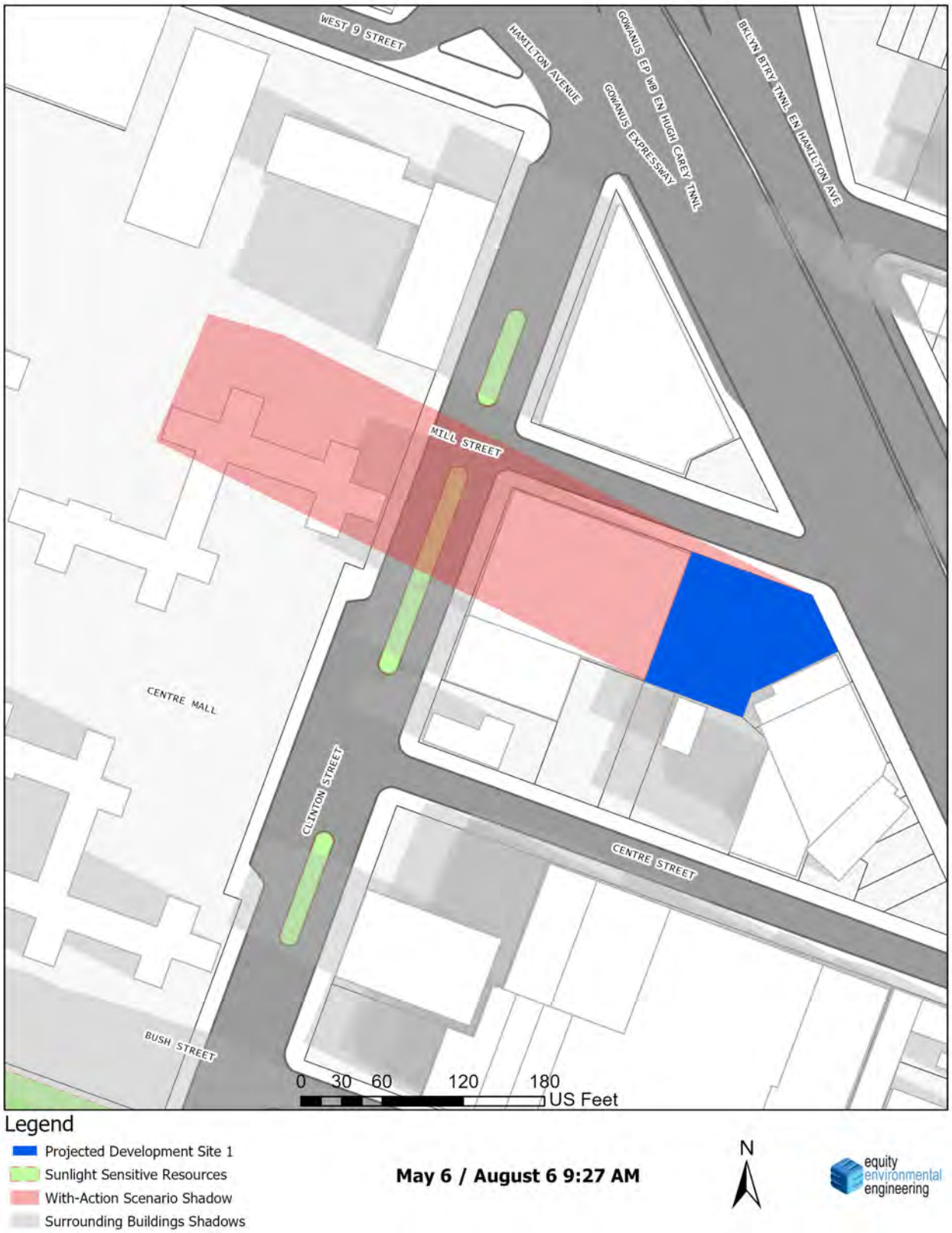


Figure 2.2-27: May/August Detailed Analysis (10:27 AM)

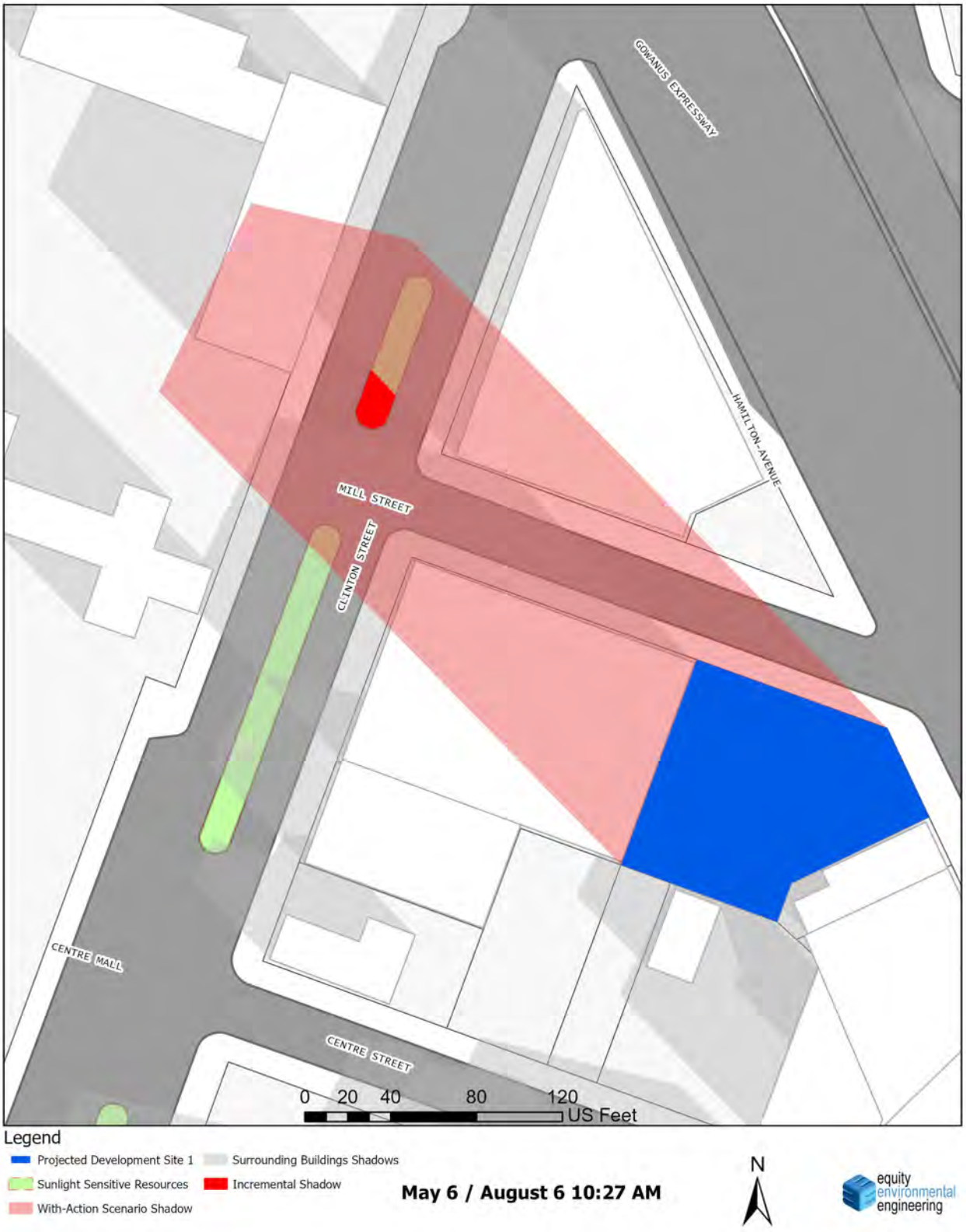


Figure 2.2-28: May/August Detailed Analysis (4:27 PM)

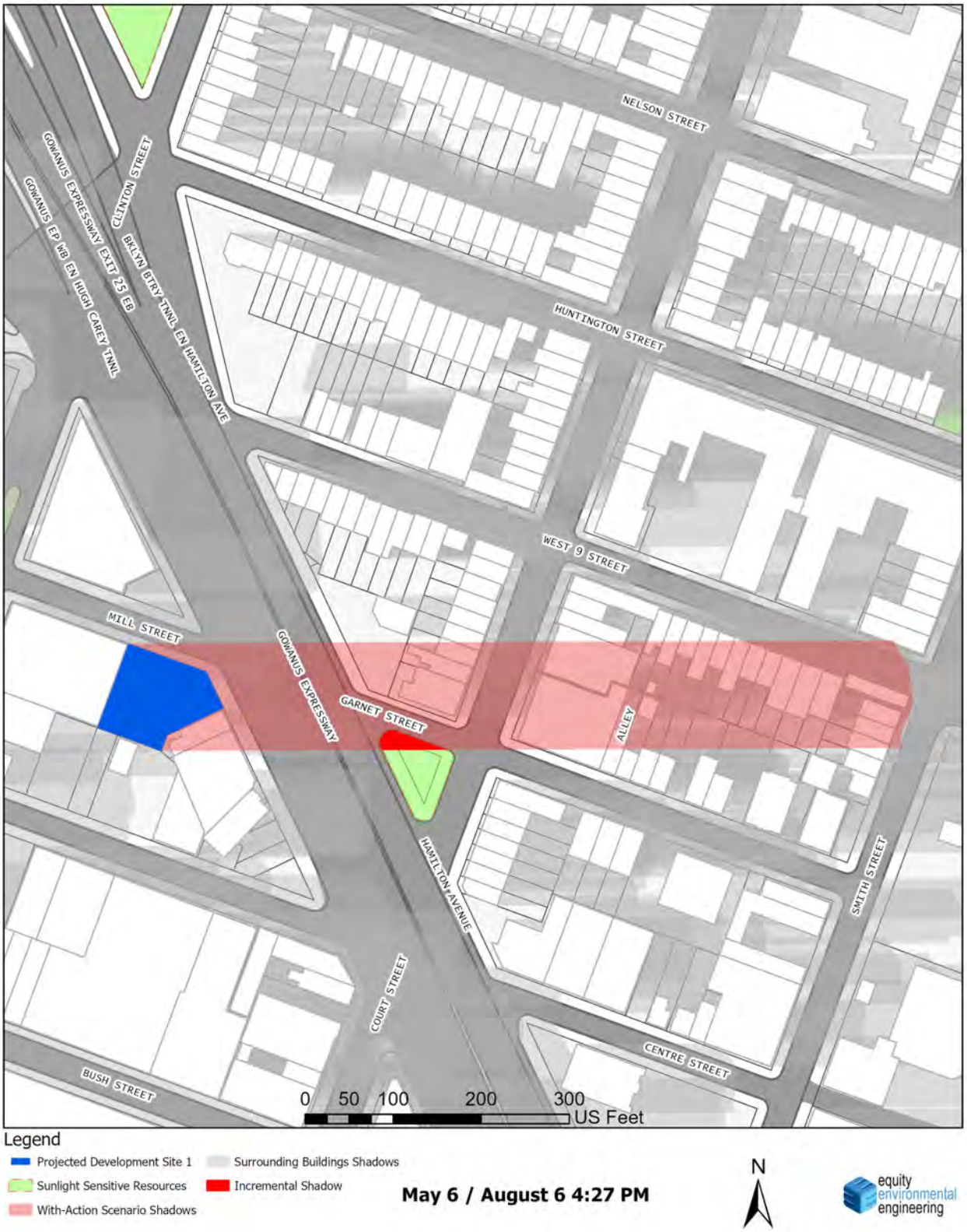


Figure 2.2-29: May/August Detailed Analysis (5:18 PM)



Sunlight Sensitive Resource 1 (Admiral Triangle)



Admiral Triangle is an approximately .43-acre triangle with a playground, several surrounding benches, and various tree plantings.

Sunlight Sensitive Resource 2, 3, and 4 (Green Streets along Clinton Street)



The green streets along Clinton Street, shown in the picture above, are a planted median that runs down the center of Clinton Street. The median is filled with bushes and tree plantings.

Sunlight Sensitive Resource 5 (Cough Triangle)



The Cough Triangle is a .03-acre triangle that features scattered tree plantings and four benches.

Sunlight Sensitive Resource 6 (Red Hook Recreation Area)



Red Hook Recreation Area is a 58.50-acre park in the Red Hook neighborhood that provides a variety of activities, including handball, basketball, soccer, and an Olympic-size pool.

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

Sunlight Sensitive Resource 1 (Admiral Triangle)

As shown in **Table 2.2-1** above, Admiral Triangle would only be affected by the shadows derived from the proposed development from 11:00 AM to 12:15 PM on December 21st for a 1-hour-

and-15-minute period throughout the year. The shadows would not reach the resource on the other three analysis days.

The triangle consists of a small playground with one play set equipment, several surrounding benches, and various tree plantings, where people's activities are mostly passive, including sitting, strolling, and relaxation, along with some active activities of the kids on the play set. The active activities would not be impacted significantly by the shadows as December is among the cold months when people tend to avoid outdoor activities. As for the passive activities, the shadows induced by the proposed development would only cast on the triangle for 1 hour and 15 minutes, which would allow for 2 hours and 38 minutes of sunlight. Therefore, people's use and enjoyment of the Admiral Triangle wouldn't be significantly impacted by the shadows. In addition, since the winter months are not part of the growing season, it eliminates any potential impacts on the vegetation in the triangle.

As such, the Proposed Action would not affect the vitality or usage of any sunlight-sensitive resources in the Admiral Triangle, and significant adverse impacts from shadows would not result from the proposed action on resource 1, and no further analysis is required for this resource.

Sunlight Sensitive Resource 2 and 3 (Green Streets along Clinton Street)

Sunlight-sensitive resources 2 and 3 are green streets along Clinton Street, which are a planted median that runs down the center of Clinton Street. The median is filled with bushes and tree plantings, where the only concern of the incremental shadows would be the growth of the plantation.

Sunlight sensitive resource 2, the green street to the north of Mill Street, would be affected by the incremental shadows for a 2-hour period from 8:51 AM to 10:51 AM on December 21st, a 1-hour-and-18-minute period from 6:27 AM to 7:45 AM on May/ August 6th, and a 10-minute period from 6:57 AM to 7:07 AM on June 21st. Sunlight sensitive resource 3, the green street between Mill Street and Centre Street, would be affected by the incremental shadows for a 10-minute period from 7:36 AM to 7:46 AM on March/ September 21st, a 30-minute period from 9:36 AM to 10:06 AM on May/ August 6th, and a 10-minute period from 10:57 AM to 11:07 AM on June 21st.

For the incremental shadows on sunlight-sensitive resource 2 on December 21st, since the winter months are not part of the growing season, it eliminates any potential impacts on the vegetation in the green street. Meanwhile, though the warm weather in spring, summer, and early autumn season is important for the growth of the plants, the shadows induced by the proposed development on March/ September 21st, May/ August 6th, and June 21st would cast on the green streets for up to 1 hour and 18 minutes, which would allow for a minimum of 6 hours of direct sunlight.

The total direct sunlight that would reach the sunlight-sensitive resource for each analysis day is listed below:

Sunlight Sensitive Resource 2

- May 6/August 6: 9 hours and 33 minutes of direct sunlight
- June 21st: 12 hours and 4 minutes of direct sunlight

Sunlight Sensitive Resource 3

- March 21/September 21: 8 hours and 43 minutes of direct sunlight
- May 6/August 6: 10 hours and 21 minutes of direct sunlight
- June 21st: 12 hours and 4 minutes of direct sunlight

Based on the duration of direct sunlight that would reach sunlight-sensitive resources 2 and 3, the loss of sunlight would not have a significant negative impact on the green streets. Accordingly, no further analysis is warranted for these two resources.

Sunlight Sensitive Resource 5 (Cough Triangle)

The Cough Triangle is a .03-acre triangle that features scattered tree plantings and four benches. The shadows induced by the proposed development would be cast on Cough Triangle for 1 hour on June 21st from 3:57 PM to 4:57 PM, which would allow for a minimum of 11 hours and 4 minutes of direct sunlight. Therefore, no significant adverse impact would be expected, and no further analysis is warranted.

Sunlight Sensitive Resource 6 (Red Hook Recreation Area)

This resource is an established center open from 6 AM – 8 PM on weekdays and 8 AM – 4 PM on Saturday. The recreation center offers indoor and outdoor sports fields and courts, a computer lab, outdoor pool, gym, and cardio rooms. The shadows cast by the Projected Development would not reach the recreation center or the pool. The outdoor open space within the Red Hook Recreation Area would be impacted by the incremental shadows for 1 hour on June 21st from 5:57 AM to 6:57 AM, covering two of three basketball courts and the northern portion of an outdoor sports field. The shadow impacted hour is in the early morning and would leave one basketball court unshaded. In addition, shadows cast by the Projected Development would shade the northern portion of the sports field, with the southern portion left unshaded. Lastly, the shadows cast by the Projected Development would allow for a minimum of 11 hours and 4 minutes of direct sunlight. Threfore, no significant adverse impact would be expected, and no further analysis is warranted.

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, according to the *2021 CEQR Technical Manual*.

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

2.3.1 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. The historic resources study area is therefore defined as the project site plus an approximately 400-foot radius around the Proposed Action area.

According to the *CEQR Technical Manual*, significant adverse impacts on 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. This section assesses the potential for the Proposed Action to result in significant adverse impacts on identified historic and cultural resources. **Table 2.3-1** below provides information about possible direct, indirect and construction related impacts to historic and cultural resources. 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:

Table 2.3-1: Possible Impacts to Historic and Cultural Resources

Construction resulting in ground disturbance, including construction of temporary roads and access facilities, grading, and landscaping.
Below-ground construction, such as excavation or installation of utilities.
Physical destruction, demolition, damage, alteration or neglect of all or part of an historic property.
Changes to the architectural resource that cause it to become a different visual entity, such as a new location, design, materials, or architectural features.
Isolation of the property from, or alteration of, its setting or visual relationship with the streetscape. This includes changes to the resource's visual prominence so that it no longer conforms to the streetscape in terms of height, footprint, or setback; is no longer part of an open setting; or can no longer be seen as part of a significant view corridor.
Introduction of incompatible visual, audible, or atmospheric elements to a resource's setting.
Replication of aspects of the resource so as to create a false historical appearance.
Elimination or screening of publicly accessible views of the resource.
Construction-related impacts such as falling objects, vibration, dewatering, flooding, subsidence, or collapse.
Introduction of significant new shadows, or significant lengthening of the duration of existing shadows, over an historic landscape or an historic structure to the extent that the architectural details that distinguish that resource as significant are obscured.

Direct Impacts

Historic resources could be directly affected by physical destruction, demolition, damage, alteration, or neglect of all or part of a historic resource. For example, alterations, such as the addition of a new wing to a historic building could result in significant adverse impacts, depending on the design. Direct impacts also include changes to an architectural resource that cause it to become a different visual entity, such as a new location, design, materials, or architectural features.

NR-listed and eligible resources are given a measure of protection from the effects and impacts of projects sponsored, assisted, or approved by federal agencies under Section 106 of the National Historic Preservation Act. Although preservation is not mandated, federal agencies must attempt to avoid adverse impacts on such resources through a notice, review, and consultation process. S/NR-listed and eligible resources are similarly protected against impacts resulting from projects sponsored, assisted, or approved by State agencies under the State Historic Preservation Act. However, private owners of S/NR-listed and eligible resources using private funds can alter or demolish their properties without such a review process. Privately owned properties that are NYCLs, in LPC-designated historic districts, or pending designation as Landmarks by LPC are protected under the New York City Landmarks Law. The law requires LPC review and approval before any alteration or demolition occurs, regardless of whether the project is publicly or privately funded. Publicly owned resources are also subject to review and advisement by LPC before project implementation.

Construction Impacts

The assessment of construction impacts on historic and cultural resources considers the possibility of physical damage to any architectural or archaeological resources identified in the project's historic and cultural resources assessment.

Pursuant to Chapter 22, Section 300 of the *2021 CEQR Technical Manual*, if a project's construction activities are located within 400 feet of a historic or cultural resource, potential hazards should be assessed, such as whether certain character-defining elements of a structure, including but not limited to rooftops or stained glass windows, could be impacted by falling objects from an adjacent construction site.

The City has two procedures for avoidance of damage to historic structures from adjacent construction.

1. All buildings are provided some protection from accidental damage through New York City Department of Buildings (DOB) controls that govern the protection of any adjacent properties from construction activities, under Building Code Section 27-166 (C26-112.4). For all construction work, Building Code section 27-166 (C26-112.4) serves to protect buildings by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the code requirements.
2. The second protective measure applies only to designated NYCL and S/NR listed historic buildings that are located within 90 linear feet of a proposed construction site. For these structures, the DOB's Technical Policy and Procedure Notice (TPPN) #10/88 is applicable. The DOB's TPPN 10/88 supplements the standard building protections afforded by the Building Code C26-112.4 by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent LPC-designated or S/NR-listed resources (within 90 feet), and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

If the project is not located within 90 feet of a historic or cultural resource that is NYC-landmark eligible, eligible for the State and National Register of Historic Places, or within an eligible New York City Historic District, then no special protections apply. Therefore, the potential for physical disturbance and adverse impacts to those historic and cultural resources should be disclosed.

Indirect Impacts

As per the CEQR Technical Manual, visual and contextual impacts on historic resources can include: isolation of a property from or alteration of its setting or visual relationship with the streetscape; introduction of incompatible visual, audible, or atmospheric elements to a resource's setting; elimination or screening of publicly accessible views of a resource; or introduction of significant new shadows, over a historic landscape or on a historic structure (if

the features that make the resource significant depend on sunlight) to the extent that the architectural details that distinguish that resource as significant are obscured.

Architectural Resources within the Study Area

To determine whether the Projected Development has the potential to affect nearby off-site historic or architectural resources, the study area was screened for historic and architectural resources. The LPC was contacted for their initial review of the project's potential to impact nearby historic and cultural resources, and by letter dated January 24, 2020, indicated that the Affected Area does not contain any sites or buildings of known architectural significance (see **Appendix A**). However, the Affected Area is within 400 feet of the Red Hook Houses Campus, and 604 Clinton Street, located within the Red Hook Houses Campus; both of which are eligible historic and cultural resources per the New York State Cultural Resource Information System (CRIS).

The Red Hook Houses consist of two connected public housing complexes managed by the New York City Housing Authority (NYCHA). The buildings, designed by architect Alfred Easton Poor, were constructed in 1939-1940 and consist of multiple 6-story elevator buildings of brick façades.

The Proposed Action would not introduce incompatible visual, audible, or atmospheric elements to the settings of historic resources. In addition, there would be no significant adverse impacts to historic resources with sunlight-dependent features. Lastly, the Projected Development Site is located 220 feet east of the Red Hook Houses and is buffered by Clinton Street, located approximately 155 feet from the nearest edge of the Projected Development Site. The Projected Development Site is further buffered from the Red Hook Houses by an adjacent intervening building located at 595 Clinton Street (Block 552, Lot 5). Accordingly, the Proposed Development would not introduce adverse construction-related impacts to the Red Hook Houses from ground-borne construction period vibrations, falling debris, and/or collapse. Therefore, significant adverse impacts on architectural resources are not expected because of the Proposed Action, and further analysis is not warranted.

2.3.2 Cultural and Archaeological Resources

Unlike the architectural evaluation of a study area that extends beyond the footprint of a project's block and lot lines, the analysis of potential and/or projected impacts on 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 *2021 CEQR Technical Manual* requires a detailed evaluation of a project's potential effect on the archeological resources if it would potentially result in an in-ground disturbance to an area not previously excavated.

The Proposed Action would result in new in-ground construction on the Projected Development Site. As noted, the LPC was contacted for their initial review of the project's potential to impact

nearby historic and cultural resources, and a response was received on January 24, 2020 (see **Appendix A**). The LPC has identified that archeological sensitivity models and historic maps indicate that there is potential for the recovery of remains from 19th century and Native American occupation on Block 552, Lot 13 (Projected Development Site 1). Accordingly, a Phase IA archaeological study is required to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary.

Phase IA Summary

A Phase IA Archaeological Documentary Study (see **Appendix A**) has been prepared by Historical Perspectives, Inc. at the request of the LPC. The December 2021 Phase IA has determined the following based on this study:

Precontact Sensitivity

December 2021 Phase IA page 9-10 "From what is known of precontact period settlement patterns on Long Island, most habitation and processing sites that would leave an archaeological footprint are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water. […] the project site was relatively level land adjacent to marsh and later a pond artificially created after the brackish waters of Gowanus Bay had been dammed for a mill pond. Prior to damming, in its original state, and again after the dam was breached ca. 1850, the site was relatively level adjacent to a marsh and unprotected with no fresh water sources depicted nearby. The lack of any reported Native American sites nearby, the lack of distinguishing topographic features, and the lack of nearby freshwater sources suggests a low sensitivity for extended precontact use. Since Native American resources tend to be shallowly-buried, usually within three or four feet of the predevelopment surface, they are extremely vulnerable to post-depositional construction. Much of the project site were disturbed by mid-to-late nineteenth-century residential and commercial construction (Figures 8 through 17). While there were open yards between and around mapped structures, there were likely unmapped cisterns and privies located there that caused an additional degree of subsurface disturbance. Since no soil borings were available for review, subsurface conditions could not be further clarified. The combination of low sensitivity for the deposition of precontact resources, coupled with post-contact land manipulation and development suggests that the project site has a low potential for hosting precontact cultural remains outside the footprints of historic structures."

Historical Sensitivity

December 2021 Phase IA page 10 "Historic maps indicated that the project site was undeveloped until the early to mid-1850s. This portion of Brooklyn was supplied with piped city water and sewers in the latter half of the nineteenth-century, so residents of structures on the property would have had to rely on backyard shaft features, specifically privies and cisterns but likely not wells due to the proximity of a communal well, for several decades.

During the second half of the nineteenth-century, the five historic lots in the project site housed multiple families at any given time. The houses had one to two families, and some had

more. Some of the houses were occupied by their owners with additional renters, and other houses appeared to be solely rental properties. In general, however, the residents of the project site lots were headed by men with working class occupations, including builders, painters, segar makers, policemen, laborers, grocers, and those employed in the nearby shipping industry. Most people who could be traced in census records appeared to be married with children. Residents appeared to be predominantly of Irish origin through the 1880s, and later of Germanic origin. Some residents lived on the lots for multiple years, while others stayed for shorter periods. **Appendix A** provides details of occupancy and occupation for the five historic lots that compromise what is now Lot 13.

Each of the lots had open yard areas at one time, although some yard areas were built over with structures in subsequent years. Archaeological resources such as artifacts related to domestic and commercial use and refuse associated with the project site residents and businesses may have been deposited in shaft features—particularly cisterns and privies—that were likely located in the yards of the houses that were constructed prior to the availability of municipal water and sewers. Comparative data has shown that these types of archaeological resources frequently are found in urban contexts, particularly in Brooklyn.

Residents fronting Mill Street (historic Lots 12, 13, and 14) appear to have had sewers available by 1875, but the date of piped water availability and connection to either sewer or water is unknown. Business and residents on Hamilton Avenue had water available by 1863, and sewers before 1875. From their earliest development in the early to mid-1850s through the dates of water and sewer installation, and possibly longer, residents would have relied on communal wells and rear yard shaft features, such as cisterns, for water. Privies and cesspools would have been used at least until the introduction of municipal sewers. As noted above, although municipal water and sewer lines were installed in Hamilton Avenue by the 1863 and 1875 respectively, owners of buildings constructed before service availability often did not hook up their buildings, many of which were rental properties, to water and sewer lines until years, and sometimes decades after the services were available. This suggests a potentially longer use-life for yard shaft features.

Privies were located furthest from the residences, often along the rear lot lines, while cisterns frequently (but not always) were located closer to the rear walls of street-fronting buildings or outbuildings. Privies and cisterns would be excavated up to 10-15 feet below grade. Identifying and examining buried features associated with the nineteenth-century occupation of the project site may reflect the daily activities of the residents and provide insight into cultural behavior of the working class community at the time just before Brooklyn's rapid growth. If undisturbed deposits of cultural material still exist, they may have the potential to provide meaningful information regarding the lives of the people who lived there. When recovered from their original context and in association with a specific historical occupation, historical deposits can provide a wealth of information about consumption patterns, consumer choice, gender relations, ethnicity, economic status, and other important issues. There is the very high possibility that these potential subsurface features could still be present given the lack of later disturbance to the project site."

Recommendations

December 2021 Phase IA page 11 "Based on the conclusions outlined above, Historical Perspectives, Inc. recommends that a program of archaeological field testing be undertaken on portions of each historic lot. This testing, often referred to as Phase IB, would determine the presence or absence of nineteenth-century shaft features and possible yard deposits associated with the former residents and commercial endeavors on the property. Archaeological field testing would involve using a backhoe to remove the existing ground surface (some of which is now covered with paving) from test trenches within the sensitive areas. Mechanical excavations, under the direction of an archaeologist, would continue to assist with removing modern fill or debris underlying the removed pavement in order to expose potential archaeological resources. All archaeological testing should be conducted according to OSHA regulations and applicable archaeological standards, which includes prior LPC approval of a field testing work plan (LPC 2018; CEQR 2020). Professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team."

Conclusion

The Proposed Action would not introduce significant adverse impacts to architectural resources within the surrounding area. The LPC has identified that archeological sensitivity models and historic maps indicate that there is potential for the recovery of remains from 19th century and Native American occupation on Block 552, Lot 13 (Projected Development Site 1). A Phase IA Archaeological Documentary Study (see **Appendix A**) has been prepared by Historical Perspectives, Inc. at the request of the LPC. The December 2021 Phase IA recommends that a program of archaeological field testing be undertaken on portions of each historic lot (Block 552, Lot 13). This testing, often referred to as Phase IB, would determine the presence or absence of nineteenth-century shaft features and possible yard deposits associated with the former residents and commercial endeavors on the property. A Restrictive Declaration is to be placed on the Projected Development Site, indicating that a Phase IB and archeological testing work plan must be reviewed and approved before building permits are issued. To ensure that potential archaeological resources on Block 552, Lot 13 are not adversely impacted by construction related to the Proposed Actions, a commitment has been made that prior to any disturbance of the archaeologically sensitive area, an archaeology documentary study and subsequent archaeological reports and/or testing, as needed, will be performed per the 2018 Guidelines for Archaeological Work in New York City prior to any disturbance of the archaeologically sensitive area. The archaeological work will be overseen by LPC. The foregoing commitment will be memorialized in a Restrictive Declaration. With the implementation of the Restrictive Declaration, the Proposed Actions would not result in any significant adverse archaeological impacts.

2.4 Urban Design and Visual Resources

According to the *2021 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 *2021 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 *2021 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 Affected Area). For visual resources, existing publicly accessible view corridors within the Study Area should be identified. The purpose of the preliminary assessment is to determine whether any physical changes proposed by a project may raise the potential to significantly and adversely affect elements of urban design, which would warrant the need for a detailed urban design and visual resources assessment.

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

Preliminary Assessment

Table 2.4-1: No-Action and With-Action Zoning

	No-Action	With-Action
Zoning	M1-1	M1-5
Permitted Uses	Com., CF, Ind.	Com., CF, Ind.
Maximum FAR	Com., Ind.: 1.00	Com., Ind.: 5.00
	CF: 2.40	CF: 6.50
Maximum Height	Front Wall: 30 feet or 2 stories	Front Wall: 85 feet or 6 stories
	Building Height: Sky Exposure Plane (1 to 1 slope)	Building Height: Sky Exposure Plane (2.7 to 1 slope)
Lot Coverage	100%	100%

Ind. = Industrial; Com. = Commercial; CF = Community Facility

The proposed zoning district is mapped between two wide streets appropriate for higher density commercial, community facility, and industrial uses, and would induce the development of a retail and commercial use along an appropriate corridor while maintaining the residential character of nearby side streets. Therefore, the Proposed Action would not result in significant adverse impacts. The Project Area consists of 11 lots along Mill Street, Hamilton Avenue, and Centre Street, and is described in detail in **Section 1.4** and **2.1.1.**

Within the study area land uses are predominantly medium-density residential uses north of Mill Street and low-density industrial uses south of Centre Street. Low- and medium-density commercial uses are developed along Clinton Street and Court Street. The surrounding area also includes several community facilities: a City-owned daycare, a Baptist church, a United States Postal Service post office, and a senior living facility. The surrounding area is generally developed with low-rise light industrial buildings along Centre Street, Bush Street, and Lorraine Street; mid-rise multi-family buildings along Court Street, and low- and mid-rise one- and two-family buildings and multi-family buildings along Garnet Street and West 9th Street. Larger buildings in the area include a mid-rise storage facility that encompasses the entirety of Block 572, and a high-rise multi-family building at the corner of Huntington Street and Court Street. A large New York City Housing Authority (NYCHA) development is immediately to the west of the Affected Area, and is approximately 1,079,791 sf and includes 1,836 residential dwelling units across 24 separate buildings.

The traffic grid is irregular, where the elevated BQE runs above Hamilton Avenue, creating irregular blockfronts. East and west of the BQE, the traffic grid is regular. Mill Street bounds the Affected Area to the north, and runs west to east with one moving lane of traffic and curbside parking. Hamilton Avenue, bounding the Affected Area to the east, is a principal arterial roadway running southeast to northwest with three moving lanes in each direction. Centre Street bounds the Affected Area to the south and is a west to east one-way road with a single moving lane of traffic and curbside parking. Clinton Street, bounding the Affected Area to the west, is a major collector roadway and runs southwest to northeast with one moving lane of traffic in each direction and curbside parking.

Along Clinton Street, the sidewalks are in good repair with regular street plantings, and most buildings are built out to their lot lines. On the western side of Clinton Street, the NYCHA housing development begins and includes wide walking paths and benches. The east-west streets, such as Mill Street and Centre Street are mainly industrial and feature wide sidewalks, few, if any, street plantings, and low-rise industrial and commercial buildings built out to their lot lines. Hamilton Avenue is a highly trafficked roadway in the area and includes narrow, broken sidewalks and few pedestrian features (e.g., little to no ground floor local retail; no street plantings; no benches).

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

Figure 2.4-2 below shows existing street level views within the Affected Area.

Figure 2.4-3 below shows illustrative renderings of the Proposed Development (Projected Development Site 1). **Figure 2.4-4** shows an axonometric of the Proposed Development.

Figure 2.4-5 through **Figure 2.4-10** show the reasonable worst-case development (as described in **Section 1.9**) building massing, compared to the existing/future no action condition.

Figure 2.4-1: Aerial Map

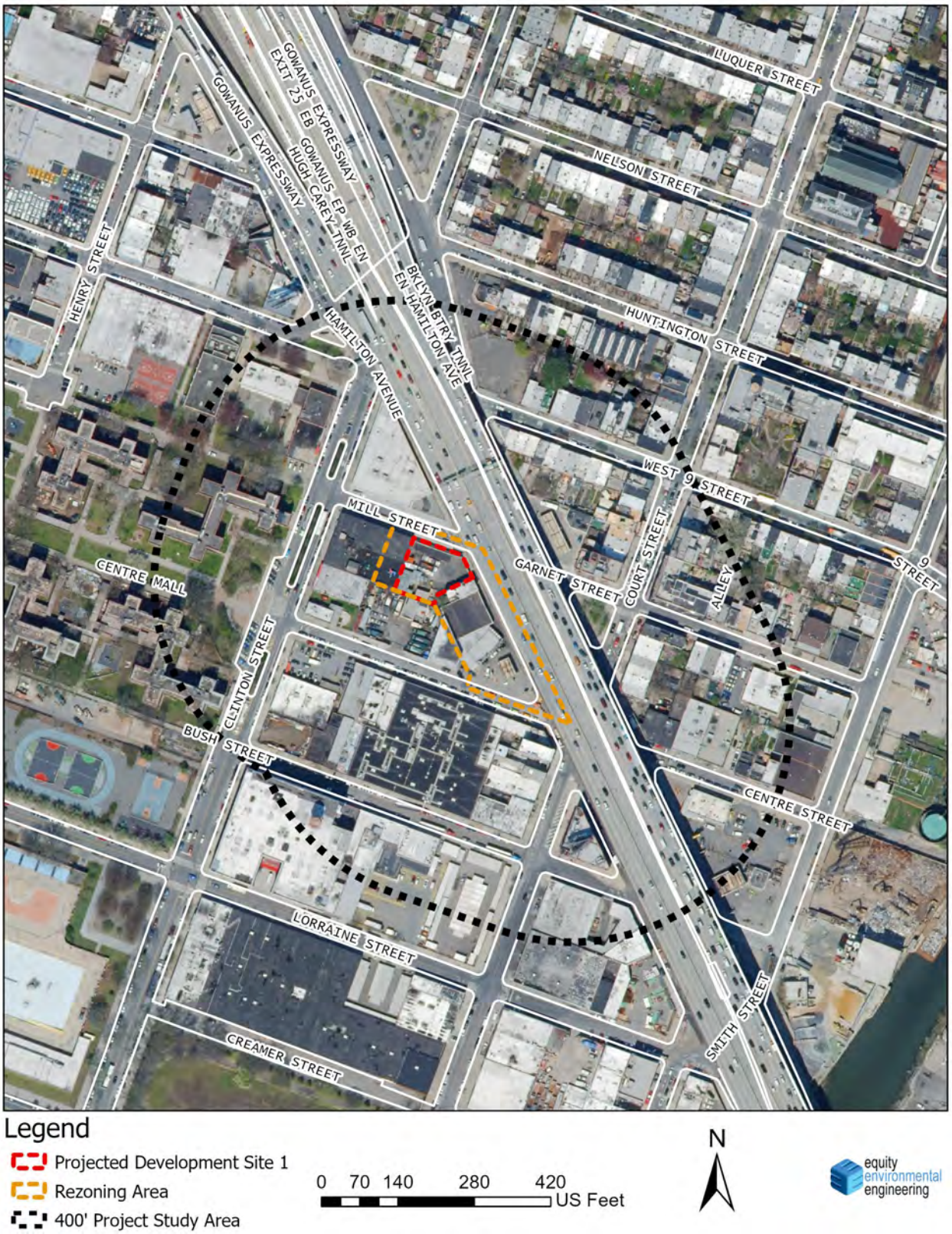


Figure 2.4-2: Photo Key



1 View of the Projected Development Site frontage on Mill Street



Study Area Map with Photo Key



2 View of Mill Street facing southeast



3 View of Hamilton Avenue facing northwest



4 View of gas station across Hamilton Avenue facing northeast



Study Area Map with Photo Key



5 View of Mill Street facing west



6 View of Clinton Street facing south



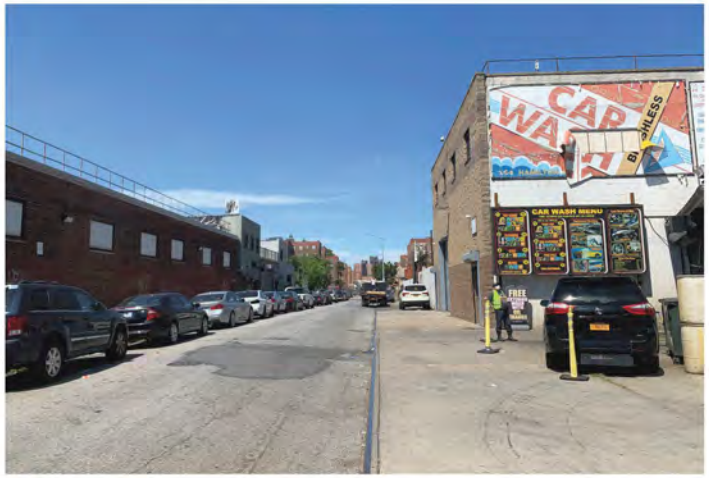
7 View of gas station to the south of the Projected Development Site



Study Area Map with Photo Key



8 View of Hamilton Ave facing southeast



9 View of Centre Street facing west

Figure 2.4-3: Proposed Development illustrative Rendering (1 of 2)[2]
Street Level View Hamilton Avenue Looking East



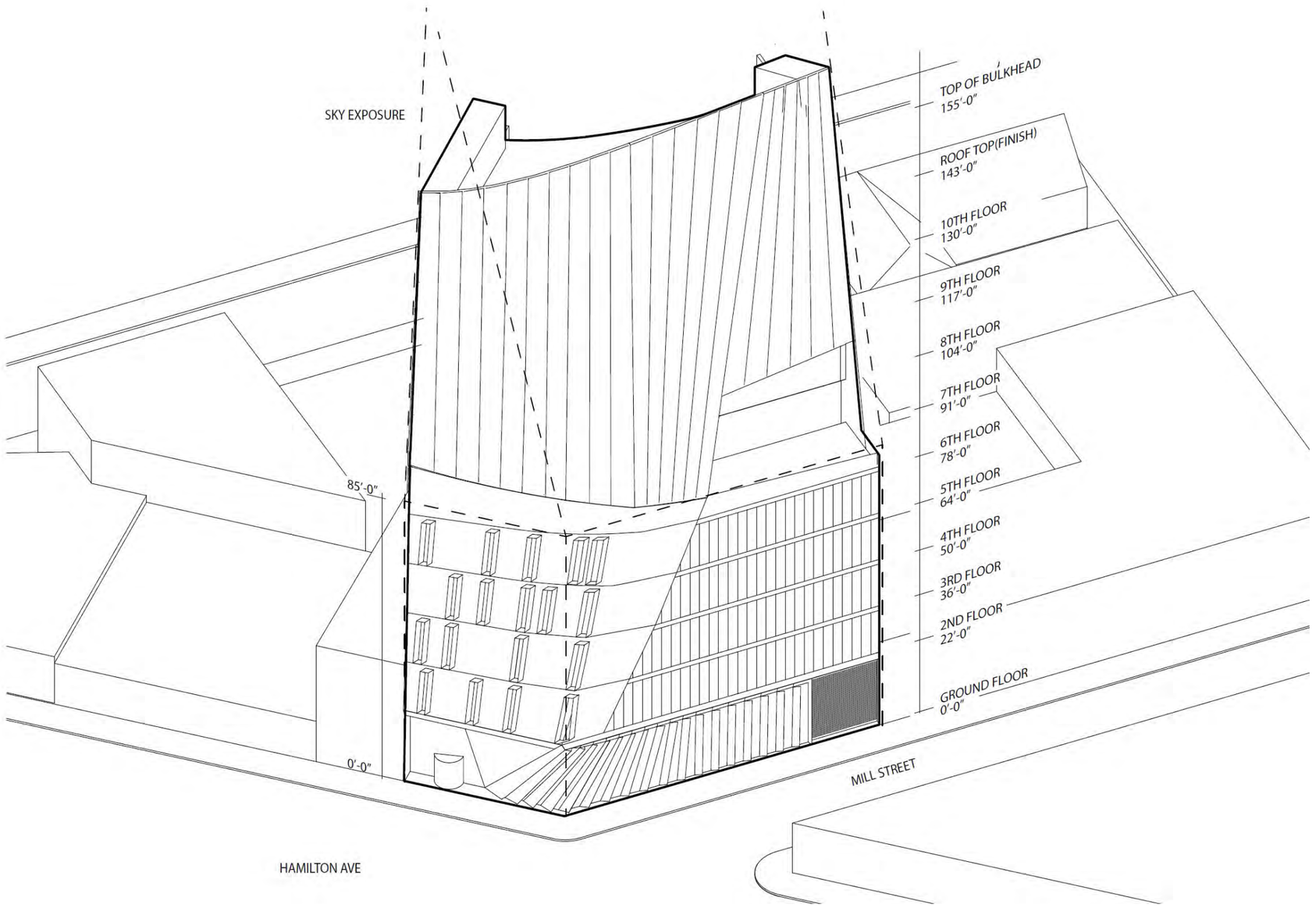
[2] For illustrative purposes only

Figure 2.4-3: Proposed Development illustrative Rendering (2 of 2)[3]
Perspective View Looking West Down Garnet Street



[3] For illustrative purposes only

Figure 2.4-4: Proposed Development Axonometric Diagram[4]

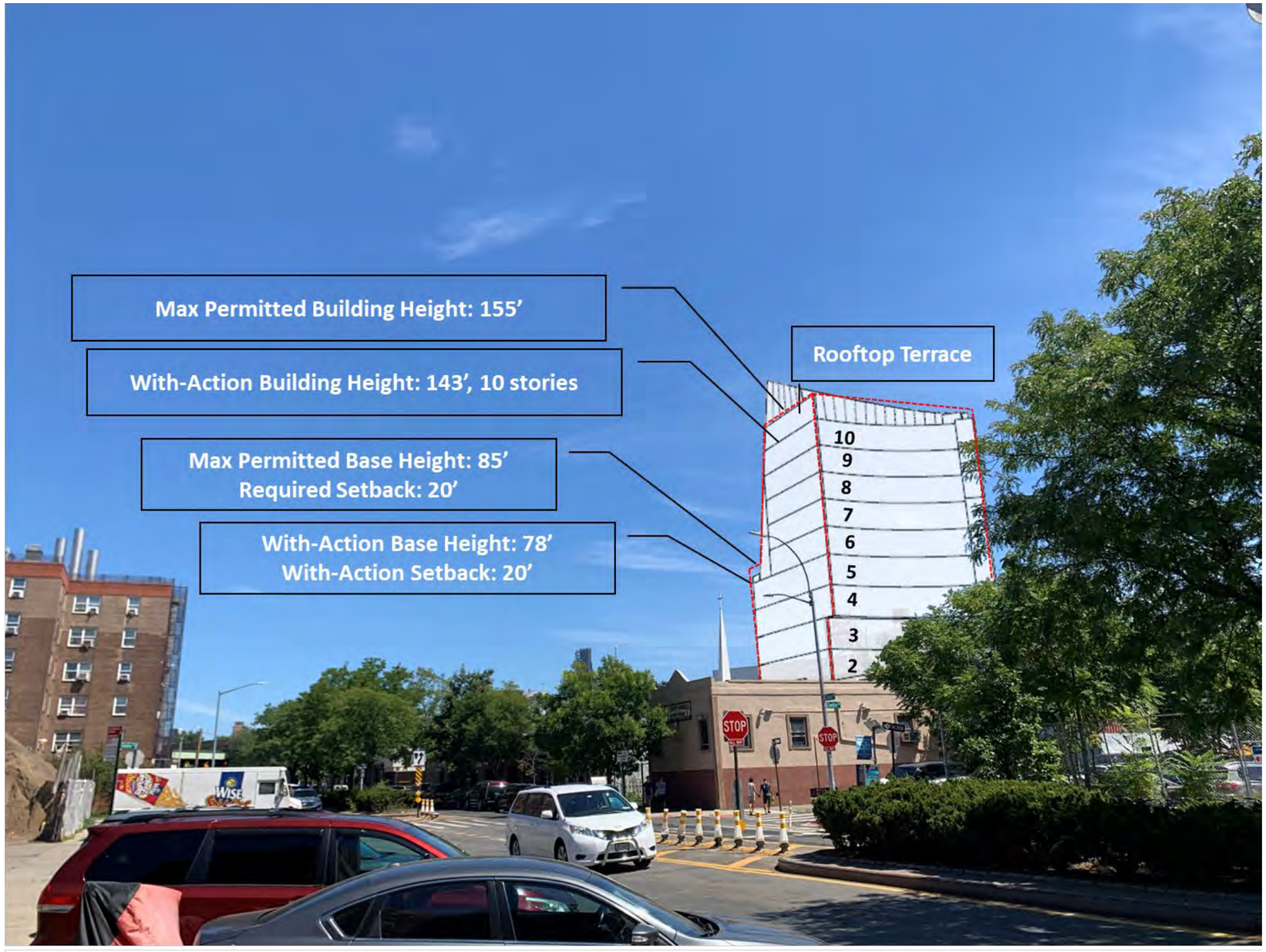


[4] For illustrative purposes only

Figure 2.4-5: Existing/No-Action Conditions (Clinton Street Looking Northeast)



Figure 2.4-6: With Action Conditions (Clinton Street Looking Northeast)

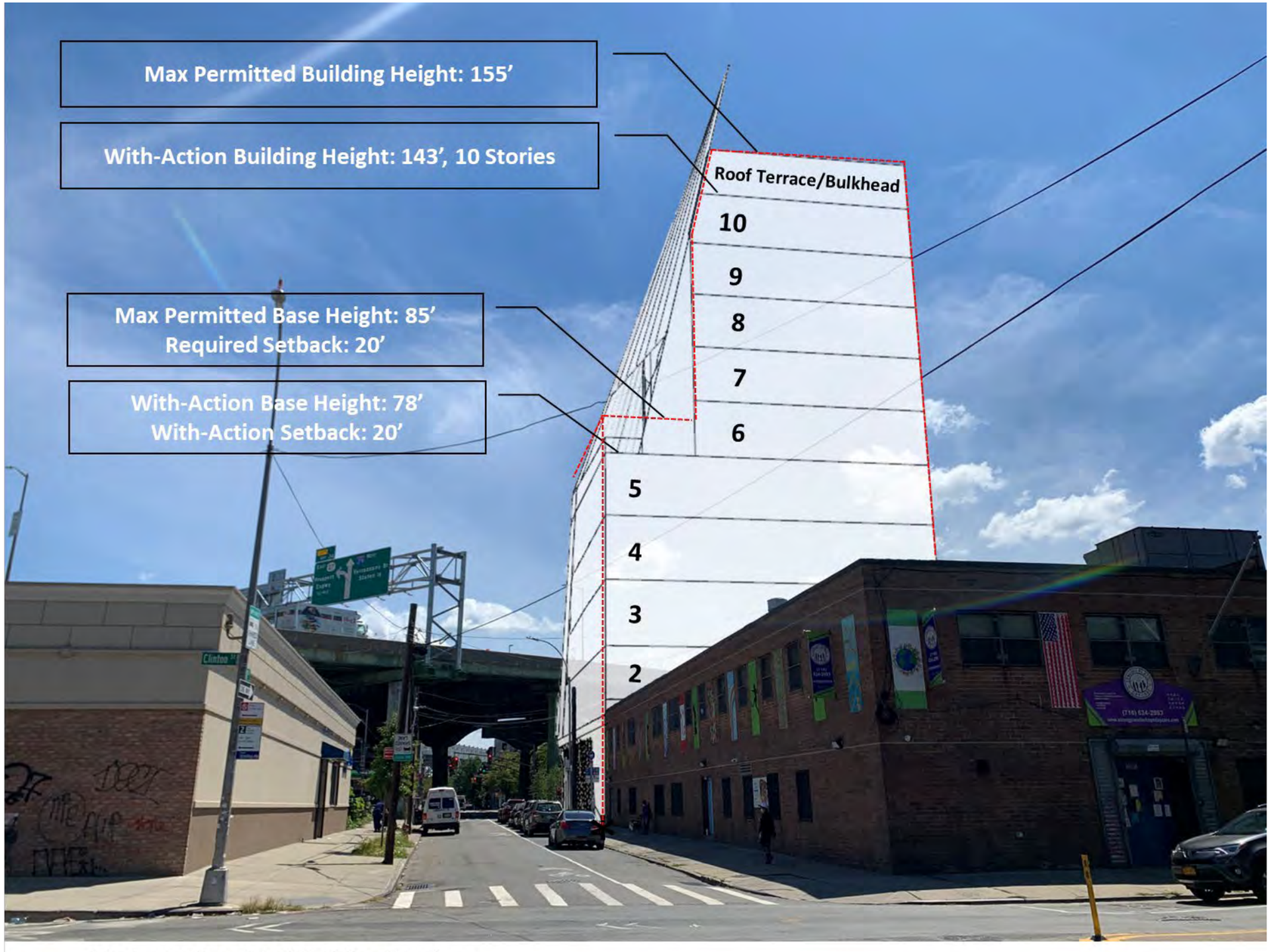


---- Maximum Permitted Building Envelope
Number of Stories
Note: 12’ Roof Terrace/Bulkhead not included in building height

Figure 2.4-7: Existing/No-Action Conditions (Clinton Street and Mill Street Intersection Looking East)



Figure 2.4-8: With Action Conditions (Clinton Street and Mill Street Intersection Looking East)



---- Maximum Permitted Building Envelope
Number of Stories
Note: 12' Roof Terrace/Bulkhead not included in building height

Figure 2.4-9: Existing/No-Action Conditions (Garnet Street Looking West)



Figure 2.4-10: With Action Conditions (Garnet Street Looking West)



---- Maximum Permitted Building Envelope
Note: 12' Roof Terrace/Bulkhead not included in building height

Analysis

Future No Action Condition

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**, there is one active construction project within the Study Area at the southeast corner of the Red Hook Houses to the west of the Project Site.

Future With Action Condition

The Projected Development Site on Block 552, Lot 13 could be developed with a building governed by the sky exposure plane and a FAR up to 6.50 (5.00 FAR commercial and manufacturing; 6.50 FAR community facility). The Applicant's proposed building, and the RWCDS, would be the development of a 10-story-plus-cellar building that rises to a height of 143 feet (155 feet to the top of the bulkhead). The building would be 67,336 gsf and would include 9,462 gsf of ground floor local retail, 15,144 gsf of community facility floor area on floors 2 and 3, and 42,727 GSF (41,729 ZSF) of office space on floors 4 through 10.

Side yards are not required within M1 districts, but a minimum rear yard requirement of no less than 20 feet must be provided at the rear lot line. The building must have an initial setback of 20 feet with a maximum front wall height of 85 feet or 6 stories, whichever is less.

Conclusion

The Proposed Action would not significantly change the pedestrian environment, nor would it partially or totally block a view corridor or natural or built visual resource. The project would also not change any urban design elements so that the context of a natural or built visual resource is altered. The rezoning would reinforce the industrial nature of the area and would effectuate the development of locally serving local retail uses and commercial office space. Therefore, the Proposed Action would not have significant adverse impacts on the constituent elements of urban design, and further analysis is not required.

2.5 Hazardous Materials

According to the *CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when: (a) hazardous material exists on a site, and (b) an action would increase pathways to their exposure, or (c) an action would introduce new activities or processes using hazardous materials.

Methodology

The hazardous materials assessment begins with a Phase 1 ESA, which is a qualitative evaluation of the environmental conditions present at a site, based on a review of available information site observations, and interviews. Pursuant to the *2021 CEQR Technical Manual*, the Phase 1 ESA is conducted in accordance with the standards established by the current ASTM Phase 1 ESA Standard and includes research and field observations to determine whether the site may contain contamination from either past or present activities on the site or as a result of activities on adjacent or nearby properties. If a potential REC is identified during this assessment, then building any subsurface investigations are usually conducted as part of a Phase II ESA to confirm the presence and extent of the contamination.

Analysis

The Projected Development Site, Block 552 Lot 13, is occupied by a 1,020 gross square foot office building. Accordingly, a Phase I Environmental Site Assessment (ESA) was conducted for the Projected Development Site by Equity Environmental Engineers (EEE) on May 8, 2019. A copy of this report is included as an Attachment.

The purpose of a Phase I ESA is to determine whether any type of environmental hazard exists within or adjacent to the project site. Environmental hazards may include, but are not be limited to, hazardous/toxic wastes or raw chemicals stored, dumped, or spilled on the site, underground and above ground storage of petroleum or hazardous materials; asbestos within the building materials/structures; and identification of potential off-site sources of hazardous waste contamination, such as industrial facilities adjacent to the Affected Area.

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 minimis RECs will be considered in the Phase I.

EEE has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13. The following conditions were observed:

- The Projected Development Site is comprised of 9,903 sf of land and is currently operating as a construction business with scaffolding storage.
- RECs - Equity found no RECs associated with the property.
- HRECs - Equity found no HRECs associated with the property.
- CRECs - Equity found no CRECs associated with this property.
- VECs - The EDR Vapor Encroachment database identified seven VECs (Vapor Encroachment Conditions) within 1/10 of a mile of the Subject Property that are related to a leaking UST, two historic dry cleaners, and four historic automobile garages. Based on these findings, a possible vapor encroachment cannot be ruled out.

Based on the findings of the Phase 1 ESA, no RECs, HRECs, CRECs were identified, however seven VECs (Vapor Encroachment Conditions) within 1/10 of a mile of the Subject Property that are related to a leaking UST, two historic dry cleaners, and four historic automobile garages were identified. To ensure that there is no potential for significant adverse impact associated with Hazardous Materials, an E-Designation will be placed on the Projected Development Site to assure that testing and mitigation will be performed, as necessary, before any future development and/or soil disturbance.

The proposed E-Designation language related to Hazardous Materials is as follows:

E-Designation (E-699)

Block 552, Lot 13 (Projected Development Site 1):

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

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

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

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

Conclusion

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

2.6 Transportation

Pursuant to *2021 CEQR Technical Manual* methodology, a transportation assessment may be necessary when a proposed action would alter the transportation network by closing, opening, or realigning an element of the transportation system such as a roadway, pedestrian way, or transit route, or if it would generate new trips on the transportation network. The objective of the transportation analyses is to determine whether a proposed project may have a potential significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, bicyclists and vehicles), on- and off-street parking, or goods movement.

Methodology

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

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

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

Analysis

Existing Conditions

The Affected Area is located on Block 552, Lots 13, 21, 22, 23, 24, 25, and p/o 5, p/o 17, p/o 18, p/o 29, p/o 31, and p/o 34 which includes a mix of commercial and industrial buildings.

The area is within the Transit Zone, but is not well-served by transit. Immediately adjacent to the Affected Area is a bus stop for the B57 and B61 buses. Approximately 1,000 feet to the east of the Affected Area, along West 9th Street, the Smith-9th Street Station is served by the MTA F and G subway lines.

The traffic grid is irregular, where the elevated BQE creates irregular block fronts. Court Street and Clinton Street are significant corridors in this area of Brooklyn and are both wide roads running southwest to northeast parallel to each other; Clinton Street is developed with medium-density community facilities and commercial buildings, and Court Street is developed with medium-density multi-family buildings and commercial buildings. Clinton Street, bounding the Affected Area to the west, is a major collector roadway running southwest-northeast with

one moving lane of traffic in each direction and curbside parking. At 80 feet in width, it is a wide street.

Future No Action Condition

In the future without the Proposed Action, the existing conditions would remain.

Future With Action Condition

In the future with the Proposed Action, Block 552, Lots 13, 21, 22, 23, 24, 25, and a portion of lots 5, 17, 18, 29, 31 and 34 would be rezoned from the existing M1-1 zoning district to an M1-5 zoning district. The Applicant-Owned Lot 13 would be developed with the Proposed Development resulting in the increments shown below.

Preliminary Assessment

The Affected Area is located in CEQR traffic zone three. Pursuant to Table 16-1 of the *2021 CEQR Technical Manual*, a development that exceeds 15,000 GSF of additional local retail space, 100,000 GSF of office uses, or 25,000 GSF of community facilities, or a weighted average exceeding 1.00 of any of the above, would exceed the threshold for warranting further analysis of potential transportation impacts.

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

Community Facility: +15,144 GSF
Local Retail: +9,462 GSF[5]
Office: +42,727 GSF
Light Industrial: -1,020 GSF

The weighted average for all uses is 1.76, and the Proposed Action requires a trip generation assessment.

2.6.1 Tier 1 Trip Generation Screening Assessment

The following Transportation Study assesses the incremental difference between the With-Action and the No-Action Scenarios in order to determine the potential effects of the Proposed Action on traffic conditions. Data sources include field observations, information provided by the project sponsor, the *2021 CEQR Technical Manual*, U.S. Census data, factors developed for recent environmental reviews, and other references as described below. These factors form the

[5] As local retail results in more trips than a supermarket, local retail was conservatively evaluated for the 35,247 GSF of commercial use under future with action conditions.

basis for the travel demand forecast (*Tier 1: Trip Generation Screening Assessment*), which analyzes peak hours and projected mode of travel, as well as person, pedestrian and vehicular trip-ends.

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

All Trip Generation Planning Factors are described below and shown in **Table 2.6-1**. Census tracts used for reverse journey to work are shown below in **Figure 2.6-1**.

Figure 2.6-1: Transportation Census Tracts



Transportation Planning Factors

Retail Assumptions

To assess the trip generation for retail space, the with-action ground floor retail was assumed to be local retail. Factors from Chapter 16, Table 16-2 of the *2021 CEQR Technical Manual* and NYC DOT Survey Data were used.

Office Assumptions

To assess the trip generation characteristics of the office use that would occur under the Proposed Action, a combination of Chapter 16, Table 16-2 of the *2021 CEQR Technical Manual*, NYC DOT Survey Data, and 25 Kent Avenue EAS was adopted.

Community Facility (Medical Office) Assumptions

To assess the trip generation characteristics of the community facility space, as the space does not have a specified tenant, medical office assumptions were used. The trip generation rate was obtained from Chapter 16, Table 16-2 of the *2021 CEQR Technical Manual*, East New York FEIS, and New York City Department of Transportation (NYCDOT) data for medical office uses.

Light Industrial Assumptions

To assess the trip generation characteristics of the light industrial use that would be eliminated under the Proposed Action, a combination of ACS Reverse Journey To Work (2012-2016) data, East New York FEIS, and 25 Kent Avenue EAS was adopted.

Table 2.6-1: Transportation Planning Factors

	Retail	Office	Medical	Light Industrial
Trip Generation	(1)	(1)	(1)	(2)
Weekday	329	18	Equation = 66.626x + 141.77 (x = size of gsf in 1,000 gsf)	14.7
Saturday	358	3.9	37	2.2
	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf
Linked-trip	25%			
Temporal Distribution	(1)	(1)	(1)	(2)
AM	4.80%	12.40%	11.00%	13.20%
MD	8.00%	11.00%	12.60%	11.00%
PM	10.90%	10.50%	8.50%	14.20%
Sat MD	11.70%	14.10%	16.60%	10.70%

Modal Splits	(5)	AM/PM/Sat (5)	MD (6)	(4)	AM/PM/Sat (3)	MD (6)
Auto	11.00%	28.70%	2.00%	22.00%	49.48%	2.00%
Taxi	0.00%	4.90%	1.00%	4.00%	0.50%	1.00%
Bus	2.00%	12.70%	7.00%	13.00%	6.53%	7.00%
Subway	3.00%	32.10%	7.00%	13.00%	28.47%	7.00%
Walk/Other	84.00%	21.60%	83.00%	48.00%	15.02%	83.00%

In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)	In (2)	Out (2)
AM	52%	48%	86%	14%	62%	38%	88%	12%
MD	50%	50%	52%	48%	53%	47%	50%	50%
PM	50%	50%	16%	84%	39%	61%	12%	88%
Sat MD	50%	50%	48%	52%	54%	46%	47%	53%

Vehicle Occupancy	(5)	AM/PM (6)	MD/Sat (6)	Weekday (4)	Sat (4)	(2)
Auto	1.20	1.13	1.13	1.50	1.50	1.20
Taxi	1.20	1.00	1.00	1.50	1.50	1.20

Truck Trip Generation	(1)	(1)	(2)	(2)
Weekday	0.35	0.32	0.29	0.67
Saturday	0.04	0.01	0.29	0.67

Temporal Distribution	(1)	(1)	(2)	(2)
AM	8.00%	10.00%	3.00%	14.00%
MD	11.00%	11.00%	11.00%	9.00%
PM	2.00%	2.00%	1.00%	1.00%
Saturday	11.00%	11.00%	0%	0.00%

In/Out Splits	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)	In (1)	Out (1)
AM/MD/PM/Sat	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%

1 = 2021 CEQR Technical Manual Table 16-2 and Appendix; 2 = East New York FEIS; 3 = ACS Reverse Journey To Work (2012-2016), Census Tracts 18, 51, 53, 59, 65, 77, 85, and 119; 4 = DOT provided data for medical office use; 5 = Based on data provided by DOT; 6 = 25 Kent Avenue EAS 2016

Table 2.6-2: Estimated Person Trips

	Local Retail		Office		Medical		Light Industrial		Total		
Size (gsf)	9,462		42,727		15,144		-1,020				
Peak Hour Trips											
AM	112		95		127		-2		332		
MD	187		85		145		-2		415		
PM	254		81		98		-2		431		
Sat MD	297		23		93		0		414		
Person Trips											
AM	In	Out	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	6	6	24	4	17	11	-1	0	46	20	67
Taxi	0	0	4	1	3	2	0	0	7	3	10
Bus	1	1	10	2	10	6	0	0	22	9	31
Subway	2	2	26	4	10	6	0	0	38	12	50
Walk/Other	49	45	18	3	38	23	0	0	104	71	175
Total	58	54	82	13	78	48	-2	0	217	115	332
MD	In	Out	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	10	10	1	1	17	15	0	0	28	26	54
Taxi	0	0	0	0	3	3	0	0	4	3	7
Bus	2	2	3	3	10	9	0	0	15	14	28
Subway	3	3	3	3	10	9	0	0	16	14	30
Walk/Other	78	78	37	34	37	33	-1	-1	151	144	295
Total	93	93	44	41	77	68	-1	-1	213	201	415
PM	In	Out	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	14	14	4	19	8	13	0	-1	26	46	72
Taxi	0	0	1	3	2	2	0	0	2	6	8
Bus	3	3	2	9	5	8	0	0	9	19	28
Subway	4	4	4	22	5	8	0	-1	13	33	46
Walk/Other	107	107	3	15	18	29	0	0	128	150	278
Total	127	127	13	68	38	60	0	-2	178	253	431
Saturday	In	Out	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	16	16	3	4	11	9	0	0	31	29	60
Taxi	0	0	1	1	2	2	0	0	3	2	5
Bus	3	3	1	2	7	6	0	0	11	10	21
Subway	4	4	4	4	7	6	0	0	15	14	28
Walk/Other	125	125	2	3	24	21	0	0	151	148	299
Total	149	149	11	12	50	43	0	0	210	203	414

Table 2.6-3: Estimated Pedestrian Trips

	Local Retail		Office		Medical		Light Industrial		Total		
Pedestrian Trips											
AM	In	Out	In	Out	In	Out	In	Out	Total In	Total Out	Total In/Out
Bus	1	1	10	2	10	6	0	0	22	9	31
Subway	2	2	26	4	10	6	0	0	38	12	50
Walk/Other	49	45	18	3	38	23	0	0	104	71	175
Total	52	48	54	9	58	36	-1	0	164	92	256
MD	In	Out	In	Out	In	Out	In	Out	Total In	Total Out	Total In/Out
Bus	2	2	3	3	10	9	0	0	15	14	28
Subway	3	3	3	3	10	9	0	0	16	14	30
Walk/Other	78	78	37	34	37	33	-1	-1	151	144	295
Total	83	83	43	39	57	50	-1	-1	182	172	354
PM	In	Out	In	Out	In	Out	In	Out	Total In	Total Out	Total In/Out
Bus	3	3	2	9	5	8	0	0	9	19	28
Subway	4	4	4	22	5	8	0	-1	13	33	46
Walk/Other	107	107	3	15	18	29	0	0	128	150	278
Total	113	113	9	45	28	44	0	-1	150	202	351
Saturday	In	Out	In	Out	In	Out	In	Out	Total In	Total Out	Total In/Out
Bus	3	3	1	2	7	6	0	0	11	10	21
Subway	4	4	4	4	7	6	0	0	15	14	28
Walk/Other	125	125	2	3	24	21	0	0	151	148	299
Total	132	132	7	8	37	32	0	0	177	172	349

Table 2.6-4: Estimated Vehicular Trips

	Local Retail		Office		Medical		Light Industrial		Total		
Vehicle Trips											
AM	In	Out	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	5	5	21	3	12	7	-1	0	37	15	52
Taxi	0	0	4	1	2	1	0	0	6	2	8
Taxi Balanced	0	0	8	1	3	3	0	0	11	4	15
Truck	0	0	1	1	0	0	0	0	1	1	2
Total	5	5	30	5	14	10	-1	0	49	20	69
MD	In	Out	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	9	9	1	1	11	10	0	0	21	19	40
Taxi	0	0	0	0	2	2	0	0	2	2	5
Taxi Balanced	0	0	1	1	3	3	0	0	4	4	8
Truck	0	0	1	1	0	0	0	0	1	1	2
Total	9	9	2	2	15	14	0	0	26	25	51
PM	In	Out	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	12	12	3	17	6	9	0	-1	20	37	57
Taxi	0	0	1	3	1	2	0	0	2	5	7
Taxi Balanced	0	0	1	7	2	2	0	0	4	9	13
Truck	0	0	0	0	0	0	0	0	0	0	0
Total	12	12	5	24	8	11	0	-1	24	46	70
Saturday	In	Out	In	Out	In	Out	In	Out	In	Out	In/Out Total
Auto	14	14	3	3	7	6	0	0	24	23	47
Taxi	0	0	1	1	1	1	0	0	2	2	4
Taxi Balanced	0	0	1	1	2	2	0	0	3	3	7
Truck	0	0	0	0	0	0	0	0	0	0	0
Total	14	14	4	4	10	8	0	0	27	26	53

***Balanced Taxis for medical office use assumes 25% of arriving taxis would be available for departing riders**

Table 2.6-5: Tier 1 Trip Generation Findings

Peak Hour	AM Peak Hour	Midday Peak Hour	PM Peak Hour	Saturday Peak Hour
Total Walk Only Trip-Ends	175	295	278	299
Total Subway Trip-Ends	50	30	46	28
Subway Threshold	**200**	**200**	**200**	**200**
Total MTA Bus Trip-Ends	31	28	28	21
MTA Bus Threshold	**200**	**200**	**200**	**200**
Total Pedestrian Trip-Ends	256	354	351	349
Pedestrian Threshold	**200**	**200**	**200**	**200**
Vehicular Trip-Ends	69	51	70	53
Vehicular Threshold	**50**	**50**	**50**	**50**

*Highlighted cells denote threshold exceedances per the *2021 CEQR Technical Manual*

Tier 1 Trip Generation Assessment Conclusion

Vehicular

As shown in **Table 2.6-5**, the proposed project would generate more than 50 vehicular trips during AM, Midday, PM, and Saturday MD peak hours. Therefore, a Level 2 screening assessment is warranted for vehicular trips during these peak hours.

Subway

As shown in **Table 2.6-5**, the proposed project would generate fewer than 200 subway trips during all peak hours. Therefore, a Level 2 screening assessment would not be warranted for subway trips during these peak hours.

MTA Bus

As shown in **Table 2.6-5**, the proposed project would generate fewer than 200 MTA bus trips during all peak hours. Therefore, a Level 2 screening assessment would not be warranted for MTA bus trips during these peak hours.

Pedestrian

In addition to walk-only trips, all bus and subway trips generated by the proposed project would begin or end as pedestrian trips. As shown in **Table 2.6-5**, the proposed project would exceed the Level 1 threshold of 200 trips during all peak hours. Therefore, a Level 2 screening assessment is warranted for pedestrian trips during these peak hours.

2.6.2 Tier 2 Trip Assignment

As part of the Level 2 screening assessment, project-generated trips were assigned to specific intersections and pedestrian elements near the Projected Development Site. Further quantified analyses to assess the potential impacts of the proposed project on the transportation system would be warranted if the trip assignments were to identify key intersections incurring 50 or more peak hour vehicular trips, pedestrian elements incurring 200 or more peak hour pedestrian trips, or public transit (subway or MTA bus) stations or lines incurring 200 or more peak hour trips.

Site Access and Egress

The proposed project has multiple entrances/exits for pedestrian trips that are specific to different land uses. Pedestrians were assigned to specific frontages based on their trip purpose. Where a location had multiple entrances/exits on the same frontage, a singular point was used for the purpose of assessing the quantitative impact of pedestrians at the surrounding intersections.

Traffic

As shown previously in **Table 2.6-5**, incremental vehicular trips resulting from the proposed project would exceed the CEQR Level-1 screening threshold during the Weekday AM, Weekday Midday, and Weekday PM, and Saturday Midday peak hours. The most likely travel routes to and from the Projected Development Site, prevailing travel patterns, commuter origin-destination (O-D) summaries from the most recent census data, the configuration of the roadway network, and the anticipated locations of site access and egress by site and land use were examined and utilized to perform vehicular trip assignments. Census Transportation Planning Product Reverse Journey to Work (2012-2016) data was utilized to determine the relative O-D points of trips. The proximity to the major through-routes in the surrounding area was considered. Additionally, all vehicular trips were assumed to take efficient routes, with minimal zig-zagging throughout the neighborhood. Project-generated vehicle movement maps are shown in **Figure 2.6-2** to **Figure 2.6-9** below.

As shown in the maps, no intersection during the Weekday AM, Weekday Midday, Weekday PM or Saturday Midday peak hour has exceeded the threshold of 50 vehicular trips. As such, no further analysis of the project-generated vehicular trips is required. Since the proposed development is not eliminating existing parking facilities, in accordance with the *2021 CEQR Technical Manual*, a parking utilization study is not warranted.

Figure 2.6-2: Weekday AM Peak Hour Vehicular Trip Assignment (1)

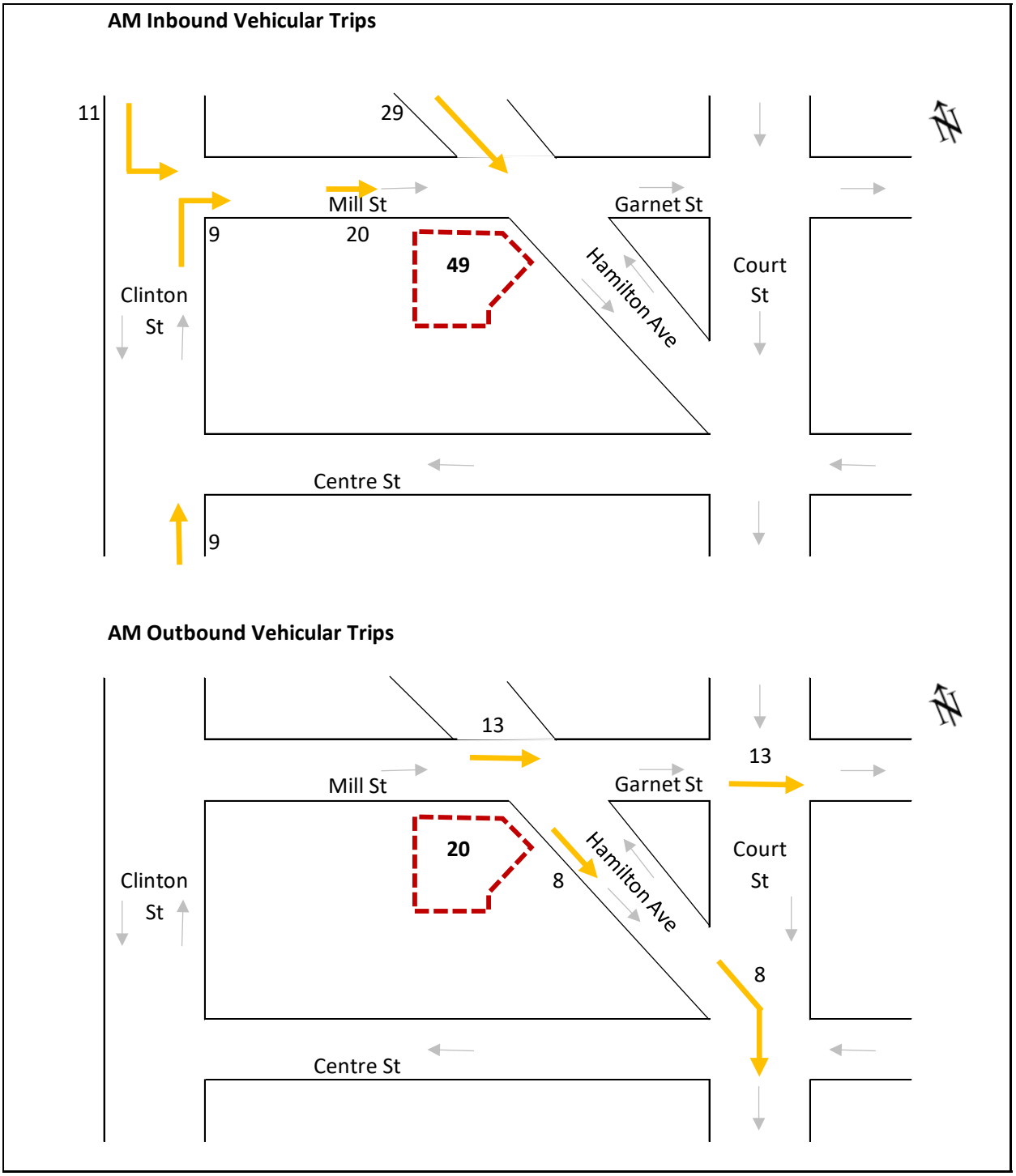


Figure 2.6-3: Weekday AM Peak Hour Vehicular Trip Assignment (2)

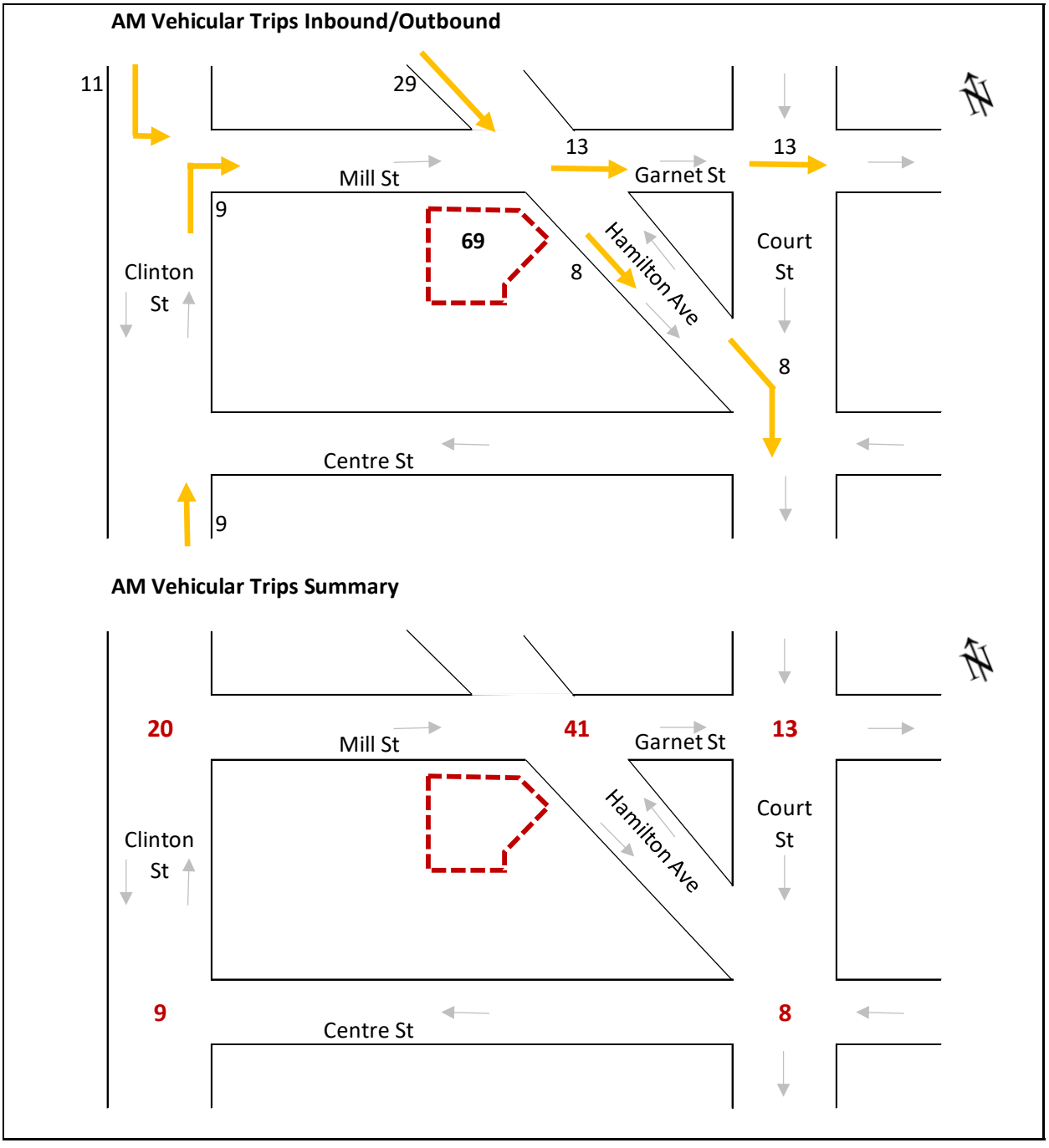


Figure 2.6-4: Weekday Midday Peak Hour Vehicular Trip Assignment (1)

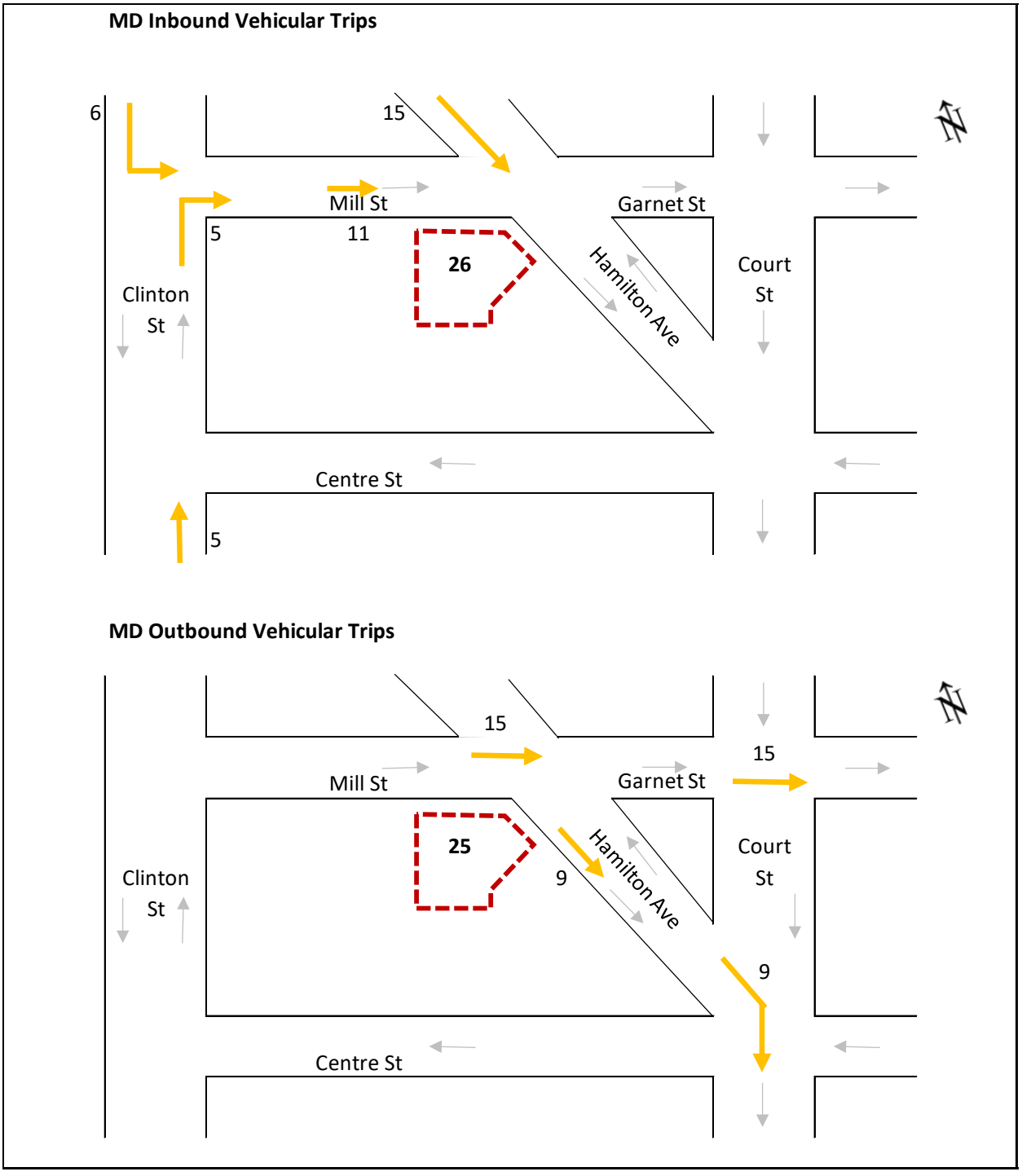


Figure 2.6-5: Weekday Midday Peak Hour Vehicular Trip Assignment (2)

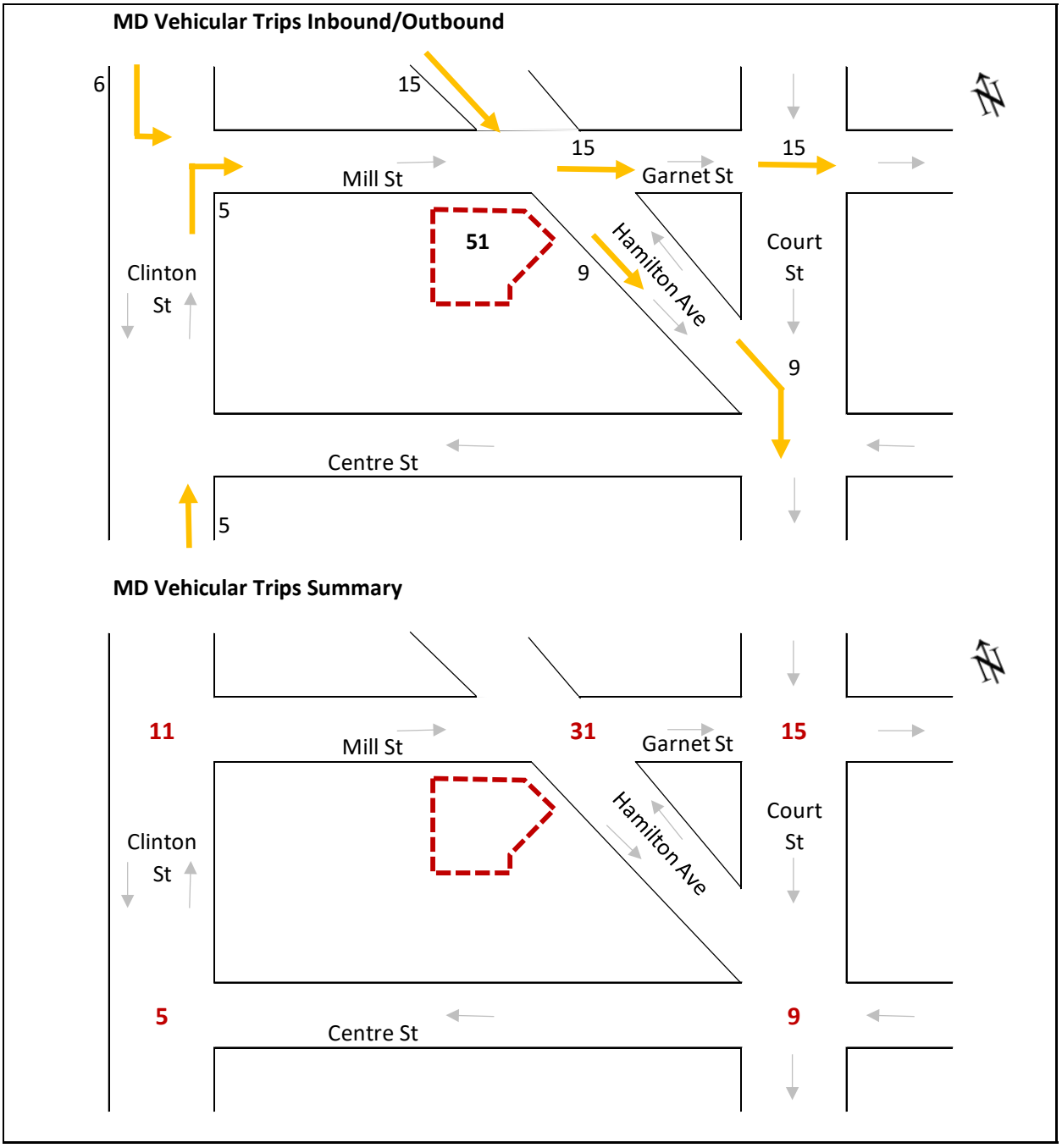


Figure 2.6-6: Weekday PM Peak Hour Vehicular Trip Assignment (1)

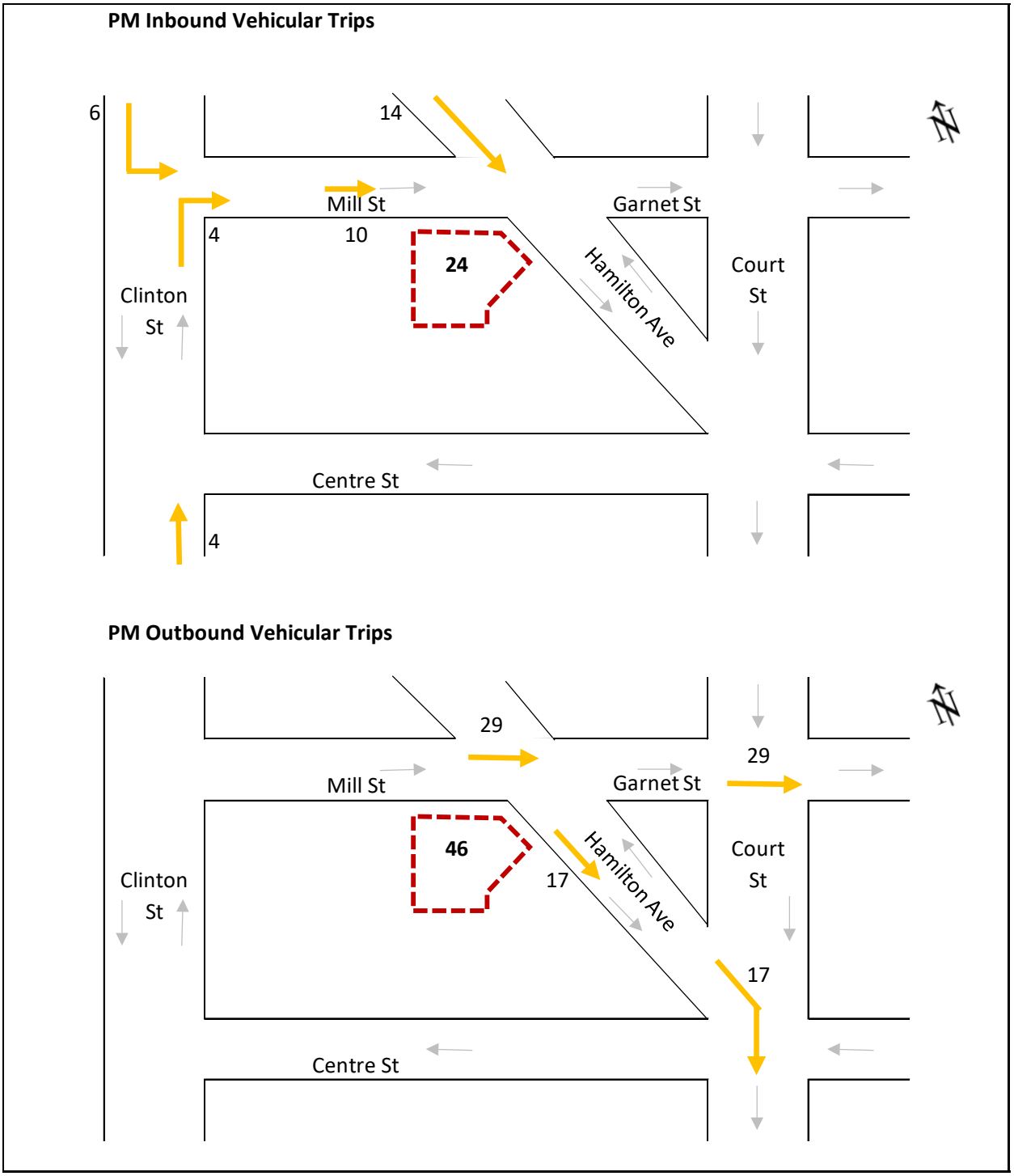


Figure 2.6-7: Weekday PM Peak Hour Vehicular Trip Assignment (2)

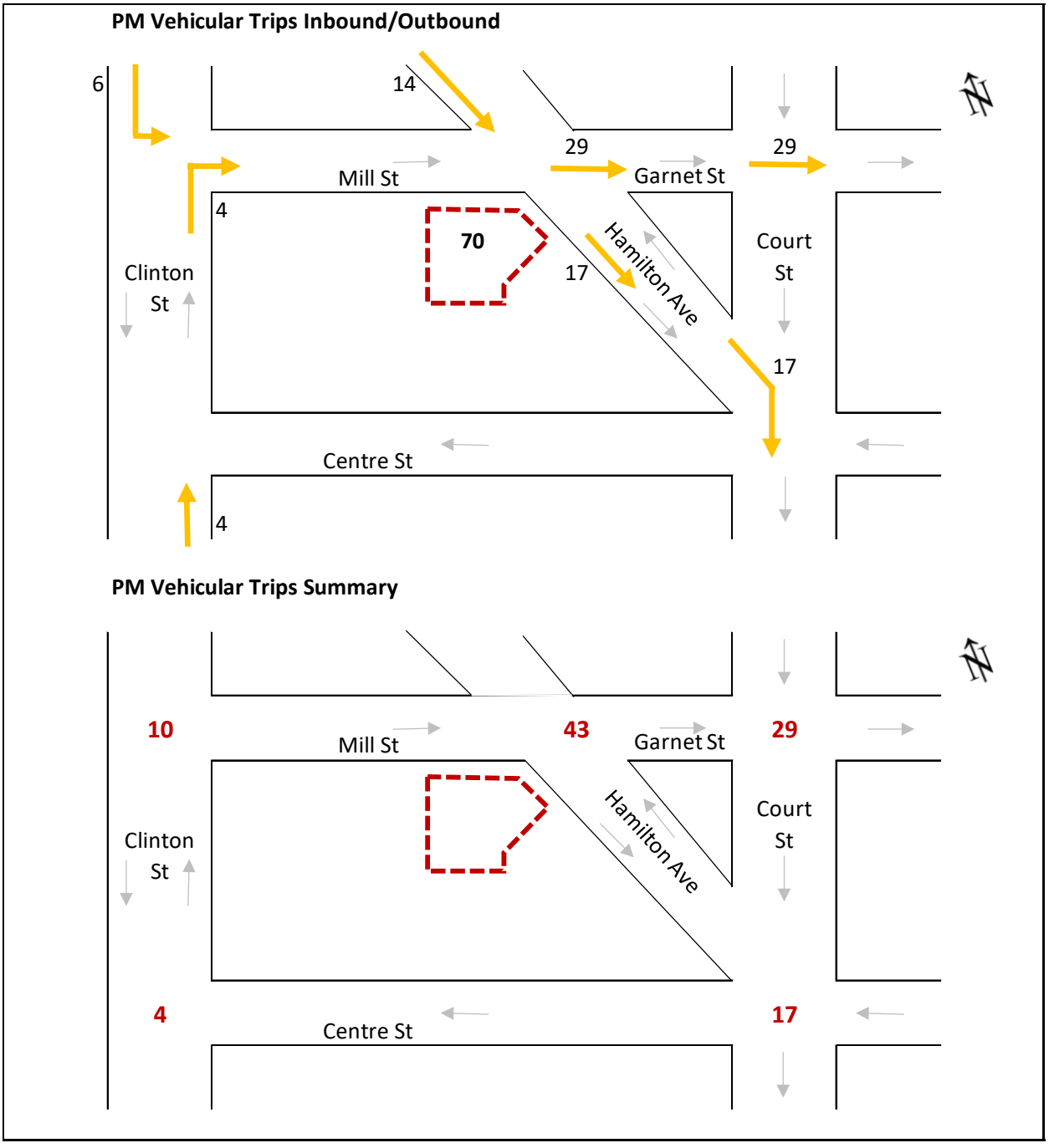


Figure 2.6-8: Saturday MD Peak Hour Vehicular Trip Assignment (1)

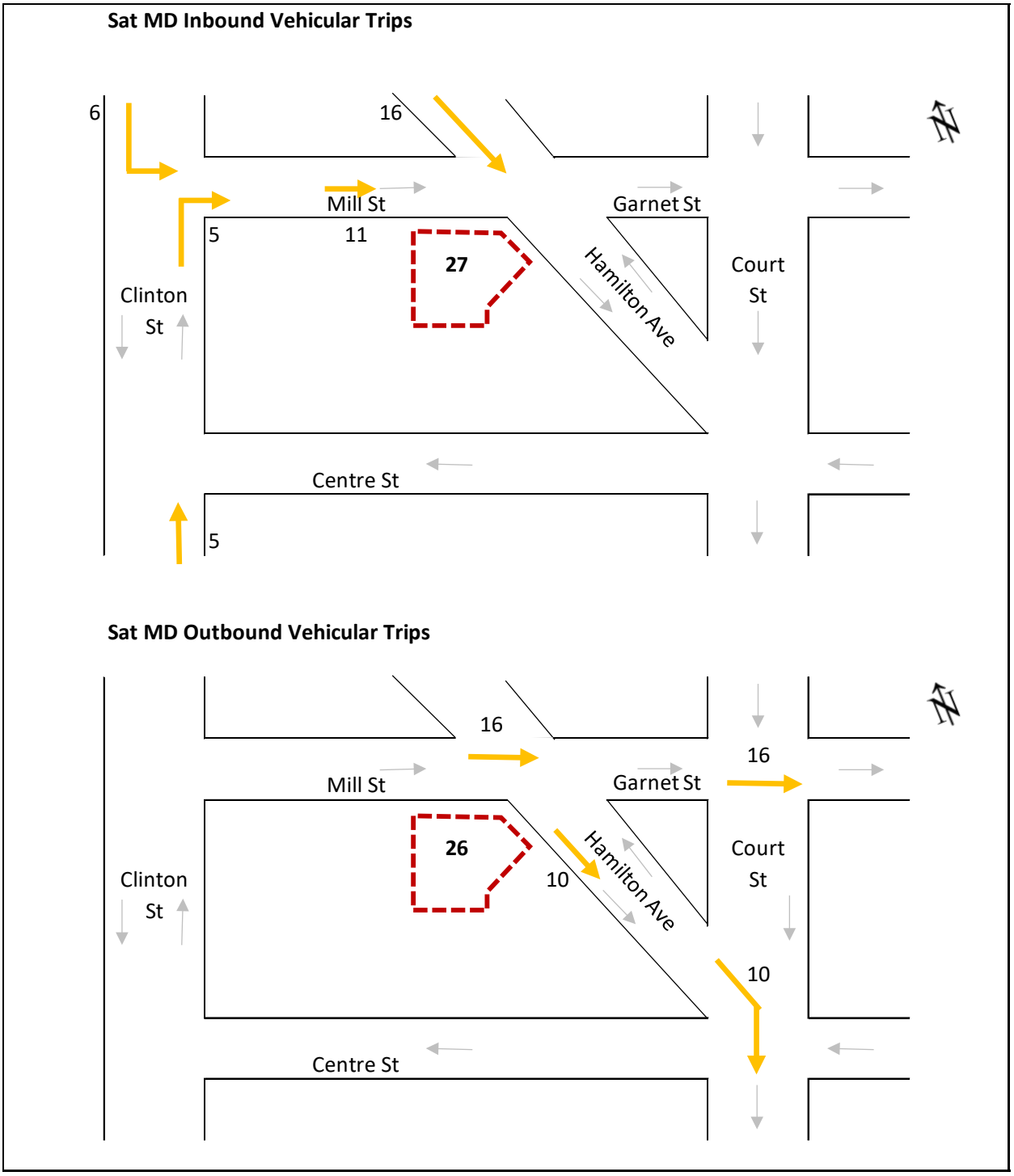
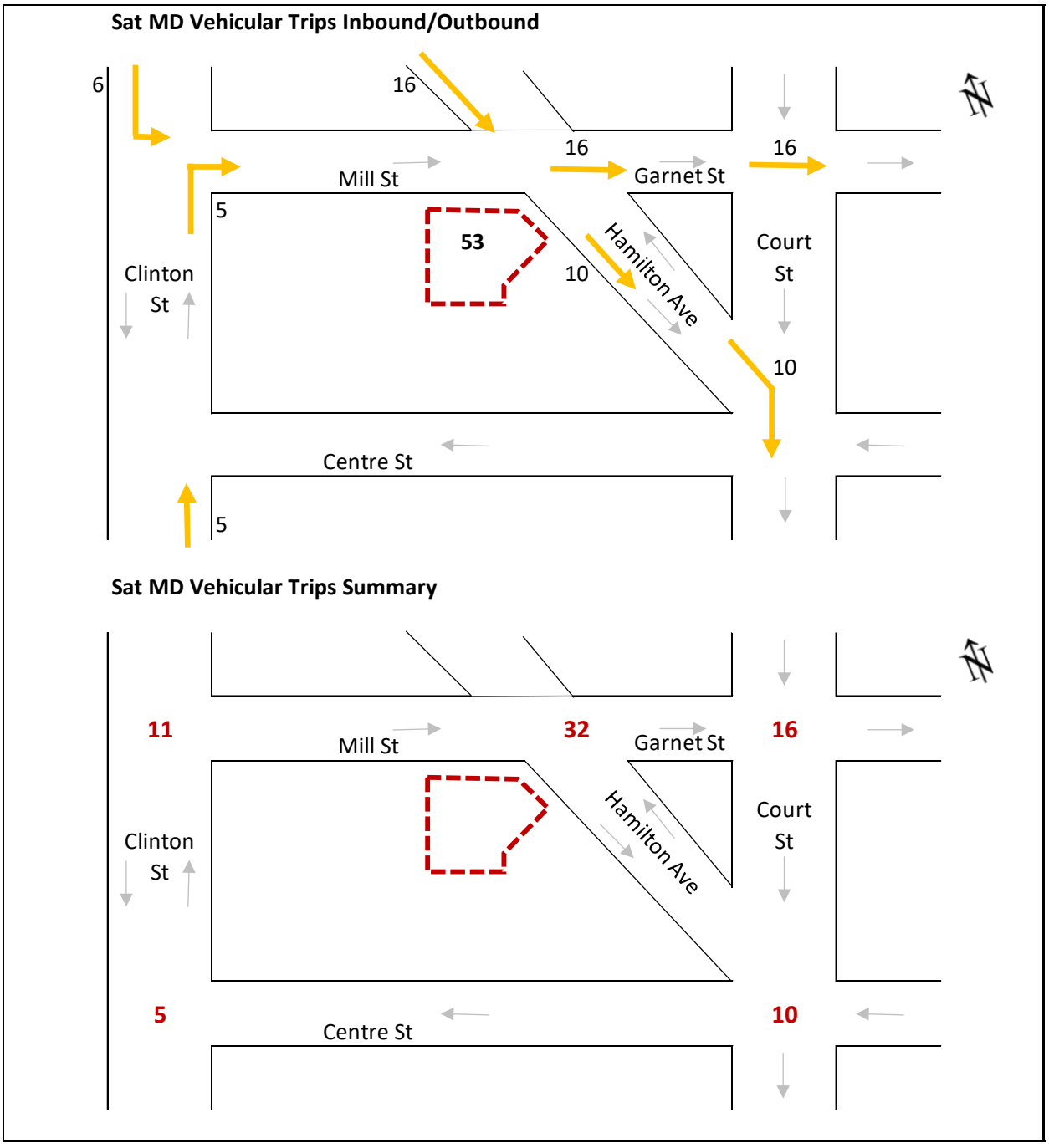


Figure 2.6-9: Saturday MD Peak Hour Vehicular Trip Assignment (2)



Pedestrian

As shown previously in **Table 2.6-5**, incremental pedestrian trips resulting from the proposed project would exceed the CEQR Level-1 screening threshold during the Weekday AM, Midday, PM, and Saturday Midday peak hours. Level 2 pedestrian trip assignments were individually developed for all the proposed uses as discussed below, and the pedestrian trip assignment maps for Weekday AM, Midday, PM, and Saturday Midday peak hours are shown in **Figure 2.6-10** to **Figure 2.6-17**.

MTA Bus Trips

The location of bus stops, the bus lines that serve each stop, the route each line covers, and the connections these lines allow for, were considered and applied to bus riders traveling to and from the Projected Development Site.

Subway Trips

The nearest subway station is the Smith-9th Street F and G line station, which is within 10-minute walking distance along the road network from the Projected Development Site. The location of the station, the lines the station serves, the route the line covers, and the connections the line allow for, were considered and applied to the subway riders traveling to and from the Projected Development Site.

Walk-Only Trips

Pedestrian walk-only trips were developed by distributing project-generated trips throughout the network based on the relative population weight of all census tracts within a 1/4-mile radius using the 2020 decennial census data. The specific entrance/exit pedestrians used based on their trip purpose and the specifics of the street network surrounding the site were taken into account, as well as the land use characteristics of the surrounding neighborhood.

Based on the detailed assignment of pedestrian trips, one corner reservoir (the southwest corner at the intersection of Mill Street and Hamilton Avenue) has been selected for detailed LOS analysis during the Weekday AM, Midday, PM, and Saturday Midday peak hours.

Figure 2.6-10: Weekday AM Pedestrian Trip Assignment (1 of 2)

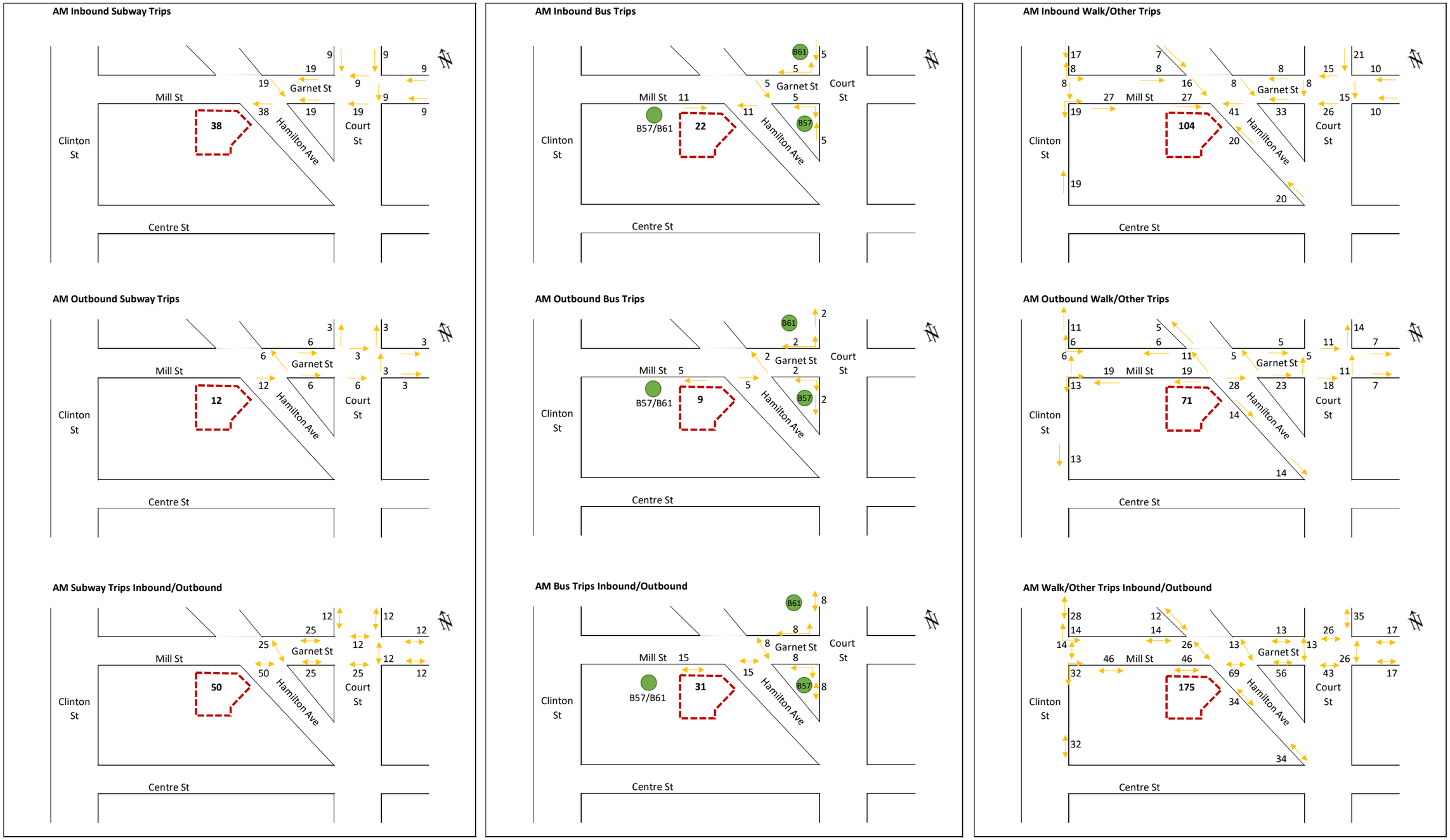


Figure 2.6-11: Weekday AM Pedestrian Trip Assignment (2 of 2)

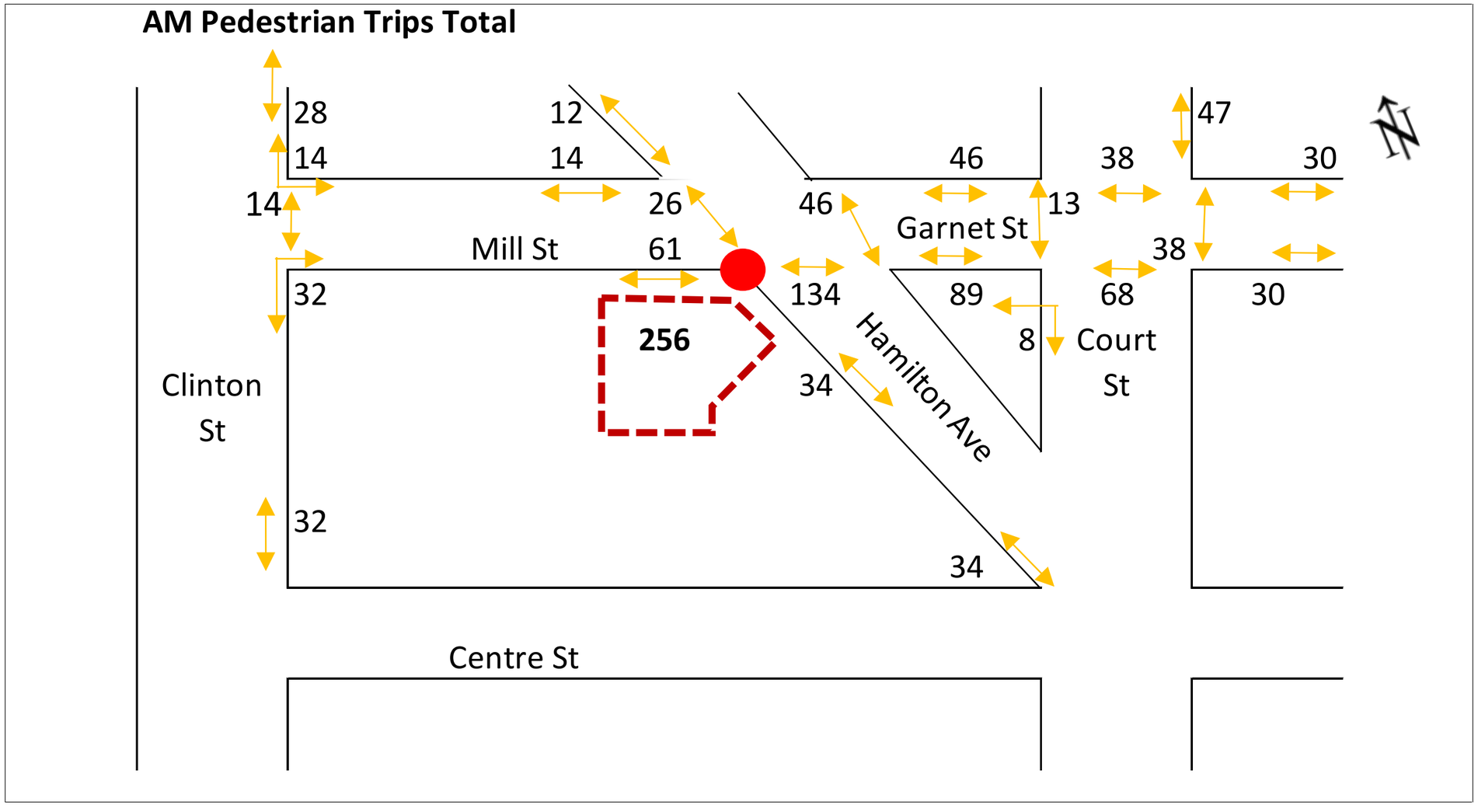


Figure 2.6-12: Weekday Midday Pedestrian Trip Assignment (1 of 2)

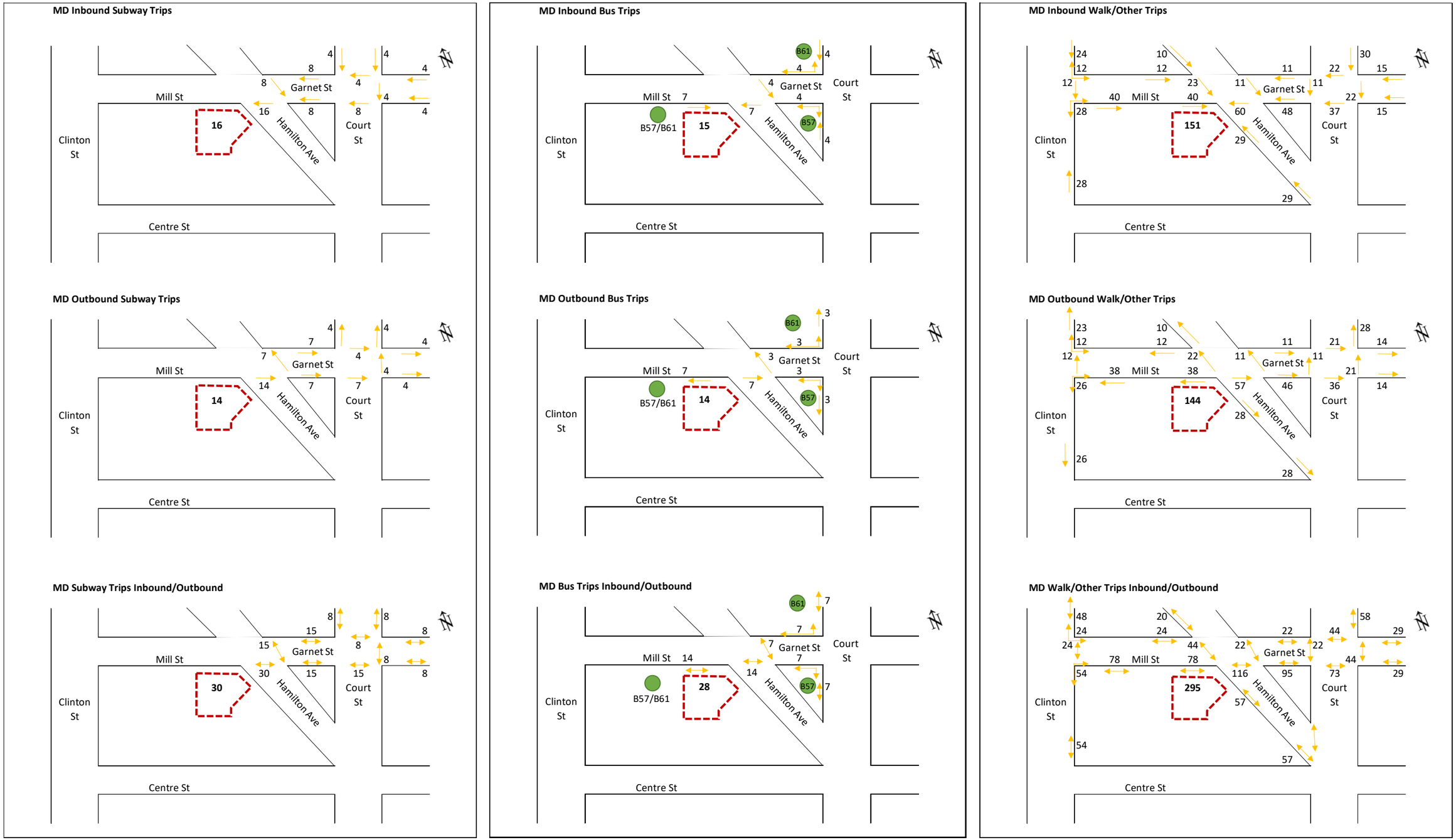


Figure 2.6-13: Weekday Midday Pedestrian Trip Assignment (2 of 2)

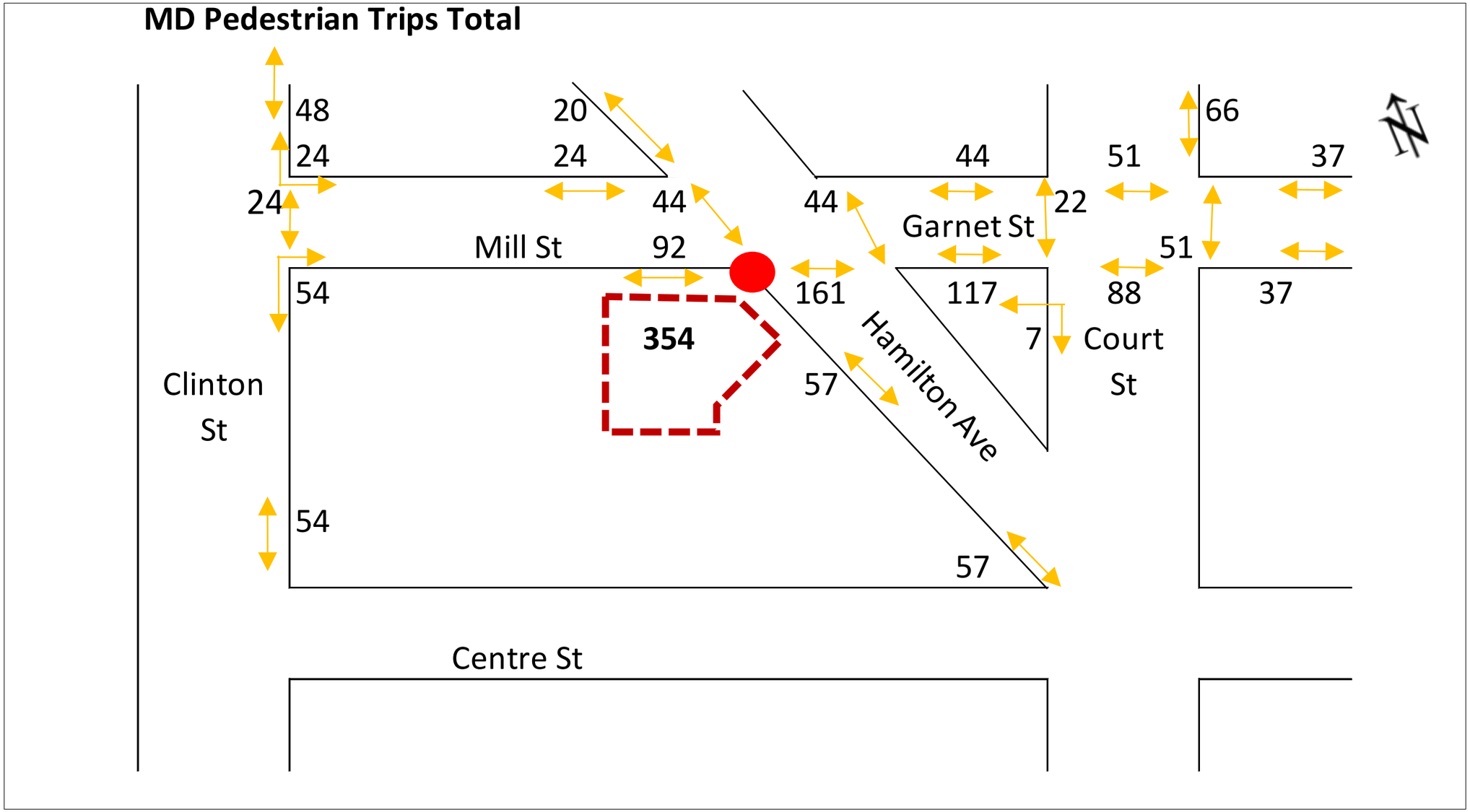


Figure 2.6-14: Weekday PM Pedestrian Trip Assignment (1 of 2)

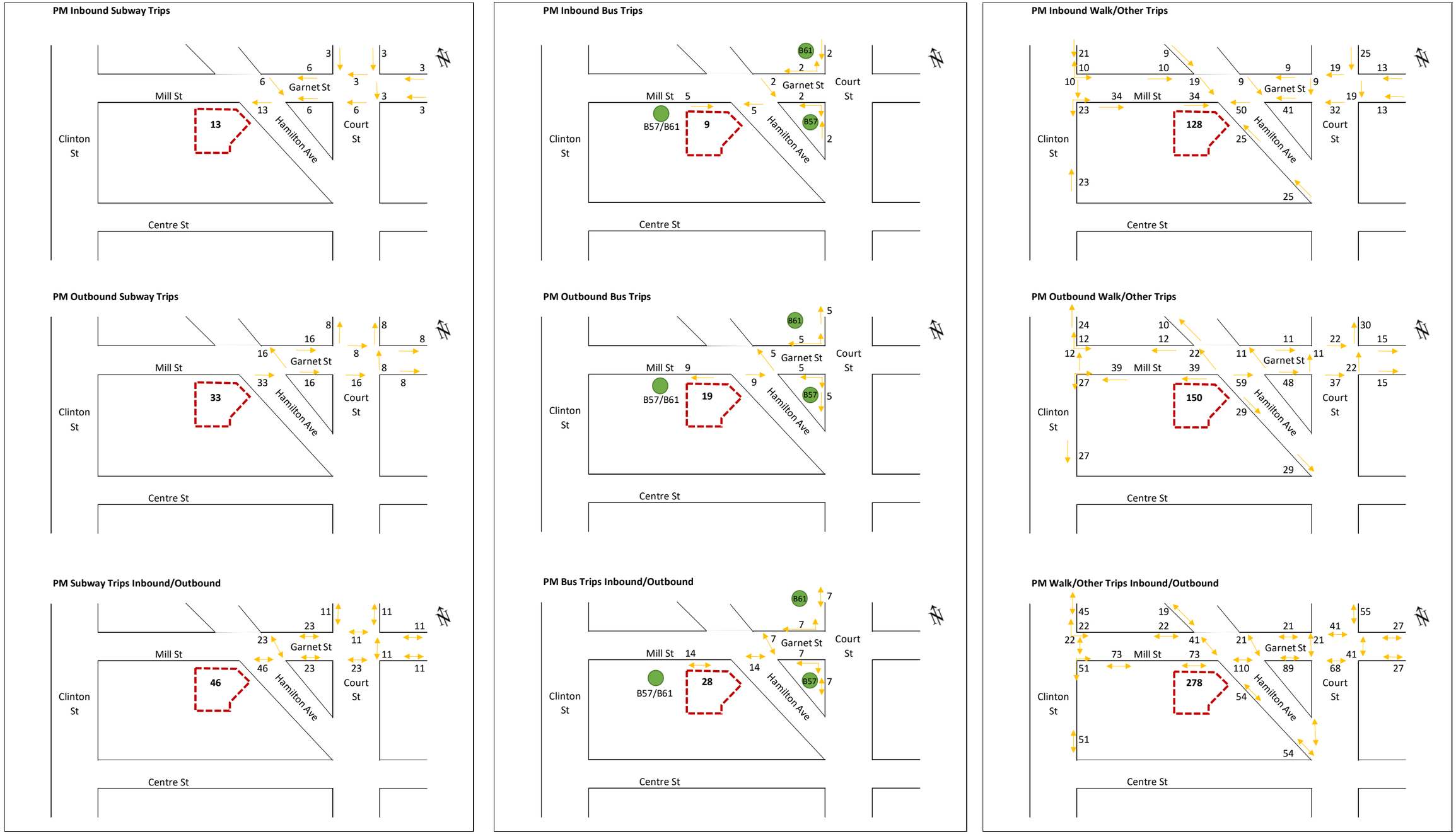


Figure 2.6-15: Weekday PM Pedestrian Trip Assignment (2 of 2)

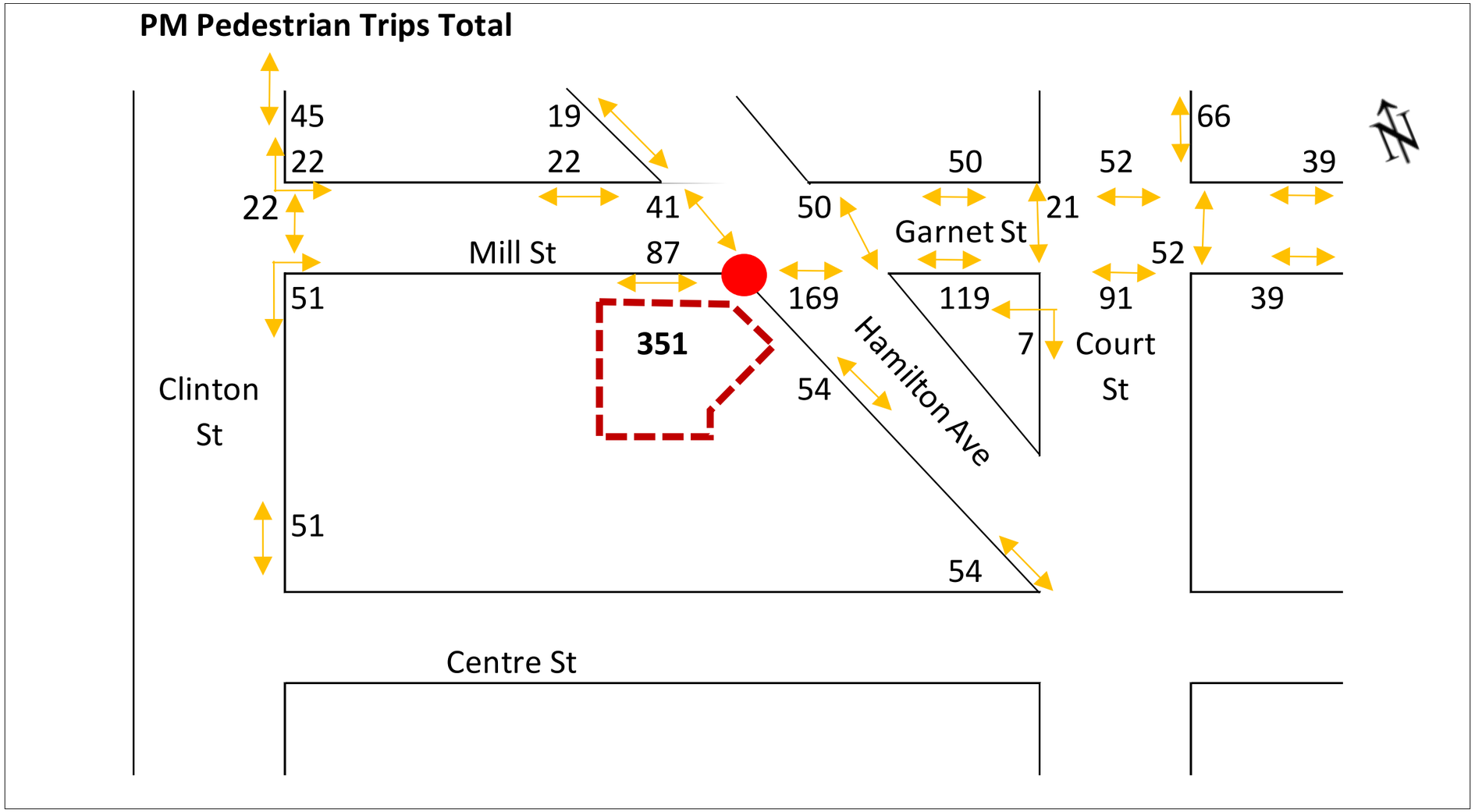
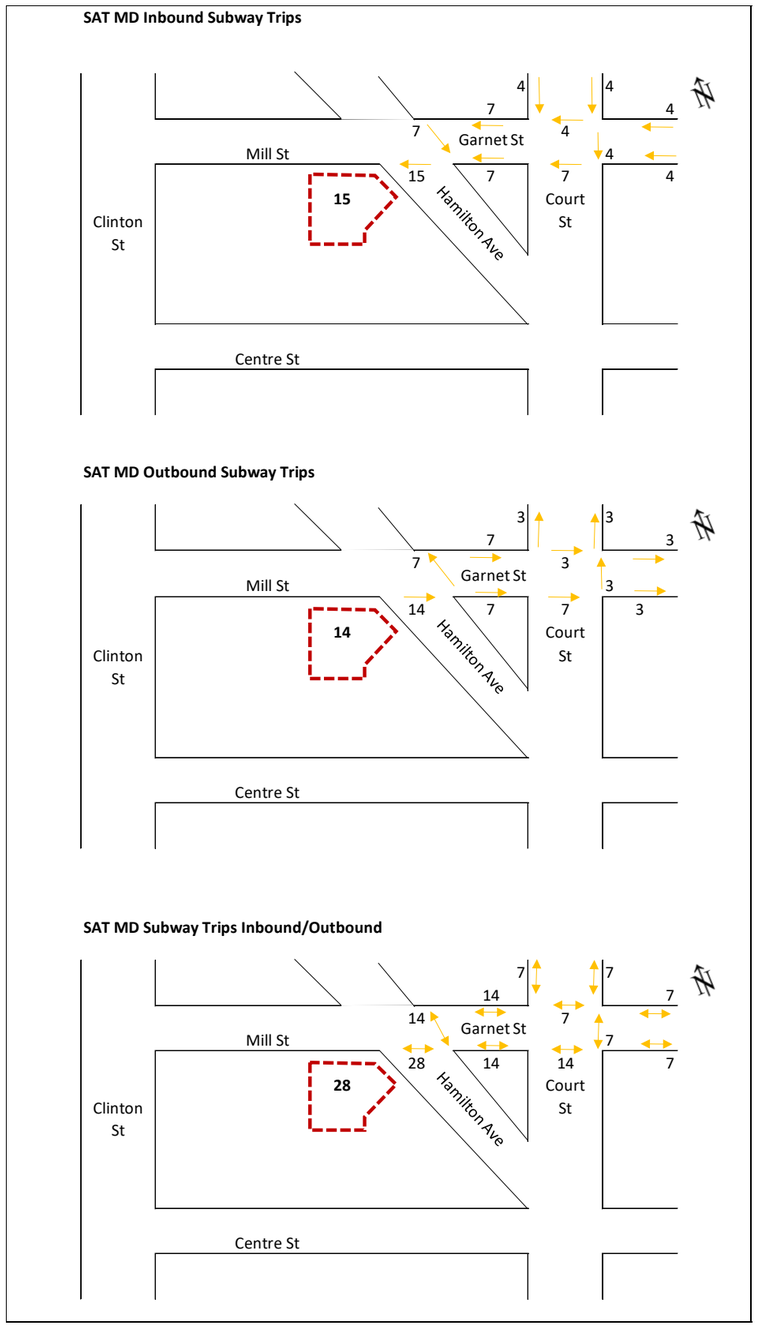
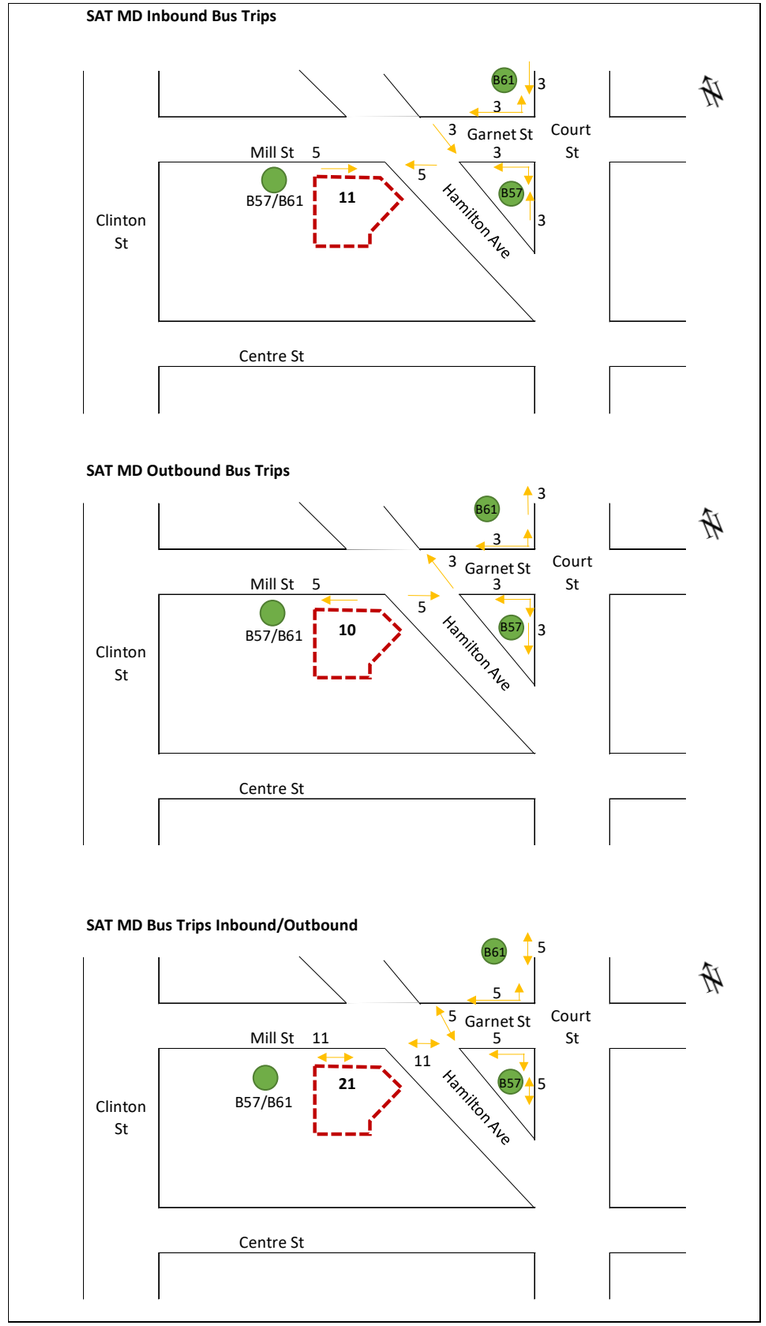


Figure 2.6-16: Saturday Midday Pedestrian Trip Assignment (1 of 2)





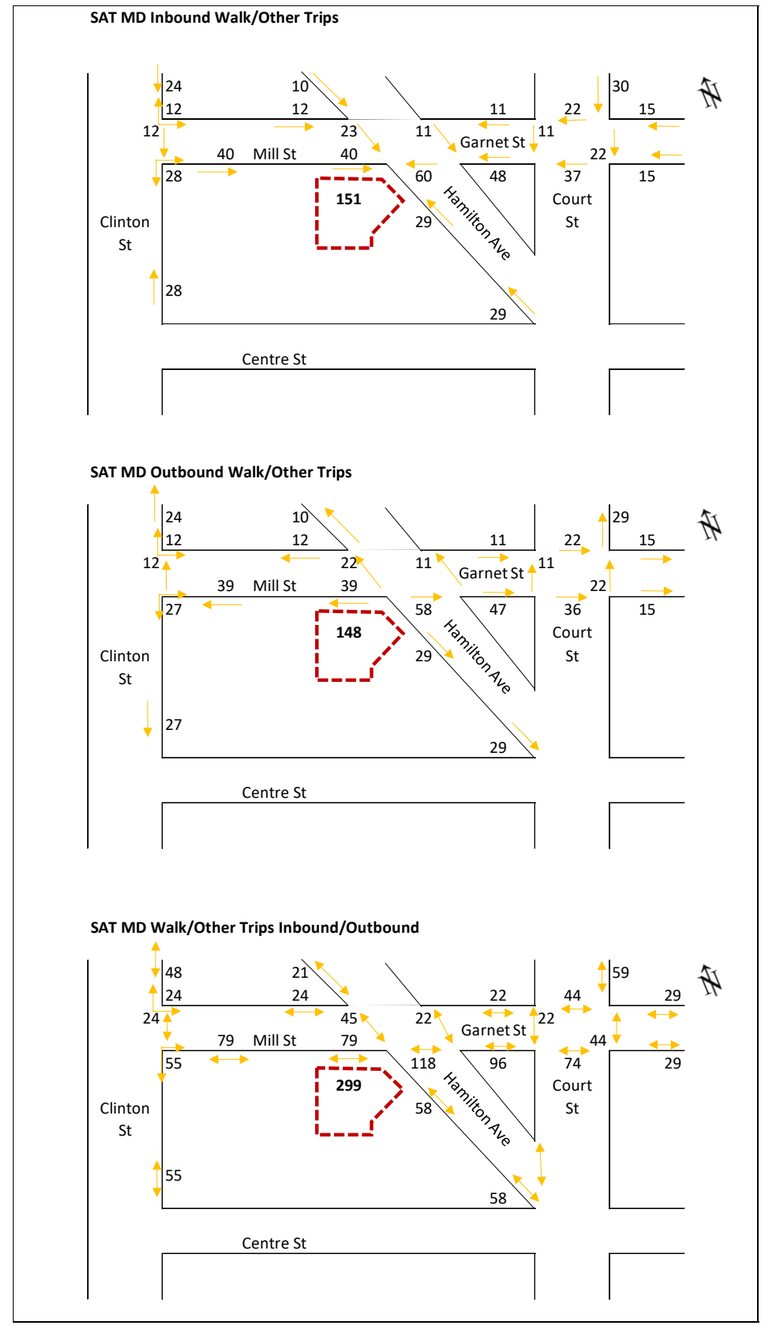
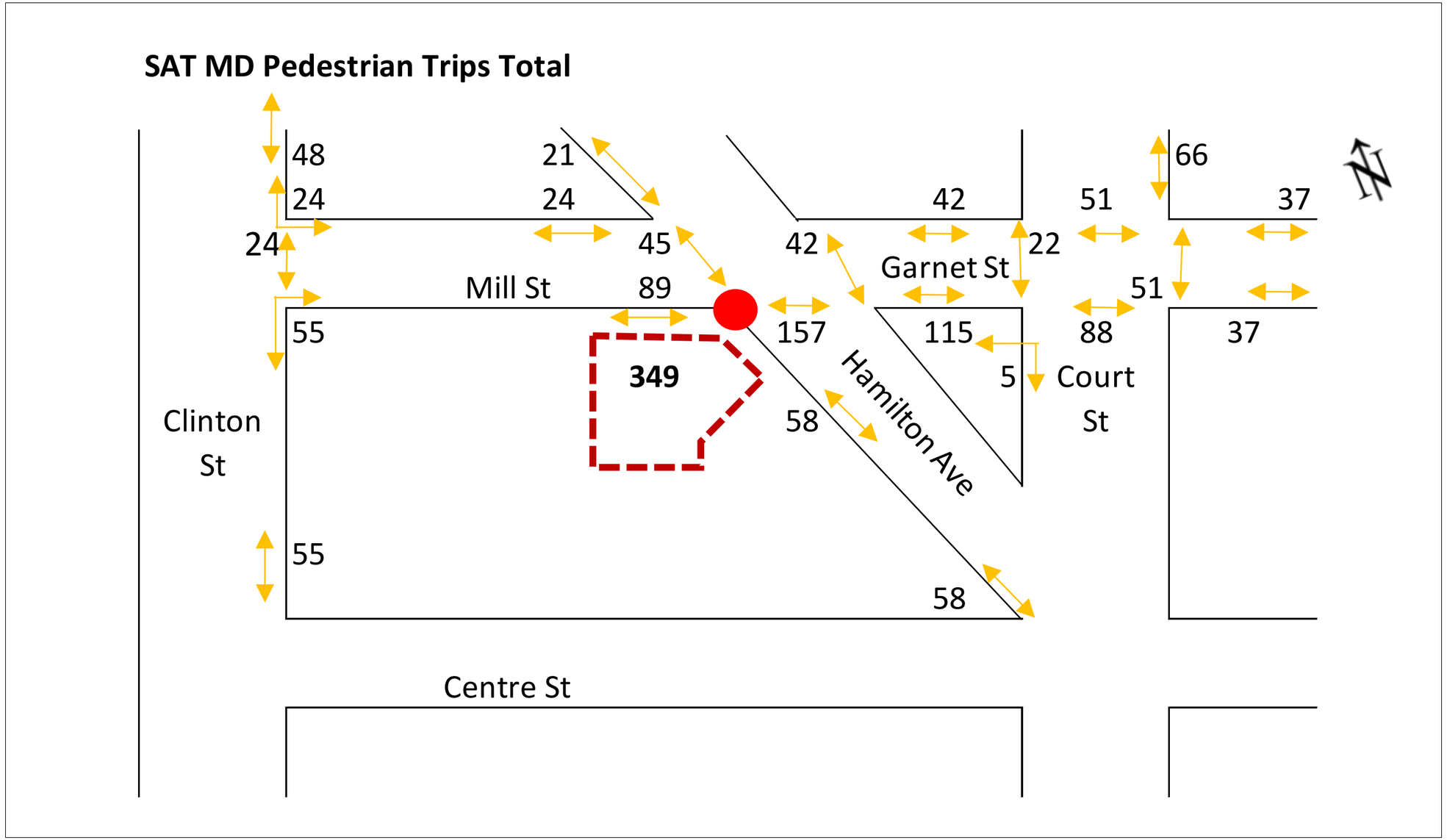


Figure 2.6-17: Saturday Midday Pedestrian Trip Assignment (2 of 2)



2.6.3 Detailed Pedestrian Level of Service Analysis

This section examines the potential traffic, transit, pedestrian, and parking impacts associated with the Proposed Action. Based on guidelines provided in the *2021 CEQR Technical Manual*.

As described above, The Incremental Development on the Projected Development Site, as assessed under the RWCDS, that could be effectuated by the Proposed Action is as follows:

Community Facility: +15,144 GSF
Local Retail: +9,462 GSF[7]
Office: +42,727 GSF
Light Industrial: -1,020 GSF

The Proposed Project is expected to be completed by 2026.

The Projected Development Site is located on the south side of Mill Street, between Clinton Street and Hamilton Avenue. The study area includes one pedestrian element (a corner reservoir), located at the southwest corner of Mill Street and Hamilton Avenue.

Four peak hours were considered for the transportation analysis:

- Weekday AM (8:30 AM to 9:30 AM)
- Weekday Midday (MD) (12:30 PM to 1:30 PM)
- Weekday PM (5:15 PM to 6:15 PM)
- Saturday MD (11:00 AM to 12:00 PM)

Screening Methodology

Transportation impact analysis methodologies for proposed projects in New York City (NYC) are defined in the *CEQR Technical Manual*, which outlines a two-tiered screening process. The Level 1 screening assessment includes a trip generation analysis to determine whether the Proposed Project would result in more than 50 vehicle trips, 200 subway/rail or bus riders, or 200 pedestrian trips in a peak hour. The Level 2 screening is a trip assignment review that identifies intersections with 50 or more vehicle trips, pedestrian elements with 200 or more pedestrian trips, 50 bus trips in a single direction on a single route, or 200 passengers at a subway station

[7] As local retail results in more trips than a supermarket, local retail was conservatively evaluated for the 35,247 GSF of commercial use under future with action conditions.

or line during any analysis peak hour which would require detailed analyses. The results of the screening analysis are described below.

Traffic

According to the criteria specified in the *CEQR Technical Manual*, traffic analyses are generally required at intersections where more than 50 new vehicle trips would be generated by a proposed project during an individual peak hour based on the results of the vehicle trip assignment. It was determined that no individual intersections would exceed this threshold during any of the peak hours; therefore, a detailed traffic analysis was not conducted.

Transit

The transit criteria specified in the *CEQR Technical Manual* and thresholds established by NYC Transit/ Metropolitan Transportation Authority (NYCT/MTA) were used to determine which subway/rail and bus routes in the study area would be analyzed. According to the criteria, if a proposed project is projected to result in fewer than 200 peak hour subway/rail passengers assigned to a single subway station or on a single subway line or 50 bus passengers assigned to a single bus line (in one direction), further transit analyses are not typically required as a proposed project is considered unlikely to create a significant transit impact.

Subway Transit

It was determined that the number of new subway trips generated by the Proposed Project would not exceed the *CEQR Technical Manual* thresholds during any of the peak hours; therefore, a detailed subway analysis was not conducted.

Bus Transit

It was determined that the number of new bus trips generated by the Proposed Project would not exceed the *CEQR Technical Manual* thresholds during any of the peak hours; therefore, a detailed bus analysis was not conducted.

Pedestrians

Based on criteria specified in the *CEQR Technical Manual*, projected pedestrian volume increases of more than 200 pedestrians per hour at any sidewalk, crosswalk, or intersection corner would be considered a location with potential for significant impacts and would require a detailed analysis. As the Proposed Project would generate more than 200 pedestrians per hour at one pedestrian within the study area element (the southwest corner at Mill Street and Hamilton Avenue) during the weekday AM, MD, and PM and Saturday MD peak hours based on a combination of walk, subway, and bus trips, a detailed pedestrian analysis was conducted for that element during the four peak hours.

Parking Conditions

According to the *CEQR Technical Manual*, if the threshold for a detailed traffic analysis is met, it is likely that a parking assessment is warranted. As the Proposed Project is expected to

generate fewer than 50 new vehicle trips at any individual intersection during any of the peak hours, a detailed traffic analysis was not conducted, and, as such, a parking assessment was not conducted.

Study Area

To assess the potential transportation impacts associated with the Proposed Project, the study area was defined based on principal pedestrian access routes to and from the Projected Development Site and key pedestrian elements likely to be affected by trips generated by the Proposed Project. In total, one pedestrian element was identified for detailed pedestrian analysis, which is the southwest corner reservoir of Mill Street and Hamilton Avenue.

Transit Service

Transit service in the study area include two subway lines (the F and G lines) and two bus routes (B57 and B61) with stops within the 0.25-mile radius of the Projected Development Site. Additionally, six bus routes (BM1, BM2, BM3, x27, x28, x37, and x38) cross the study area without stopping in it.

The G and F lines serve the Smith-9th Streets subway station, approximately 0.25-miles away from the Projected Development Site. The B57 and B61 both travel along Lorraine Street, with the B57 continuing north/south along Court Street/Smith Street and the B61 continuing east/west along 9th Street. The closest bus stop to the Projected Development Site is at Clinton Street, serving both the B57 and B61.

Operational Analysis Methodology

The following sections summarize the operational analysis methodologies and significant impact criteria in accordance with the *CEQR Technical Manual* guidelines for pedestrians and safety.

Pedestrian Operations

The pedestrian corner element was analyzed in accordance with the *CEQR Technical Manual* guidelines. A description of these methodologies is provided below.

Corners

Corner analyses are conducted at signalized intersections using the analytical procedures described in the *2010 Highway Capacity Manual* (HCM 2010). The capacities of corners are evaluated based on pedestrian space measured in terms of square feet (sf) per pedestrian (ft^2/p). To calculate pedestrian space, effective crosswalk widths and corner areas, hourly pedestrian volumes (crosswalk, corner, and sidewalk), conflicting hourly turning vehicles, average walking speed (3.5 feet/second or 3.0 feet/second if 20 percent of pedestrians are seniors and/or school children or the intersection is in a Senior Pedestrian Focus Area), and

signal timing are required. **Table 2.16-6** shows the LOS criteria for corners based on pedestrian space.

Table 2.16-6: LOS Criteria for Corners

Level of Service (LOS)	Pedestrian Space (ft^2/p)
A	> 60
B	60 to > 40
C	40 to > 24
D	24 to > 15
E	15 to > 8
F	≤ 8

Source: Transportation Research Board. *Highway Capacity Manual*, 2010.

Significant Impact Criteria: Pedestrian Operations

The *CEQR Technical Manual* provides guidance on the impact criteria for pedestrian facilities based on the general comfort and convenience levels of pedestrians, according to the location of the study area. Pedestrians in central business district (CBD) areas have become accustomed to higher pedestrian volumes and generally are more tolerant of restricted LOS conditions that might not be acceptable in other less congested (non-CBD) locations. An acceptable LOS for CBD areas is generally a mid-LOS D or better while an acceptable LOS for non-CBD areas is generally the upper limit of LOS C or better. For purposes of the pedestrian operations analysis, the pedestrian elements in the study area were considered to be part of a non-CBD area.

For corners in non-CBD areas, the average pedestrian space that is considered acceptable ranges from LOS A to LOS C. If the pedestrian space deteriorates to worse than LOS C (less than 24.0 ft^2/p), significant impacts are determined based on the following sliding scale:

- If the average pedestrian space under the No-Action condition is greater than 26.6 ft^2/p, then a decrease to 24.0 ft^2/p or less under the With-Action condition is considered a significant impact.
- If the average pedestrian space under the No-Action condition is between 5.1 and 26.6 ft^2/p, a decrease in space under the With-Action condition should be considered significant if it is greater than or equal to ((No-Action pedestrian space ft^2/p / 9.0) – 0.31). The With-Action condition increments are provided in Table 16-12 in the *CEQR Technical Manual*.
- If the average pedestrian space under the No-Action condition is less than 5.1 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.2 ft^2/p under the With-Action condition is considered a significant impact.

Existing Conditions

Once the project characteristics have been defined, baseline conditions (the "Existing condition") are established for pedestrians.

Pedestrian Conditions

The existing operations of the study area's sidewalks and corner reservoirs were assessed during the four peak hours (Weekday AM, Weekday MD, Weekday PM, and Saturday MD). Specific elements analyzed were selected based on meeting the criteria of a projected pedestrian volume increase of more than 200 pedestrians per hour at any sidewalk, crosswalk, or corner reservoir during at least one of the four peak hours. The analysis was performed at one corner location within the study area.

Pedestrian (crosswalk and corner reservoir) counts were conducted in June 2022 during the four peak periods. These counts were summarized into one-hour intervals. A field inventory was performed to determine the geometric characteristics of the pedestrian study elements to be used in the pedestrian capacity analyses.

As presented in **Table 2.16-7**, the corner reservoir included in the transportation analysis operates at LOS A during all four peak hours in the Existing condition.

Table 2.16-7: 2022 Existing Condition Level of Service Analysis

Location	Available Circulation Space (ft^2/p)				Corner Circulation LOS			
	Weekday			Sat	Weekday			Sat
	AM	MD	PM	MD	AM	MD	PM	MD
Hamilton Avenue and Mill Street (SW corner)	1387	1024	1345	1298	A	A	A	A

Future Without the Proposed Project

The future without the Proposed Action (the "No-Action condition") builds on the Existing condition analysis by incorporating background growth, other nearby projects expected to be completed by the project analysis year (2026), and anticipated changes in the transportation network. The No-Action condition analysis focuses on conditions in 2026. The analysis of the No-Action condition serves as the baseline to which the future condition with the Proposed Project was compared to identify potential impacts.

The *CEQR Technical Manual* guidelines (Table 16-4) provide an annual background growth rate for this area of Brooklyn of 0.50 percent for the first five years and 0.25 percent for the years beyond. Therefore, an annual growth rate of 0.50 percent was applied, over a period of four years, to the 2022 Existing condition volumes to develop the 2026 No-Action condition background pedestrian volumes.

Under the No-Action condition, the Projected Development Site would remain under the existing zoning designations with no additional development.

No planned substantial development projects, roadway improvements or anticipated changes in the transportation network were identified to be implemented by 2026 in the study area.

Pedestrian Operations

Pedestrian trips associated with general annual background growth of 0.50 percent for four years were added to the Existing condition volumes to generate the No-Action condition volumes to be used in the No-Action pedestrian analysis during all four peak hours.

As presented in **Table 2.16-8,** the corner reservoir included in the transportation analysis would continue to operate at LOS A during all four peak hours in the 2026 No-Action condition.

Table 2.16-8: 2026 No-Action Condition Level of Service Analysis

Location	Available Circulation Space (ft^2/p)				Corner Circulation LOS			
	Weekday			Sat	Weekday			Sat
	AM	MD	PM	MD	AM	MD	PM	MD
Hamilton Avenue and Mill Street (SW corner)	1373	1014	1332	1285	A	A	A	A

Future With the Proposed Project

The No-Action condition analysis forms the future baseline to which projected trip increments associated with the Proposed Project are added to formulate the future "With-Action condition."

The With-Action development scenario for the Proposed Project considers the following incremental development and the Projected Development Site:

- 15,144 gsf of community facility space
- 9,462 gsf of local retail space
- 42,727 gsf of commercial office space
- -1,020 gsf of light industrial space

Pedestrian Operations

Trips associated with the Proposed Project were added to the No-Action pedestrian network to generate With-Action peak hour volumes for all four peak hours.

The With-Action condition results for the corner reservoir location was compared with the No-Action condition results for all four peak hours. As shown in **Table 2.16-9,** the corner reservoir

would continue to operate at LOS A during all four peak hours. Therefore, the Proposed Project would not result in any significant adverse transportation-related impacts.

Table 2.16-9: 2026 With-Action Condition Level of Service Analysis

Location	Available Circulation Space (ft^2/p)				Corner Circulation LOS							
	Weekday			Sat	Weekday						Sat	
	AM	MD	PM	MD	AM		MD		PM		MD	
Hamilton Avenue and Mill Street (SW corner)	357	237	278	273	A		A		A		A	

2.6.4 Street User Safety Assessment

In conjunction with a Detailed Traffic and/or Pedestrian Analysis, an assessment of street user safety may be appropriate. The key issue to be resolved in safety assessments is whether the street users, with particular focus on bicyclists and pedestrians, will be at increased risk for involvements in crashes due to the Proposed Action.

Crash data for the nine study area intersections were obtained from NYC DOT for the period between 2015 – 2019. The data obtained quantify the total number of reportable crashes (involving fatality, injury, or more than $1,000 in property damage), fatalities, and injuries during the study period, as well as the yearly breakdown of vehicular crashes with pedestrians and bicycles at each location.

According to the *2021 CEQR Technical Manual* a high crash location is defined as a location identified along a Vision Zero corridor/intersection[8] or with 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicycles injury crashes in any consecutive 12 months of the most recent 3-year for which data is available. If any high crash locations are identified, practicable measures to enhance pedestrian/bicycle safety at these locations will be described. There are no Vision Zero, Senior Pedestrian Focus Areas (SPFAs) or Truck Priority Safety Corridors within the study area.

Table 2.16-10 depicts the total crash characteristics by intersection during the study period, as well as a breakdown of pedestrian and bicycle crashes by year and location. Review of the dates of the incidents identifies no consecutive 12-month period exceeding the thresholds for high crash locations. As no study intersections are high crash locations, no further analysis is warranted regarding vehicular and pedestrian safety.

[8] Vision Zero seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside of a motor vehicle, whereas Vision Zero corridors & intersections are identified as locations that disproportionately account for pedestrian fatalities and severe injuries thus prioritizing them for safety interventions.

Table 2.16-10: Crash Data Review

CENTRE MALL / CENTRE STREET / CLINTON STREET					
Year	**Cr**	**Bi Inj**	**Ped Inj**	**Total Bi/Ped Inj**	**Mot Inj.**
2017	1	0	0	0	0
2018	1	0	0	0	0
2019	1	0	0	0	1
Total	**3**	**0**	**0**	**0**	**1**
CLINTON STREET / MILL STREET					
Year	**Cr**	**Bi Inj**	**Ped Inj**	**Total Bi/Ped Inj**	**Mot Inj.**
2017	1	0	1	1	0
2018	1	0	0	0	0
2019	0	0	0	0	0
Total	**2**	**0**	**1**	**1**	**0**
COURT STREET / GARNET STREET					
Year	**Cr**	**Bi Inj**	**Ped Inj**	**Total Bi/Ped Inj**	**Mot Inj.**
2017	2	0	1	1	2
2018	5	0	0	0	1
2019	0	0	0	0	0
Total	**7**	**0**	**1**	**1**	**3**
COURT STREET / GOWANUS EXPRESSWAY / HAMILTON AVENUE					
Year	**Cr**	**Bi Inj**	**Ped Inj**	**Total Bi/Ped Inj**	**Mot Inj.**
2017	10	1	1	2	8
2018	22	1	3	4	6
2019	10	2	1	3	4
Total	**42**	**4**	**5**	**9**	**18**

Data source: NYSDOT/DMV(2017-2019)
There is no fata in the intersections (2017-Present)
Fatal data source : NYCDOT/NYPD (2017-present)
data updated as on July 6,2022

Cr = Crash
Bi Inj = Bicycle Injury
Ped Inj = Pedestrian Injury
Mot. Inj = Motorist Injury

2.7 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 quality, defined as pollutant levels in the surrounding environment to which the public has access, 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.

Air Pollutants and Applicable Standards and Guidelines

The U.S. Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for seven of the most common air pollutants—known as "criteria" pollutants (carbon monoxide (CO), lead, nitrogen dioxide (NO_2), ozone, relatively coarse inhalable particulates (PM_{10}), fine particulate matter ($PM_{2.5}$), and sulfur dioxide (SO_2). The presence of these pollutants in ambient air is generally due to diverse and widespread sources of emissions. As required by the Clean Air Act, EPA periodically conducts comprehensive reviews of the scientific literature on health and welfare effects associated with exposure to the criteria air pollutants. The NAAQS have been adopted as the ambient air quality standards for the State of New York.

Background concentrations were obtained from the New York State Department of Environmental Conservation (NYSDEC) 2020 annual report at the nearest monitoring station(s). The monitoring station(s) is a federally-mandated station(s), part of the network maintained by the NYSDEC. **Table 2.7-1** shows the primary NAAQS and background concentrations from the nearest federally-mandated monitoring station(s) of the pollutant(s) that a detailed analysis was conducted for.

Table 2.7-1: Background Concentration at the NYSDEC Nearest Monitoring Station

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
$PM_{2.5}$	24-Hour	35 μg/m^3	19.2 μg/m^3	Division Street
	Annual	12 μg/m^3	9.1 μg/m^3	
CO	1-Hour	35 ppm	1.99 ppm	CCNY
	8-Hour	9 ppm	1.50 ppm	

In addition to the NAAQS, the *CEQR Technical Manual* requires that projects subject to CEQR apply a $PM_{2.5}$ and 8-hour CO significant impact criteria (based on concentration increments). The *CEQR Technical Manual de minimis* criteria set allowable incremental increase in CO and $PM_{2.5}$ concentrations that would result as a consequence of a proposed project. CO criteria set the minimum change in 8-hour average concentration that constitutes a significant environmental impact. Significant increase of CO concentrations in New York City are:

- An increase of 0.5 parts per million (ppm) or more in the maximum 8-hour average CO concentration at a location where the predicted No-Action 8-hour concentration is equal to 8 ppm or between 8 ppm and 9 ppm; or
- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8 ppm.

$PM_{2.5}$ significant impact concentrations are evaluated as follows:

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.1 μg/m^3 at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or for mobile sources, at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations).
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 μg/m^3 at any receptor location for stationary sources.

$PM_{2.5}$ *de minimis* are 24-hour concentration increment of 7.9 μg/m^3, and annual $PM_{2.5}$ concentration increments of 0.3 μg/m^3 for stationary source and 0.1 μg/m^3 for mobile source on a neighborhood scale. Eight-hour CO *de minimis* is 3.75 parts per million.

2.7.1 Mobile Sources

Screening Assessment

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 creation of a covered roadway or affect any covered roadway. Peak hour trip generation is far below the 170-car threshold, as per the transportation section, as potentially warranting further assessment. 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.

As per the vehicular assignment provided in the Transportation chapter, the worst case of maximum incremental trip-ends generated by the project is 43 at the intersection of Mill Street and Hamilton Avenue during the Weekday PM peak hour. Under the guidance with DCP in consultation with DEP, the Proposed Project is not expected to create any potential significant adverse air quality impact from mobile source. As such, detailed mobile source HDDV impact analysis is not warranted. However, the project would result in operable windows or air intakes within 200 feet of an atypical roadway. Accordingly, an Atypical Roadway analysis is provided below.

Atypical Roadway

According to the *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadway(s) may result in significant adverse mobile source air quality impacts.

The proposed project consists of a single development site, located at 150 Mill Street (Block 552, Lot 13). The Reasonable Worst-Case Scenario (RWCDS) would facilitate a 10-story, 143-foot tall, building. As the Projected Development Site is located approximately 15 feet from the Gowanus Expressway, a detailed analysis is required.

Significant impact concentrations for atypical roadway analysis were evaluated as follows:

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard.
- A CO increase of more than half the difference between baseline (i.e., No-Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8 ppm.
- The NAAQS for 1-hour CO and annual $PM_{2.5}$.

Mobile source effect on air quality is associated with vehicular related emissions and the pollutants' dispersion. Emissions of vehicular mechanical components (exhaust, crank case, break ware, and tire wear) were generated with the EPA's MOVES. Fugitive road dust emissions were added to estimate total particulate matter emissions. The pollutants' concentrations at sensitive receptors were modeled with the EPA's CAL3QHCR Gaussian dispersion model.

Next to the Projected Development Site, the Gowanus Expressway (I-278) northbound traveling lanes fork to the Brooklyn-Queens Expressway (BQE) and the Hugh L. Carey Tunnel, and the BQE and Hugh L. Carey Tunnel southbound lanes merge into the Gowanus Expressway. The highway is approximately 45 feet above grade near the Projected Development Site.[9] Elevation points at the highway, approximately 1,000 feet in each direction from the Projected Development Site, were used to calculate the highway's gradient. This included the Gowanus Expressway, the BQE, and the Hugh L. Carey Tunnel roadway.

Hourly traffic counts and vehicle classifications at the Gowanus Expressway was obtained from the NYSDOT for station 020015. Hourly traffic counts and vehicle classifications at the Hugh L. Carey Tunnel roadway was obtained from the *2016 NYC Bridge Traffic Volumes* Report. Traffic on the BQE segment(s) was derived from the other roadways traffics. In addition, the NYSDEC county database was used to further characterize type of vehicles. e.g., intercity bus, transit bus, and school bus. Traffic annual background growth rate, obtained from the *CEQR Technical*

[9] https://data.cityofnewyork.us/Transportation/Elevation-points/szwg-xci6

Manual, was used to project traffic to the Build year. Vehicle's speeds were obtained from UBER Movement for periods of the weekday.[10] A Tier 1 approach, using the peak-hour traffic, was used to predict the 24-hour $PM_{2.5}$. Annual $PM_{2.5}$ was predicted by applying the weighted average emission per period of the day (early morning, AM, midday, PM, and evening).

The EPA's MOVES2014b emission factor algorithm was used to compile the CO and $PM_{2.5}$ emission factors. MOVES can be used to calculate emission rates of criteria air pollutants, greenhouse gas emissions, and some hazardous air pollutants for both on-road motor vehicles and non-road equipment. MOVES models calculate emissions at the national, county, and project level by use of databases and by specifying the characteristics (Run Specification) of the scenario that is modeled. The MOVES model was run at the project scale, where inspection/maintenance, fuel data (fuel properties, distribution, and engine technology), age distribution, and meteorology, were all obtained from the NYSDEC for the borough of Brooklyn (traffic conditions were discussed above). Links (roadway segments) in MOVES for the expressway(s) specified lengths of 1,000 feet. The links' gradients were accounted for in the MOVES model.

Peak hour emission factors, corresponding to the maximum hourly traffic, were compiled for each season. The greatest emission, for each pollutant independently, were used in the dispersion analyses. Annual particulate emission factors were compiled for the five periods of the day (early morning, AM, Midday, PM, and evening) during the month of January, when maximum emission was predicted. Dust generated by vehicles traveling on paved roadways were added to estimate total particulate matter emissions for the short-term analysis (annual fugitive dust emission is negligible, based on similar types of analyses under CEQR. A silt loading factor of 0.015 g/m^2 (for expressways) was applied, based on the *CEQR Technical Manual*. In addition, a conservative assumption of "dry" road condition was used for the short-term calculation (precipitation reduced silt loading).

Dispersion analysis was conducted using the EPA's CAL3QHCR dispersion model version 13196. All models specified settling and deposition velocities of 0-meter per second, 60-minute averaging time, and urban surface roughness of 108-centimeter, which is generally the most conservative. 1-hour CO concentration was predicted using the emulate CAL3QHC meteorology data, specifying 10-deg incremental wind vector direction, 1-meter per second wind speed, natural stability, and 285.5 Kelvin, and 1,000-meter mixing height. $PM_{2.5}$ concentrations were predicted with model-ready meteorology data, obtained from the DCP. The Gowanus Expressway and the BQE were modeled as above grade bridge type roadways. The Hugh L. Carey Tunnel roadway included at grade roadway north of Henry Street, fill between Henry and West 9th Street, and bridge otherwise. Elevation point data[11] were used to determine the links height above grade.

[10] https://movement.uber.com/?lang=en-US
[11] https://data.cityofnewyork.us/Transportation/Elevation-points/szwg-xci6

A persistence factor of 0.7 was applied to the 1-hour CO concentration to predict the 8-hour CO concentration. Receptors at the Projected Development Site were placed around the lot outer perimeter from ground level to rooftop height in spaced intervals.

The predicted concentrations of the 24-hour $PM_{2.5}$ and CO 8-hour were evaluated with the NYC Guideline (*de minimis*); the annual $PM_{2.5}$ and 1-hour CO predicted concentrations were added to the background concentrations, and results evaluated with the NAAQS. **Table 2.7-2** shows the dispersion analysis results.

Table 2.7-2: Atypical Roadway Dispersion Analysis Results

Pollutant and Averaging Time	Modeled Concentration	Background Concentration	Evaluated Concentration	Threshold Concentration	Threshold Standard
$PM_{2.5}$ 24-hour	3.60 µg/m^3	N.A.	**3.60 µg/m^3**	**7.90 µg/m^3**	*de minimis*
$PM_{2.5}$ Annual	0.68 µg/m^3	9.1	**9.8 µg/m^3**	**12 µg/m^3**	NAAQS
CO 1-hour	0.49 ppm	1.99	**2.48 ppm**	**35 ppm**	NAAQS
CO 8-hour	0.34 ppm	N.A.	**0.34 ppm**	**3.75 ppm**	*de minimis*

As seen in **Table 2.7-2**, the 24-hour $PM_{2.5}$ and 8-hour CO concentrations do not exceed the *de minimis,* and the annual $PM_{2.5}$ and 1-hour CO concentrations are within the NAAQS. Therefore, no significant adverse air quality impacts were predicted at the Projected Development Site from the emissions associated with the vehicular traffic on the Gowanus Expressway, and as such, there is no reason to believe that the emissions generated at the nearby highway road segment(s) would result in significant adverse air quality impacts.

2.7.2 Stationary Sources

Project HVAC Systems Analysis

The stationary source analysis will study the potential impacts of a 10-story, 143-foot-tall, 67,336 GSF building to be constructed pursuant to the Proposed Action on Projected Development Site 1 (Block 522, Lot 13). The building would be a 67,336 GSF (64,345 ZSF; 6.50 FAR), 10-story plus cellar building that rises to a height of 143 feet (155 feet to the top of the bulkhead). The building would include 9,462 GSF (7,779 ZSF) of ground floor commercial retail, 15,144 GSF (14,832 ZSF) of community facility floor area on floors 2 and 3, and 42,727 GSF (41,729 ZSF) of office space on floors 4 through 10. No parking spaces are required within the proposed M1-5 zoning district, and no parking spaces would be provided.

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

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

As outlined in the *CEQR Technical Manual,* 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 building's residential or non-residential use, the square footage of the development that would be served by the system, the height of the building served by the HVAC system and the distance to the nearest building whose height is at least as great as the building served by the HVAC system. The *CEQR Technical Manual* provides a screening analysis based on these factors, which was utilized to determine the potential for significant impacts from the projected building's HVAC system(s).

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.

Per the *CEQR Technical Manual*, the CEQR nomographs depicted on Figure 17-6 of the *CEQR Technical Manual Appendices* were used. This stationary source screen is a generic screen that considers the type of fuel oil used in HVAC systems of commercial non-residential buildings. According to 15 RCNY 2-15, no new boiler or burner installations may use No. 6 or No. 4 fuel oils. Therefore, the highest-emitting fuel that could be used is No. 2 fuel oil. This nomograph depicts the size of the development versus the 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. **Figure 2.7-1** shows the screening analysis nomograph.

Figure 2.7-1: The Projected Development Site – HVAC Screen Nomograph

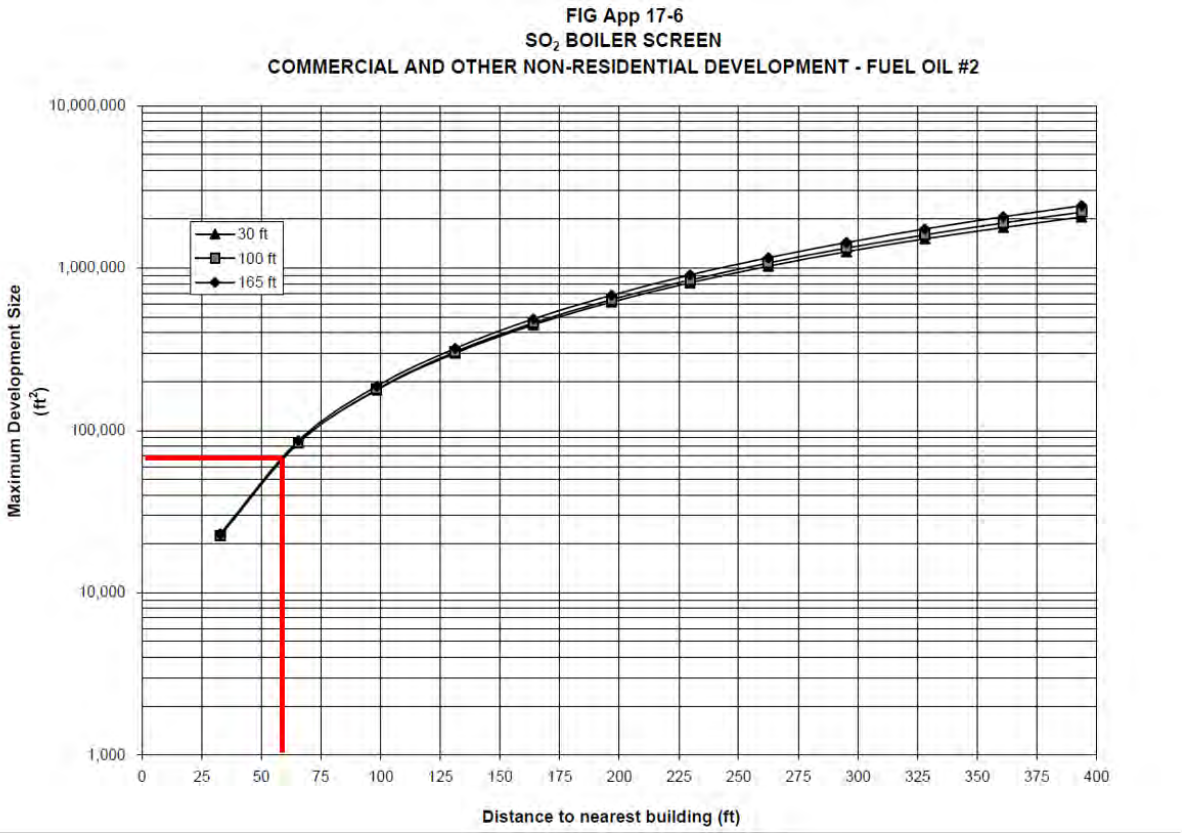


Table 2.7-3 shows the building heights and the screening analyses results.

Table 2.7-3: 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	13	155	67,336	65	Block 476, Lot 7501	500	Pass

Figure 2.7-1 screening analysis shows that a detailed analysis would be required for any existing or planned land uses that are 155 feet or higher and at a distance of less than 65 feet from the Projected Development Site. The closest building of equal or greater height is the 10-story multi-family building located at 505 Court Street (Block 476, Lot 7501), which is approximately 500 feet northeast of the Projected Development Site. Therefore, there would be no HVAC impacts from the Proposed Action, and detailed modeling is not required.

Project HVAC Systems Analysis Conclusion

To ensure that there are no significant adverse impacts related to emissions from the HVAC systems associated with the With-Action development on existing buildings of similar or greater height, certain restrictions would be required regarding fuel type and/or exhaust stack location for some of the development sites. The text of the (E) designation (E-699) would be as follows:

(E-699) Block 552, Lot 13 (Projected Development Site 1): Any new commercial and/or community facility development on the above-referenced property must ensure the heating, ventilating, and air conditioning (HVAC) system and hot water equipment stack is located at the building's highest tier and at least 158 feet above grade to avoid any potential significant adverse air quality impacts

Industrial Emissions Screening

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 the 400-foot study area (See **Figure 2.7-2**) and a DEP CATS search.

400-Foot Study Area

The Affected Area is located within an M1-1 zoning district. The surrounding area within a radius of 400 feet consists primarily of industrial, commercial, and community facility uses. The 400-foot radius was screened for potential sources of industrial emissions. The findings of the screening are shown below in **Table 2.7-4.** No active permits were identified within the 400-foot study area.

Figure 2.7-2: Industrial Emissions Sources

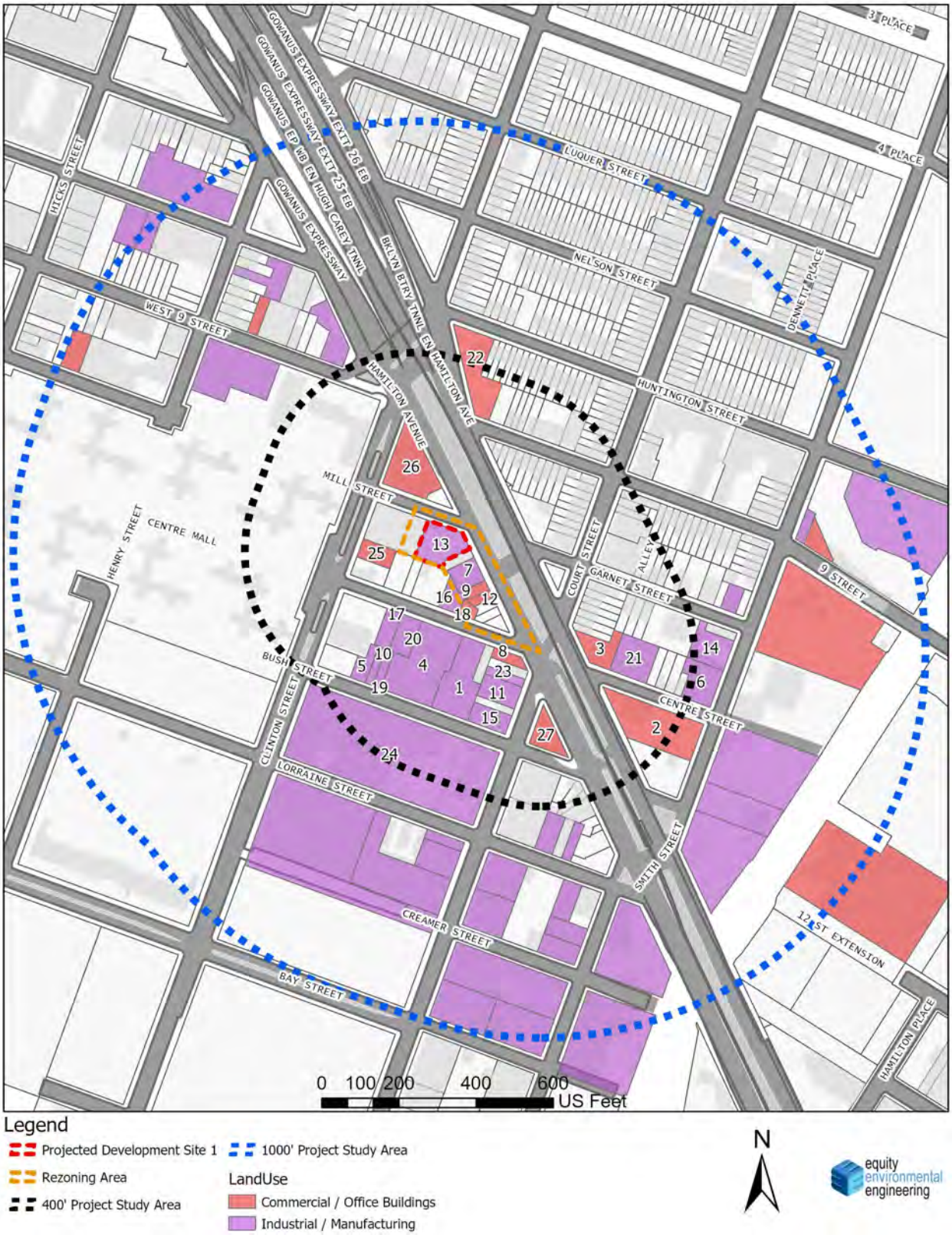


Table 2.7-4: Industrial/Manufacturing within 400 feet of the Affected Area

Permit	Business	Site Key	Block	Lot	Address
No Records Found		1	562	37	211 BUSH STREET
No Records Found		2	482	9	357 HAMILTON AVENUE
No Records Found		3	479	1	353 HAMILTON AVENUE
Cancelled PA044395 / PA044495	Bitton Dye Works Inc	4	562	18	201 BUSH STREET
No Records Found		5	562	49	195 BUSH STREET
No Records Found		6	479	27	508 SMITH STREET
No Records Found		7	552	18	340 HAMILTON AVENUE
No Records Found		8	562	26	582 COURT STREET
No Records Found		9	552	21	346 HAMILTON AVENUE
No Records Found		10	562	47	197 BUSH STREET
No Records Found		11	562	29	588 COURT STREET
No Records Found		12	552	22	348 HAMILTON AVENUE
No Records Found		13	552	13	150 MILL STREET
No Records Found		14	479	23	504 SMITH STREET
No Records Found		15	562	33	596 COURT STREET
No Records Found		16	552	31	157 CENTRE STREET
No Records Found		17	562	14	144 CENTRE STREET
No Records Found		18	552	29	159 CENTRE STREET
No Records Found		19	562	46	199 BUSH STREET
No Records Found		20	562	16	150 CENTRE STREET
Expired PB012413	Other Half Brewing Company	21	479	37	191 CENTRE STREET
Cancelled GA001991	Gas Station	22	381	9	289 HAMILTON AVENUE
No Records Found		23	562	28	586 COURT STREET
Various Cancelled PA105872 / PA105972 / PA106072 / PA106272 / PA191872	Sapolin Paints, Metropolitan Consolidated	24	572	1	183 LORRAINE STREET
No Records Found		25	552	3	603 CLINTON STREET
No Records Found		26	541	1	593 CLINTON STREET
Cancelled PB047711	Verizon Wireless	27	481	1	561 COURT STREET

1,000 Foot Study Area

As outlined in the *CEQR Technical Manual*, projects that would introduce new uses near major sources, large sources, and odor-producing facilities may result in potentially significant adverse air quality impacts. The study area considers major sources, large sources, and odor-producing facilities within 1,000 feet of the Project Area. Major emission sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits; large emission sources are identified as sources located at facilities which require a State facility permit. Solid waste or medical waste incinerators, asphalt and concrete plants, power generating plants, large boilers of large public facilities for example, and large industrial facilities are typical type of sources requiring these permits. Odor-producing facilities are operations that have the potential to cause discomfort, such as: solid waste management facilities, water pollution control plants (i.e., sewage treatment plants), and incinerators.

A search using the EPA's Envirofacts database was conducted for large source emissions. No existing large combustion sources, such as power plants, cogeneration facilities, etc. are located within 1,000 feet of the Project Area were identified. As such, no analysis was warranted. The surrounding area within a radius of 1,000 feet of the Affected Area was screened for potential large source industrial emissions.

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. In addition, based on the analysis presented above, the Proposed Action would not result in significant adverse impacts related to mobile or stationary source emissions.

2.8 Noise

Introduction

According to the *2021 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. As discussed in the *CEQR Technical Manual*, if the Proposed Action 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.

Noise monitoring was conducted within the Affected Area to assess any potential noise impacts. Vehicular traffic is the predominant source of noise in the area, and Clinton Street, Court Street, and the elevated BQE are all within 1,500 feet of the Affected Area with an unobstructed line of sight. 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 occupants of the proposed development. Additionally, the Proposed Action would introduce project-generated vehicular traffic, and would be located near an existing stationary noise source (daycare playground).

The noise analysis presented in this chapter consists of three parts:

- A Preliminary Noise Passenger Car Equivalent (PCE) Screening Analysis to determine whether project-generated traffic will increase Noise PCEs on adjacent roadways by greater than 100%.
- A Stationary noise analysis to determine future with-action noise levels inclusive of playground-generated noise associated with a daycare located west of the Projected Development Site.
- A determination of the level of attenuation necessary to ensure that interior noise levels satisfy City Environmental Quality Review (CEQR) requirements.

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 2.8-1** 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 acoustic energy 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 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. 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.

Table 2.8-1: 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: 2021 CEQR Technical Manual

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 40-45 dB(A) L_{10} or Ldn, depending on the source. CEPO-CEQR Noise Standards classify noise exposure into four categories: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable.

Table 2.8-2: Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	70 < L10 ≤ 73	73 < L10 ≤ 76	76 < L10 ≤ 78	78 < L10 ≤ 80	80 < L10
Aircraft[A]	65 < DNL ≤ 68	68 < DNL ≤ 71	71 < DNL ≤ 73	73 < DNL ≤ 75	75 < DNL
Train	65 < Ldn ≤ 68	68 < Ldn ≤ 71	71 < Ldn ≤ 73	73 < Ldn ≤ 75	75 < Ldn
Attenuation[B]	(i) 28 dB(A)	(ii) 31 dB(A)	(iii) 33 dB(A)	(iv) 35 dB(A)	See Note c

Note:

A. DNL descriptor based on average values of Ldn over a year period.
B. The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.
C. The required attenuation value is the difference between Lbuild and Linterior, using the appropriate noise descriptor Where:
Lbuild is the projected noise level under the build condition rounded up to the whole number
Linterior is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

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.

Measurement Location and Equipment

Because the predominant noise sources of noise in the area are vehicular movements, noise monitoring was conducted during peak vehicular travel periods, 07:30 am-09:00 am, 12:00 pm-1:30 pm, and 4:30 pm-6:00 pm. Pursuant to *CEQR Technical Manual* methodology, readings on all frontages were conducted for 20-minute periods during three peak periods of vehicular travel. Noise monitoring was conducted using a Type 1 Casella CEL-633 sound meter with wind screen. The monitors were placed on a tripod at a height of approximately five feet above the surface, away from any other noise-reflective surfaces. The monitor was calibrated prior to and following each monitoring session. Periods of peak vehicular around the Affected Area constitute a worst-case condition for noise. An elevated reading was also taken to account for the elevated BQE automobile-generated noise by placing a sound meter on a lift. Noise locations are shown below in **Figure 2.8-1 to Figure 2.8-5**.

Figure 2.8-1: Noise Monitoring Locations

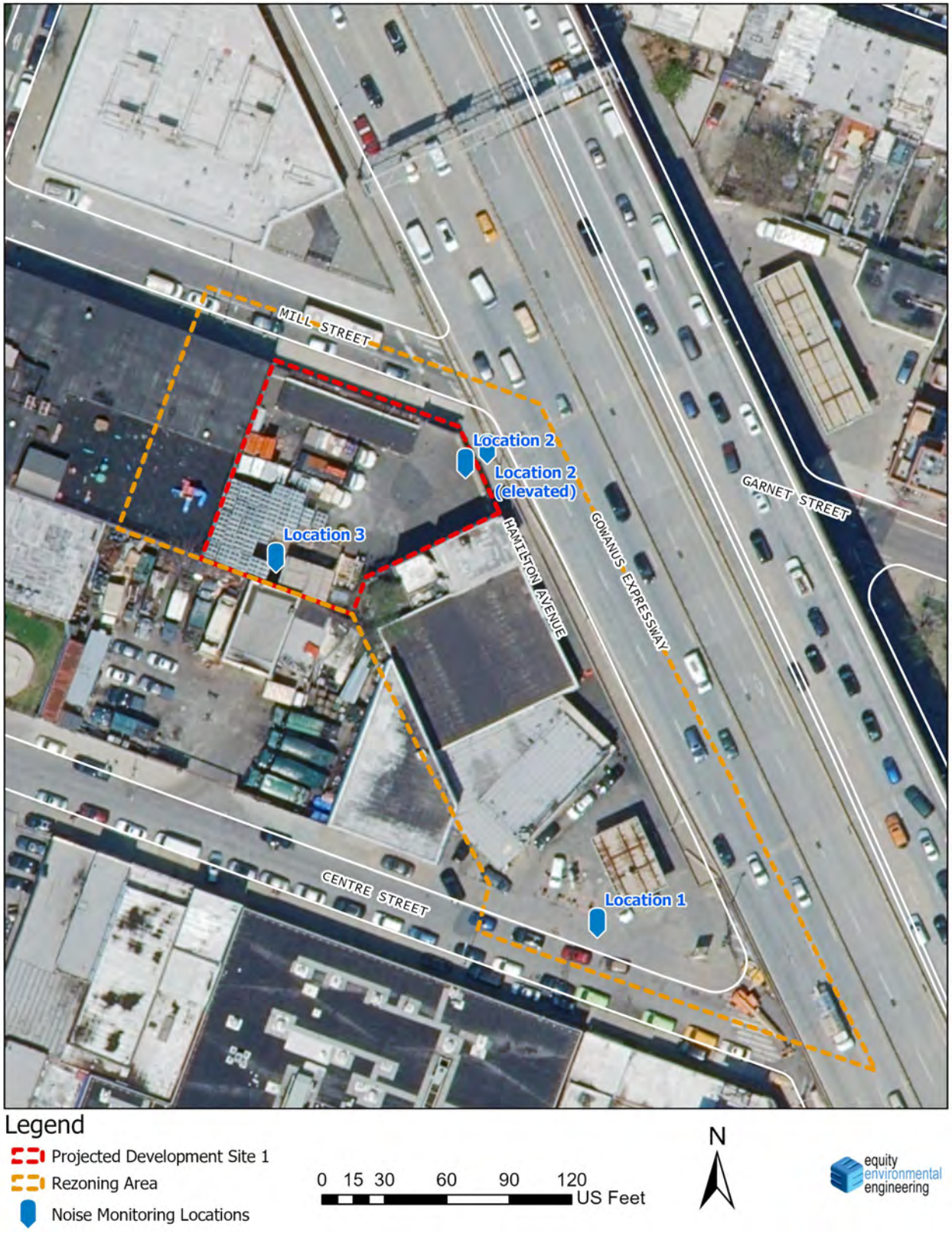


Figure 2.8-2: Location 1 Corner of Centre Street and Hamilton Avenue



Figure 2.8-3: Location 2 Ground Level Facing Hamilton Avenue



Figure 2.8-4: Location 2 Elevated Facing BQE



Figure 2.8-5: Location 3 Rear of Projected Development Site 1



Measurement Conditions

Monitoring was conducted during typical midweek conditions, on Wednesday, May 8, 2019. The weather was approximately 50^0-60^0 Fahrenheit and wind speeds were mild during monitoring. Traffic volumes and vehicle classification were documented during the noise monitoring at Location 1 and Location 2 (ground level).

2.8.1 Existing Conditions

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

Table 2.8-3: Noise (dB) Levels at Location 1

Wednesday, May 8, 2019			
Time	8:31 am – 8:51 am	12:50 pm– 1:10 pm	5:19 pm – 5:39 pm
L_{max}	91.5	85.7	93.8
L_{10}	73.5	72.5	72.5
L_{eq}	72.8	70.3	74.0
L_{50}	70.0	68.5	67.5
L_{90}	67.5	65.5	64.0
L_{min}	64.2	62.1	61.4

Table 2.8-4: Noise (dB) Levels at Location 2 Ground Level

Wednesday, May 8, 2019			
Time	8:07 am – 8:27 am	12:26 pm– 12:47 pm	4:53 pm – 5:13 pm
L_{max}	90.8	90.4	92.9
L_{10}	80.0	79.0	78.5
L_{eq}	76.6	76.2	75.8
L_{50}	75.0	74.0	74.0
L_{90}	71.0	69.5	68.5
L_{min}	67.8	66.8	65.1

Table 2.8-5: Noise (dB) Levels at Location 2 Elevated

Wednesday, May 8, 2019			
Time	8:02 am – 8:24 am	12:24 pm – 12:45 pm	4:51 pm – 5:12 pm
L_{max}	92.7	88.2	88.3
L_{10}	83.0	76.5	76.5
L_{eq}	78.0	73.9	73.6
L_{50}	73.5	72.5	72.0
L_{90}	70.0	68.5	66.5
L_{min}	67.6	65.7	63.4

Table 2.8-6: Noise (dB) Levels at Location 3

Wednesday, May 8, 2019			
Time	7:40 am – 8:00 am	12:01 pm – 12:21 pm	4:29 pm – 4:49 pm
L_{max}	82.2	80.3	74.1
L_{10}	67.5	67.5	65.0
L_{eq}	65.8	65.1	62.8
L_{50}	64.5	63.5	62.0
L_{90}	61.5	61.0	59.0
L_{min}	57.1	56.6	54.7

Tables 2.8-7 through **Table 2.8-9** contain the traffic volumes and vehicle classifications for the morning, noon, and evening monitoring sessions at Location 1 and ground level Location 2.

Table 2.8-7: Traffic Volumes Morning

	Location 1	Location 2
Car/ Taxi	2	439
Van/Light Truck/SUV	1	545
Medium Truck	0	59
Heavy Truck	0	17
Bus	0	14

Table 2.8-8: Traffic Volumes Noon

	Location 1	Location 2
Car/ Taxi	1	376
Van/Light Truck/SUV	1	449
Medium Truck	1	38
Heavy Truck	0	12
Bus	0	10

Table 2.8-9: Traffic Volumes Evening

	Location 1	Location 2
Car/ Taxi	4	406
Van/Light Truck/SUV	2	521
Medium Truck	3	50
Heavy Truck	1	20
Bus	0	12

2.8.2 Mobile Sources

Preliminary Noise PCE Screening

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

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

Pursuant to Section 332.1 of the *2021 CEQR Technical Manual*, to calculate vehicular noise using projections:

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

A preliminary Noise PCE screening was conducted to determine if the Proposed Action would result in an increase to existing Noise PCE values by 100 percent or more. This screening assesses the Noise PCE values of peak hour project-generated vehicles, compared to the Noise PCE values of existing background traffic recorded during noise monitoring at Noise Monitoring Location 2. As shown in **Figure 2.8-1**, due to the proximity of Location 1 to Hamilton Avenue, it is assumed that vehicles traveling on Hamilton Avenue represent the existing Noise PCEs at Location 1. Furthermore, there are no nearby existing noise-sensitive receptor windows along Centre Street that would be expected to experience significant adverse noise increases. Accordingly, existing noise PCEs recorded at Location 2 were referenced for the existing noise PCEs at both Locations 1 and 2. The existing 20-minute traffic volumes at Location 2 (shown in **Table 2.8-7** through **Table 2.8-9 a**bove) were multiplied by three to reflect a one-hour period. The project-generated vehicular trip assignments, as shown in Section 2.6 (Transportation), were referenced to conduct the noise PCE screening at Noise Locations 1 and 2.

As indicated below in **Table 2.8-10** and **Table 2.8-11**, the Proposed Action(s) would not increase existing Noise PCE values by greater than 100% during any peak hour at Noise Location 1. Accordingly, no further analysis is warranted.

As indicated below in **Table 2.8-12** and **Table 2.8-13**, the Proposed Action(s) would not increase existing Noise PCE values by greater than 100% during any peak hour at Noise Location 2, and no further analysis is warranted.

Table 2.8-10: Location 1 Noise PCE Screen

	AM Existing Vehicle Counts (1 hour)	AM Project Generated Vehicle Trip-Ends	With-Action AM Noise PCE Value	MD Existing Vehicle Counts (1 hour)	MD Project Generated Vehicle Trip-Ends	With-Action MD Noise PCE Value	PM Existing Vehicle Counts (1 hour)	PM Project Generated Vehicle Trip-Ends	With-Action PM Noise PCE Value
Car/ Taxi	1317	13	1330	1128	9	1137	1218	13	1231
Van/Light Truck/SUV	1635	0	1635	1347	0	1347	1563	0	1563
Medium Truck	177	0	2301	114	0	1482	150	0	1950
Heavy Truck	51	0	2412	36	0	1712	60	0	2823
Bus	42	0	756	30	0	540	36	0	648
Total Noise PCE	-	-	8434	-	-	6218	-	-	8215

Table 2.8-11: Location 1 Noise PCE Findings

Peak Hour	No-Action/Existing	With Action	Increment	% Increase
AM Noise PCE	8406	8434	28	0%
MD Noise PCE	6189	6218	29	0%
PM Noise PCE	8199	8215	16	0%

Table 2.8-12: Location 2 Noise PCE Screen

	AM Existing Vehicle Counts (1 hour)	AM Project Generated Vehicle Trip-Ends	With-Action AM Noise PCE Value	MD Existing Vehicle Counts (1 hour)	MD Project Generated Vehicle Trip-Ends	With-Action MD Noise PCE Value	PM Existing Vehicle Counts (1 hour)	PM Project Generated Vehicle Trip-Ends	With-Action PM Noise PCE Value
Car/ Taxi	1317	38	1355	1128	34	1162	1218	56	1274
Van/Light Truck/SUV	1635	0	1635	1347	0	1347	1563	0	1563
Medium Truck	177	0	2301	114	0	1482	150	0	1950
Heavy Truck	51	1	2452	36	2	1767	60	0	2832
Bus	42	0	756	30	0	540	36	0	648
Total Noise PCE	-	-	**8498**	-	-	**6298**	-	-	**8267**

Table 2.8-13: Location 2 Noise PCE Findings

Peak Hour	No-Action/Existing	With Action	Increment	% Increase
AM Noise PCE	8406	8498	92	1%
MD Noise PCE	6189	6298	109	2%
PM Noise PCE	8199	8267	68	1%

2.8.3 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.

The design and specifications for mechanical equipment – such as heating, ventilation, and air conditioning – would incorporate sufficient noise reduction to comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code, Subchapter 5, §24-227, the New York City Department of Building Code. This would ensure that mechanical equipment does not result in any significant increase in noise levels, either by itself or cumulatively with other project noise sources.

A stationary noise analysis was conducted to determine future with-action noise levels inclusive of playground-generated noise associated with Strong Place for Hope daycare, located at 595 Clinton Street directly west of the Projected Development Site. The daycare play area is located on the roof of the first floor building, as shown below in **Figure 2.8-6**.

Playground Noise Methodology

To determine the potential noise impacts of the play area on facades affected by existing play area noise, the measurements and procedures outlined in a study conducted by AKRF entitled, "Development of Noise Assessment Method for School Playground Noise." were referenced. The study, conducted for the New York School Construction Authority (SCA), included noise monitoring at nine schools (one early childhood center, four elementary schools, three intermediate schools, and one high school) and provides the results for hourly equivalent (Leq) noise levels by grade composition, as shown below in **Table 2.8-14**. This study has been widely used and recognized for assessing school playground noise impacts for previously approved projects subject to environmental review by the New York City Department of City Planning (DCP), the New York City Department of Environmental Protection (DEP), and the SCA.

Table 2.8-14: Maximum Playground Boundary Noise Level in Leq

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

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

As shown in **Table 2.8-14** above, the Early Childhood Center School (71.5 dBA) noise level was selected as the referenced noise level from the boundary of the play area. Calculations were evaluated based on the measurements and procedures outlined in a study conducted by AKRF.

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

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

To predict potential noise impacts at a given distance from a play area boundary, the study suggests a 4.5 dBA reduction in Leq noise levels per doubling of distance at a distance between 40 and 300 feet, with initial reductions of 4.8 dBA at 20 feet, 6.8 dBA at 30 feet, and 9.1 dBA at 40 feet. Noise levels can be estimated with the following equation at sensitive receptor with a direct line of sight to the play area between 40 to 300 feet:

Lp1 = Lp2 – 15*log(d/10)
Where:
Lp1 = the predicted noise level at a specific distance.
Lp2 = the maximum Leq at the boundary of the school play area.
d = the distance from the play area boundary to the sensitive receptor in feet.
In certain situations, these values may overstate play area noise levels.

Future With-Action Conditions

In order to determine Future With-Action noise levels for the southern building façade up to 35 feet from the play area boundary and for the western façade, inclusive of daycare noise, an assessment was prepared by logarithmically adding the noise generated by the play area at the receiver locations to the existing AM, MD, and PM monitored L_{eq} noise levels at each location. In order to determine future building attenuation requirements for the Affected Area, predicted With-Action L10 noise levels were calculated by combining the predicted With-Action Leq and the difference between Leq and L10 monitored noise level or 3 dBA above predicted Leq noise level depending on dominant noise source. The results of the Playground Noise Analysis, and resulting attenuation requirements are shown below in **Table 2.8-15**.

Figure 2.8-6: Adjacent Daycare Play Area and Distances to Noise Monitoring Locations



Table 2.8-15: Future With-Action Noise Levels with Play Area Noise Calculations

Period	Existing L10 Noise Monitoring Location 3	Existing Leq Noise Monitoring Location 3	0 feet from Play Area Boundary			Required Western Façade Attenuation
			Predicted Leq due to Play Area (in dBA)	Predicted Combined Leq (in dBA)	Predicted L10 (in dBA)	
AM	67.5	65.8	71.5	72.5	**75.5**	31
MD	67.5	65.1	71.5	72.4	75.4	
PM	65.0	62.8	71.5	72.0	75.0	
Period	Existing L10 Noise Monitoring Location 3	Existing Leq Noise Monitoring Location 3	35 feet from Play Area Boundary			Required Southern Façade Attenuation - Up to 35 feet from play area boundary)
			Predicted Leq due to Play Area (in dBA)	Predicted Combined Leq (in dBA)	Predicted L10 (in dBA)	
AM	67.5	65.8	64.7	68.3	70.0	28
MD	67.5	65.1	64.7	67.9	**70.3**	
PM	65.0	62.8	64.7	66.9	69.9	

I. For conservative purposes, predicted with-action L10 noise levels were calculated by combining the predicted With-Action Leq and the difference between Leq and L10 monitored noise level or 3 dBA above predicted Leq noise level depending on dominant noise source

II. The highest L10 at each receptor location is shown in **bold**.

III. The above composite window-wall attenuation values are for residential/community facility uses. Commercial office uses would be 5.0 dBA less in each category. All the above categories require a closed window situation and an alternate means of ventilation.

2.8.4 Attenuation Requirements

The *2021 CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For community facility and commercial office uses such as would occur under the Proposed Action, an L_{10} or L_{eq} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure. An L_{10} or L_{eq} of between 70 and 80 dB(A) is identified as marginally unacceptable general external exposure.

The highest recorded L_{eq}[12] at Location 1 was 74.0 dB(A) during the evening period. The highest recorded L_{10} at Location 2 ground level was 80.0 dB(A) during the morning period. The highest recorded L_{10} at Location 2 elevated was 83.0 dB(A) during the morning period. As shown in Table 2.8-5 above, the highest projected L_{10} at Location 3 (western façade) directly abutting the

[12] The Leq exceeded the L10 noise level at noise location 1 during the evening monitoring period, and was therefore identified as the reference noise level at this location.

play area is 75.5 during the morning period, and the highest projected L_{10} (southern façade within 35 feet from the play area boundary) is 70.3 during the midday monitoring period.

To ensure that no significant adverse impacts related to noise occur as a result of the Proposed Action, the following E-Designation would be placed on the Development Site:

The text for E-Designation would be as follows:

E-699

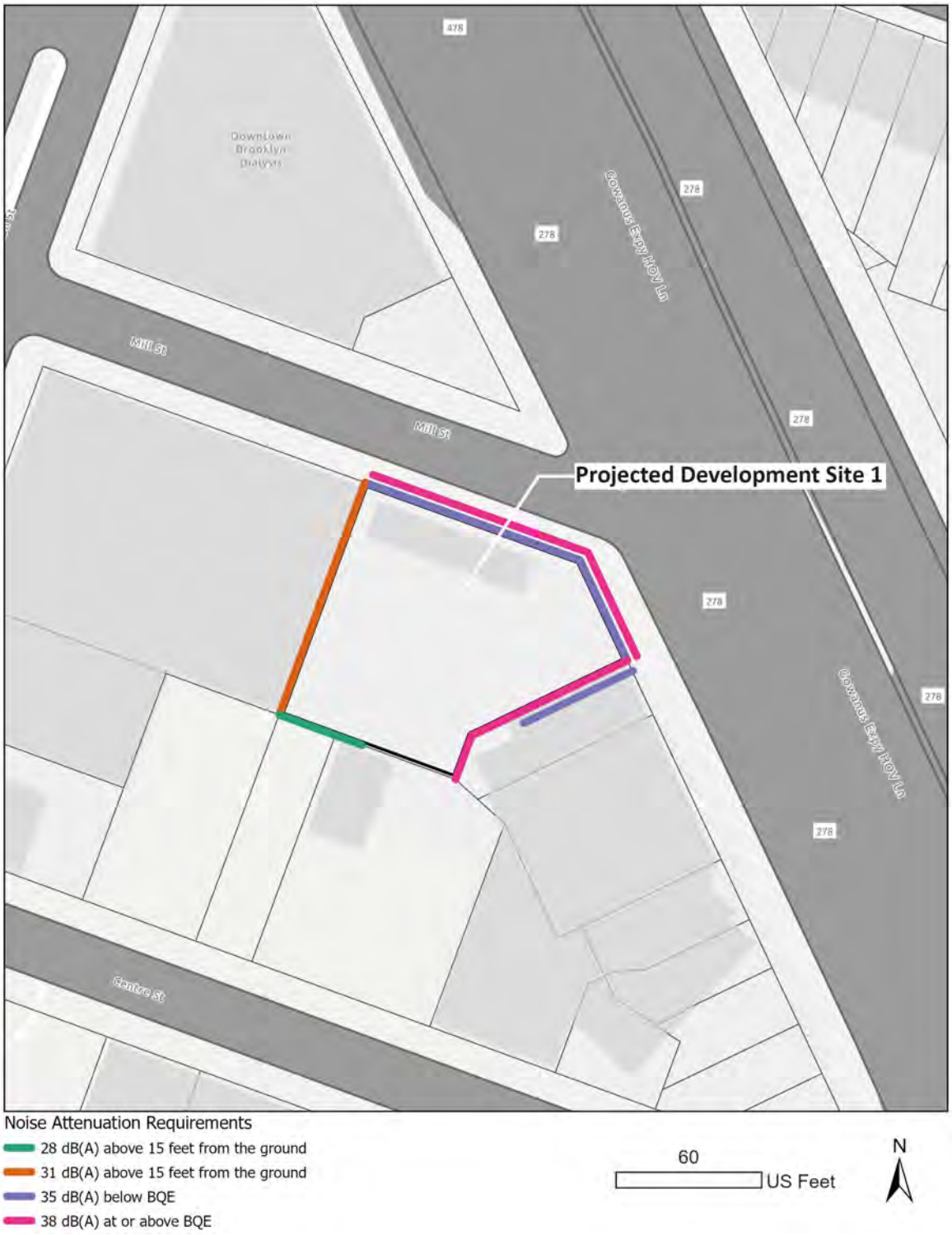
Block 552, Lot 13 (Projected Development Site 1): In order to ensure an acceptable interior noise environment, future community facility/commercial office uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on the northern facades facing Mill Street for floors below the BQE and the northeastern facades facing Hamilton Avenue for floors below the BQE and the southeastern facades within 50 feet of Hamilton Avenue for floors below the BQE and 38 dBA of attenuation on the northern facades facing Mill Street for floors at or above the BQE and on the northeastern facades facing Hamilton Avenue for floors at or above the BQE and on the southeastern and eastern facades for floors at or above the BQE and 31 dBA of attenuation on the western facades facing Clinton Street for floors above 15 feet from the ground and 28 dBA of attenuation on the southern facades facing Centre Street within 35 feet from the western lot line for floors above 15 feet from the ground in order to maintain an interior L10 noise level not greater than 45 dBA for community facility uses or not greater than 50 dBA for commercial office uses as illustrated in the **EAS Figure 2.8-7**. 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.

The facade attenuation requirements above are detailed in **Figure 2.8-7** below.

Conclusion

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

Figure 2.8-7: Noise Attenuation Requirements*



*The above attenuation requirements are for community facility uses. Commercial office uses would require attenuation 5 dBA less.

2.9 Construction

According to the *2021 CEQR Technical Manual*, construction impacts may be analyzed for any project that involves construction or could induce construction. For construction activities not related to in-ground disturbance, short-term construction generally does not warrant a detailed construction analysis. For example, the use of a property for construction staging activities is likely to only warrant analysis if this activity continues for a period of several years. Consideration of several factors, including the location and setting of the project in relation to other uses and intensity of construction activities are used to determine if a project's construction activities warrant analysis in one or more of the following technical areas:

- Transportation
- Air Quality or Noise
- Historic and Cultural Resources
- Hazardous Materials
- Natural Resources
- Open Space
- Socioeconomic Conditions
- Community Facilities
- Land Use and Public Policy
- Neighborhood Character
- Infrastructure

A preliminary construction analysis may be required because the proposed development would result in the following:

- Construction activities are considered long-term (Last longer than two years); or
- Short term construction activities would directly affect a technical area, such as impeding the operation of a community facility.
- Result in the closing, narrowing, impeding of traffic, transit, or obstruction of pedestrian or vehicular routes in proximity to critical land uses.
- Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out.
- The operation of several pieces of diesel equipment in a single location at peak construction.
- Closure of a community facility or disruption in its services.
- Disturbance of a site containing or adjacent to a site containing natural or historic resources.
- Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall.

Analysis

Future No Action Condition

In the future without the Proposed Action, existing conditions are expected to continue. Under the existing M1-1 zoning a majority of the lots within the Affected Area would be significantly developed, and based on current neighborhood trends, existing active use of buildings, and high parking requirement (1 space per 300 sf), no new development is expected to occur.

Future With Action Condition

In the future with the Proposed Action Block 552, Lots 13, 21, 22, 23, 24, 25, and a portion of lots 5, 17, 18, 29, 31 and 34 would be rezoned from the existing M1-1 zoning district to a M1-5 zoning district. The Applicant-Owned Lot 13 would be developed with the Proposed Development.

Projected Development Site 1

The projected development is the same as The Applicant's proposed development. A 10-story, 143-foot-tall, 67,336 GSF building would be constructed. The building would be a 67,336 GSF (64,345 ZSF; 6.50 FAR), 10-story plus cellar building that rises to a height of 143 feet (155 feet to the top of the bulkhead). The building would include 9,462 GSF (7,779 ZSF) of ground floor commercial retail, 15,144 GSF (14,832 ZSF) of community facility floor area on floors 2 and 3, and 42,727 GSF (41,729 ZSF) of office space on floors 4 through 10. No parking spaces are required within the proposed M1-5 zoning district, and no parking spaces would be provided.

It is assumed that ground-floor commercial use would be local retail, that community facility uses would be Use Group (UG) 4 medical office, and floors 4 through 10 would be general office space.

Build Year

The analysis year for the Proposed Action is 2026 based on an 18-month period for the environmental review and ULURP processes and an 18-month construction schedule for the Proposed Development. No other sites are expected to redevelop as a result of the Proposed Action in the foreseeable future, as discussed in detail below and as reflected by the analysis year.

Construction Impact Screening Assessment

Transportation

According to the CEQR Technical Manual, a number of factors should be considered before determining whether a preliminary assessment of the effect of construction on transportation is needed including:

- Whether the project's construction would be located in a Central Business District (CBD) or along an arterial or major thoroughfare;
- Whether the project's construction activities would require closing, narrowing, or otherwise impeding moving lanes, roadways, key pedestrian facilities, parking lanes and/or parking spaces, bicycle routes and facilities, bus lanes or routes, or access points to transit; and
- Whether the project would involve construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap, and last for more than two years overall.

Construction at the Projected Development Site would be considered short term, with fewer than 24 months of construction activities. Accordingly, construction of the development site would not be expected to result in significant adverse impacts on transportation.

Air Quality and Noise

According to the CEQR Technical Manual, an assessment of air quality and noise for construction activities is likely not warranted if the project's construction activities:

- Are considered short-term (less than two years);
- Are not located near sensitive receptors; and
- Do not involve construction of multiple buildings where there is a potential for on-site receptors on buildings to be completed before the final build-out.

The Development Site is located near sensitive receptors. Strong Hope for Place Daycare is located on Block 552, Lot 5, directly west of the Site, and a mixed residential and commercial building is located on Block 552, Lot 17 directly east of the Site. The CEQR Technical Manual states that if a project meets one or more of the criteria above, a preliminary air quality or noise assessment is not automatically required. Instead, various factors should be considered, such as the types of construction equipment (e.g., gas, diesel, electric), the nature and extent of any commitment to use the Best Available Technology (BAT) for construction equipment, the physical relationship of the project site to nearby sensitive receptors, the type of construction activity, and the duration of any heavy construction activity. These measures are discussed below.

Air Quality

The project would make use of the Best Available Technology to minimize impacts on the residential building and daycare in the vicinity of the Projected Development Site, as further discussed below.

As with most construction projects in the City, the proposed project would require the operation of several pieces of diesel equipment at one time during the heavier periods of

construction, such as demolition and excavation. The Applicant would implement the following measures that would minimize air quality and noise impacts on the surrounding community.

- Diesel Equipment Reduction: Construction of the proposed project would minimize the use of diesel engines and use electric engines, to the extent practicable. This would reduce the need for on-site generators, and require the use of electric engines in lieu of diesel where practicable.
- Clean Fuel: To the extent practicable, ultra-low sulfur diesel (ULSD) would be used for diesel engines on the development sites.
- Best Available Tailpipe Reduction Technologies: To the extent practicable, non-road diesel engines with a power rating of 50 horsepower (hp) or greater would utilize the best available tailpipe (BAT) technology for reducing diesel particulate matter (DPM) emissions. Diesel particle filters (DPF) have been identified as being the tailpipe technology currently proven to have the highest PM reduction capability.
- To the extent practicable, construction contracts would specify that all diesel non-road engines rated at 50 hp or greater would utilize DPFs, either installed on the engine by the original equipment manufacturer (OEM) or retrofit with a DPF verified by EPA or the California Air Resources Board, and may include active DPFs if necessary; or other technology proven to reduce DPM by at least 90 percent.
- Utilization of Newer Equipment: To the extent practicable, all non-road construction equipment rated less than 50 hp in the project would meet at least the Tier 2 emissions standard, and construction equipment with a power rating of 50 hp or greater would meet at least the Tier 3 retrofitted with DPF and/or Tier 4 emissions standards where conforming equipment is widely available, and the use of such equipment is practicable.
- Dust Control: Fugitive dust control plans will be implemented as part of the construction process. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction sites. Truck routes within the sites would be watered as needed to avoid the re-suspension of dust. All trucks hauling loose material will be equipped with tight fitting tailgates and their loads securely covered prior to leaving the sites. In addition to regular cleaning by the City, streets adjacent to the site would be cleaned as frequently as needed by the construction contractor. Water sprays will be used for all transfer of soils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.
- Restrictions on Vehicle Idling: In addition to adhering to local laws restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to three minutes, to the extent practicable, for all equipment and vehicles that are not using their engines to operate a loading, unloading, or a processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

Overall, these air emission controls would significantly reduce DPM emissions to a level otherwise achieved by applying the currently defined best available control technologies under NYC Local Law 77. In addition, as stated in the CEQR Technical Manual, all the necessary

measures would be implemented to ensure compliance with the NYC Air Pollution Control Code regulating construction-related dust emissions.

The total construction duration for Projected Development Site 1 is approximately 18 months. Based on the project size and the construction work involved, construction activities effectuated by the Proposed Action would not be considered out of the ordinary or exceptional in terms of intensity and would be of a relatively short duration (less than 2 years). Therefore, with the implementation of emissions control measures that are required by local law, the construction of the development site would not result in any significant adverse impacts on air quality.

Noise

Construction noise is regulated by the NYC Noise Control Code and by EPA's noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7AM and 6PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. If weekend or after hour work is necessary, permits would be required to be obtained, as specified in the NYC Noise Control Code.

The total construction duration for the Projected Development Site is less than 24 months which is considered short-term. As such, the construction of the proposed project is not expected to result in a significant adverse construction noise impact.

Historic and Cultural Resources

The assessment of construction impacts on historic and cultural resources considers the possibility of physical damage to any architectural or archaeological resources identified in the project's historic and cultural resources assessment.

Pursuant to Chapter 22, Section 300 of the *2021 CEQR Technical Manual*, if a project's construction activities are located within 400 feet of a historic or cultural resource, potential hazards should be assessed, such as whether certain character-defining elements of a structure, including but not limited to rooftops or stained glass windows, could be impacted by falling objects from an adjacent construction site.

As discussed in Section 2.3: Historic and Cultural Resources, the Affected Area is within the 400-foot radius of the S/NR eligible Red Hook Houses Campus, and S/NR eligible 604 Clinton Street, located within the Red Hook Houses Campus.

The City has two procedures for avoidance of damage to historic structures from adjacent construction.

1. All buildings are provided some protection from accidental damage through New York City Department of Buildings (DOB) controls that govern the protection of any adjacent properties from construction activities, under Building Code Section 27-166 (C26-112.4). For all construction work, Building Code section 27-166 (C26-112.4) serves to protect buildings by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the code requirements.

2. The second protective measure applies only to designated NYCL and S/NR listed historic buildings that are located within 90 linear feet of a proposed construction site. For these structures, the DOB's Technical Policy and Procedure Notice (TPPN) #10/88 is applicable. The DOB's TPPN 10/88 supplements the standard building protections afforded by the Building Code C26-112.4 by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent LPC-designated or S/NR-listed resources (within 90 feet), and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

The two regulatory mechanisms listed above are not applicable to the Proposed Project as the Red Hook Houses are not located adjacent to or within 90 feet of the Projected Development Site. Pursuant to the 2*021 CEQR Technical Manual*, if the project is not located within 90 feet of a historic or cultural resource that is NYC-landmark eligible, eligible for the State and National Register of Historic Places, or within an eligible New York City Historic District, then no special protections apply. Therefore, the potential for physical disturbance and adverse impacts to those historic and cultural resources should be disclosed.

The Projected Development Site is located 220 feet east of the Red Hook Houses and is buffered by Clinton Street, located approximately 155 feet west measured from the nearest edge of the Projected Development Site. The Projected Development Site is further buffered from the Red Hook Houses by an adjacent intervening building located at 595 Clinton Street (Block 552, Lot 5). Accordingly, the Proposed Development would not introduce adverse construction-related impacts to the Red Hook Houses from ground-borne construction period vibrations, falling debris, and/or collapse. Therefore, significant adverse construction impacts on architectural resources are not expected because of the Proposed Action, and further analysis is not warranted.

Conclusion

Construction activities at the Projected Development Site would be short-term, and would be performed in compliance with the relevant EPA, DEP, DOT and DOB codes and regulations to ensure minimal construction impacts. Based on the preliminary screening provided above, no impacts on transportation, air quality, noise, or historic resources would occur pursuant to the Proposed Action. On the basis of the above analysis, the Proposed Action would not have any significant adverse construction impacts, and further analysis is not required.

APPENDIX A

LPC CORRESPONDENCE AND PHASE IA STUDY

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: 150_MILL
Date Received: 1/15/2020

Properties with no Architectural significance:

1) 595 CLINTON STREET, BBL: 3005520005
2) 150 MILL STREET, BBL: 3005520013
3) 338 HAMILTON AVENUE, BBL: 3005520017
4) 340 HAMILTON AVENUE, BBL: 3005520018
5) 346 HAMILTON AVENUE, BBL: 3005520021
6) 348 HAMILTON AVENUE, BBL: 3005520022
7) 350 HAMILTON AVENUE, BBL: 3005520023
8) 352 HAMILTON AVENUE, BBL: 3005520024
9) 354 HAMILTON AVENUE, BBL: 3005520025
10) 159 CENTRE STREET, BBL: 3005520029
11) 157 CENTRE STREET, BBL: 3005520031
12) 149 CENTRE STREET, BBL: 3005520034

Comments:
LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from 19th Century and Native American occupation for the following Borough, Block and Lot locations within the study area:

3005520005
3005520013
3005520017
3005520018
3005520021
3005520022
3005520023
3005520031
3005520034

Accordingly, the Commission recommends that an archaeological documentary study be performed for these locations to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary (see CEQR Technical Manual 2014).

Portions of the project site appear to be disturbed by 20th century construction of building(s) on the front and rear portions of the lot(s). Portions of these lot(s) not built in the 20th century appear to have low archeological potential. There are no further archeological concerns for the following Borough, Block and Lots within the study area:

3005520024
3005520025
3005520029

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

Gina Santucci

1/24/2020

SIGNATURE DATE

Gina Santucci, Environmental Review Coordinator

File Name: 34736_FSO_DNP_01242020.docx

HISTORICAL PERSPECTIVES INC.

Phase IA Archaeological Documentary Study

150 Mill Street Rezoning
Block 552 / Lot 13
Brooklyn, Kings County, New York

LPC Department of City Planning / LA-CEQR-K

Phase IA Archaeological Documentary Study
150 Mill Street Rezoning
Block 552 / Lot 13
Brooklyn, Kings County, New York
LPC Department of City Planning / LA-CEQR-K

Prepared For:

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Authors:

Faline Schneiderman, M.A., R.P.A.

December 2021

EXECUTIVE SUMMARY

Rezoning has been proposed for 12 lots on Brooklyn's Block 552, on the border between the Red Hook and Carroll Gardens neighborhoods. Block 552 is bounded by Hamilton Avenue on the east, Mill Street on the north, Clinton Street on the west, and Centre Street on the south (Figure 1). The elevated Bronx Queens Expressway (BQE)/Gowanus Expressway runs parallel to and above Hamilton Avenue. Currently, development of Lot 13 has been proposed for a 10-story mixed-use building, including a supermarket, two floors of community facilities, and offices.

As part of the rezoning application, project materials were submitted to the New York City Landmarks Preservation Commission (LPC), which responded that archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from 19th century and Native American occupation on the project site. Accordingly, they recommended that an archaeological documentary study be performed for the site to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary. While the rezoning area includes 12 lots identified by LPC as potentially sensitive for archaeological resources, this study addresses only Block 552, Lot 13, which corresponds to the address of 150 Mill Street.

At the request of the project sponsors, Historical Perspectives, Inc. (HPI) completed a Phase IA Archaeological Documentary Study of the 150 Mill Street rezoning project. The study complies with the guidelines of the LPC (2018). For the purposes of this study, the Archaeological Area of Potential Effect (APE) and the project site are identical, and encompass all of Lot 13, excepting the narrow strip along Hamilton Avenue reserved for future street widening. Research found the following:

Precontact Resources: The project site was relatively level land adjacent to marsh and later a mill pond artificially created after the brackish waters of Gowanus Bay had been dammed. Before this, it was relatively level land adjacent to a marsh and unprotected with no fresh water sources nearby. The lack of any reported Native American sites nearby, the lack of distinguishing topographic features, and the lack of nearby freshwater sources suggests a low sensitivity for extended precontact use. Further, since Native American resources tend to be shallowly-buried, usually within three or four feet of the pre-development surface, they are extremely vulnerable to post-depositional construction. Much of the project site were disturbed by mid-to-late nineteenth century residential and commercial construction. While there were open yards between and around mapped structures, there were likely unmapped cisterns and privies located there that caused an additional degree of subsurface disturbance. Since no soil borings were available for review, subsurface conditions could not be further clarified.

The combination of low sensitivity for the deposition of precontact resources, coupled with post-contact development suggests that the project site has a low potential for hosting precontact cultural remains outside the footprints of historic structures. Therefore, no additional research is recommended.

Historic Resources: Historic maps indicated that the project site was undeveloped until the early to mid-1850s. This portion of Brooklyn was supplied with piped city water and sewers in the latter half of the nineteenth-century, so residents of structures on the project site would have had to rely on backyard shaft features, specifically privies and cisterns but likely not wells due to the proximity of a communal well, for several decades.

During the second half of the nineteenth century, the site was divided into five historic building lots that housed either residential or mixed residential/commercial buildings with multiple families at any given time. Some of the houses were occupied by their owners with additional renters, and other houses appeared to be solely rental properties. Residents were generally middle class working families, many of Irish descent, and later of German descent. Some residents lived on the lots for multiple years, while others stayed for shorter periods.

Each of the lots had open yard areas that are potentially sensitive for shaft features—particularly cisterns and privies—that were constructed prior to the availability of municipal water and sewers, which was late in this part of Brooklyn. Therefore, the project site is sensitive for historic artifacts associated with the domestic and commercial use of the buildings on the project site. As such, Phase IB archaeological testing is recommended to seek intact shaft features. Testing would establish the presence or absence of nineteenth-century shaft features and possible yard deposits associated with the former residents and commercial endeavors on the project site.

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I. INTRODUCTION

Rezoning has been proposed for 12 lots on Brooklyn's Block 552, on the border between the Red Hook and Carroll Gardens neighborhoods. Block 552 is bounded by Hamilton Avenue on the east, Mill Street on the north, Clinton Street on the west, and Centre Street on the south (Figure 1). The elevated Bronx Queens Expressway (BQE)/Gowanus Expressway runs parallel to and above Hamilton Avenue. Currently, development of Lot 13 has been proposed for a 10-story mixed-use building, including a supermarket, two floors of community facilities, and offices (Appendix A).

As part of the rezoning application, project materials were submitted to the New York City Landmarks Preservation Commission (LPC), which responded that:

> LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from 19th Century and Native American occupation on the project site for the following Borough, Block and Lot locations within the study area… Accordingly, the Commission recommends that an archaeological documentary study be performed for this site to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary (see CEQR Technical Manual 2020) (Santucci 1/24/2020).

While the rezoning area includes 12 lots identified by LPC as potentially sensitive for archaeological resources, this study addresses only Block 552, Lot 13 (Appendix D). This lot corresponds to address 150 Mill Street (Figure 2).

At the request of the project sponsors, Historical Perspectives, Inc. (HPI) presents the following Phase IA Archaeological Documentary Study of the 150 Mill Street rezoning project. The study complies with the guidelines of the LPC (LPC 2018). For the purposes of this study, the Archaeological Area of Potential Effect (APE) and the project site are identical, and encompass all of Lot 13, excepting the narrow strip along Hamilton Avenue reserved for future street widening.

II. METHODOLOGY

The present study entailed review of various resources.

- Primary and secondary sources concerning the general precontact period and history of Red Hook and specific events associated with the project site and vicinity were reviewed using materials available online at the Center for Brooklyn History (formerly the Brooklyn Historical Society), the Brooklyn Public Library, the library of HPI, and other online resources.
- Historic maps and photographs, and images were searched using materials from the New York Public Library, the Center for Brooklyn History (formerly the Brooklyn Historical Society), the New York City Municipal Archives, the library of HPI, and using various online websites. These materials provided a chronology of land usage for the project site.
- Land records were reviewed at the Brooklyn City Register's Office, and on familysearch.com, focusing on the nineteenth century.
- Tax assessment records were reviewed at the New York City Municipal Archives. These records include data from 1866 through the end of the nineteenth century for Brooklyn.
- Selected city directories and federal and state census records were reviewed.
- Department of Building (DOB) index records and certificates of occupancy were reviewed online.
- Information about previously recorded archaeological sites and surveys in the area was compiled from data available at the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP), the LPC, and the library of HPI.

In addition, a site visit to discern areas of prior disturbance and current conditions was conducted on November 19, 2021 (Photographs 1-12; Figure 2).

At the time of the writing of this report (December 2021), the Center for Brooklyn History (formerly the Brooklyn Historical Society) was closed for in-person research. Further, while attempts were made to gather detailed sewer and water hook-up dates for historic building lots in the project site, they proved unsuccessful. A research request to the Water and Sewer Record Central Unit of the Bureau of Water and Sewer Operations, New York City Department of Environmental Protection (DEP) was approved, and all available material was shared (Appendix D). Unfortunately, the response indicated that there were no sewer hook-up cards available. With regard to water hook-up dates, a map was supplied showing that each lot in the project site had been hooked to a water line in Mill Street at some point, but dates for when this occurred were not available (Appendix D).

III. CURRENT CONDITIONS AND ENVIRONMENTAL SETTING

A. Current Conditions

The project site consists of Block 552, Lot 13, which historically was comprised of five individual city lots. Currently the lot is undeveloped other than a one-story building on the north side of the block fronting onto and parallel with Mill Street, constructed in 1995 (Photographs 1-12). The site is relatively level, covered in blacktop, and is accessed from an entranceway on Mill Street near its intersection with Hamilton Avenue (Photographs 1 and 2). The perimeter of the site is bounded by extant structures or site fencing (Photographs 3 through 12). Evidence of subsurface disturbance consists of several drainage grates, a manhole, and utility lines accessing the extant building (Photographs 4, 7, 9, 11 and 12). The site has most recently been served for outdoor storage.

B. Topography and Hydrology

The project site is located in an area of south Red Hook that in its natural state was near the waters of a small cove of Gowanus Bay, but how near is unclear. The earliest maps that survive with enough detail to determine topography and hydrology of the area were made in the mid-eighteenth century, after settlement of Red Hook had started and residents already had begun to modify the natural terrain. The 1766/67 Ratzer map (Figure 4) showed the site as on a spit of land projecting southward into wetland meadows, but these were around a mill pond created by the erection of a dam to the south on the bay. In 1782, this same spit of land appeared to contain a small ridge to the northwest of the project site (Stevens 1800; Figure 5). The map also showed that marshland along the margins of the wetland had a series of dikes or canals excavated into them, likely to encourage drainage and allow for boat access.

One of the earliest topographical maps that indicated elevations showed the project site to be between 10-20 feet above sea level and sloping gently from northeast to southwest (Bien and Vermeule 1891). The earliest available map that reported an elevation at the intersection of Hamilton Avenue and Mill Street, the 1903 Hyde atlas, reported an elevation of 13 feet above sea level (Figure 14) while the 1908 Bromley atlas showed the same intersection as 13.8 feet above sea level. Later maps and atlases reverted to the 1903 elevation of 13 feet above sea level. The current elevation is 13.6 feet (NAVD88).

Prior to development in the area, the western end of Block 552 overlapped the mill pond formed by the creation of a large dam to the south on Gowanus Bay (Colton 1849, Figure 4). The project site lots appeared to have been on firm ground, but historic reports suggest they were poorly drained (see Chapter IV). After the dam was breached in the 1850s, the western end of the block reverted to marshland that was later filled.

C. Geology

Long Island is the top of a Coastal Plain ridge formation that is covered with glacial drift, in reality an elevated sea bottom demonstrating low topographic relief and extensive marshy tracts. In the last million years, as glaciers advanced and receded three times, the surficial geology of the island, including the project site, was profoundly altered. “The glacier was an effective agent of erosion, altering the landscape wherever it passed. Tons of soil and stone were carried forward, carving and smoothing the land surface. Massive accumulations of glacial debris were deposited at the margins of the ice sheet, forming a series of low hills or terminal moraines (Eisenberg 1978:19). Circa 18,000 years ago, the last ice sheet reached its southern limit, creating the Harbor Hill moraine that traverses the length of Long Island. The moraine lies several miles south of the project site. North of the moraine, the

complex rising and subsidence of the coastal plain, relieved of its glacial burden, and the rising sea level, caused by the volume of melting ice, created the coastline of embayed rivers and estuaries, with extensive marsh tracts, which stabilized approximately 3,000 years ago (Schuberth 1968:195,199).

D. Soils

According to the soil survey for New York City (Figure 3), the project site is comprised of a single soil mapping unit, UrA, described as Urban Land, Reclaimed Substratum, 0-3 percent slope. This designation suggests the entire site has been subjected to urban landfilling; however, the soil survey notes that the soil units are not definitive at the macrolevel scale of mapping.

No soil borings have been completed within the project site.

IV. BACKGROUND RESEARCH/HISTORICAL OVERVIEW

A. Precontact Occupation

For this report, the word precontact is used to describe the period prior to the use of formal written records. In the Western Hemisphere, the precontact period also refers to the time before European exploration and settlement of the New World. Archaeologists and historians gain their knowledge and understanding of precontact Native Americans in the lower Hudson Valley area from three sources: ethnographic reports, Native American artifact collections, and archaeological investigations.

Based on data from these sources, a precontact cultural chronology has been devised for the New York City area. Scholars generally divide the precontact era into three main periods, the Paleo-Indian (ca. 14,000–9,500 years ago), the Archaic (ca. 9,500–3,000 years ago), and the Woodland (ca. 3,000–500 years ago). The Archaic and Woodland periods are further divided into Early, Middle, and Late substages. The Woodland was followed by the Contact Period (ca. 500–300 years ago). Artifacts, settlement, subsistence, and cultural systems changed through time with each of these stages.

Scholars often characterize precontact sites by their close proximity to a water source, fresh game, and exploitable natural resources (i.e., plants, raw materials for stone tools, clay veins, etc.). These sites are often separated into three categories: primary (campsites or villages), secondary (tool manufacturing, food processing), and isolated finds (a single or very few artifacts either lost or discarded). Primary sites are often situated in locales that are easily defended against both nature (weather) and enemies. Secondary sites are often found in the location of exploitable resources (e.g., shellfish, lithic raw materials).

The archaeological and ethnographic record has demonstrated that Native Americans utilized Brooklyn's resources for thousands of years (Bolton 1922; Cropsey 1925; Denton 1902; Furman 1874). According to historian Bolton, at the time of European Contact, the Canarsee—a local Native American group occupying the Brooklyn area—utilized large tracts of upland fields for maize cultivation, with living and camping activities concentrated along the shore and along year-round watercourses (Bolton 1922:130). The Canarsee were reportedly a western Long Island tribe of the Metoac or Metouwas Confederacy, with the principal site and headquarters at what is now Flatbush. The colonial road leading from what is now Flatbush Avenue southwest into Red Hook, known as Red Hook Lane, was the route of a Native American trail—improved upon by early colonists. There were Native American planting fields in the vicinity of the project site at the terminus of this road, known as "Sassian" (Grumet 1981:70). There also was a sizeable Native American settlement in and around Gowanus Creek, to the north and east of the project site, and Native Americans were known to have fishing camps around Gowanus Bay (Ibid.:11). Last, Bolton identified one precontact site within a mile of the project site, known as Werpoes, located at what are now Hoyt and Baltic Streets in the City of Brooklyn about 4500 feet northeast of the project site (Bolton 1922; Grumet 1981:58).

The NYSOPRHP and the New York State Museum (NYSM) did not report any previously inventoried precontact sites or areas of precontact sensitivity in proximity to the project site. One Native American burial site was identified about a mile to the northeast (Site 04701.017322), and a precontact site, Site 3606, was identified about a mile east near Flatbush Avenue and Warren Street. Parker reported that the site was a camp or village in Brooklyn.

Furman wrote “the surface of this sand hill, which is about 70 feet high, is covered with stones, many of which are completely vitrified, and others nearly decomposed, by the action of fire; and about a foot and a half, and in some places between three and four feet, below the surface is a distinct layer or stratum of ashes and cinders, interspersed with pieces of coarse earthenware and the stone heads of Indian arrows” (Furman 1874:98). In addition, the NYSM reported precontact sensitivity at Governor’s Island in the East River about a mile northwest of the project site.

B. Previously Recorded Archaeological Sites and Surveys

The archaeological site file inventories from the NYSM and the NYSOPRHP indicate that three archaeological sites have been recorded within a one-mile radius of the project site. These sites are summarized in Table 1, below.

Table 1: Archaeological sites within one mile of the Project Site

Site # and Name	Distance from Project Site	Time Period	Site Type
4701.014947 Revolutionary War mass grave	3180 feet southeast	1770s	Burial
4701.019115 Target 31a Sunken Vessel Hull (ex. Point O'Woods V)	1590 feet to northeast	1943	Sunken Ship
4701.020238 Rear Yard of 197 9th Street/Gowanus Pre-K Archaeological Site	3050 feet to southeast	Historic	Domestic

There have been a number of archaeological studies completed within a one-mile radius of the Project Site in Brooklyn. NYSOPRHP reports more than 20 archaeological surveys nearby, many of which were associated with the restoration and rehabilitation of the Gowanus Canal (e.g., AKRF 2019, HPI 2015, Hunter 2004, and Langan 2014). Others were completed for smaller scale projects such as those related to housing initiatives (e.g., AKRF 2015, Geismar 2016). No studies identified additional precontact archaeological sites near the project site.

C. Construction History of the Project Site

The project site falls within a large area originally patented to Frederick Lubbertsen in 1640, which contained all lands located east of Red Hook (and which at the time was a neck of land separated from the mainland of Brooklyn by salt marshes) and west of Gowanus Creek, bounded on the south by Gowanus Bay. The earliest historical use of the project site vicinity was for creation of a large mill pond immediately west prior to 1766, measuring about 20 acres, to feed the I. Seabring Mill located about two and a half blocks northwest of the project site. The mill pond was created by enclosing a cove of Gowanus Bay with two very long mill dams (Stiles 1869:58). The project site, which was located to the immediate east of Seabring’s mill pond, was shown on the 1766/67 Ratzer map as fast land (Figure 4). The mill and pond were known in the later eighteenth and nineteenth centuries as Luquer’s (or Luqueer’s) Mill Pond. To the northeast of the project site, just north of what is now Ninth Street east of Court Street, was another tidal mill constructed by John Rapelje after 1766. The pond was created by slave labor forced to excavate it out of the marsh adjacent to the Gowanus Creek (Stiles 1867:67). Rapelje sold the land to Robert Stoddard in 1794, and in 1799 Stoddard sold the mill and land encompassing the project site to Jordan B. Coles, who maintained ownership until it was sold in 1834 after his death. Coles’ mansion and mill stood more than 500 feet east of the project site (Martin 1834, Figure 6).

The project site vicinity changed dramatically after 1834, the year Brooklyn became a city, and the Coles property was subjected to subdivision and sale. In 1834, the *Long Island Star* reported that more than $90,000 was paid for land sales within the former Jordan Cole’s estate in Red Hook (*Long Island Star* 11/27/1834). Much of the land went to real estate speculators (Appendix B).

Also in 1834, developers pushed for expansion of the street grid from the downtown area over to Red Hook in anticipation of new housing and creation of a city bulkhead line to attract waterfront commerce. A new speculative development group, the Red Hook Building Company, formed to stimulate growth, which provided an impetus to prepare the ground in Red Hook for future construction (Stiles 1869:159). Prior to actual development, marshes and

ponds in the Red Hook area were filled, often by leveling adjacent hills, to create a more level building surface. Grading and filling was completed slowly in the project site vicinity. By the creation of the 1834 Martin survey of Brooklyn, Luqueer's Mill pond to the immediate west of the project site only had been partly filled (Martin 1834, Figure 6; Tolford 1834). While plans were made for future blocks and lots over the pond's footprint, it remained unfilled immediately west of the project site through at least 1849 (Colton 1849, Figure 7). By this time the mill pond had been reduced in size to allow for the creation of Hamilton Avenue adjacent to the project site. By 1850, the mill dam appears to have been completely breached and the western section of Block 552, previously under water, reverted to marsh and was later filled.

While assessments were made for regulating and paving Hamilton Avenue adjacent to the project site in the late 1830s and early 1840s (*Long Island Star* 10/29/1838 and 3/16/1840), a petition to open Mill Street between Columbia Street and Hamilton Avenue adjacent to the project site was not reviewed by the Brooklyn Mayor and Common Council until 1850 (*Brooklyn Daily Eagle* 4/1/1850). And what is now Block 552 Lot 13 was historically divided into five individual building lots numbered, from west to east, 12 through 16. In 1849 these lots were put up for sale again after Lefferts G. Coles and additional heirs of Jordan Coles successfully petitioned the courts to invalidate an earlier sale of several lots in his estate. As a result, the courts permitted the reselling of the following land:

> All those certain lots known and distinguished on a map of the property of Jordan COLES, situated in the city of Brooklyn, on the 17th day of December 1834, filed in the office of the clerk of the county of Kings as lot numbers… 864, 865, 866, 867, 868, 869, 870, 871, 873, 874, 875, 876 on Mill street on said map; and also lots numbers 877,878,879,880 on Clinton street…
>
> All that part of the said mortgaged lands bounded as follows: beginning at a point where the southwesterly side line of Hamilton avenue intersects the north side line at Centre street…thence running westerly on the southwesterly side line of Hamilton avenue two hundred and eight-five feet seven inches more or less to Mill Street, thence westerly on the south side line of Mill street forty-three feet one inch more or less to a point one hundred and ninety feet from Clinton street, thence southerly on a line parallel with Clinton street two hundred feet to Centre street and thence eastwardly on the north side line of Centre street two hundred and fort-six feet eleven inches more or less to the corner of Hamilton avenue and Centre street aforesaid the place of the beginning. (*Brooklyn Daily Eagle* 4/10/1849)

The lots in the first paragraph description appear to have encompassed what later became Lots 12 and 13 at 146 and 148 Mill Street, and land described in the second paragraph encompassed all of what became Lots 14 at 150 Mill Street, and Lots 15 and 16 at 334 and 336 Hamilton Avenue respectively (see Table 2 below). Although specific partition lot numbers were referenced that correlate to an 1834 subdivision plan of Coles' land that has not been located, the more detailed description of these lots in the subsequent sale confirm they were the lots in the project site (Appendix B).

Following the resale of lots on the block in the late 1840s, the project site lots were identified using different numbering schemes including lot numbers, ward numbers, and addresses. Table 2, below, details the varied ways each lot was identified over time and each primary source. Of note, addresses in city directories, particularly during the 1850s and 1860s, were not always consistent for each lot from year to year.

Table 2: Project Site Lot 13 Historic Lot, Ward, and Address Numbers Where Known

1903-1950 (atlases) Lot No. and Address Block 552	**1880-1903 (atlases and directories) Lot No. and Address Block 282**	**1866-69 Old/New (tax assessment lots) Block 146**	**1855 Addresses (directories & 1855 map) Ward 12**	**1849-1852 (maps) Ward 6**
12 – 146 Mill St	30 – 146 Mill St	84		Garnet/Mill St
13 – 148 Mill St	29 – 148 Mill St	85		Garnet/Mill St
14 – 150 Mill St	28 – 150 Mill St	86	1 Mill ?	Garnet/Mill St
15 – 334	27 – 334 Hamilton	57 ½	188 Hamilton	Hamilton

1903-1950 (atlases) Lot No. and Address Block 552	1880-1903 (atlases and directories) Lot No. and Address Block 282	1866-69 Old/New (tax assessment lots) Block 146	1855 Addresses (directories & 1855 map) Ward 12	1849-1852 (maps) Ward 6
Hamilton				
16 – 336 Hamilton	26 – 336 Hamilton	57	190 Hamilton	Hamilton

Using the identifications in the above table, each historic lot was researched to determine the year that it was developed with a residential or mixed residential/commercial structure, established property owners, and when possible, the occupants of structures after their development. The information for each historic lot is presented in Appendix B. Appendix C provides tax photographs from 1939-1941 of the structures on the historic lots. Details of construction on each individual lot are provided herein.

Lot 12

Lot 12, the westernmost of the five lots, measured 25 feet in width by 100 feet in length and was historically given the address of 146 Mill Street throughout the twentieth century. Its west and east borders were located at 140 feet and 165 feet east of the southwest corner of Mill Street and Clinton Avenue. The lot remained vacant through at least 1855 (Martin 1834, Figure 6; Colton 1836, 1849 Figure 7; Dripps 1850, Figure 8; Perris 1855, Figure 9), and before then passed through the hands of several real estate developers in the area who owned many nearby lots, but lived elsewhere in Brooklyn (e.g., John Dimon, John Johnson, Rodney S. Church, Elizabeth A. Wood, and Pardon Kenyon; Appendix B). By 1856 a structure was mapped at the north end of the lot fronting Mill Street (Dripps 1856, 1869, Figure 10). The earliest tax assessment records for this neighborhood date to 1866 when E. A. Wood was assessed for a three-story house and lot (Old Lot 84) with a combined value of $500 (Brooklyn Tax Assessments; Appendix B), even though she had sold the property in 1864 to James and Mary Ward for $350. The Wards may have lived near the lot as early as 1857 when James was listed in a directory as a laborer living on Hamilton Avenue near Mill Street (Lain 1857, 1858). However, the Wards were not found in either the federal or state census records for Ward 12 in Brooklyn from 1860 through 1875, suggesting that they could have been absentee landlords.

In 1871 the lot and house were sold to David Humphrey, who was reportedly living in Ward 12 in 1865 and 1870 with his sons and daughters, but no wife (Appendix B). Humphrey was assessed $300 for the house and lot in 1872/1873, which increased to $500 in 1874 after a new building was constructed. By 1875, Daniel and Bridget Humphrey, David's son and daughter-in-law, were living in the house with both David and brother William, who were boarders. By 1880, the Michael and Kate Flaherty family lived on the property too (Appendix B). The lot was sold by the Humphrey family in 1882 when James Dannaher acquired it. Dannaher continued to be assessed for a 20 foot by 30 foot house on the lot through at least 1899.

Maps and atlases showed a dwelling near the north end of the lot from 1856 through at least 1915 (Dripps 1856, 1869, Hopkins 1880, Sanborn 1886, Bromley 1893, Hyde 1903, Sanborn 1915; Figures 10 through 15). In 1915 it was depicted as a three-story frame dwelling with a small two-story rear addition, with a second extremely small square structure at the south end of the lot (Sanborn 1915, Figure 15). By 1939 it had been razed (Sanborn 1939, Figure 16). The majority of the southern 70 feet of the lot was never depicted as developed.

Lot 13

Lot 13 measured 25 feet in width by 100 feet in length and was historically given the address of 148 Mill Street throughout the twentieth century. Its west and east borders were located at 165 feet and 190 feet east of the southwest corner of Mill Street and Clinton Avenue. While appearing undeveloped in 1850, two structures were shown on the lot by 1855 (Dripps 1850, Figure 8; Perris 1855, Figure 9). Like Lot 12, it had passed between several land speculators before it was sold to Ann Hughes in 1864 (Appendix B). When a building was first constructed on the lot, it was under the ownership of Pardon Kenyon and Elizabeth Wood, speculators. While Elizabeth Wood lived elsewhere in Brooklyn, Pardon Kenyon lived on a lot on the block fronting Centre Street, out of the project site.

Two people by the name of David Hughes, possibly a father and son – one a peddler and the other a laborer, appeared to have lived in the house beginning by at least 1857 when the two were reported in a directory as living on Mill Street near Hamilton Avenue (Appendix B). In 1860, David and Ann Hughes were living in the 12th Ward with an additional family that included John, Margaret, Pat[rick], Michael, and Hugh McMahon, presumably siblings as all were in their late teens and early twenties, and two young children of the Smith family – without their parents listed (Appendix B). By 1865, David Hughes had passed, and Ann Hughes was living in the house with her 10 year old son John Hughes. Ann was reported in directories as a widow from 1867 onward and was assessed for the house and lot from 1866 through 1876, when the building was described as a two-story dwelling. Ann Hughes sold the lot to Adam Lamb in 1884, and at some point it passed to John J. Dannaher. From 1888 through 1892 Dannaher was assessed for two two-story dwellings on the lot, and in 1899 he was assessed for two three-story dwellings: one 20 feet by 25 feet at the front of the lot, and one 15 feet by 25 feet at the back of the lot.

Maps and atlases showed two frame structures on the lot with vacant space between them and behind (south) of the rear dwelling from at least 1855 through at least 1915, although the location of the building at the south end of the lot (the rear) shifted over time and was eventually shown at the far southern end of the lot. At least two outbuildings were shown between the two dwellings, a small square one in the center of the lot and a long rectangular one along its eastern border (Perris 1855; Dripps 1856, 1869; Hopkins 1880; Sanborn 1886; Bromley 1893; Hyde 1903; Sanborn 1915, Figures 9 through 15; compare Figures 12 and 14). While the rear (southern) building was razed by 1939, the northern dwelling stood through at least 1950 and appeared as a two-story frame dwelling in 1939-41 (Sanborn 1939, 1950, Figures 16 and 17, Appendix C). It, too, has since been razed.

Lot 14

Lot 14, like Lots 12 and 13, historically measured 25 feet in width and 100 feet in length and was assigned the address 150 Mill Street throughout the twentieth century. Its eastern lot line was at 190 feet west of Clinton Street and its eastern lot line was 215 feet from Clinton. In 1853 when nine of James McIntyre's vacant lots west of Hamilton Avenue between Mill and Clinton Streets were sold for unpaid taxes, including what is now Lot 14, they were described as "mostly under water," (*Brooklyn Evening Star* 4/19/1853).

The lot first appeared to have been developed between 1852 and 1855 with two frame structures that were situated in a similar configuration to those on adjacent Lot 13 (Dripps 1850, Figure 8; Dripps 1852, Perris 1855, Figure 9). In 1855 the lot was sold to Patrick Flannery, and he and his brother Daniel, laborers, were both listed in the 1856 Directory as living at Mill Street near Hamilton Avenue (Appendix B). Tax, census, and directories reported that Pat(rick) and Mary Flannery and/or their children appeared to have lived on the lot from at least 1856 through at least 1893 (Appendix B). Although Patrick was initially a laborer, he eventually became a grocer. When assessed for taxes from 1872 through 1876, he was reportedly paying between $300 and $350 for a one-story house, while on the 1875 census he was living in a brick building valued at $4000. Additional non-family residents were noted at the same location in 1868 and 1875 (Appendix B). In 1889, the one-story house was replaced by a new two-story house measuring 25 feet in width by 50 feet in depth.

While the 1855 Perris map showed two dwellings on the lot, the next detailed map dating to 1869 showed only one at the north end of the lot fronting Mill Street (Dripps 1869, Figure 10). Mapping in 1880 did not provide enough detail to determine building presence or absence (Hopkins 1880, Figure 11), but the 1886 Robinson atlas showed only one one-story frame building at the south end of the lot, and no structures fronting Mill Street (Figure 12). Between 1893 and 1903 the frame building at the south end of the lot was removed, and a brick building was erected on the northern one-third of the lot fronting Mill Street (Bromley 1893, Figures 13; Hyde 1903, Figure 14). The Sanborn 1903 and 1915 maps reported it as a three-story brick dwelling (Sanborn 1903, 1915, Figure 15). In 1939, the lot was vacant and in 1943, a one-story on-grade three-car garage was constructed at its south end (DOB NB 108307 1943; Sanborn 1939, 1950, Figures 16 and 17).

Lots 15 and 16

Lots 15 and 16 shared a similar history but were occupied by separate structures. Lot 15 was situated at the southwestern intersection of Mill Street and Hamilton Avenue and had the address of 334 Hamilton Avenue from the 1870s onward, although it was for a time also known as 152 Mill Street. The four sided lot was shaped like a

kite, that is that there were two pairs of adjacent sides that were relatively equal to each other. The shortest side measured 18.1 feet on Mill Street, and south on Hamilton Avenue for 20.7 feet. The southern lot line was about 57 feet in length running perpendicular to Hamilton Avenue, and the westernmost lot line was about 55 feet in length running south of and perpendicular to Mill Street (Figure 11).

Lot 16 fronted only onto Hamilton Avenue and historically had the address 336 Hamilton Avenue. It was 25 feet in width on Hamilton Avenue, 69.85 feet along its south lot line, and 57 feet in length along its north lot line (Figure 11).

In 1847 both lots were under the ownership of real estate speculator Rodney S. Church, and by the issuance of the 1850 Dripps map Lot 15 had a structure on it. By 1855 both lots had brick structures fronting onto Hamilton Avenue with small vacant yards behind (Dripps 1850, Figure 8; Perris 1855, Figure 9). An 1856 advertisement in the *Brooklyn Evening Star* announced the pending sale of the following:

> The large 3 story brick house and lot on the S W corner of Hamilton avenue and Mill street. The house is built by day's work in the best manner, contains 15 rooms, and the first story occupied as a store.
>
> Also the large 3 story and basement brick store and dwelling on Hamilton avenue, adjoining the above, built in the best manner; the basement is finished for a saloon, the 2nd story as a chapel, &c; contains 10 large rooms, well worthy the attention of capitalists (*Brooklyn Evening Star* 2/5/1856).

By 1858 Robert Shannon, a liquor dealer of Irish origin, presumably had purchased both lots as he was living at Hamilton Avenue at or near the corner of Mill Street and was assessed for a three-story building on each lot from 1866 through 1876 (Appendix B). Both lots were quit claimed to him in 1874. In 1860, Robert and Jane Shannon and their children were living in Ward 12, and Shannon continued to be listed in directories as a liquor dealer living at the corner of Hamilton Avenue and Mill Street on Lot 15 through 1875.

Other people were also associated with each individual lot such as James Martin on Lot 15, whose address was 334 Hamilton Avenue when he had his liquor licenses revoked in 1878 (*Brooklyn Daily Eagle* 11/15/1878), and William Lennon, who was a liquor dealer residing at 334 Hamilton Avenue in 1879 (*The Brooklyn Union* 6/11/1879). Lennon operated the saloon in the basement (or first floor) through at least 1884 (*Brooklyn Daily Eagle* 11/21/1884), with other families – not the Lennons – listed on the lot in the 1880 Census (Barbary, Van Blunt, Coon, Volument; Appendix B).

By the mid-1870s, the neighborhood was shifting from its predominantly Irish population of families with children to one of German ancestry. In 1873, two residents were identified on Lot 16 at 336 Hamilton Avenue: Charles Oschman (later Ugman) a segar maker, and John Daulton, a laborer (Appendix B). In 1874 it was reported that Thomas Victory of 336 Hamilton Avenue was refused a license by the Board (presumably a liquor license) as a reporter found him "dead drunk last night in a back room of his saloon, and his bar closed up" (*Brooklyn Review* 3/15/1874). In 1875, residents T. Helary and Richard Burns, laborers, were reported living at the site and in 1877 Michael Cavan, laborer, and Mary Behan, widow, were living there. In the 1880s, the population continued to shift in demographics to become more German with slightly less reported occupants of Irish descent (Reininsland, Hoffman, and Stark in the 1880 US Census; Flaherty and McCormack in the 1880 directory; Appendix B). In 1874 the lot was quit claimed by Milford D. Streeter to Robert Shannon, and from 1882 through 1899, D. W. Streeter was assessed for taxes on the lot with the lot measuring 25 feet by 69 feet, and the building measuring 20 feet by 35 feet (Appendix B).

The brick buildings depicted on each lot appear to have remained relatively unchanged from 1855 through 1939 (Perris 1855; Dripps 1856, 1869, Hopkins 1880, Sanborn 1886, Bromley 1893, Hyde 1903, Sanborn 1915, 1939; Figures 9 through 15; Appendix C). A small one-story frame addition had been built on the western end of Lot 15 so that the entirety of the lot was covered sometime between 1903 and 1915 (Figures 14 and 15), and all buildings on the two lots were removed between 1939 and 1950, although no demolition permits were found to establish their exact date of demolition (Sanborn 1939, 1950, Figures 16 and 17).

D. History of Municipal Water and Sewer Availability

Water: Before the neighborhood of Red Hook encompassing the project site was parceled into city blocks and lots in the mid-nineteenth century, it was rural land adjacent to a tidal mill pond. The slow development that crept into the area in the early 1850s spurred the need for potable water by the growing population. In the 1850s, drinking water in most of Brooklyn was provided by communal pumps and every family had its cedar pail and cocoanut dipper for its drinking water from the pumps and cistern water for household purposes (Armbruster 1942:31). In 1850, one such well was sunk about 300 feet east of the project site in Court Street between Centre and Mill Streets (*Brooklyn Daily Eagle* 3/2/1850). In 1852, assessments were made to several individuals, including Rodney S. Church, to sink another well at the corner of Mill Street and Hamilton Avenue (*Brooklyn Daily Eagle* 9/29/1851). Eleven years later in 1862 the well at Mill Street and Hamilton Avenue was ordered to have its pump removed and the "well filled up and the pavement restored" due to the poor quality of the water (*Brooklyn Evening Star* 6/14/1862). Likely residents also had to rely on individual cisterns for water collection, especially after the nearby pump was closed. Cisterns usually were located immediately off the backs of the houses and obtained rainwater via downspouts from the roof of the buildings.

The date of municipal piped water installation in Mill Street adjacent to the project site is unclear as multiple searches through Brooklyn newspapers failed to find any references to initial installation. Piped water in Brooklyn was generally available after 1860, but the 1915 Sanborn map (Figure 15) labeled the water pipe in Mill Street as dating to 1891. Earlier maps and atlases did not depict a water line in Mill Street between Clinton Street and Hamilton Avenue, even though they were depicted on Garnet Street east of Hamilton Avenue by 1880 (Hopkins 1880, Figure 11; Sanborn 1886, Figure 12), and possibly as early as 1863, as reported on the 1915 Sanborn map (Sanborn 1915, Figure 15). Hamilton Avenue appeared to have had water installed by 1860 (Ibid.)

Sewer: A drainage sewer was installed beneath Hamilton Avenue in 1854 (*Brooklyn Daily Eagle* 6/3/1854) but was constructed in response to the need to drain low-lying land between Clinton Street and the Gowanus Bay. In 1859, the City of Brooklyn began work on providing waste sewers under local streets so that houses could then hook into them. The Brooklyn Office of the Sewer Commissioners established sewer districts for the City of Brooklyn in 1859, and construction began in the following years. It does not appear that a waste sewers were made available to project site residents for some time thereafter. An 1875 sewer map showed the project site in District J, with a 12-inch sewer line in Mill (then labeled Garnet) Street and a 30-inch line in Hamilton Avenue (Adams 1875). The dates that these sewer lines were installed is unclear. At least one was replaced or never completed because in 1891 an assessment was made to install sewers at the intersection of Mill Street and Hamilton Avenue to connect to Lots 14 and 15 on what was then Block 282, now Block 552 (*The Brooklyn Citizen* 3/28/1891).

Individual privies likely served the waste disposal needs of early residents in each dwelling prior to sewer availability. Privies were usually located along the back lot line, or between houses if there was a structure along the back lot line.

V. CONCLUSIONS

A. Precontact Sensitivity

From what is known of precontact period settlement patterns on Long Island, most habitation and processing sites that would leave an archaeological footprint are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water. As noted above, the project site was relatively level land adjacent to marsh and later a pond artificially created after the brackish waters of Gowanus Bay had been dammed for a mill pond. Prior to damming, in its original state, and again after the dam was breached ca. 1850, the site was relatively level adjacent to a marsh and unprotected with no fresh water sources depicted nearby. The lack of any reported Native American sites nearby, the lack of distinguishing topographic features, and the lack of nearby freshwater sources suggests a low sensitivity for extended precontact use.

Since Native American resources tend to be shallowly-buried, usually within three or four feet of the pre-development surface, they are extremely vulnerable to post-depositional construction. Much of the project site were disturbed by mid-to-late nineteenth century residential and commercial construction (Figures 8 through 17). While

there were open yards between and around mapped structures, there were likely unmapped cisterns and privies located there that caused an additional degree of subsurface disturbance. Since no soil borings were available for review, subsurface conditions could not be further clarified.

The combination of low sensitivity for the deposition of precontact resources, coupled with post-contact land manipulation and development suggests that the project site has a low potential for hosting precontact cultural remains outside the footprints of historic structures.

B. Historical Sensitivity

Historic maps indicated that the project site was undeveloped until the early to mid-1850s. This portion of Brooklyn was supplied with piped city water and sewers in the latter half of the nineteenth-century, so residents of structures on the property would have had to rely on backyard shaft features, specifically privies and cisterns but likely not wells due to the proximity of a communal well, for several decades.

During the second half of the nineteenth century, the five historic lots in the project site housed multiple families at any given time. The houses had one to two families, and some had more. Some of the houses were occupied by their owners with additional renters, and other houses appeared to be solely rental properties. In general, however, the residents of the project site lots were headed by men with working class occupations, including builders, painters, segar makers, policemen, laborers, grocers, and those employed in the nearby shipping industry. Most people who could be traced in census records appeared to be married with children. Residents appeared to be predominantly of Irish origin through the 1880s, and later of Germanic origin. Some residents lived on the lots for multiple years, while others stayed for shorter periods. Appendix B provides details of occupancy and occupation for the five historic lots that compromise what is now Lot 13.

Each of the lots had open yard areas at one time, although some yard areas were built over with structures in subsequent years. Archaeological resources such as artifacts related to domestic and commercial use and refuse associated with the project site residents and businesses may have been deposited in shaft features—particularly cisterns and privies—that were likely located in the yards of the houses that were constructed prior to the availability of municipal water and sewers. Comparative data has shown that these types of archaeological resources frequently are found in urban contexts, particularly in Brooklyn.

Residents fronting onto Mill Street (historic Lots 12, 13, and 14) appear to have had sewers available by 1875, but the date of piped water availability and connection to either sewer or water is unknown. Business and residents on Hamilton Avenue had water available by 1863, and sewers before 1875. From their earliest development in the early to mid-1850s through the dates of water and sewer installation, and possibly longer, residents would have relied on communal wells and rear yard shaft features, such as cisterns, for water. Privies and cesspools would have been used at least until the introduction of municipal sewers. As noted above, although municipal water and sewer lines were installed in Hamilton Avenue by the 1863 and 1875 respectively, owners of buildings constructed before service availability often did not hook up their buildings, many of which were rental properties, to water and sewer lines until years, and sometimes decades after the services were available. This suggests a potentially longer use-life for yard shaft features.

Privies were located furthest from the residences, often along the rear lot lines, while cisterns frequently (but not always) were located closer to the rear walls of street-fronting buildings or outbuildings. Privies and cisterns would be excavated up to 10-15 feet below grade. Identifying and examining buried features associated with the nineteenth century occupation of the project site may reflect the daily activities of the residents and provide insight into cultural behavior of the working class community at the time just before Brooklyn's rapid growth. If undisturbed deposits of cultural material do still exist, they may have the potential to provide meaningful information regarding the lives of the people who lived there. When recovered from their original context and in association with a specific historical occupation, historical deposits can provide a wealth of information about consumption patterns, consumer choice, gender relations, ethnicity, economic status, and other important issues.

There is the very high possibility that these potential subsurface features could still be present given the lack of later disturbance to the project site. Table 3, below, summarizes the archaeological sensitivity potential for each of the historic lots within the project site. Figure 18 illustrates those locations deemed archaeologically sensitive.

Table 3: Historic Period Archaeological Sensitivity by Historic Lot

Historic Lot #	Building Dates	Disturbance Status	Archaeological Sensitivity
12	ca. 1856 - ca. 1915	Rear of lot - minimal	**High**, sensitive for residential shaft features at rear of lot
13	ca. 1855 - ca. 1950 (north) ca. 1855 – ca. 1915 (south)	Center of lot – none	**High**, sensitive for residential shaft features at center of lot between two historic structures
14	ca. 1855 – ca. 1880 (north) ca. 1855 - ca. 1869 (south)	North end – ca. 1903 3 story brick building Center of lot - none	**High**, sensitive for residential shaft features at center of lot between two historic structures
15	ca. 1850 – ca. 1939	West end of lot – 1 story addition – moderate	**Moderate**, sensitive for commercial and residential shaft features west end of lot
16	ca. 1850 – ca. 1939	West end of lot - none	**High**, sensitive for commercial and residential shaft features west end of lot

VI. RECOMMENDATIONS

Based on the conclusions outlined above, HPI recommends that a program of archaeological field testing be undertaken on portions of each historic lot, as shown on Figure 18. This testing, often referred to as Phase IB, would determine the presence or absence of nineteenth-century shaft features and possible yard deposits associated with the former residents and commercial endeavors on the property. Archaeological field testing would involve using a backhoe to remove the existing ground surface (some of which is now covered with paving) from test trenches within the sensitive areas. Mechanical excavations, under the direction of an archaeologist, would continue to assist with removing modern fill or debris underlying the removed pavement in order to expose potential archaeological resources.

All archaeological testing should be conducted according to OSHA regulations and applicable archaeological standards, which includes prior LPC approval of a field testing work plan (LPC 2018; CEQR 2020). Professional archaeologists, with an understanding of and experience in urban archaeological excavation techniques, would be required to be part of the archaeological team.

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Figure 1: Project Site on *Jersey City, NJ, NY* and *Brooklyn, NY* 7.5 Minute topographic quadrangles (U.S.G.S. 2019).

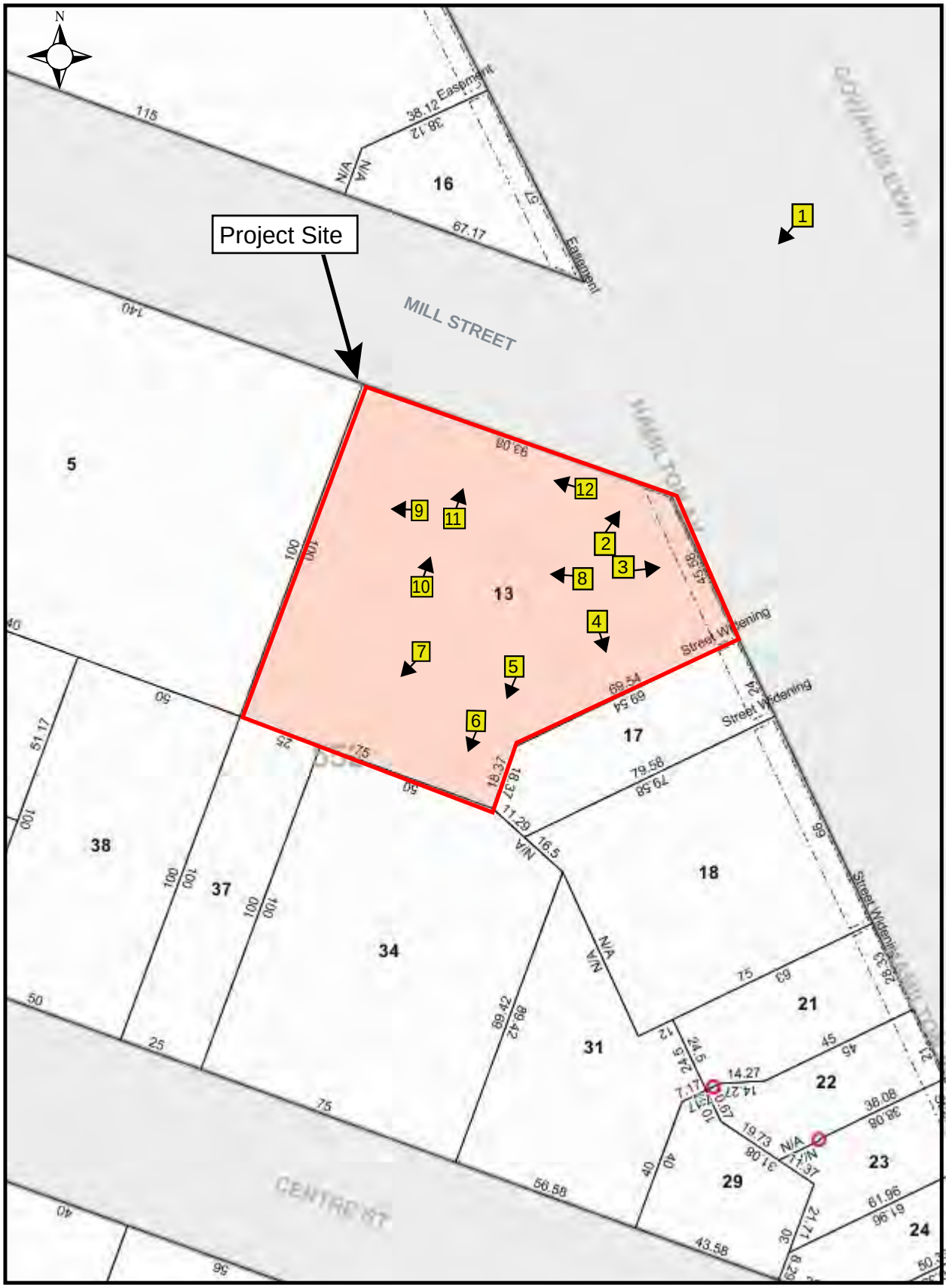

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Figure 2: Project Site and photograph key on NYC Tax Map (2021).

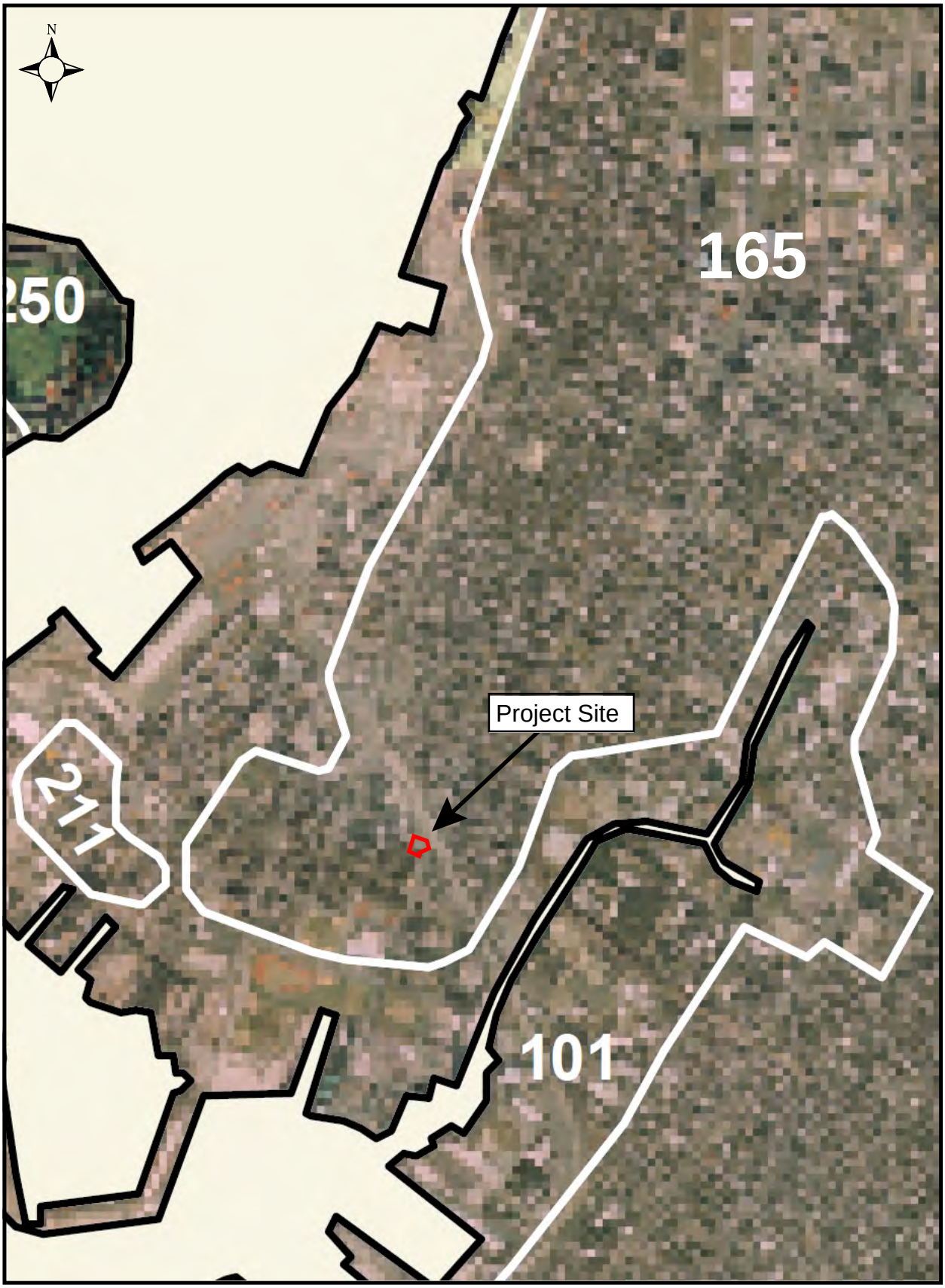

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Figure 3: Project Site on *New York City Reconnaissance Soil Survey* (U.S.D.A. 2006).



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Figure 4: Project Site on *Plan of the city of New York in North America : surveyed in the years 1766 & 1767* (Ratzer 1766/67).



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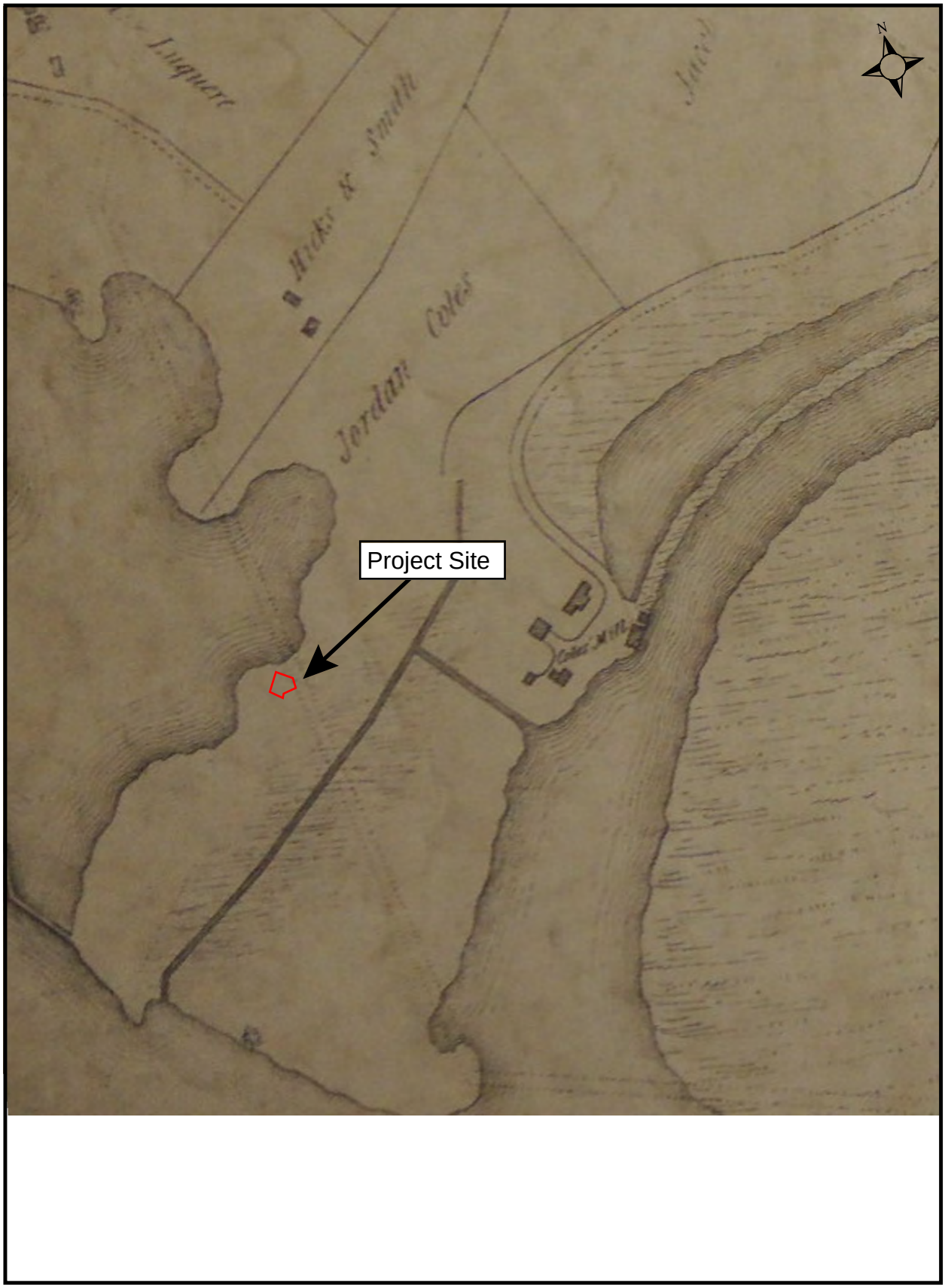
0 250 500 750 1000 1250 FEET

Figure 5: Project Site on *Composite of B.F. Steven's Facsimile of the Unpublished British Head Quarters Coloured Manuscript map of New York & Environs, 1782* (Stevens, 1900).



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0 100 200 300 400 500 FEET

Figure 6: Project Site on *Map of Brooklyn, Kings County, Long Island. From an Entire New Survey by Alex Martin* (Martin 1834).



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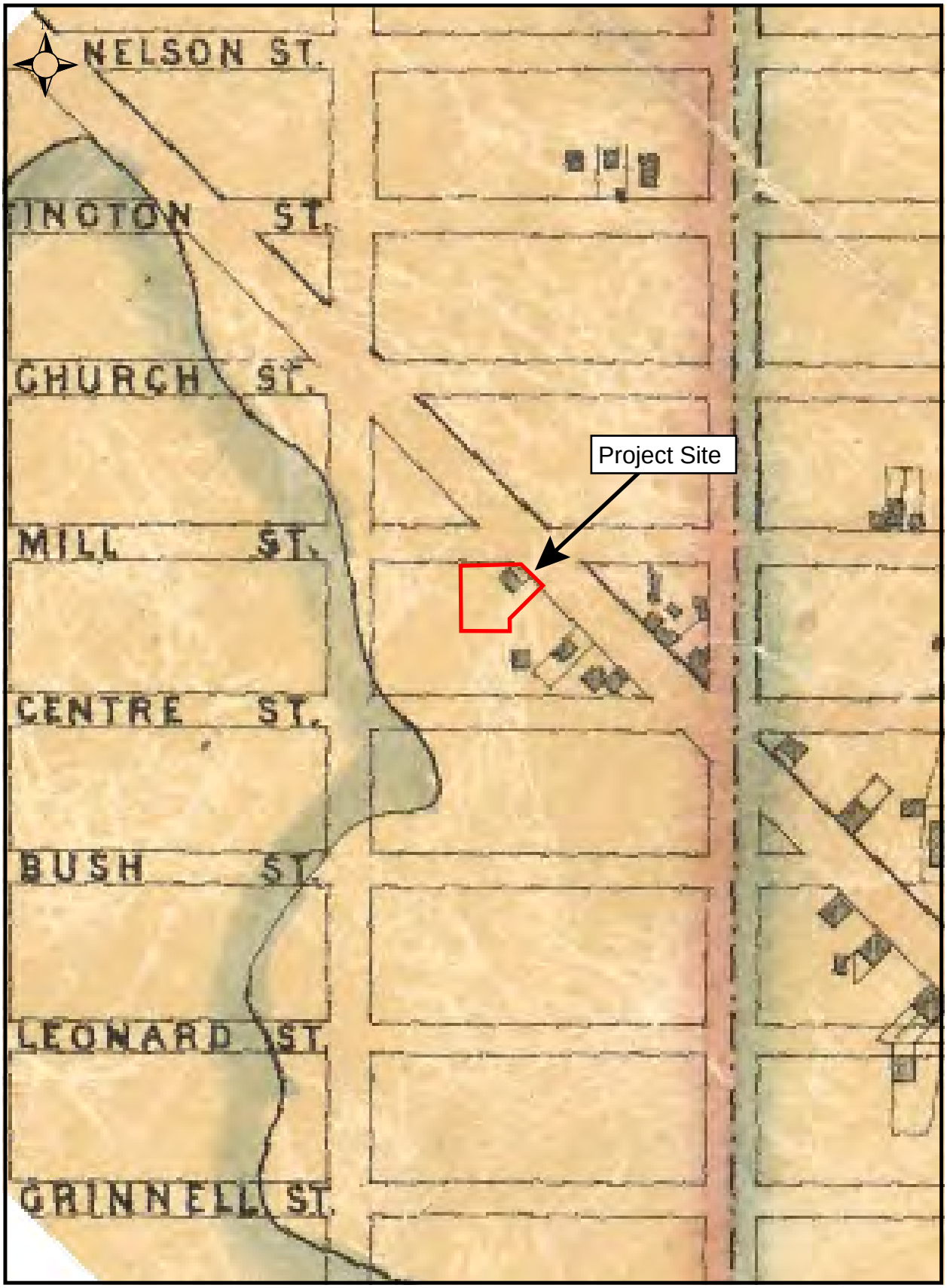
Figure 7: Project Site on *Map of the City of Brooklyn, As Laid Out By Commissioners...* (Colton 1849).



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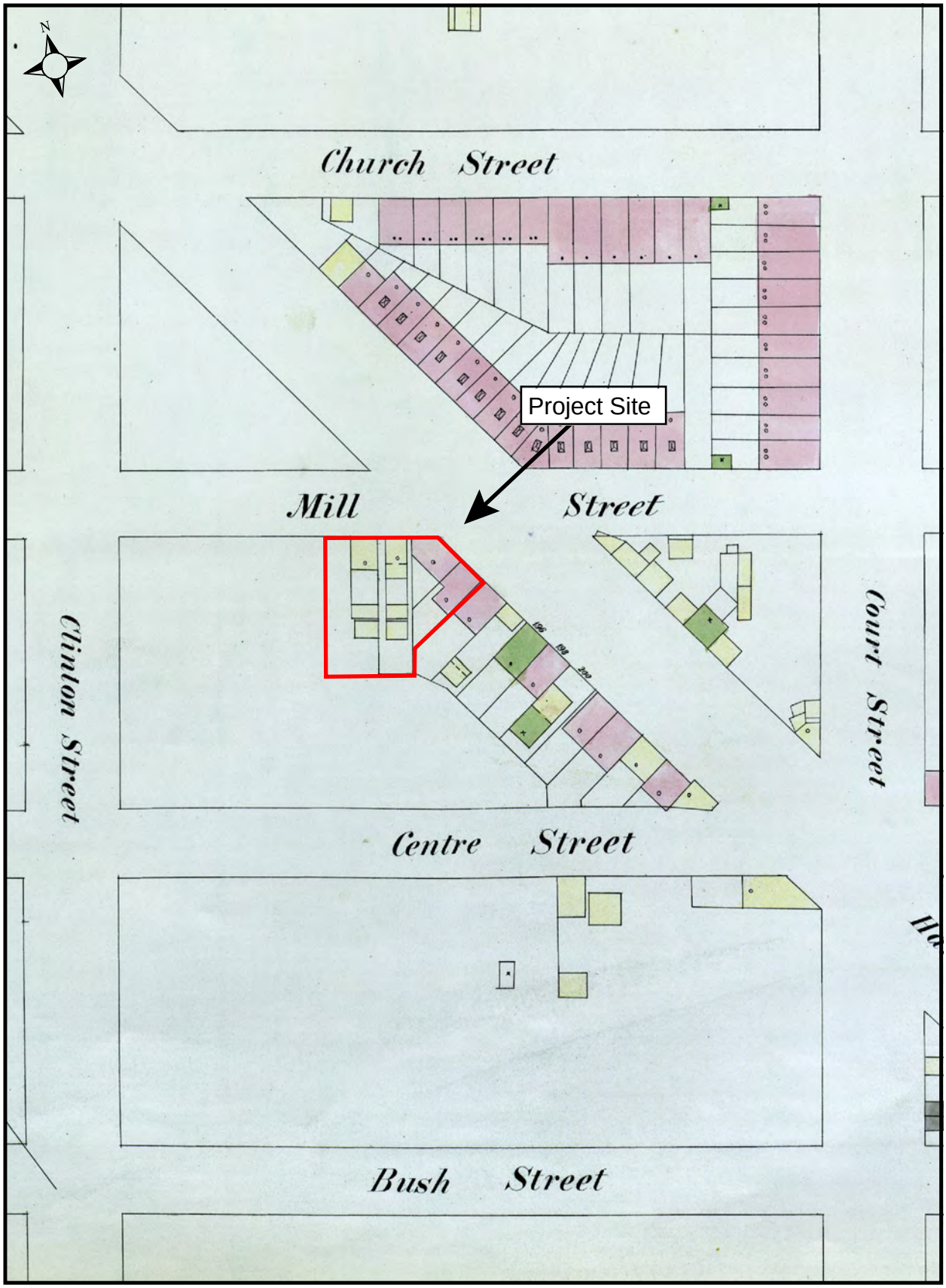
0 100 200 300 400 500 FEET

Figure 8: Project Site on *Map of the City of Brooklyn, also the Village of Williamsburg* (Dripps 1850).



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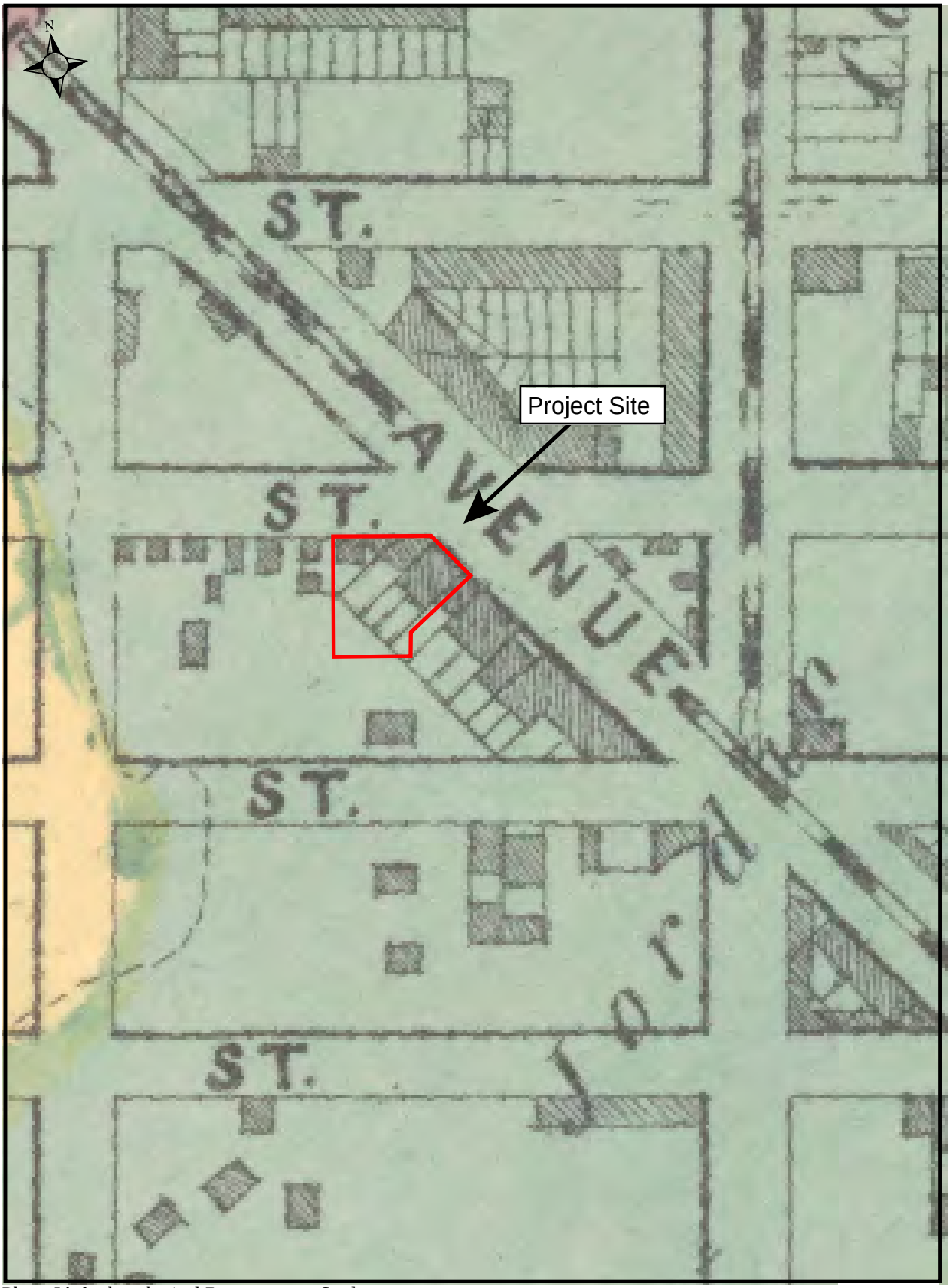
0 50 100 150 200 250 FEET

Figure 9: Project Site on *Maps of the city of Brooklyn* (Perris 1855).



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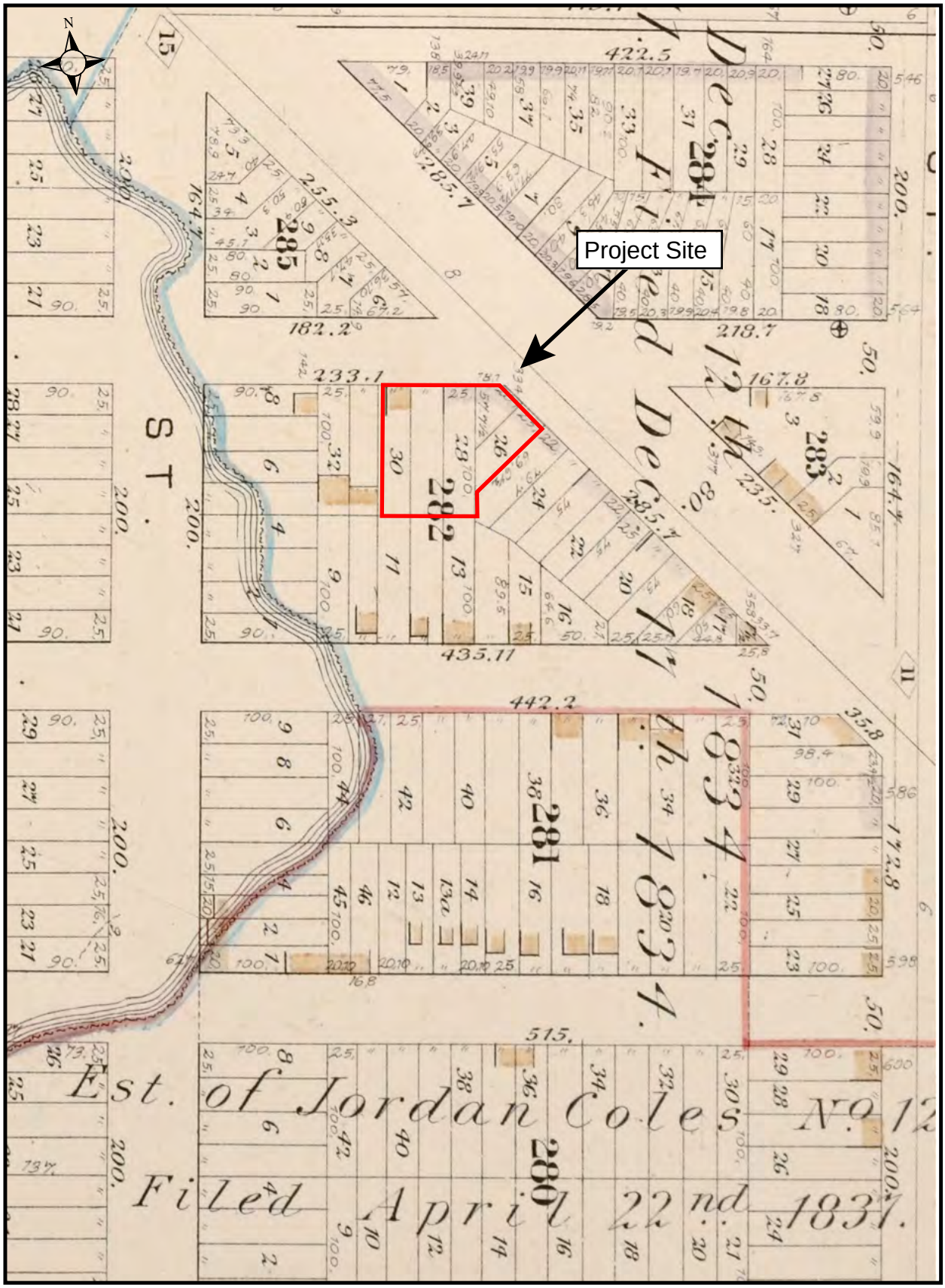
0 50 100 150 200 250 FEET

Figure 10: Project Site on *Map of the City of Brooklyn* (Dripps 1869).



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0 50 100 150 200 250 FEET

Figure 11: Project Site on *Detailed Estate and Old Farm Line Atlas of the City of Brooklyn* (Hopkins 1880).

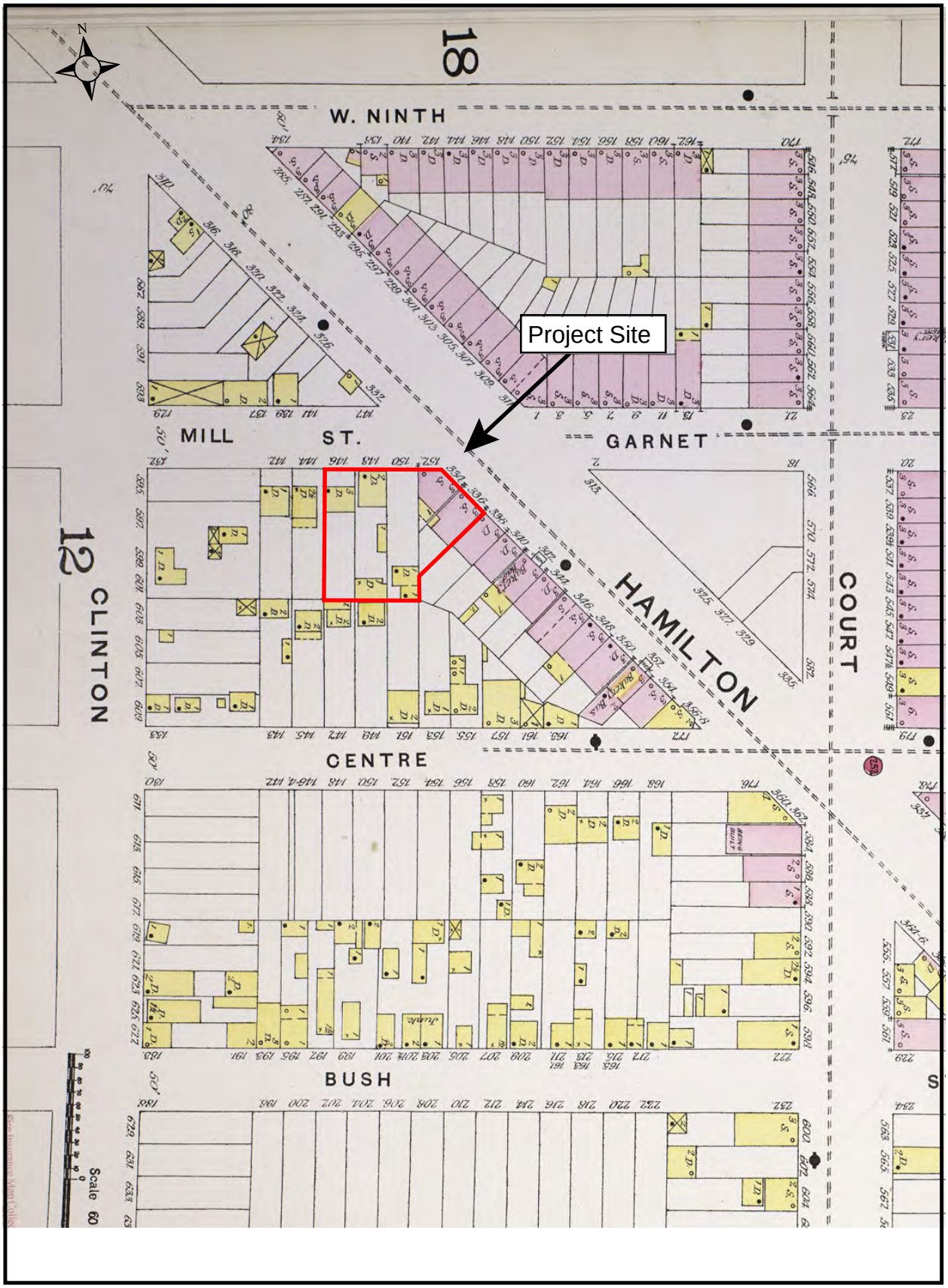

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Figure 12: Project Site on *Insurance Maps of Brooklyn, NewYork* (Sanborn 1886).

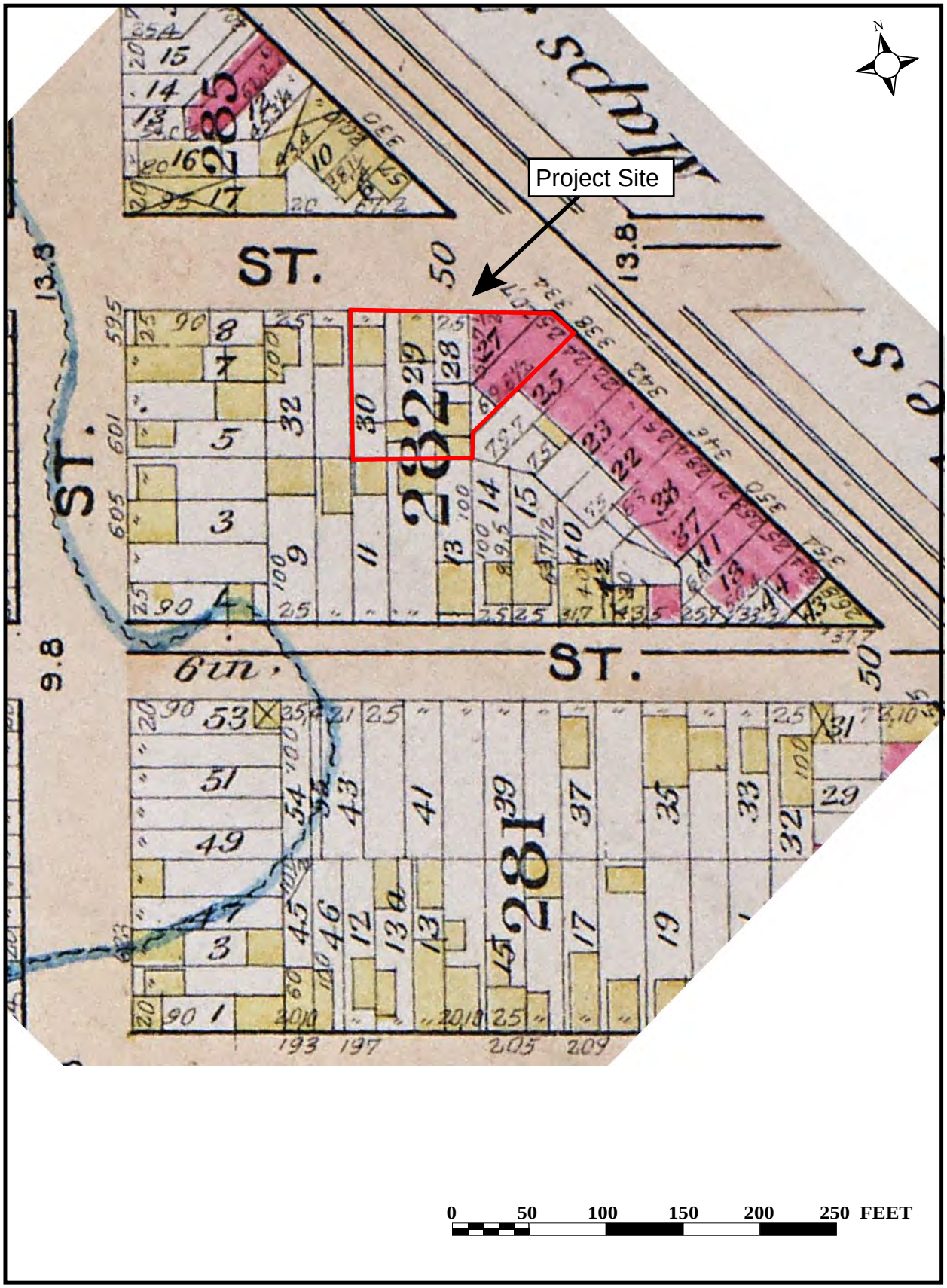

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Figure 13: Project Site on *Atlas of the entire city of Brooklyn, complete in one volume* (Bromley 1893). (Note: Lots on Hamilton Avenue erroneously portrayed as elongated to the east).

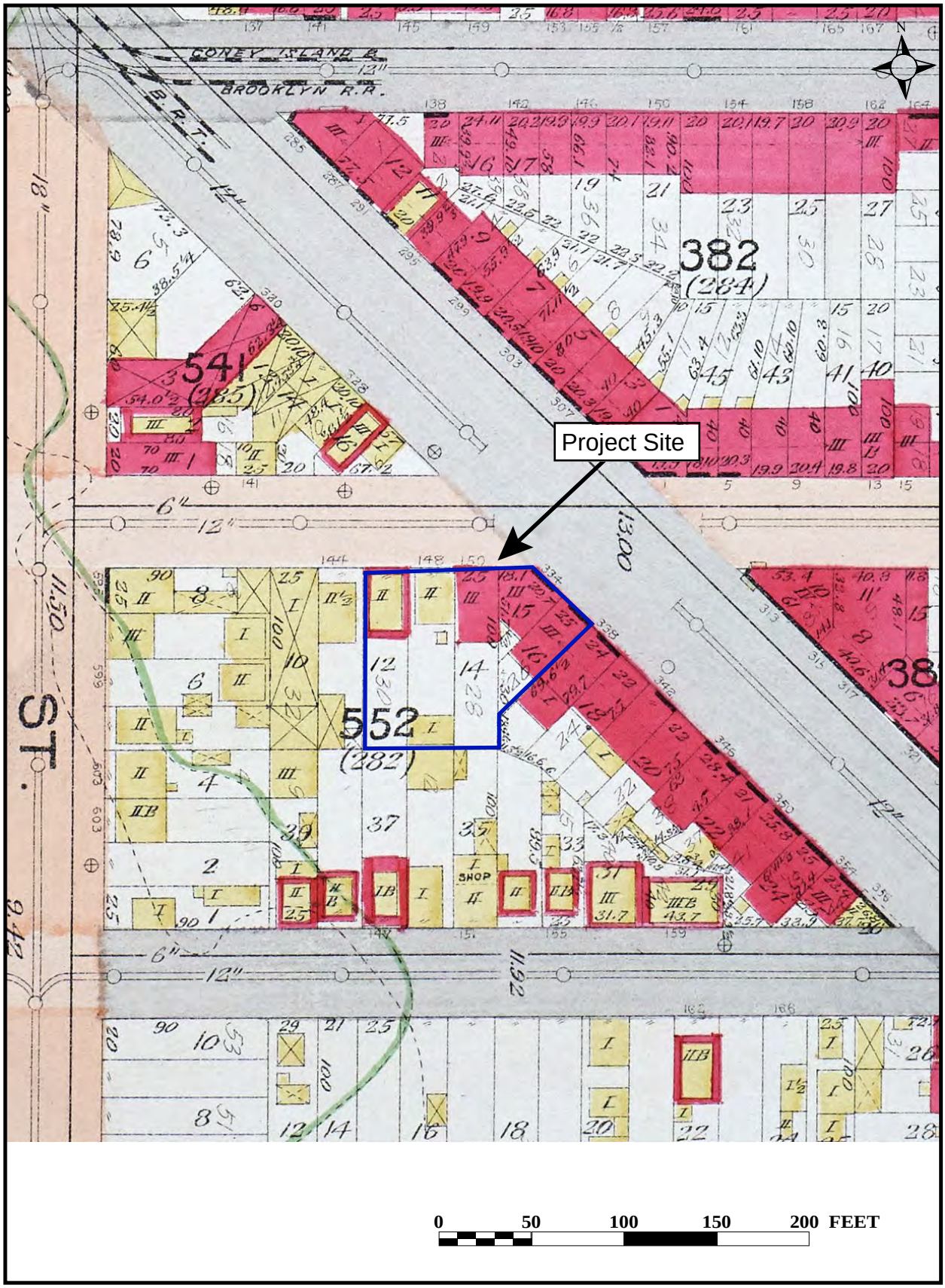

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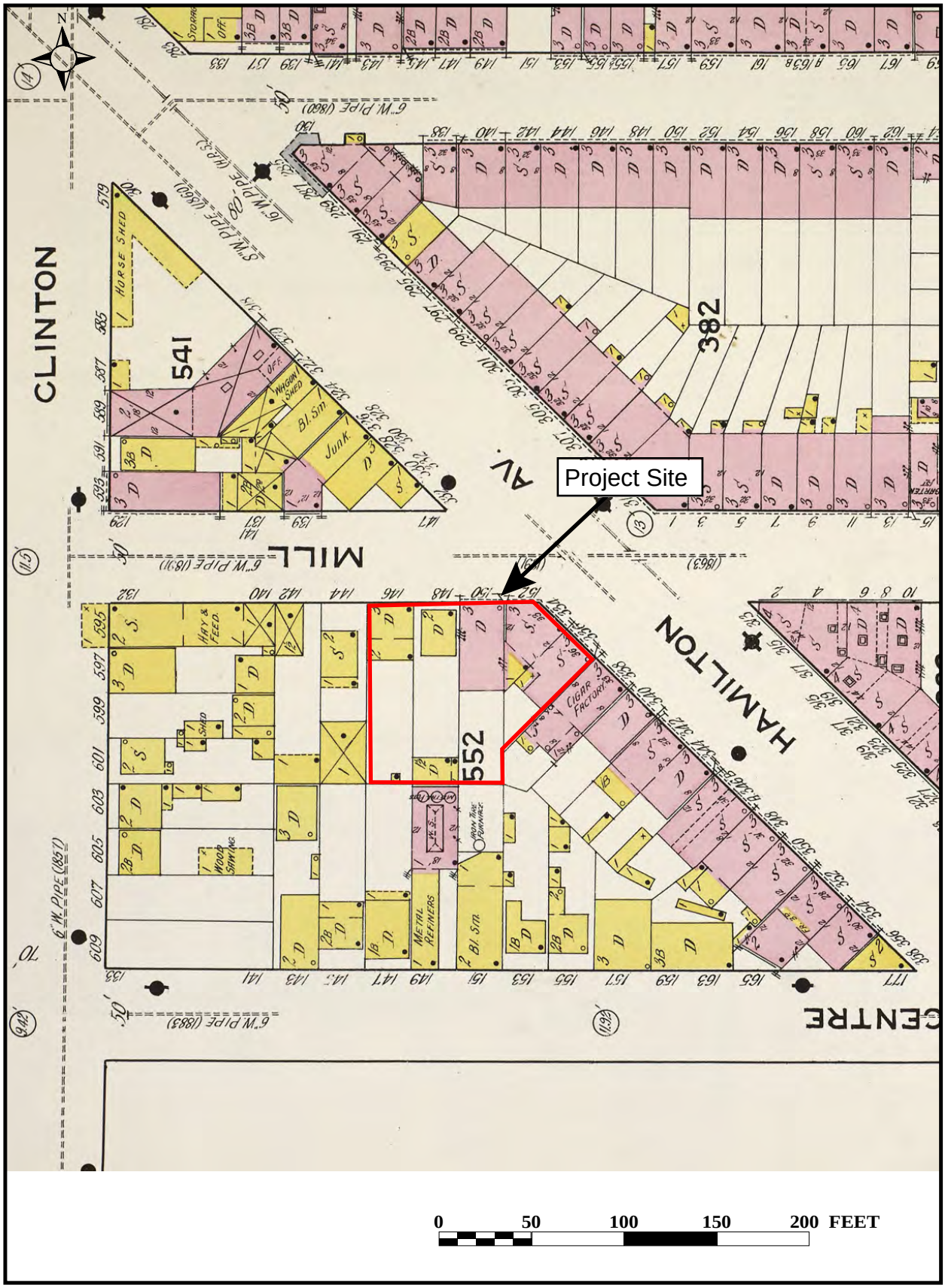
Figure 14: Project Site on *Project Site on Atlas of the Borough of Brooklyn, City of New York* (Hyde 1903).



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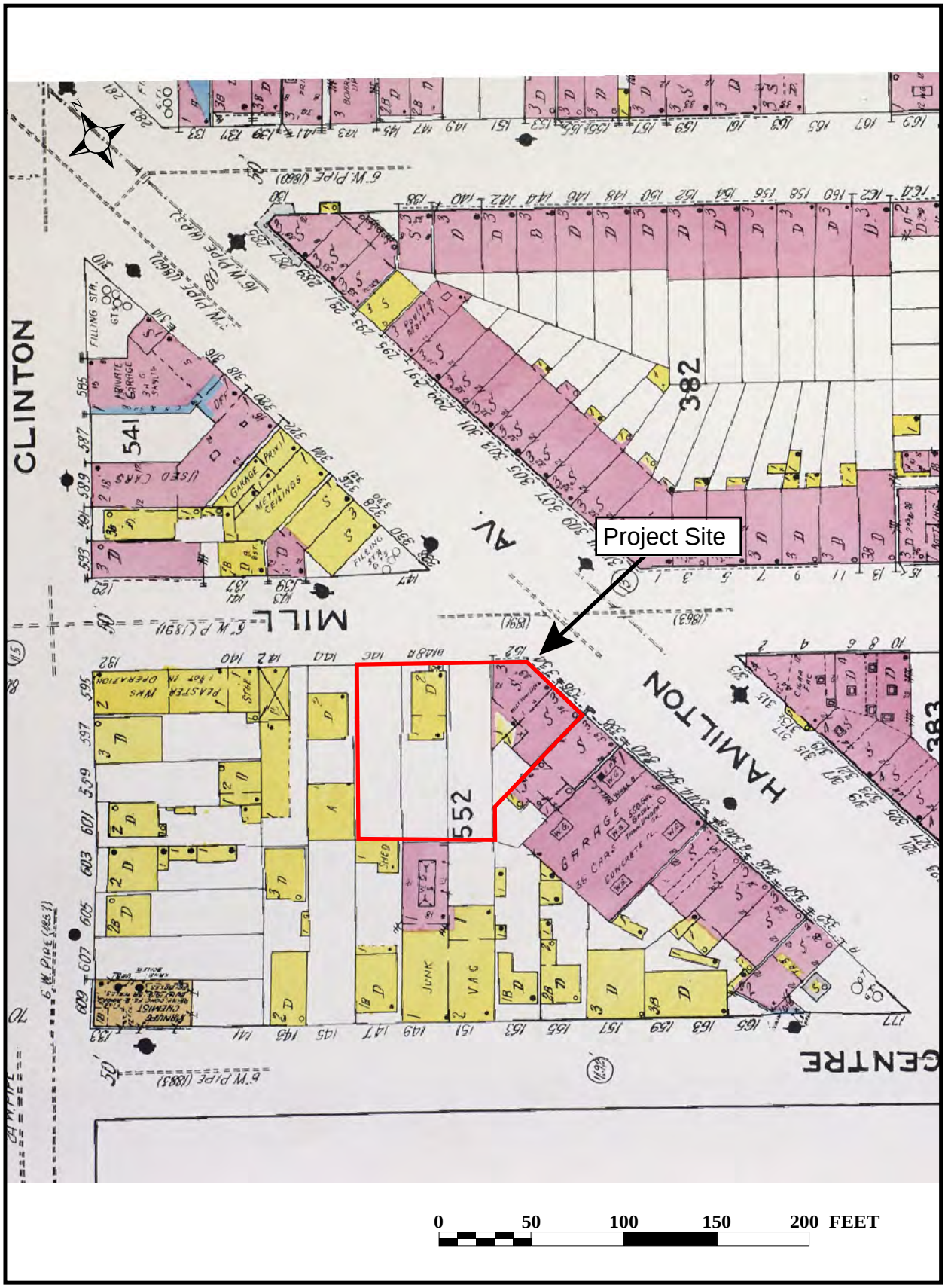
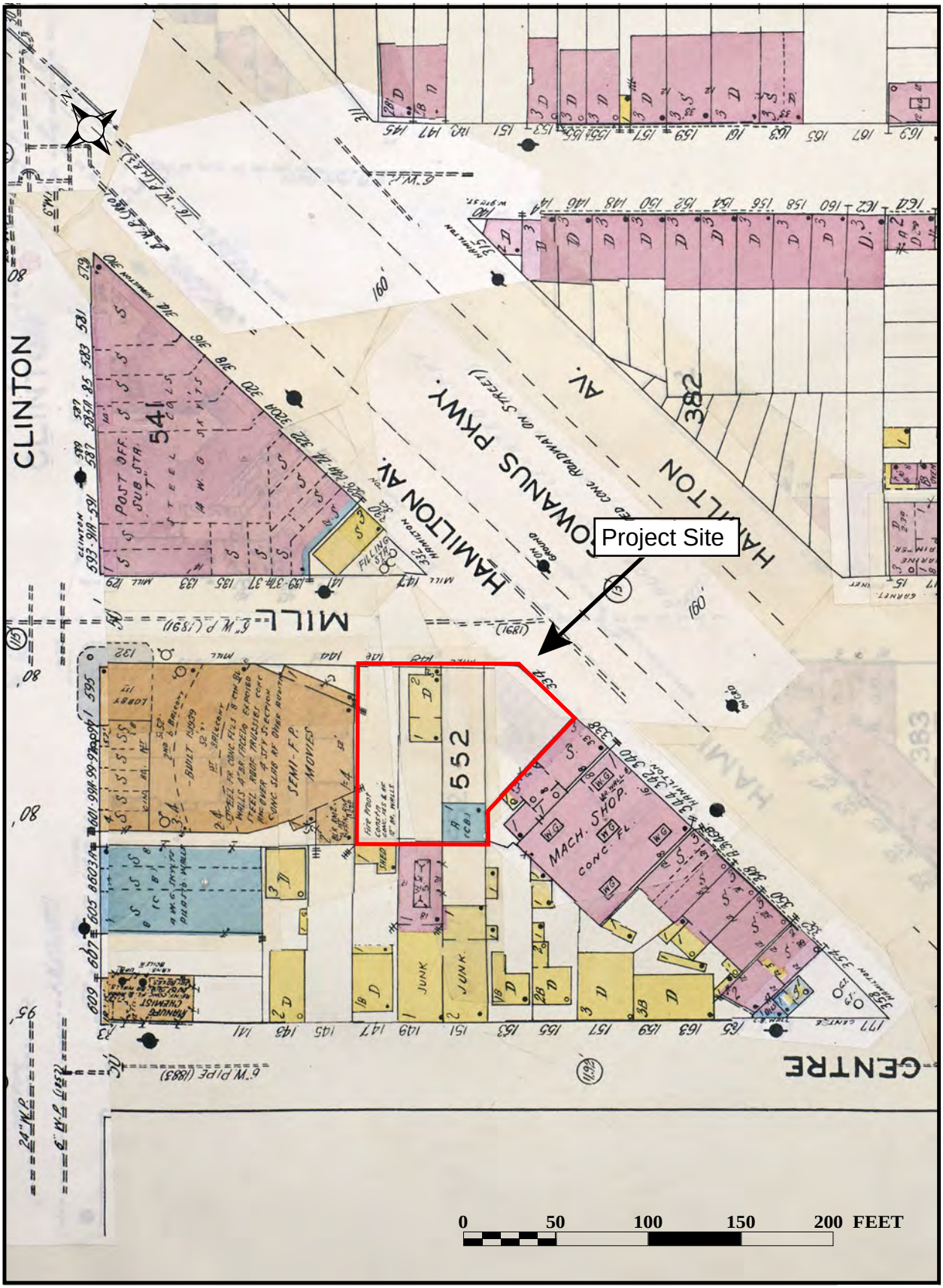
Brooklyn, Kings County, New York

Figure 15: Project Site on *Insurance Maps of the Borough of Brooklyn, New York* (Sanborn 1915).



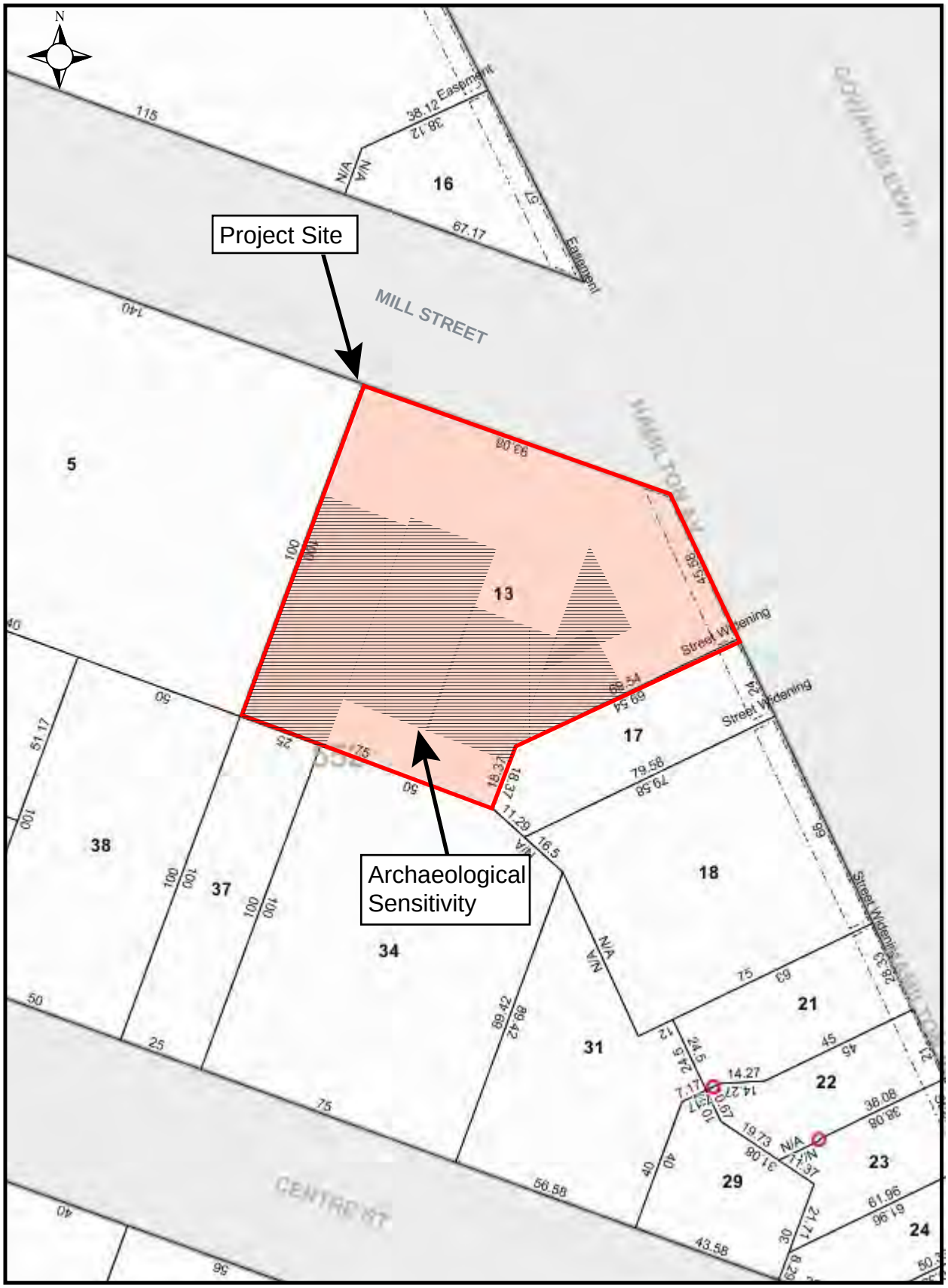
Phase IA Archaeological Documentary Study
150 Mill Street Rezoning
Block 552 / Lot 13
Brooklyn, Kings County, New York

Figure 16: Project Site on *Insurance Maps of the Borough of Brooklyn* (Sanborn 1939).



Phase IA Archaeological Documentary Study
150 Mill Street Rezoning
Block 552 / Lot 13
Brooklyn, Kings County, New York

Figure 17: Project Site on *Insurance Maps of the Borough of Brooklyn* (Sanborn 1950).



Phase IA Archaeological Documentary Study
150 Mill Street Rezoning
Block 552 / Lot 13
Brooklyn, Kings County, New York

Figure 18: Project Site with locations of precontact and historic archaeological potential on NYC Tax Map (2021).



Photograph 1: Entrance to project site at the intersection of Mill Street and Hamilton Avenue, facing southwest.



Photograph 2: Looking outward to the site entrance at the intersection of Hamilton Avenue and Mill Street from inside the site, facing northeast.



Photograph 3: Fencing to the right of entrance along Hamilton Avenue, facing east.



Photograph 4: Storm grate in pavement next to building fronting onto Hamilton Avenue out of the project site, facing southeast.



Photograph 5: Paved area in project site with adjacent storage trailer, facing south.



Photograph 6: Close up of paved area in project site with storage trailer, facing south.



Photograph 7: A second drainage grate in the paved part of the project site, facing southwest.



Photograph 8: West end of project site with south side of one-story building on north end of site at right, facing west.



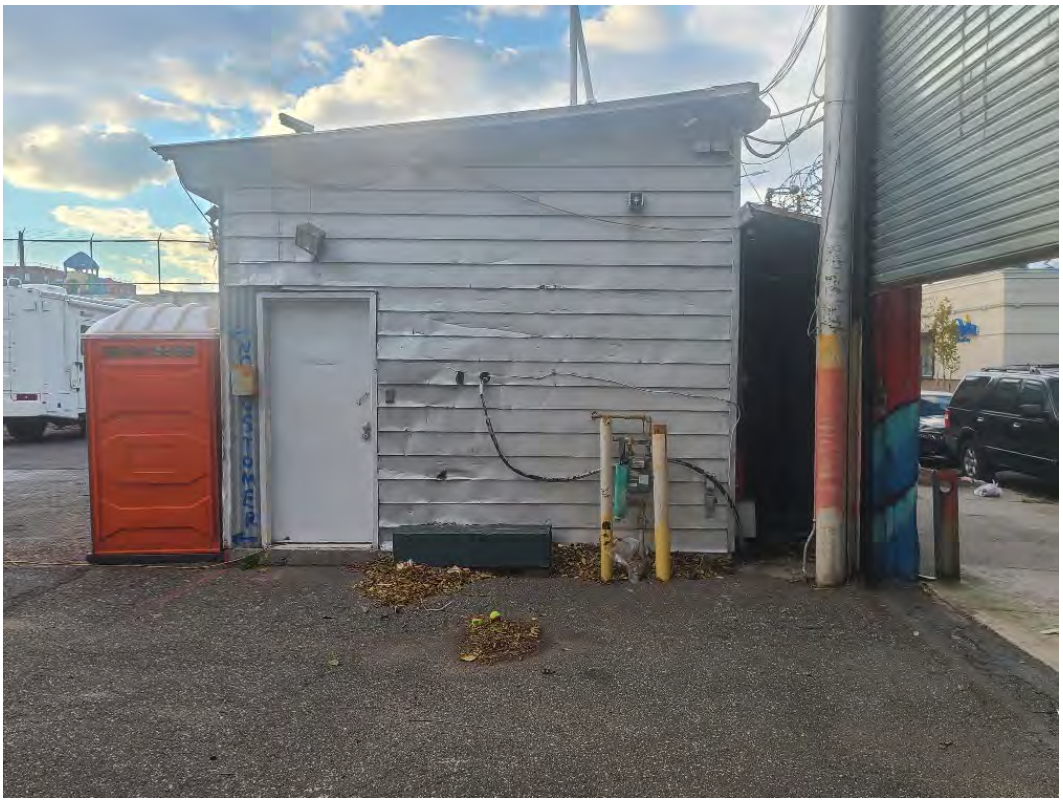
Photograph 9: Pavement with manhole south of one-story building on project site, facing west.



Photograph 10: South elevation of one-story office building on north end of site paralleling Mill Street, facing north.



Photograph 11: Close up of utility lines and catchment area adjacent to office entrance, facing north.



Photograph 12: East elevation of office trailer, facing northwest with Mill Street to right.

APPENDIX B

WRP FORM AND FLOOD EVALUATION WORKSHEET

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

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

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

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

A. APPLICANT INFORMATION

Name of Applicant: 150 Mill Street LLC

Name of Applicant Representative: Amber Kartalyan

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

Telephone: 201-757-3561 Email: amber.kartalyan@equityenvironmental.com

Project site owner (if different than above): 150 Mill Street LLC

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The Applicant, 150 Mill Street LLC, requests approval of a zoning map amendment to facilitate the development of Block 552, Lot 13 with a 10-story plus cellar, 67,336 gross-square-foot (gsf) mixed-use commercial and community facility building in the Red Hook neighborhood of Brooklyn, Community District 6. The building will include ground floor local retail and upper floors community facility and general office use.

2. Purpose of activity

To develop an underutilized site and introduce a diverse set of uses within a mixed-use neighborhood within a project area that is historically industrial.

C. PROJECT LOCATION

Borough: Brooklyn Tax Block/Lot(s): Block 552, Lots 13, 21, 22, 23, 24, 25, 5, 17, 18, 29

Street Address: 150 Mill Street

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

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

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

Board of Standards and Appeals ☐ Yes ☑ No

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

Other City Approvals

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

State Actions/Approvals/Funding

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

Federal Actions/Approvals/Funding

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

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

E. LOCATION QUESTIONS

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

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

F. WRP POLICY ASSESSMENT

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

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

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

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

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

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

G. CERTIFICATION

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

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

Applicant/Agent's Name: Amber Kartalyan

Address: 500 International Drive Suite 150, Mount Olive NJ

Telephone: 201-757-3561 Email: amber.kartalyan@equityenvironmental.co

Applicant/Agent's Signature: Amber Kartalyan

Date: 9/8/22

Submission Requirements

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

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

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

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

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

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

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

Applicant Checklist

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

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT www.nyc.gov/wrp

Enter information about the project and site in highlighted cells in Tabs 1-3. Tab 4, "Summary Charts" contains primary results. Tab 5, "0.2%+SLR" produces charts to be used for critical infrastructure or facilities. Tab 6, "Calculations" contains background computations. Appendix A contains tide elevations for station across the city to be used for the elevation of MHHW if a site survey is not available. Non-highlighted cells have been locked.

Background Information	
Project Name	150 Mill Street Rezoning
Location	150 Mill Street Brooklyn, NY
Type(s)	☑ Residential, Commercial, Community Facility ☐ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facility ☑ Industrial Uses ☐ Over-water Structures ☐ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/Drainage ☐ Coastal Protection
Description	The Applicant, 150 Mill Street LLC, requests approval of a zoning map amendment to facilitate the development of Block 552, Lot 13 with a 10-story plus cellar, 67,336 gross-square-foot (gsf) mixed-use commercial and community facility building in the Red Hook neighborhood of Brooklyn, Community District 6. The building will include ground floor local retail and upper floors community facility and general office use.
Planned Completion Date	2024
Expected Project Lifespan	99 years

The New York City Waterfront Revitalization Program Climate Change Adaptation Guidance document was developed by the NYC Department of City Planning. It is a guidance document only and is not intended to serve as a substitute for actual regulations. The City disclaims any liability for errors that may be contained herein and shall not be responsible for any damages, consequential or actual, arising out of or in connection with the use of this information. The City reserves the right to update or correct information in this guidance document at any time and without notice.

For technical assistance on using this worksheet, email wrp@planning.nyc.gov, using the message subject "Policy 6.2 Worksheet."

Last update: Sept. 7, 2018

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.61	**2.61**	**NAVD88**	**Station ID 8518750**
1% flood height	11.00	**11.00**	**NAVD88**	*PFIRM 3604970192G*
Design flood elevation	-->			
As relevant:				
0.2% flood height	-->		**NAVD88**	

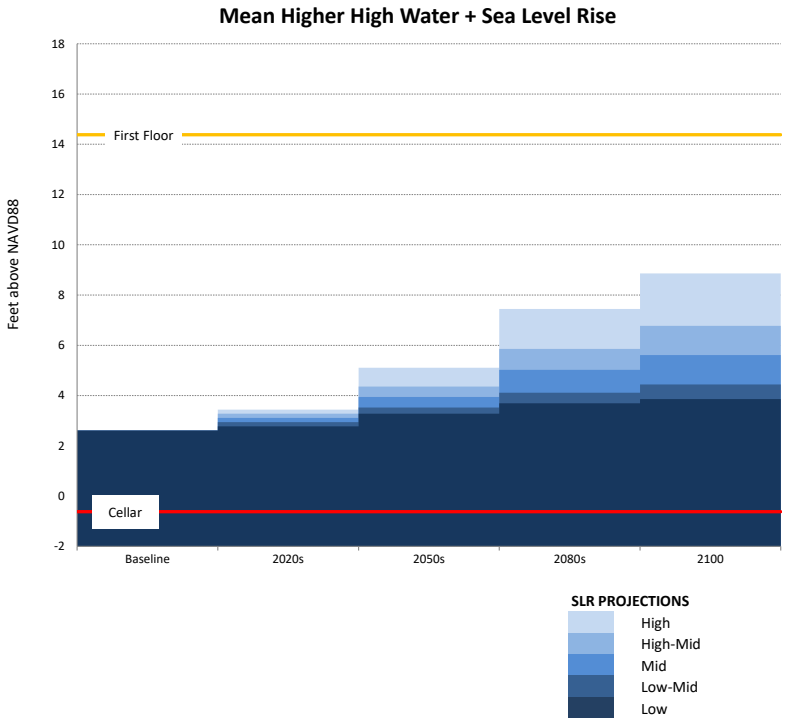
Data will be converted based on the following datums:

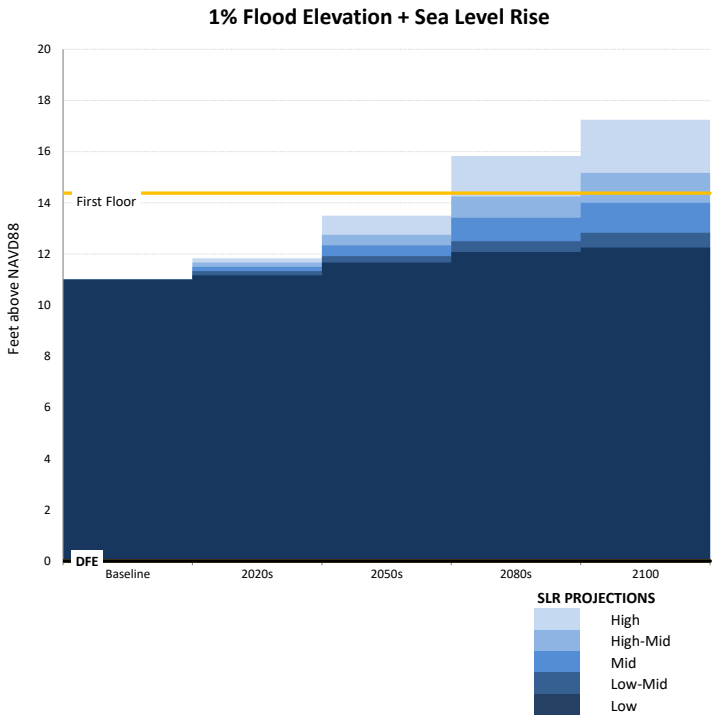
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*

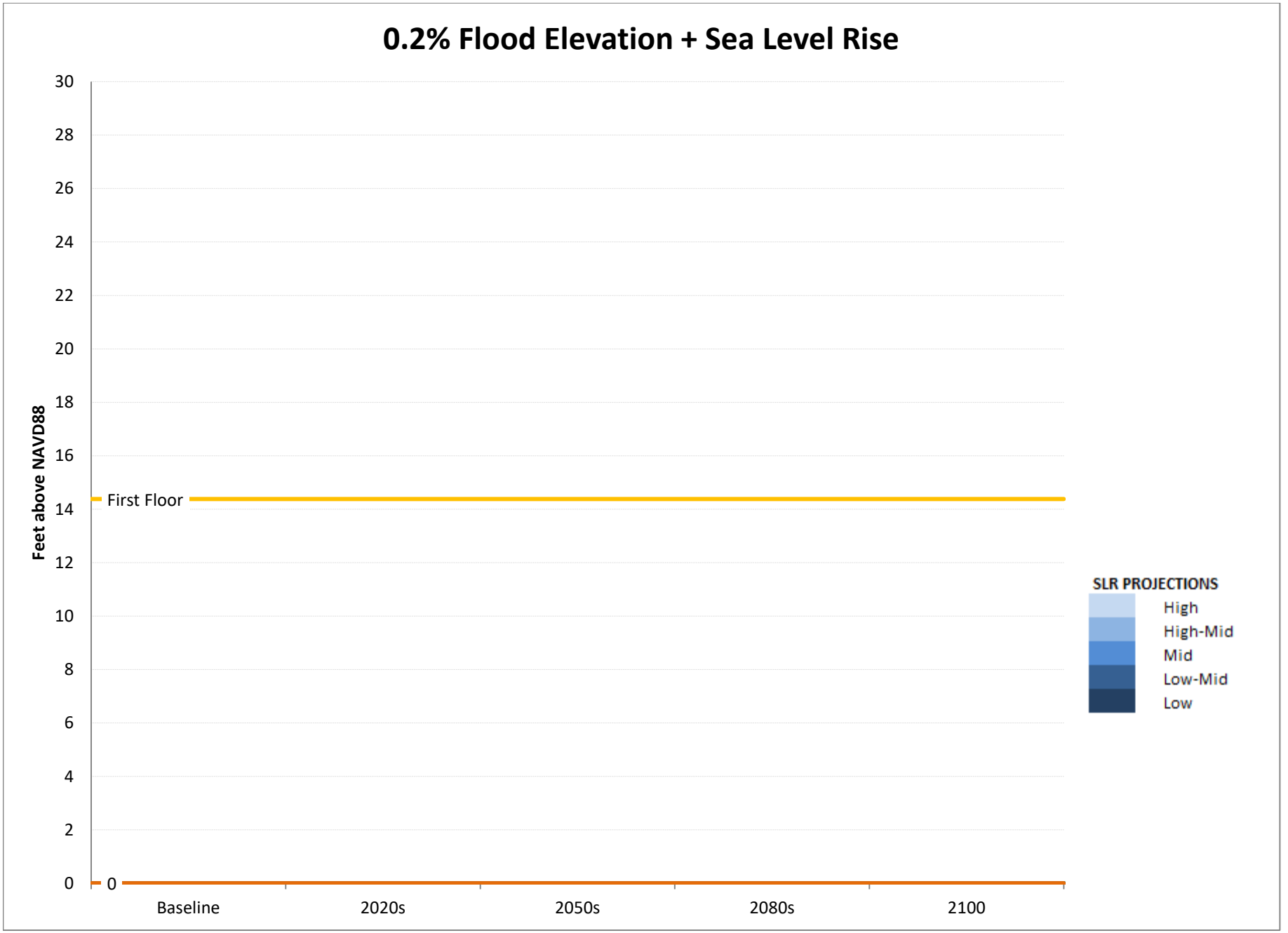
Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
Cellar	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☐ Other		-0.6	Feet	NAVD88	*-0.6*	*-0.6*	*-3.2*	*#VALUE!*
Building mechanicals, elevator access, commercial retail space									
First Floor	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other		14.4	Feet	NAVD88	*14.4*	*14.4*	*11.8*	*#VALUE!*
Local retail uses, building lobby, elevator access									
	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
	☐ Vulnerable ☐ Critical ☑ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									

Assess project vulnerability over a range of sea level rise projections.






0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
First Floor
0
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

	SLR (ft)					
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**	
Baseline	0.00	0.00	0.00	0.00	0.00	**2014**
2020s	0.17	0.33	0.50	0.67	0.83	**2020s**
2050s	0.67	0.92	1.33	1.75	2.50	**2050s**
2080s	1.08	1.50	2.42	3.25	4.83	**2080s**
2100	1.25	1.83	3.00	4.17	6.25	**2100**

	MHHW+SLR (ft above NAVD88)				
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
Baseline	2.61	2.61	2.61	2.61	2.61
2020s	2.78	2.94	3.11	3.28	3.44
2050s	3.28	3.53	3.94	4.36	5.11
2080s	3.69	4.11	5.03	5.86	7.44
2100	3.86	4.44	5.61	6.78	8.86

	1%+SLR (ft above NAVD88)				
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
Baseline	11.00	11.00	11.00	11.00	11.00
2020s	11.17	11.33	11.50	11.67	11.83
2050s	11.67	11.92	12.33	12.75	13.50
2080s	12.08	12.50	13.42	14.25	15.83
2100	12.25	12.83	14.00	15.17	17.25

	0.2%+SLR (ft above NAVD88)				
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
Baseline	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2020s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2050s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2080s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2100	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

	0	1
Cellar	-1	-0.62
First Floor	14	14.38
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
DFE	0.00	0.00

SLR (in)				
Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
0	0	0	0	0
2	4	6	8	10
8	11	16	21	30
13	18	29	39	58
15	22	36	50	75

NOAA Tide Station Data

(to be used only when a site survey is unavailable)

Station ID	*Station Name*	*Source MHHW (Feet, NAVD88)**	*Adjusted MHHW (Feet, NAVD88)**
8518687	Queensboro Bridge	2.27	2.60
8530095	Alpine	2.11	2.44
8516614	Glen Cove	3.72	4.05
8516990	Willets Point	3.72	4.05
8518639	Port Morris	3.33	3.66
8518699	Williamsburg Bridge	2.14	2.47
8518750	The Battery	2.28	2.61
8531680	Sandy Hook	2.41	2.74
8518490	New Rochelle	3.71	4.04
8531545	Keyport	2.66	2.99
8516891	Norton Point	2.08	2.41
8517201	North Channel	2.72	3.05
8517137	Beach Channel	2.10	2.43
8517756	Kingsborough	2.13	2.46
8519436	Great Kills	2.22	2.55
8531142	Port Reading	2.82	3.15
8519483	Bergen Point	2.56	2.89
8519050	USCG	2.28	2.61
8518902	Dyckman St	2.01	2.34
8517251	Worlds Fair Marina	3.59	3.92
8518668	Horns Hook	2.54	2.87
8518643	Randalls Island	2.60	2.93
8518526	Throggs Neck	3.68	4.01

* MHHW values include an addition 0.33 feet to account for changes in sea level since the 1983-20(

Source
NOAA Tides and Currents
NOAA Tides and Currents
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Randalls
Island
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Morris
8518639
Throggs
Neck
8518526
Willets
Point
8516990
Worlds Fair
Marina
8517251
Queensboro
Bridge
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Horns Hook
8518668
Williamsburg
Bridge
8518699
The Battery
8518750
North
Channel
8507201
Norton
Point
8516891
CG
9050
Beach
Channel
8517137
Kingsborough
8517756
Sandy Hook
8531680

Waterfront Revitalization Program Assessment

Because the Affected Area is located within the boundaries of the New York City Coastal Zone and is subject to CEQR discretionary review procedures, the Proposed Action must be reviewed and assessed for consistency with the policies and conditions set forth in the New York City WRP. **Figure 2.1-1** below shows the Affected Area in relation to Coastal Zone Boundary special area designations.

The WRP Consistency Assessment Form (CAF) was completed (see **Appendix C**) to determine if the Proposed Action is consistent with the WRP policies. The Projected Development Site is within the 2007 Effective FEMA Flood Insurance Rate Map (FIRM) and the 2015 Preliminary FEMA Flood Insurance Map (PFIRM) 0.2% chance annual floodplain. **Figure 2.1-2** below shows the 2007 FIRM comparison to the 2015 PFIRM.

As shown below in **Figures 2.1-3 to 2.1-6**, which reference the New York City Panel on Climate Change (NPCC) future floodplain projections through the 2100s, the Projected Development Site is anticipated to fall partially within the future 1% annual chance floodplain by the 2050s, and entirely within the future 1% annual chance floodplain by the 2080s.

Figure 2.1-1: Coastal Zone Boundary Special Area Designations

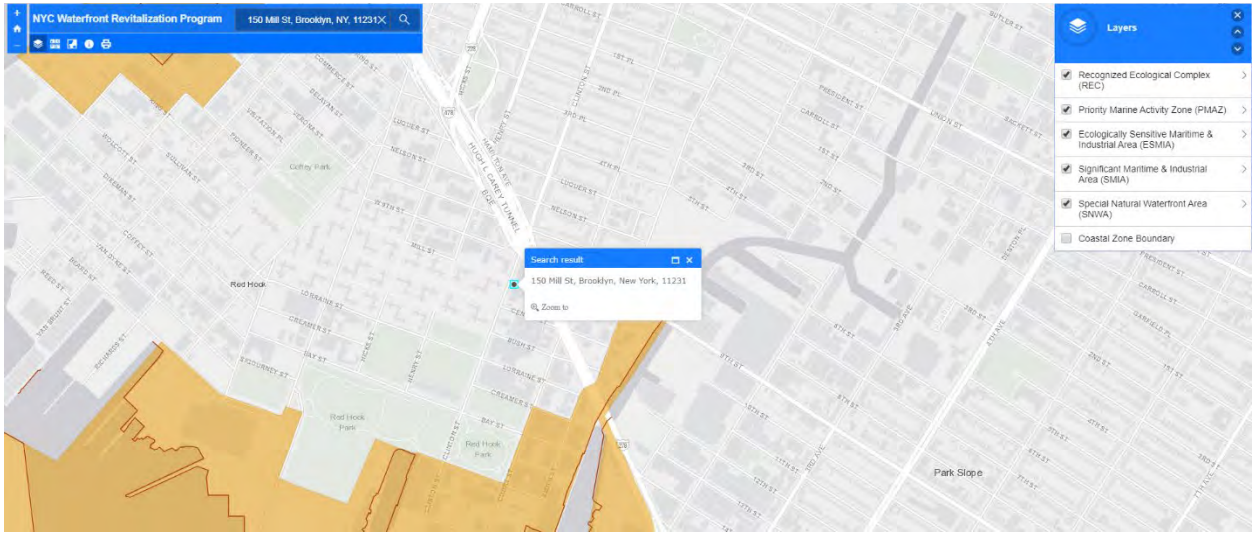
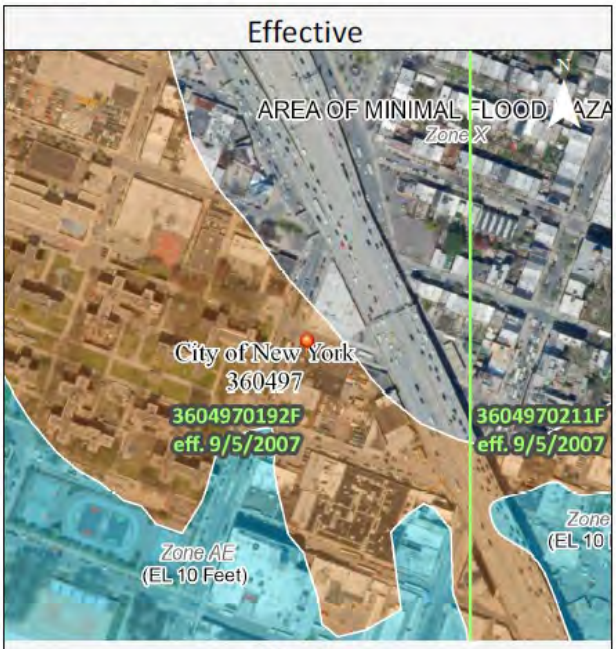


Figure 2.1-2: 2007 FIRM and 2015 PFIRMS

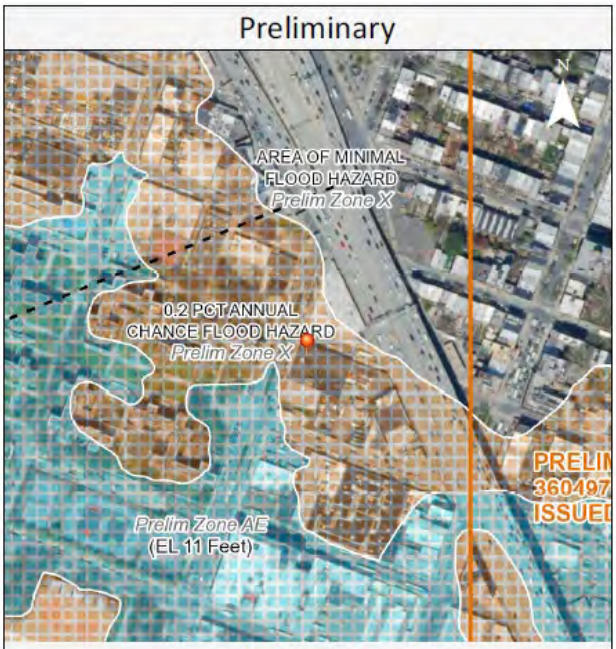
Comparison of Flood Hazard

Effective & Preliminary Flood Hazards

FEMA



Effective	
POI Longitude/Latitude	-74.0015, 40.675
Effective FIRM Panel	3604970192F
Effective Date	9/5/2007
Flood Zone	X
Static BFE*	Not Available
Flood Depth	Not Available
Vertical Datum	Not Available



Preliminary	
POI Longitude/Latitude	-74.0015, 40.675
Preliminary FIRM Panel	3604970192G
Preliminary Issue Date	1/30/2015
Flood Zone	X
Estimated Static BFE*	Not Available
Estimated Flood Depth	Not Available
Vertical Datum	Not Available

Figure 2.1-3: 2020s Flood and High Tide Projections

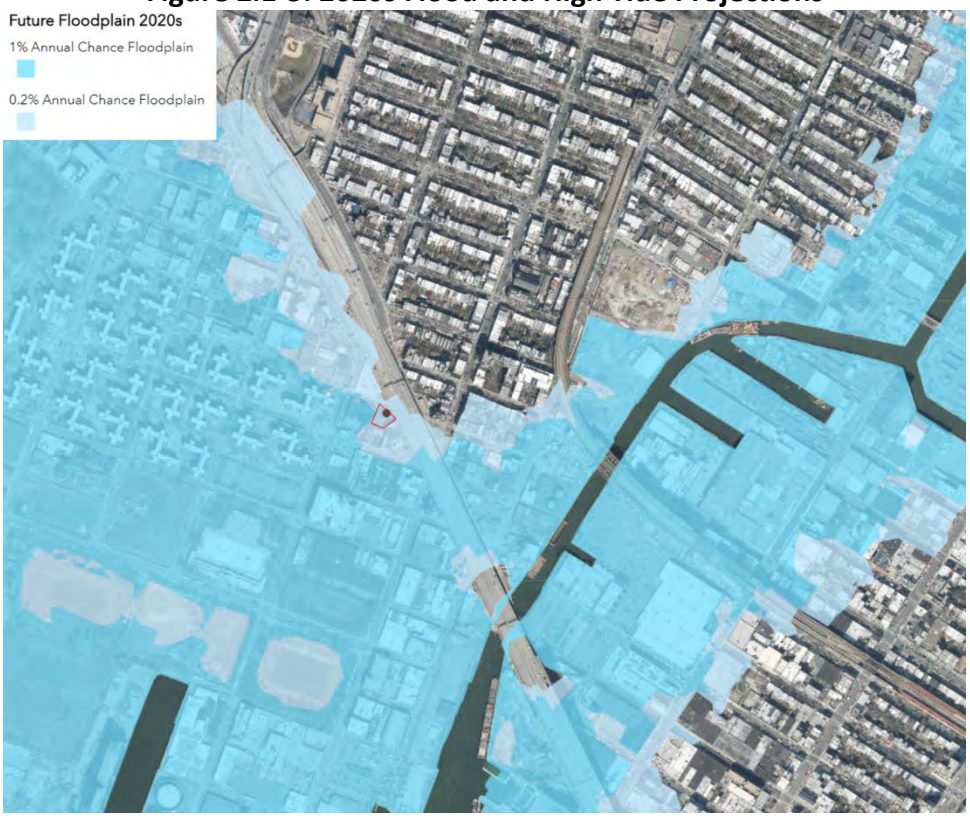




Figure 2.1-4: 2050s Flood and High Tide Projections

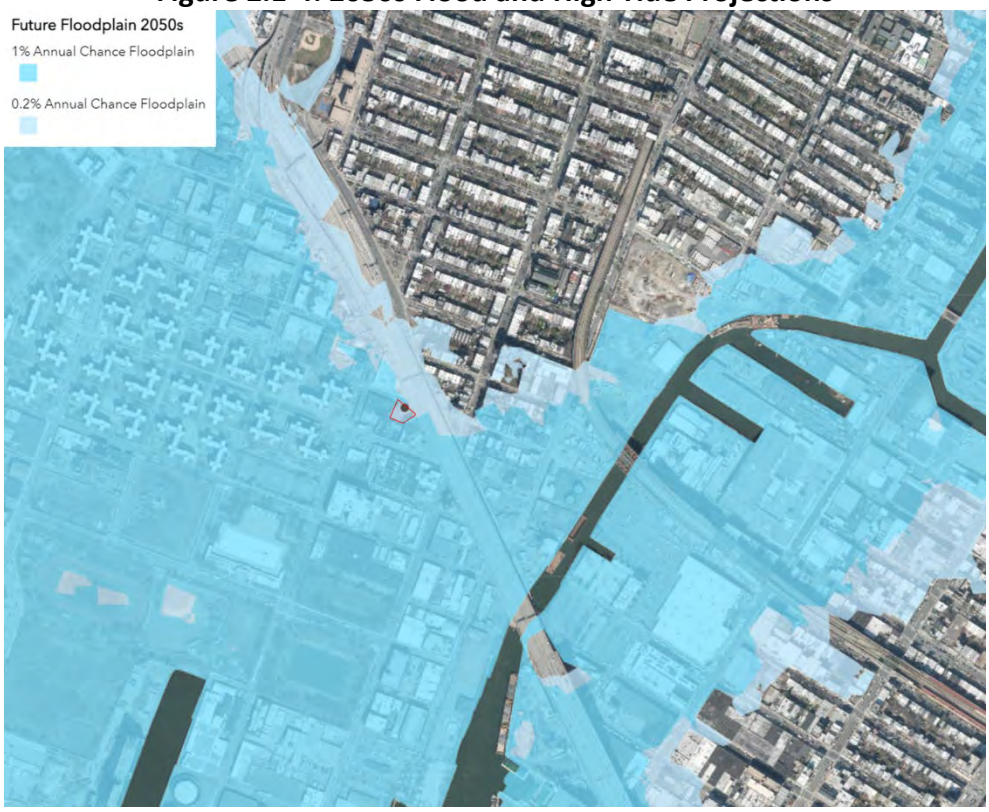
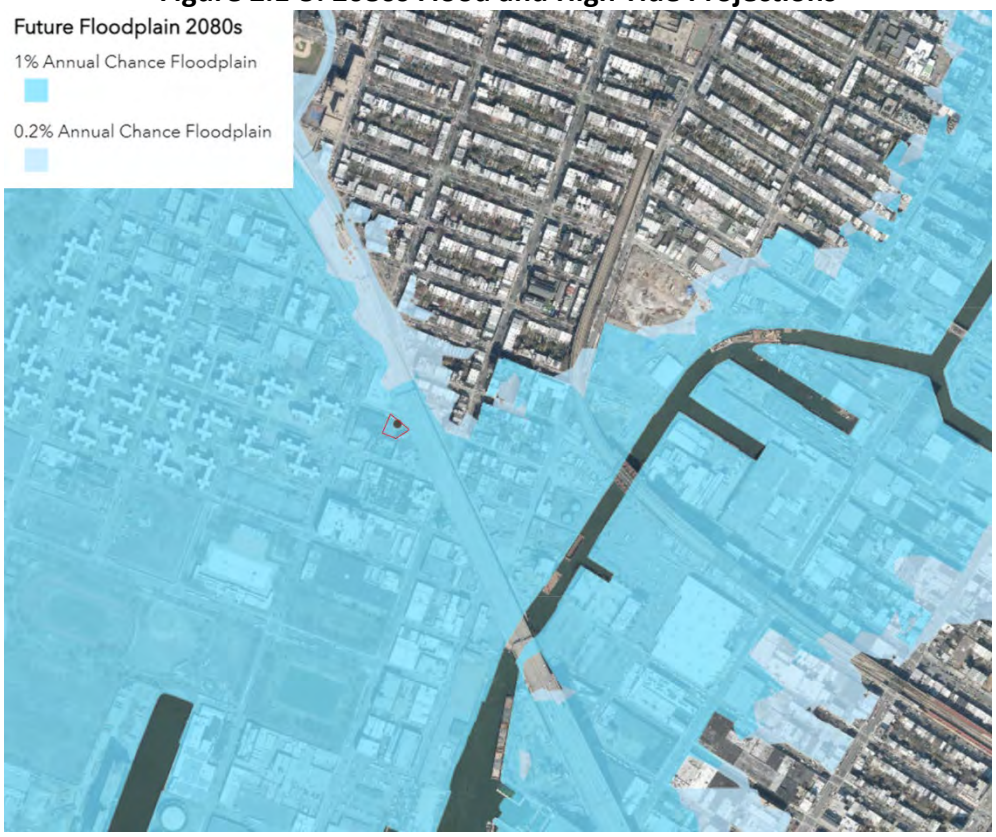




Figure 2.1-5: 2080s Flood and High Tide Projections



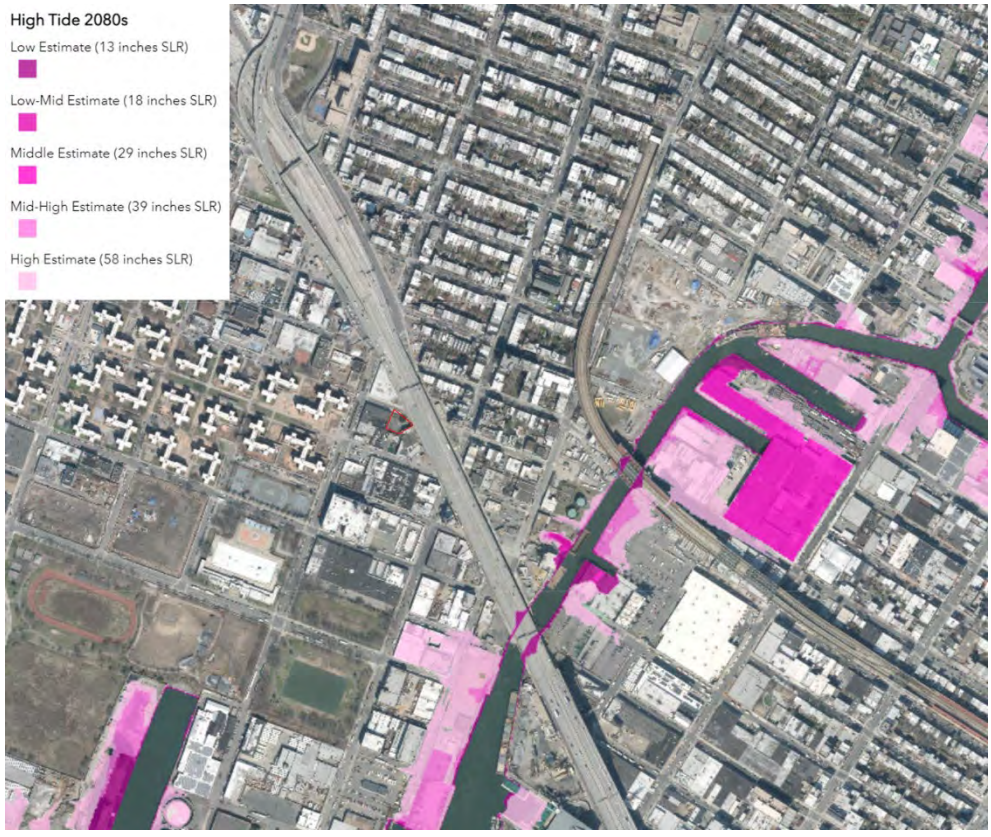
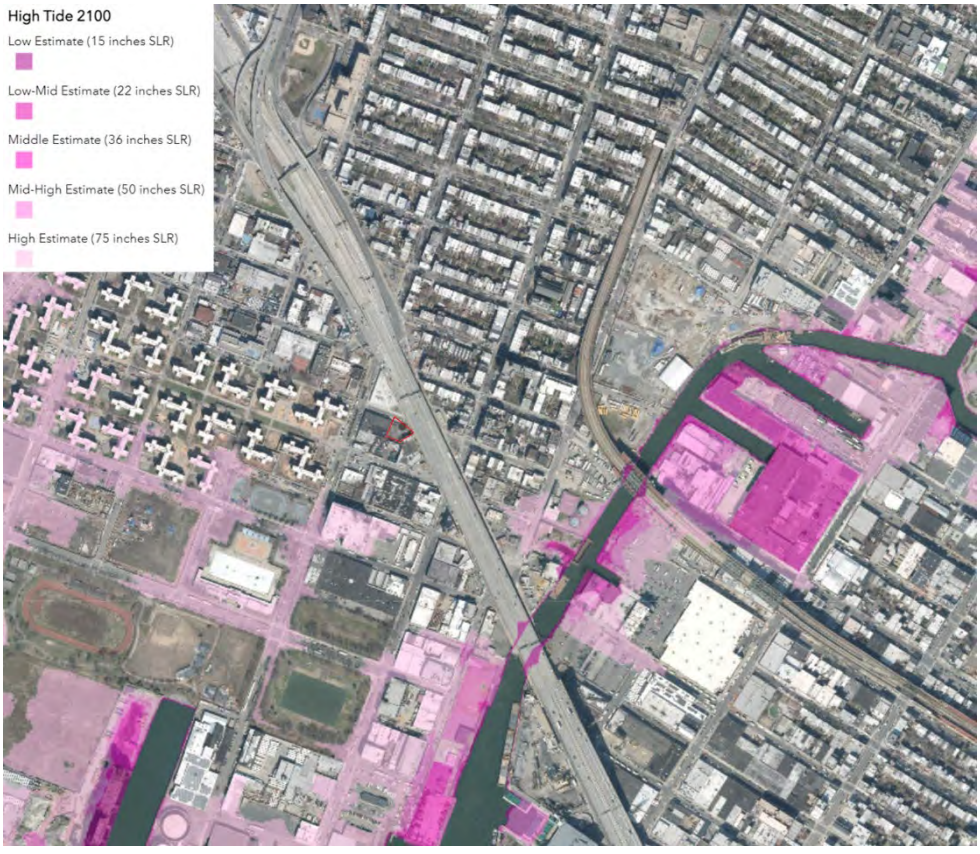


Figure 2.1-6: 2100s Flood and High Tide Projections





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

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

The Proposed Action would permit the redevelopment of an underutilized corner lot. The lot would be developed with a mixed-use commercial and community facility building in an area bounded by two wide roads mapped with commercial overlays. The surrounding area is predominantly industrial and commercial. The development of the Projected Development Site with a commercial and community facility building would add to the commercial corridors along Court Street and Clinton Street. Therefore, the Proposed Action is consistent with sub-policy 1.1.

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

The Projected Development Site is located in an area with fully developed infrastructure and adequate capacity to support the proposed project. The surrounding community provides supportive infrastructure complementary to commercial and community facility uses, such as residential neighborhoods and open space resources. Additionally, the Projected Development Site is located within a transit zone with adequate roadway access and mass transit available within walking distance to support the proposed development.

Sub-Policy 1.5: Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.

The Proposed Project would integrate consideration of climate change and sea level rise. As discussed below, the Applicant would employ dry-floodproofing upon construction to protect critical building features (mechanical and utility systems), which are contained within the cellar level below grade. In addition, the Applicant would size vertical façade elements on the ground floor to accommodate the lateral structural loads imposed by removable flood gates, which would be installed at a later date. Therefore, the Proposed Action would be consistent with Policy 1.5

POLICY 5: Protect and Improve Water Quality in The New York City Coastal Area

Sub-Policy 5.1: Manage direct or indirect discharges to waterbodies.

Considerations:

A) *Minimize the negative impacts to fish and wildlife habitats caused by artificial input of large quantities of freshwater into tidal or brackish waterbodies and enhances freshwater inputs when it can be demonstrated that there will be ecological benefits.*
B) *Minimize the negative impacts to fish and wildlife habitats caused by effluent discharge that result in thermal changes from steam generating, heating, air conditioning, and industrial facilities.*
C) *Limit discharge of vessel wastewaters into waterways by providing adequate pumpout facilities.*

While the Proposed Development would not involve industrial use that would result in a new direct or indirect discharge into water bodies, the Proposed Action will be required to ensure that the site would not be impacted by hazardous materials. In the event that hazardous materials are identified on the site, the Proposed Action would require remediation, which would prevent further discharge of such contamination into the groundwater and waterways. Therefore, the Proposed Action would minimize the negative impacts on fish and wildlife habitats caused by effluent discharge.

Sub-Policy 5.2: Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

Considerations:

A) *Use sustainable stormwater management strategies, such as green infrastructure, use of permeable surfaces, on-site detention, and the preservation and enhancement of vegetation, wetlands, and ecosystems to minimize nonpoint discharge into coastal waters of excess nutrients, organics, eroded soils, and pollutants, and to control stormwater runoff from roadways and other developed areas.*
B) *Minimize nonpoint source pollution of coastal waters using the following approaches listed in order of priority: (1) avoid pollution by limiting sources; or (2) reduce pollutant loads to recipient waters by managing unavoidable sources.*
C) *Limit sources of atmospheric deposition of pollutants to New York City waterbodies and streams, particularly from nitrogen sources, which may deteriorate water quality or impair aquatic habitats.*
D) *As described in WRP Sub-Policy 7.1, use accepted best management practices to prevent the run-off of pollutants and potentially contaminated sediment into waterways*.

The Projected Development Site is currently entirely impervious with asphalt-paved groundcover, and the Proposed Development would not increase stormwater runoff. Additionally, as further described under sub-policy 7.1, the development and any required

remediation of the site would occur in accordance with accepted best management practices to avoid runoff of pollutants and contaminated sediment into waterways. Remediation of the Projected Development Site would occur pursuant to applicable City, State, and Federal regulatory guidance. All control measures will comply with the Stormwater Pollution Prevention Plan (SWPPP). Control measures, such as an Erosion and Sediment Control Plan during site remediation and construction, and additional measures shall be implemented if conditions change or warrant additional control measures. With these stormwater management provisions in place, pollution and discharge into coastal waters will be managed to avoid impact. Accordingly, the Proposed Action is consistent with sub-policy 5.1.

POLICY 6: Minimize Loss of Life, Structures, Infrastructure, and Natural Resources Caused by Flooding and Erosion, And Increase Resilience to Future Conditions Created by Climate Change.

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

The Projected Development Site is located within the 2007 FEMA Flood Insurance Rate Map (FIRMs) and 2015 Preliminary Flood Insurance Rate Maps (PFIRMs) 0.2% annual chance floodplain (500-year flood zone). Under Policy 6, the primary goal for projects within flood hazard areas is to reduce the risks posed by current and future flood events, mainly major storms that are likely to increase due to climate change and sea-level rise.

As the Projected Development Site falls within the 0.2% annual chance floodplain, the proposed building would not be subject to compliance with NYC Building Code Appendix G. Appendix G requires owners of severely damaged or destroyed buildings in the 1% annual chance floodplain to comply with the flood-resistant construction standards of the Building Code when they rebuild. The same requirements are applicable to any new development, or substantially improved properties, whether the development is located in whole or in part within the 1% annual chance floodplain.

The Applicant has been informed of future best management practices and would employ dry-floodproofing upon construction to protect critical building features that are below grade (mechanical and utility systems) contained within the cellar level. In addition, the Applicant would size vertical façade elements on the ground floor to accommodate lateral structural loads imposed by removable flood gates, which would be installed at a later date. Therefore, the Proposed Project would meet the requirements of building-scale resiliency measures to reduce the risks of damage from current and future coastal hazards and would be consistent with Policy 6.1.

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

The following assessment was prepared in accordance with *The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance Document for Policy 6.2.* The three basic steps to assessing an action's consistency with Policy 6.2 of the Waterfront Revitalization Program include identifying vulnerabilities and consequences, identifying adaptive strategies, and evaluating policy consistency.

Policy 6.2 Detailed Methodology

1. Identify Vulnerabilities and Consequences

a) *Assess the Project Area's Exposure to current and future flood risk (Flood-Evaluation Worksheet)*

The information in the following subsections is based on the results of the completed flood evaluation worksheet, which is provided in **Appendix C**.

The Projected Development Site's ground floor level (base plane) is located approximately 14.38 feet in elevation (NAVD88 Datum). The Subject Building's vulnerable or critical features, which are most likely to be impacted by future flood events, would be located on the cellar level. The cellar level would be located approximately 15 feet below the ground elevation or -0.62 feet (NAVD88 Datum).

Regulatory floodplains are defined by the elevation of the base flood (BFE) in relation to the elevation of the ground. According to datum (NAVD88) obtained from the National Oceanic and Atmospheric Administration (NOAA) website for the nearest NOAA station – The Battery, NY Station (Station ID 8518750) - the mean of the higher high-water height (MHHW) is 2.61 feet. Based on the 2015 PFIRMs, the 1% flood height for the nearest AE zone is 11 feet.

Figure 2.1-7 shows the results of the MHHW and SLR projections, and **Figure 2.1-8** shows the results of the 1% Flood Elevation and Sea Level Rise (SLR) projections.

Figure 2.1-7: MHHW and Sea Level Rise Projections

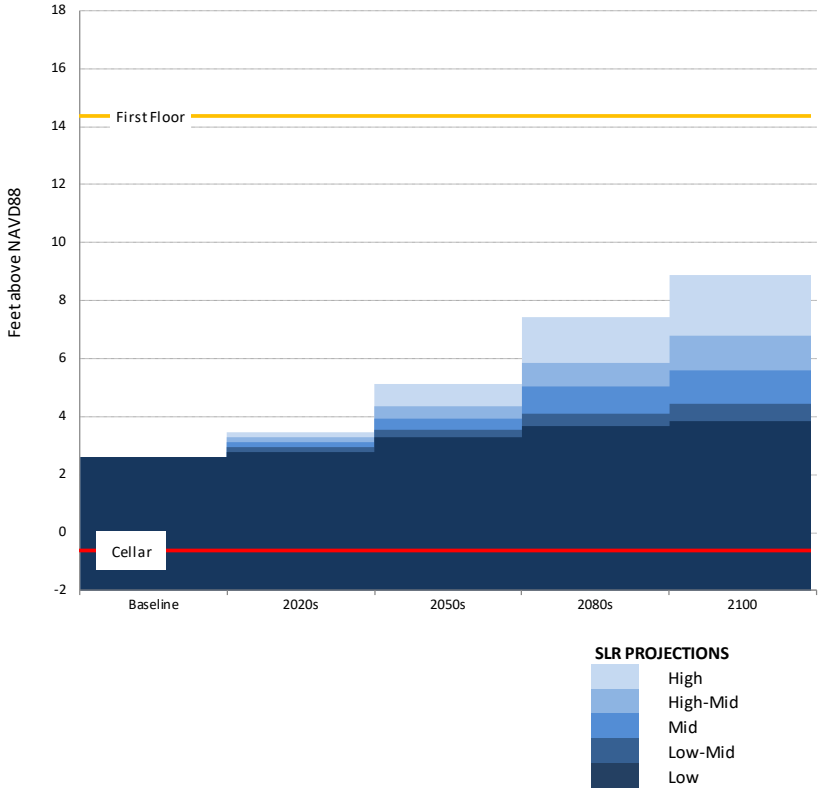
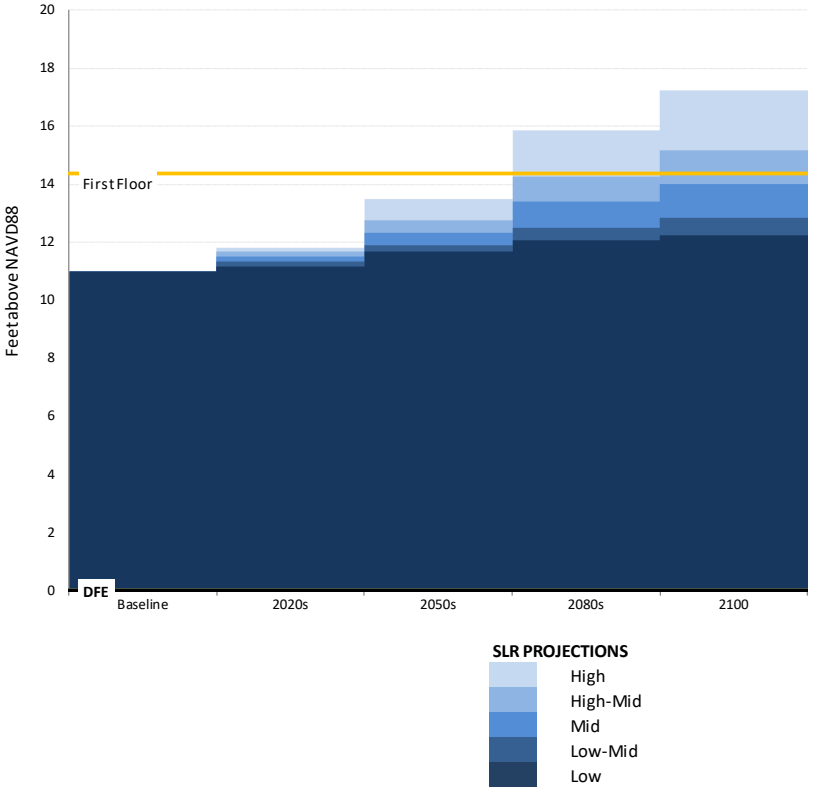


Figure 2.1-8: 1% Flood Elevation and Sea Level Rise



As indicated in **Figure 2.1-8** above, the Proposed Development's first-floor level would fall within the 1% annual chance floodplain by the 2080s under high SLR projections. Based on the New York City Panel on Climate Change (NPCC) future floodplain projections, the building would not be within the 1% annual chance floodplain until the 2050s (See **Figure 2.1-4** above), where it is projected to fall partially within the 1% annual chance flood plain. Thus, the cellar is not projected to be below the 1% annual chance flood elevation until the 2050s.

Based on the New York City Panel on Climate Change (NPCC) future floodplain projections, the building would not be subject to tidal flooding through the 2100s (See **Figures 2.1-3 to 2.1-6** above).

b) ***Identify any Project Features that may be located below the elevation of the 1% floodplain over the lifespan of the project under any SLR scenario:***

The Proposed Development's cellar level is anticipated to fall within the 1% floodplain by the 2050s, and the first-floor level is anticipated to fall within the 1% floodplain by the 2080s. As the building is not currently within the 1% annual chance floodplain, the building is not required to comply with the provisions of the DOB building code Appendix G: Flood Resistant Construction.

The ground-floor level, located at an elevation of 14.38 feet (NAVD88), would contain commercial retail space (supermarket), a building lobby, and elevator access.

The cellar level, located at an elevation of -0.62 feet (NAVD88), would contain a supermarket space, mechanical space, office storage, and retail storage, as well as a bike room and freight elevator.

c) ***Identify any vulnerable, critical, or potentially hazardous features that may be located below the elevation of Mean Higher High Water over the lifespan of the project under any sea level rise scenario.***

The Proposed Development would not be impacted by the MHHW under any SLR projections.

d) ***Identify if the project or action would facilitate the development of any vulnerable, critical, or potentially hazardous features, as defined under "Key Terms" below, within areas exposed to flooding from Mean Higher High Water or 1% Annual Chance Flood by the 2050s under the 90th percentile of sea level rise projections:***

Vulnerable, Critical or Potentially Hazardous Features Pursuant to Policy 6.2 guidance:

- ***Vulnerable Features if damaged have the potential to incur significant damage if flooded.***

  These include any form of enclosed space within a building, including residential, commercial, industrial, or community facility land uses; enclosed parking structures;

storage areas; enclosed recreational facilities; and bulkheads, revetments, piers, platforms, and other in-water infrastructure elements.

- ***Critical Features if damaged, would have severe impacts on the project and its ability to function.***

  The project features that if damaged, would have severe impacts on the project and its ability to function as designed. Examples include electrical utilities, building heating and cooling systems, telephone and data connection and distribution rooms, and other supporting and related building technology and utility spaces.

- ***Potentially Hazardous Features, if damaged or made insecure by flooding, could potentially adversely affect the health and safety of the public and the environment.***

  Examples include hazardous materials, including highly volatile, flammable, explosive, toxic, or water-reactive materials; and materials that have the potential to become waterborne in the event of a flood and would be dangerous to the health and safety of the public and the environment, such as the storage of construction materials, demolition debris, and aggregate materials.

  The Proposed Development would not introduce any hazardous features, materials or substances that, if made insecure, would result in a threat to public health or the environment.

The Following are Vulnerable and Critical Features Project Features:

The Cellar Level: The cellar level, located at an elevation of -0.62 feet (NAVD88), would be subject to flooding from the 1% annual chance flood elevation. Based on the New York City Panel on Climate Change (NPCC) future floodplain projections, the building would not be within the 1% annual chance floodplain until the 2050s (See **Figure 2.1-4** above), when it is projected to fall partially within the 1% annual chance flood plain. Thus, the cellar is not projected to be below the 1% annual chance flood elevation until the 2050s.

The cellar level would contain a mechanical room, and an elevator mechanical room, which with no protection from flooding would be considered critical building features. These features, if flooded, could be significantly damaged, resulting in the potential disruption of the building's mechanical functions.

Vulnerable features, if not protected from flooding, include enclosed space used for retail storage and supermarket.

The Ground Floor Level: The ground-floor level, located at an elevation of 14.38 feet (NAVD88), will contain commercial space, a building lobby, and elevator access. The

ground floor level would be subject to flooding from the 1% annual chance flood by the 2080s. Vulnerable features, if not protected from flooding, include enclosed space (supermarket and lobby).

To protect these features from damage related to future flood events, the Applicant would employ the following flood damage reduction elements upon construction:

- A hydrophilic admix would be added to the foundation concrete (sika, zypex etc), which is considered a dry floodproofing measure. This measure would protect the critical cellar programs from potential future flooding.
- Vertical facade elements on the ground floor would be sized to accommodate lateral structural loads imposed by removable flood gates, which would be installed at a later date.

2. Identify Adaptive Strategies

The goal of Step 2 under WRP Policy 6.2 is to assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning. Assess how applicable codes and regulations, planned flood damage reduction elements and adaptive measures, or likely future infrastructure investments (beyond the scope of the proposed project), would or would not reduce potential flood damage for any proposed vulnerable, critical, or potentially hazardous features.

Because the Projected Development Site is susceptible to the impacts of sea level rise and future flood events, it is recommended that building scale resiliency measures and flood mitigation strategies be considered. Pursuant to *Policy 6.2: Climate Change Adaptation Guidance*, consideration of climate change projections for coastal flooding and sea level rise should be incorporated into the design and planning of projects. The development should identify potential vulnerabilities to and consequences of sea level rise and coastal flooding over its lifespan and identify and incorporate design techniques to address these risks.

Recommendations

The following are recommendations for flood resilience techniques and controls to minimize future damage and vulnerability to the subject building upon construction:

Building Scale Resilience Measures

- Water-resistant flooring with waterproof adhesive or pressure-treated subfloor in the cellar and first floor levels;
- Dry floodproofing of cellar level;
- Rigid, closed-cell foam insulation in the cellar and first floor levels;
- Removable or hinged wainscot panels in the cellar and first floor levels;

- Elevated outlets in the cellar and first floor levels;
- Chair rail molding over a gap in the wallboard to prevent wicking in the cellar and first floor levels; and
- Extra-wide snap-on baseboard in the cellar and first floor levels.

The Applicant has been educated about future flood risks to the Proposed Development. Floodproofing measures would be incorporated into the building design upon construction to minimize future damage and vulnerability to the proposed building's cellar and first-floor levels.

The project is configured to maximize the size of community-focused programs on the first and second floors, and there is consequently insufficient space for placing mechanicals anywhere above the cellar. Accordingly, a hydrophilic admix would be added to the foundation concrete (sika, zypex etc), which is considered a dry floodproofing measure. This measure would protect the critical cellar programs from potential future flooding. In addition, vertical facade elements on the ground floor would be sized to accommodate lateral structural loads imposed by removable flood gates, which would be installed at a later date.

While not required, these building scale resiliency measures would help prevent damage to vulnerable and critical building features and reduce the susceptibility of water damage from a future flood event or inundation. With the provision of the above, the building features would not be considered vulnerable or critical.

a) *Flood Protection of Adjacent Sites:*

The Proposed Development would not substantially increase stormwater runoff and would not introduce any hazardous features that would impact the health, safety, or welfare of surrounding residents in the event of a flood. The proposed lot coverage, and resulting impervious surface, is permitted as-of-right by the underlying zoning and would be a reduction in the existing impervious coverage. Therefore, the Proposed Action would not affect the flood protection of adjacent sites.

3. Assess Policy Consistency

A project or action would advance the policy when:

- *No new vulnerable, critical, or potentially hazardous features would be located within area flooded by current or future high tide, or current or future 1% annual chance flood, over the project's lifespan, or*
- *All new vulnerable, critical or potentially hazardous features would be protected through flood damage reduction elements or future adaptive measures within the timeframe that they would be needed.*

A project or action would hinder the policy when:

- *Vulnerable, critical or potentially hazardous features would be introduced in areas that*

will be flooded by high tide during the project's lifespan and adaptive measures are not feasible.

- *Industrial development would not be protected from 2050s high tides or the current 1% annual chance flood.*
- *Critical infrastructure would not be protected to the elevation of the 1% annual chance storm over its lifespan.*
- *Shoreline structures would not function as intended with increases in sea levels projected over their lifespan.*

Construction and any required remediation of the site would be performed pursuant to applicable Local, State, Federal regulations and laws. The Applicant would employ flood resiliency measures for the cellar and first floor levels based on the future flood projections related to the 1% annual chance flood elevation. The cellar level would be dry-floodproofed, vertical facade elements on the ground floor would be sized to accommodate lateral structural loads imposed by removable flood gates, which would be installed at a later date. These building-scale resiliency measures and adaptive strategies, to be employed upon construction, would minimize the potential damage to site-specific vulnerable or critical features. Therefore, the Proposed Action is consistent with sub-policy 6.2 of the Waterfront Revitalization Program and would not jeopardize the intent of the WRP.

POLICY 7: Minimize Environmental Degradation and Negative Impacts on Public Health from Solid Waste, Toxic Pollutants, Hazardous Materials, and Industrial Materials that May Pose Risks to the Environment and Public health and safety.

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

a) *Prevent release of toxic pollutants, radioactive materials, or substances hazardous to the environment that would have a deleterious effect on fish and wildlife and human resources. Limit discharges of persistent bioaccumulating and toxic substances. Minimize resuspension of toxic pollutants and hazardous substances and wastes and reentry of bioaccumulative substances into the food chain for existing environmental sources. Limit use of pesticides, herbicides, insecticides, and fertilizers and to prevent direct or indirect entry into waterways.*

b) *Remediate inactive hazardous waste disposal sites and brownfields to ensure that the public health and the waters, wetlands, and habitats are protected. Utilize best practices during the remediation process to ensure safe containment of contaminants in the event of a coastal storm.*

c) *To the extent required by NYC Community Right to Know Law and local and state water quality improvement programs, integrate consideration of pollution prevention, good housekeeping and control of hazardous wastes, toxic pollutants, and substances*

hazardous to the environment into the planning and design of any facility using such materials.

d) *Use accepted best design and management practices, including industrial pollution prevention, for the siting of hazardous materials, toxic pollutants, and other materials that may pose risks to the environment and public health and safety. Use best site design practices to prevent the runoff of pollutants and potentially contaminated sediment into waterways. The NYS Dept. of Environmental Conservation's New York State Stormwater Management Design Manual should be used as a reference.*

e) *Provide adequate wastewater collection facilities to the extent practicable to prevent direct discharge of treated sewage by vessels into the waterways.*
f) *Pursuant to WRP Policy 6.2, incorporate consideration of climate change and sea level rise into the planning and design of projects which involve the siting of materials storage which may pose risks to public health and the environment. Projects should consider potential risks to features specific to each project, including but not limited to temporary and long-term waste storage areas, fuel storage tanks, and hazardous material storage.*

Sub-Policy 7.2: Prevent and remediate discharge of petroleum products.

1. *Minimize negative impacts from potential oil spills by the appropriate siting of petroleum off-loading facilities and use of best practices.*

2. *Follow best practices for the prevention and control of petroleum discharges from any major petroleum-related facility. Clean up and remove any petroleum discharge in accordance with the guidelines contained in the New York State Water Quality Accident Contingency Plan and Handbook.*

3. *Follow approved methods for handling and storage and use approved design and maintenance principles for storage facilities to prevent discharges of petroleum products.*

Sub-Policy 7.3: Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

a) *Use routes and methods for transporting solid waste and hazardous materials that protect the coastal environment and the safety and general welfare of the public.*

b) *Site and design solid and hazardous waste facilities so that they will not adversely affect protected natural areas, including Significant Coastal Fish and Wildlife. Habitats, habitats and wetlands critical to vulnerable species, rare ecological communities, surface waters, and aquifer recharge areas.*

c) *Give priority to waterborne transport of waste materials and substances when siting solid and hazardous waste facilities within the coastal area where practical and economically feasible.*

Equity Environmental Engineering has completed a Phase I Environmental Site Assessment and submitted it to NYC DEP for review and concurrence. Based on the findings of the Phase 1 ESA, no RECs, HRECs, CRECs were identified, however, seven VECs (Vapor Encroachment Conditions) within 1/10 of a mile of the Subject Property that are related to a leaking UST, two historic dry cleaners, and four historic automobile garages were identified. To ensure that there is no potential for significant adverse impact associated with Hazardous Materials, an E-Designation will be placed on the Projected Development Site to assure that testing and mitigation will be performed, as necessary, before any future development and/or soil disturbance. With these measures in place, the Proposed Action is consistent with Policy 7 of the WRP.

The project was reviewed for consistency with the New York City Waterfront Revitalization Program and issues WRP # 18-169.

From:	Lucrecia Montemayor (DCP)
To:	Amber Kartalyan
Cc:	Michael Marrella (DCP)
Subject:	WRP Consistency Determination: 3568 Nostrand Avenue - BSA (WRP# 21-120)
Date:	Wednesday, November 3, 2021 5:06:26 PM

Hello Amber,

We have completed the review of the project as described below for consistency with the policies and intent of the New York City Waterfront Revitalization Program (WRP).

3568 Nostrand Avenue – BSA The Applicant is requesting a variance from the New York City Board of Standards and Appeals pursuant to Section 72-21 of the Zoning Resolution of The City of New York ("ZR"). The Proposed Action would permit the development of a 6-story plus cellar Use Group ("UG") 3 Yeshiva High School for girls at 3568 Nostrand Avenue within the Sheepshead Bay neighborhood of Brooklyn Community District 15 (The Project Site). The Proposed Development is contrary to the bulk provisions of the underlying R4/C1-2 zoning district as follows: 1. Floor Area/FAR: The proposed floor area is 17,894 square feet (4.26 FAR) where a maximum of 8,400 square feet (2.0 FAR) is permitted as-of-right pursuant to ZR § 33-121. 2. Front Wall Height: The proposed front wall is 74'-8" where the maximum height of the front wall permitted as-of-right is 35 feet pursuant to ZR § 33-431. 3. Sky Exposure Plane: The proposed sky exposure plane follows a 1:1-8" ratio where the sky exposure plane permitted as-of-right is a 1:1 ratio pursuant to ZR § 33-431**.**
Based on the information submitted, the Waterfront Open Space Division, on behalf of the New York City Coastal Commission, having reviewed the waterfront aspect of this action, finds that the actions will not substantially hinder the achievement of any Waterfront Revitalization Program (WRP) policy and hereby determines the project consistent with the WRP policies.
This determination is only applicable to the information received and the current proposal. Any additional information or project modifications would require an independent consistency review.

For your records, this project has been assigned WRP# 21-120. If there are any questions regarding this review, please contact me.
Best,

LUCRECIA MONTEMAYOR SOLANO, AICP
SENIOR WATERFRONT PLANNER

NYC DEPT. OF CITY PLANNING
120 BROADWAY, 31st FLOOR • NEW YORK, NY 10271
212-720-3624 I lmontemayor@planning.nyc.gov

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Waterfrontplan.nyc

APPENDIX C

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Equity Environmental Engineering

May 21, 2019

347-228-4154
Yoel Lefkowitz
150 Mill Street
Brooklyn,, New York

Re: Environmental Site Assessment, Phase I
150 Mill Street
150 Mill Street
Brooklyn, NY

Please find enclosed the PARCEL Implementation Agreement. Please contact me if you have any questions.

Robert L. Jackson
Managing Director

Phase I Environmental
Site Assessment Report

150 Mill Street
150 Mill Street
Brooklyn, NY 11231

Prepared for

Yoel Lefkowitz
150 Mill Street
Brooklyn,, New York

Prepared by

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

Job Number: 2018121
05/15/2019

Powered By PARCEL

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1.0 GENERAL INFORMATION

Project Information:
150 Mill Street
Project Number:
2018121

Consultant Information:
Equity Environmental Engineering
500 International Drive
Mount Olive, NJ 07828
Phone: 973-527-7451
Fax: 973-858-0280
E-mail Address: bob.jackson@equityenvironmental.com
Inspection Date: 05/08/2019
Report Date: 05/15/2019

Site Information:
150 Mill Street
150 Mill Street
Brooklyn, NY 11231
Latitude, Longitude: 40.674712, -74.000972
Site Access Contact:

Client Information:
Yoel Lefkowitz
347-228-4154
150 Mill Street
Brooklyn,, New York

Site Assessor

John Vrabel
Project Scientist

Site Assessor

This report has not been signed.

Site Assessor

This report has not been signed.

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 located at 150 Mill Street, Brooklyn, New York City Block 552, Tax Lot 13, and is within Community District 6. The Subject Property is 9,242 square feet and is currently developed with a 1,020 gross square foot office building. The Site Location Map is located in Appendix A and site photographs are located in Appendix B.

2.2 Data Gaps

Equity did not identify any significant data gaps that would affect its ability to identify Recognized Environmental Conditions (RECs) associated with the Subject Property.

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					
7.3.4	**ASTs**	X					
7.3.5	**Other Suspect Containers**	X					
7.3.6	**Equipment Likely to Contain PCBs**	X					A forklift was stored onsite on intact pavement as well as a one gallon container of hydraulic fluid in a storage closet.
7.3.7	**Interior Staining/Corrosion**	X					
7.3.8	**Discharge Features**	X					Two drains were observed in the outdoor lot of the Subject Property. The drains are assumed to discharge into the municipal sewer system.
7.3.9	**Pits, Ponds, And Lagoons**	X					
7.3.10	**Solid Waste Dumping/Landfills**	X					
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 properties or into the ground, groundwater, or surface waters of the properties. Historic Recognized Environmental Conditions (HRECs) 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. Controlled Recognized Environmental Conditions (CRECs) are RECs that are under some form of institutional and/or engineering control. A Vapor Encroachment Condition (VEC) is the presence or likely presence of chemical of concern vapors in the subsurface of the target property caused by the release of vapors from contaminated soil and/or groundwater either on or near the target property. All RECs and VECs are discussed below.

2.4 Recommendations (continued)

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 3.5 of this report. This assessment has revealed the following information in connection with the Subject Property:

RECs:

There are no RECs associated with the Subject Property.

HRECs:

There are no HRECs associated with the Subject Property.

CRECs:

There are no CRECs associated with the Subject Property.

VECs:

The EDR Vapor Encroachment database identified seven VECs (Vapor Encroachment Conditions) within 1/10 of a mile of the Subject Property that are related to a leaking UST, two historic dry cleaners, and four historic automobile garages. Based on these findings, a possible vapor encroachment cannot be ruled out. Details on the VECs can be found in Appendix F.

3.0 INTRODUCTION

3.1 Purpose

The purpose of the Phase I Environmental Site Assessment (ESA) was to evaluate the current and historical conditions of the Subject Property in an effort to identify recognized environmental conditions in connection with the Subject Property.

A recognized environmental condition is defined by ASTM as:

Recognized Environmental Condition - 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 recognized environmental conditions 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 general accordance with ASTM Standard E 1527-13 and included the following:

- Review of previous environmental site assessments;
- Records review;
- Interviews with regulatory officials and personnel associated with the subject and adjoining properties;
- A site visit; 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. These activities would be carried out in a Phase II ESA, if required. 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 IESA 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 noted. Equity does not warrant the accuracy or completeness of the 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

Along with all of the limitations set forth in various sections of the ASTM E 1527-13 protocol, the accuracy and completeness of this report may be limited by the following: access limitations, physical obstructions to observations, outstanding information requests, and historical data source failure.

It should be noted that this assessment did not include a review or audit of operational environmental compliance issues, or of any environmental management systems (EMS) that may exist on the property. Where required, the documents listed in Appendices A and E were used as reference material for the completion of the Phase I ESA. Some of the information presented in this report was provided through existing documents and interviews. Although attempts were made, whenever possible, to obtain a minimum of two confirmatory sources of information, Equity Environmental Engineering LLC (Equity) in certain instances has been required to assume that the information provided is accurate.

3.4 Limitations and Exceptions (continued)

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgment of Equity based on the data obtained from the work. Due to the nature of investigation and the limited data available, Equity cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be construed as legal advice.

Should additional information become available which differs significantly from our understanding of conditions presented in this report, we request that this information be brought to our attention so that we may reassess the conclusions provided herein.

3.5 Deviations

There were no deviations made during this Phase I ESA.

3.6 Special Terms and Conditions

Authorization to perform this assessment was given by 150 Mill Street LLC. on May 8, 2019. Instructions as to the location of the property, access, and an explanation of the property and facilities to be assessed were provided by 150 Mill Street LLC.

3.7 Reliance

This report has been prepared for the sole benefit of the 150 Mill Street LLC.. The report may not be relied upon by any other person or entity without the express written consent of 150 Mill Street LLC.

4.0 SITE DESCRIPTION

4.1 Location and Legal Description

The Subject Property is known as 150 Mill Street and is located at 150 Mill Street, Brooklyn, NY.

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 150 Mill Street, Brooklyn, NY 11231. Any exceptions to or deletions from this practice are described in Section 2.5 of this report. This assessment has revealed no evidence of Recognized Environmental Conditions in connection with the Subject Property.

4.3 Site and Vicinity Description

The Subject Property consists of approximately 9,242 square feet and is developed with an approximately 1,020 square foot, office building. The ground surface at the site is predominantly flat. Groundcover consists primarily of concrete sidewalk, asphalt, and an office building. The subject property can be accessed from Mill Street.

The site is zoned M1-1 for industrial uses. The area surrounding the site is primarily industrial, manufacturing, commercial, and residential.

4.4 Current Use of Property

The Subject Property is currently developed with a one story 1,020 gross square foot office building and a storage lot.

4.5 Description of Structures and Other Improvements

The office building on the property are of wood, and masonry construction. The building is currently in good condition. New York City supplies drinking water to the Subject Property from the municipal distribution system. Sanitary discharges on the Subject Property are discharged into the municipal sanitary sewer system. The Subject Property area is serviced by the Borough of Brooklyn. Electricity and gas are provided to the Subject Property by Con Edison.

4.6 Adjoining Property Information

During the site reconnaissance, Equity observed that the land use in the immediate vicinity of the Subject Property is primarily industrial, manufacturing, commercial, and residential. During the vicinity reconnaissance, Equity observed the following land use on properties in the immediate vicinity of the Subject Property:

North: Commercial
South: Industrial and manufacturing, and commercial
East: Mixed residential and commercial
West: Public facilities and institutions (Day care center)

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 as part of this report. The property ownership as well as all individuals who were interviewed as part of this investigation, have not reported any specialized knowledge of this Subject Property outside of what is contained in this report.

5.2 Valuation Reduction for Environmental Issues

Equity has not been provided with an appraisal for the subject property. However, this property is to be refinanced rather than sold. No environmental issues were identified by the client that could result in property value reduction.

5.3 Owner, Property Manager, and Occupant Information

No written or verbal communication with the property owner, manager and tenants revealed any information which suggested that there are currently or historically been any Recognized Environmental Conditions associated with the Subject Property.

5.4 Reason For Performing Phase I ESA

The purpose of this Phase I Environmental Site Assessment (ESA) was to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E 1527-13) in connection with the Subject Property.

The Phase I ESA is being conducted as part of environmental due diligence prior to soil disturbance related to the proposed construction at the Subject 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 Target Property (TP) for this database search was 150 Mill Street Block 552, Lot 13. The NR designation on the table stands for "Not Requested" at this search distance. The TP is not listed for this database.

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	1	NR	1
CORRACTS		1	0	0	1	1	NR	2
RCRA-LQG		0.25	2	5	NR	NR	NR	7
RCRA-SQG		0.25	0	4	NR	NR	NR	4
RCRA-CESQG		0.25	1	0	NR	NR	NR	1
FUDS		1	0	0	0	1	NR	1
US BROWNFIELDS		0.5	0	0	1	NR	NR	1
EDR Hist Auto		0.125	7	NR	NR	NR	NR	7
SEMS		0.5	1	2	0	NR	NR	3
SEMS-ARCHIVE		0.5	0	0	3	NR	NR	3
ROD		1	0	0	0	1	NR	1
RCRA NonGen / NLR		0.25	15	27	NR	NR	NR	42
EDR Hist Cleaner		0.125	2	NR	NR	NR	NR	2
NY MANIFEST		0.25	17	46	NR	NR	NR	63
NY SWRCY		0.5	1	0	0	NR	NR	1
NY DRYCLEANERS		0.25	0	1	NR	NR	NR	1
NY MOSF		0.5	0	2	2	NR	NR	4
NY CBS AST		0.25	0	1	NR	NR	NR	1
NY LTANKS		0.5	4	9	28	NR	NR	41
NY SPILLS		0.125	32	NR	NR	NR	NR	32
NY VCP		0.5	0	0	5	NR	NR	5
NY SWF/LF		0.5	2	1	10	NR	NR	13
NJ MANIFEST		0.25	2	11	NR	NR	NR	13
NY HSWDS		0.5	0	0	4	NR	NR	4
NY UST		0.25	8	15	NR	NR	NR	23
NY AST		0.25	1	10	NR	NR	NR	11
NY BROWNFIELDS		0.5	0	0	5	NR	NR	5
NY DEL SHWS		1	0	0	2	0	NR	2
NY SHWS		1	0	1	5	5	NR	11
NY CBS		0.25	0	1	NR	NR	NR	1
NY MOSF AST		0.5	0	1	2	NR	NR	3
NY MOSF UST		0.5	0	1	2	NR	NR	3
PA MANIFEST		0.25	1	2	NR	NR	NR	3
EDR MGP		1	0	0	3	2	NR	5

6.2 Additional Environmental Record Sources

No additional environmental record sources were researched for this Phase I investigation.

6.3 General Site Setting

The Subject Property is located in Brooklyn and surrounded by industrial, manufacturing, commercial, and residential land use. The ground surface at the Subject Property is predominately level. The general area surrounding the Subject Property is flat with little topographic relief.

6.3.1 Topography

Based on a review of the USGS 1.5' 2013 topographic map for the site area, groundwater is inferred to flow to the east toward the Gowanus Canal.

6.3.2 Surface Water Bodies

The nearest surface water in the vicinity of the Subject Property is the Gowanus Canal located approximately 1,000 feet to the east of the Subject Property. No surface water is located on the Subject Property.

6.3.3 Geology and Hydrology

Based on the soil survey maps published by the USDA Soil Conservation Service (1994) and information provided in the EDR Report, the subsurface soils expected at the site include Urban Land, which is variable in texture and 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.). The geologic age identification of the rock at the Subject Property is Eugeosynclinal Deposits, and the rock-stratigraphic units are made up of the Mesozoic Era, Cretaceous System, Upper Cretaceous Series (Code uK).

The Subject Property is located within the 3604970192F FEMA Flood Plain Panel. No on-site water wells or springs were observed during the Property reconnaissance. No settling ponds, lagoons, surface impoundments, wetlands or catch basins were observed at the Subject Property during this assessment.

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.

6.4.2 Title Records

Equity was not provided land title records as part of this assessment.

6.4.3 City Directories

Business directories including city, cross reference, and telephone directories were reviewed for the years spanning 1970 through 2014. The Subject Property was listed historically as an industrial, manufacturing, and residential site.

150 Mill Street was listed as the following:

1970: Storrs Lloyd A.
2000: CLLTRL RECVY SFTWR
2005: Billy Contractors Inc
2010: ALL STATE SCAFFOLDING INC, and BILLY CONTRACTORS INC.
2014: ALL STATE SCAFFOLDING INC, and BILLY CONTRACTORS INC.

6.4.4 Aerial Photos

Equity reviewed a total of sixteen aerial photographs spanning from 1924 to 2017. The Subject Property depicted in the aerials from 1924 to 2017 is consistent with the current shape, size, and location of the Subject Property.

6.4.5 Sanborn/Historical Maps

Equity reviewed a total of twenty six Sanborn Fire Insurance maps from 1886 to 2007. The table below summarizes the observations made based on the maps provided by EDR. The Sanborn maps are located in Appendix C.

Summary

Date(s)	Property Comments	Surrounding Area Comments
1886, 1904, 1915	The Subject Property is developed with three residential dwelling units, and two stores	The surrounding area is primarily residential, commercial, and undeveloped land.
1938	The Subject Property is developed with one residential dwelling unit and two stores.	The surrounding area is primarily residential, and commercial with uses including dwelling units and store fronts.
1950	The Subject Property is developed with one residential dwelling unit.	The surrounding area is primarily residential, and commercial with uses including dwelling units and store fronts.
1938, 1950, 1969, 1977, 1979, 1980, 1981, 1982, 1986, 1987, 1988, 1991, 1992, 1993, 1995, 1996, 2001, 2002, 2003, 2004, 2005, 2006, 2007	The Subject Property is undeveloped.	The surrounding area is primarily residential, industrial, manufacturing, and commercial with uses including gas stations, warehouses, commercial properties and dwelling units.

6.4.6 Historical Topographic Maps

Equity reviewed a total of twelve historical topographic maps from 1891 through 2014. No discernible information could be obtained from these maps. The topographic maps are provided in Appendix C.

6.4.7 Other Environmental Reports

No other environmental reports were obtained or reviewed for this assessment.

6.4.8 Building Department Records

According to the New York City Department of Buildings (DOB) website eleven actions have been identified at 150 Mill Street. The actions are in relation to certification of occupancy, new building construction, plumbing, and a zoning violation.

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

There are no known liens and/or activity/use limitations on the Subject Property.

7.0 SITE RECONNAISSANCE

7.1 Methodology and Limiting Conditions

The site reconnaissance was conducted on May 8, 2019 by John Vrabel, Project Scientist with Equity, accompanied by Yoel Lefkowitz of 150 Mill Street LLC. Weather conditions at the time of the site reconnaissance were cloudy and 50-60 degrees Fahrenheit. The visual reconnaissance consisted of observing the boundaries of the property and systematically traversing the site to provide an overlapping field of view, wherever possible. The periphery of the on-site structure was observed along with interior accessible common areas, manufacturing, storage and maintenance areas. Photographs of pertinent site features identified during the site reconnaissance are included in Appendix B.

7.2 General Site Setting

The Subject Property is located in Brooklyn and surrounded by industrial, commercial, and residential land use. The ground surface at the Subject Property is predominately level. The general area surrounding the Subject Property is flat with little topographic relief. Groundcover consists primarily of an office building, asphalt, and concrete sidewalk. The Subject Property is accessed from the north via an entrance from Mill Street.

7.3 Site Visit Findings

7.3.1 Hazardous Substances

Items stored on the Subject Property consist of hydraulic fluid, aluminum roof coating, and various paints.

7.3.2 Petroleum Products

A one gallon container of hydraulic fluid was observed in a storage closet.

7.3.3 USTs

No underground storage tanks (USTs) were observed during the site reconnaissance.

7.3.4 ASTs

No above ground storage tanks (ASTs) were observed during the site reconnaissance.

7.3.5 Other Suspect Containers

No other suspect containers were observed during the site reconnaissance.

7.3.6 Equipment Likely to Contain PCBs

A forklift and a one gallon container of hydraulic fluid in a storage closet were stored onsite on intact pavement.

7.3.7 Interior Staining/Corrosion

No interior staining was identified during the site reconnaissance.

7.3.8 Discharge Features

Two drains were observed in the outdoor lot of the Subject Property. The drains are assumed to discharge into the municipal sewer system.

7.3.9 Pits, Ponds, And Lagoons

No pits, ponds, or lagoons were observed during the site reconnaissance.

7.3.10 Solid Waste Dumping/Landfills

No solid waste dumping/landfills were observed during the site reconnaissance.

7.3.11 Stained Soil/Stressed Vegetation

No stained soil or stressed vegetation was observed during the site reconnaissance.

7.3.12 Wells

No wells were observed during the site reconnaissance.

8.0 INTERVIEWS

The Subject Property inspection was conducted with Yoel Lefkowitz. During the site reconnaissance Mr. Lefkowitz was not able to provide building history for the Subject Property.

CONCLUSIONS

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 properties or into the ground, groundwater, or surface waters of the properties. Historic Recognized Environmental Conditions (HRECs) 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. Controlled Recognized Environmental Conditions (CRECs) are RECs that are under some form of institutional and/or engineering control. A Vapor Encroachment Condition (VEC) is the presence or likely presence of chemical of concern vapors in the subsurface of the target property caused by the release of vapors from contaminated soil and/or groundwater either on or near the target property. All RECs and VECs are discussed below.

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 Section3.5 of this report. This assessment has revealed the following information in connection with the Subject Property:

RECs:

There are no RECs associated with the Subject Property.

HRECs:

There are no HRECs associated with the Subject Property.

CRECs:

There are no CRECs associated with the Subject Property.

VECs:

The EDR Vapor Encroachment database identified seven VECs (Vapor Encroachment Conditions) within 1/10 of a mile of the Subject Property that are related to a leaking UST, two historic dry cleaners, and four historic automobile garages. Based on these findings, a possible vapor encroachment cannot be ruled out. Details on the VECs can be found in Appendix F.

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 Zola Database
7. NYC Department of Buildings records
8. Qualifications

Appendix A:

Figures



Legend

150 Mill Street

0 0.17 0.35 0.7 1.05 1.4 Miles

N

Figure 1
Phase I ESA
USGS Site Location Plan

150 Mill Street
Brooklyn, New York

equity environmental engineering
500 International Drive, Suite 150, Mount Olive, NJ 07828
Office: (973) 527-7451 / Fax: (973) 858-0280

DRAWN BY / DATE	REV / DATE	DRAWING NUMBER
GB/12.17.18		2018121-01



Legend

150 Mill Street

0 15 30 60 90 120 US Feet

N

Figure 2
Phase I ESA
Site Boundary Map

150 Mill Street
Brooklyn, New York

equity environmental engineering
500 International Drive, Suite 150, Mount Olive, NJ 07828
Office: (973) 527-7451 / Fax: (973) 858-0280

DRAWN BY / DATE	REV / DATE	DRAWING NUMBER
GB/12.17.18		2018121-02

Appendix B:

Photographs

150 Mill Street

Photos #1-4

01 View of the Subject Property frontage on Mill Street.



02 View of Subject Property scaffolding storage lot.



03 View of Drainage feature on the Subject Property storage lot.



04 View of fork lift stored on the Subject Property.



05 View of office building entrance.



06 View of typical room found inside the office building.



07 View inside storage closet on the Subject Property.



08 View of 5 gallon bucket of aluminum roof coating observed in the storage closet.



09 View of gas station to the south of the Subject Property.



10 View of day care center to the west of the Subject Property.



11 View of kidney care center to the north of the Subject Property.



12 View of gas station to the east of the Subject Property.



APPENDIX D

NOISE BACKUP DATA

Instrument Model	CEL-633C		
LAeq	72.8 dB	Battery Low	No
LCpeak with Time	102.8 dB (5/8/2019 8:46:14 AM)	Duration	00:20:03 HH:MM:SS
Lepd(Projected)	72.8 dB	End Date & Time	5/8/2019 8:51:21 AM
Lex8h(Projected)	72.8 dB	Overload	No
LAFmax with Time	91.5 dB (5/8/2019 8:46:11 AM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	92.3 dB (5/8/2019 8:46:11 AM)	Response	Random
LAFmin with Time	64.2 dB (5/8/2019 8:34:00 AM)	Run Number	57
LAImin with Time	64.3 dB (5/8/2019 8:34:01 AM)	Serial Number	2670911
LZeq	88.4 dB	Start Date & Time	5/8/2019 8:31:18 AM
LCeq	84 dB	Site	Unallocated
LCeq-LAeq	11.2 dB	Location	Unallocated
LAleq	74.4 dB	Person	Unallocated
LAE	103.6 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 8:27:26 AM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	70 dB
Calibration (After) Date	5/8/2019 8:52:48 AM	LAF 90%	67.5 dB
Calibration Drift	-0.1 dB	LAF 95%	67 dB
LAF 10%	73.5 dB		
Notes			

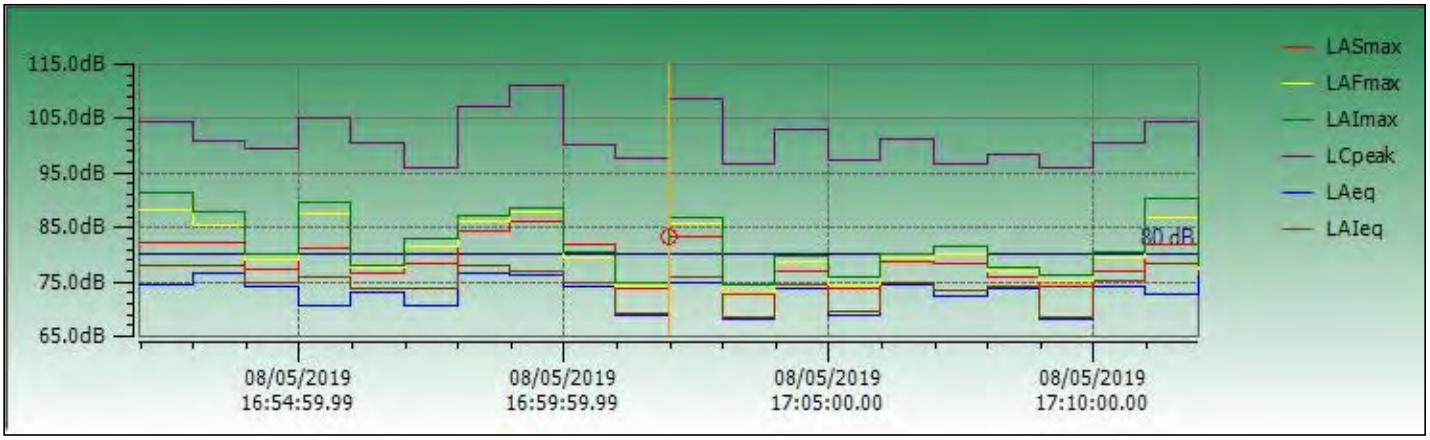
Instrument Model	CEL-633C		
LAeq	74 dB	Battery Low	No
LCpeak with Time	108.2 dB (5/8/2019 5:38:31 PM)	Duration	00:20:22 HH:MM:SS
Lepd(Projected)	74 dB	End Date & Time	5/8/2019 5:39:22 PM
Lex8h(Projected)	74 dB	Overload	No
LAFmax with Time	93.8 dB (5/8/2019 5:20:49 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	94.7 dB (5/8/2019 5:20:49 PM)	Response	Random
LAFmin with Time	61.4 dB (5/8/2019 5:19:00 PM)	Run Number	63
LAImin with Time	61.8 dB (5/8/2019 5:19:01 PM)	Serial Number	2670911
LZeq	86.4 dB	Start Date & Time	5/8/2019 5:19:00 PM
LCeq	82.1 dB	Site	Unallocated
LCeq-LAeq	8.1 dB	Location	Unallocated
LAleq	76.6 dB	Person	Unallocated
LAE	104.9 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 5:18:45 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	67.5 dB
Calibration (After) Date	5/8/2019 5:39:39 PM	LAF 90%	64 dB
Calibration Drift	0.1 dB	LAF 95%	63 dB
LAF 10%	72.5 dB		

Notes

Instrument Model	CEL-633C		
LAeq	70.3 dB	Battery Low	No
LCpeak with Time	104.0 dB (5/8/2019 1:00:33 PM)	Duration	00:20:02 HH:MM:SS
Lepd(Projected)	70.3 dB	End Date & Time	5/8/2019 1:10:14 PM
Lex8h(Projected)	70.3 dB	Overload	No
LAFmax with Time	85.7 dB (5/8/2019 1:03:27 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	86.3 dB (5/8/2019 1:03:27 PM)	Response	Random
LAFmin with Time	62.1 dB (5/8/2019 12:52:52 PM)	Run Number	60
LAImin with Time	62.5 dB (5/8/2019 12:52:52 PM)	Serial Number	2670911
LZeq	87.8 dB	Start Date & Time	5/8/2019 12:50:12 PM
LCeq	83 dB	Site	Unallocated
LCeq-LAeq	12.7 dB	Location	Unallocated
LAleq	71.5 dB	Person	Unallocated
LAE	101.1 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 12:47:53 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	68.5 dB
Calibration (After) Date	5/8/2019 1:11:52 PM	LAF 90%	65.5 dB
Calibration Drift	-0.1 dB	LAF 95%	64.5 dB
LAF 10%	72.5 dB		

Notes

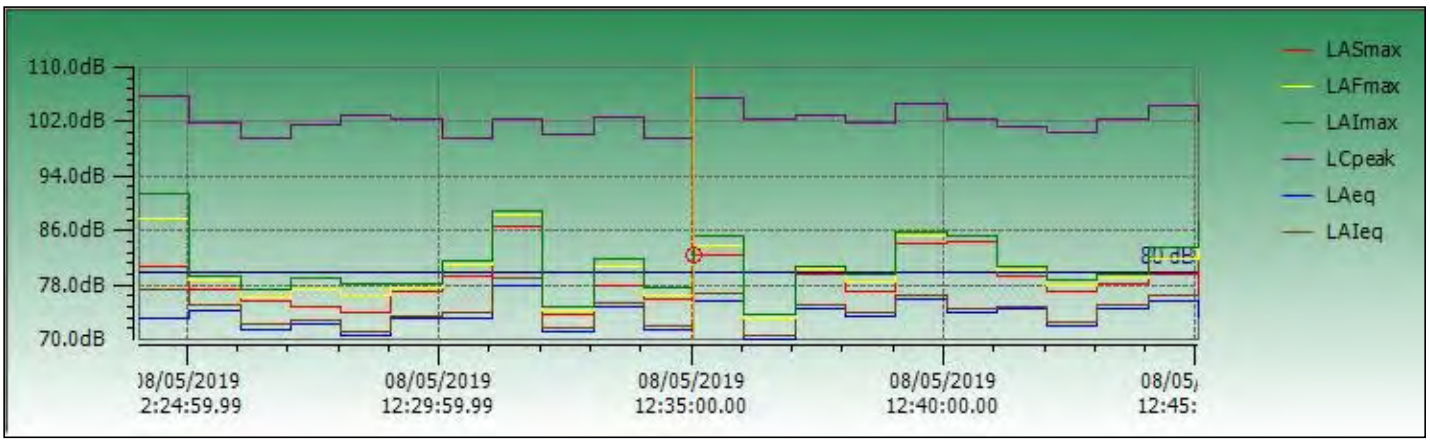
Instrument Model	CEL-633C		
LAeq	73.6 dB	Battery Low	No
LCpeak with Time	111.1 dB (5/8/2019 4:59:54 PM)	Duration	00:20:04 HH:MM:SS
Lepd(Projected)	73.6 dB	End Date & Time	5/8/2019 5:12:02 PM
Lex8h(Projected)	73.6 dB	Overload	No
LAFmax with Time	88.3 dB (5/8/2019 4:52:07 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	91.5 dB (5/8/2019 4:52:06 PM)	Response	Random
LAFmin with Time	63.4 dB (5/8/2019 5:09:36 PM)	Run Number	49
LAImin with Time	64.0 dB (5/8/2019 5:09:14 PM)	Serial Number	1488256
LZeq	89.3 dB	Start Date & Time	5/8/2019 4:51:58 PM
LCeq	84.9 dB	Site	Unallocated
LCeq-LAeq	11.3 dB	Location	Unallocated
LAIeq	75.2 dB	Person	Unallocated
LAE	104.4 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 4:50:52 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	72 dB
Calibration (After) Date	5/8/2019 5:14:27 PM	LAF 90%	66.5 dB
Calibration Drift	0.1 dB	LAF 95%	65.5 dB
LAF 10%	76.5 dB		
Notes			



Instrument Model	CEL-633C		
LAeq	73.9 dB	Battery Low	No
LCpeak with Time	105.9 dB (5/8/2019 12:24:14 PM)	Duration	00:21:07 HH:MM:SS
Lepd(Projected)	73.9 dB	End Date & Time	5/8/2019 12:45:10 PM
Lex8h(Projected)	73.9 dB	Overload	No
LAFmax with Time	88.2 dB (5/8/2019 12:31:17 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	91.3 dB (5/8/2019 12:24:14 PM)	Response	Random
LAFmin with Time	65.7 dB (5/8/2019 12:29:10 PM)	Run Number	48

LAImin with Time	66.1 dB (5/8/2019 12:29:10 PM)	Serial Number	1488256
LZeq	90.6 dB	Start Date & Time	5/8/2019 12:24:03 PM
LCeq	85.6 dB	Site	Unallocated
LCeq-LAeq	11.7 dB	Location	Unallocated
LAleq	74.9 dB	Person	Unallocated
LAE	105 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 12:22:52 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	72.5 dB
Calibration (After) Date	5/8/2019 12:46:07 PM	LAF 90%	68.5 dB
Calibration Drift	0.1 dB	LAF 95%	68 dB
LAF 10%	76.5 dB		

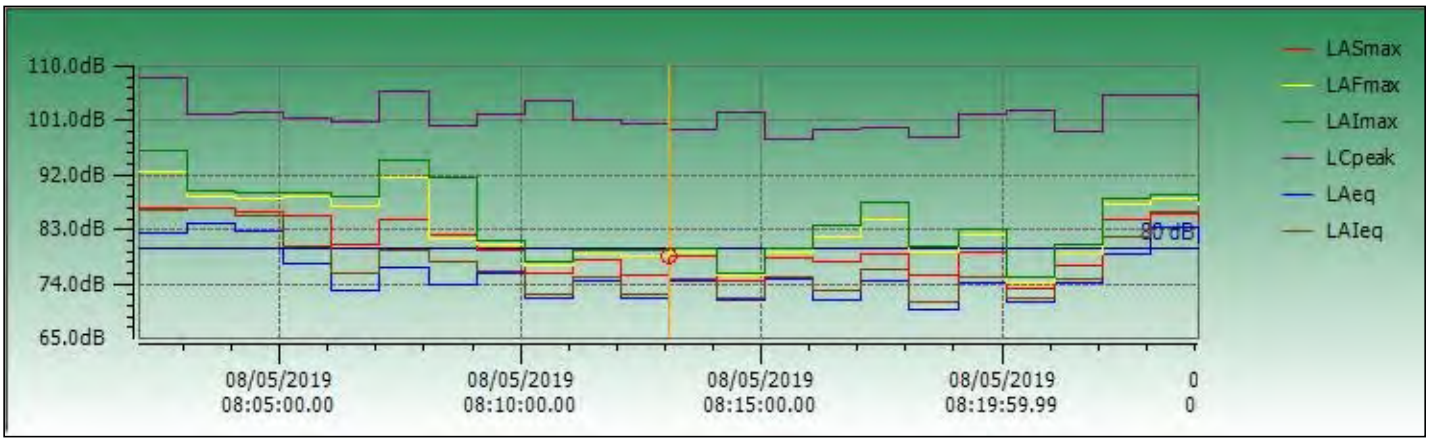
Notes



Instrument Model	**CEL-633C**		
LAeq	78 dB	Battery Low	No
LCpeak with Time	108.2 dB (5/8/2019 8:02:11 AM)	Duration	00:22:52 HH:MM:SS
Lepd(Projected)	78 dB	End Date & Time	5/8/2019 8:24:56 AM
Lex8h(Projected)	78 dB	Overload	No
LAFmax with Time	92.7 dB (5/8/2019 8:02:11 AM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	95.9 dB (5/8/2019 8:02:11 AM)	Response	Random
LAFmin with Time	67.6 dB (5/8/2019 8:16:33 AM)	Run Number	47
LAImin with Time	67.9 dB (5/8/2019 8:16:34 AM)	Serial Number	1488256
LZeq	90.7 dB	Start Date & Time	5/8/2019 8:02:04 AM
LCeq	85.9 dB	Site	Unallocated
LCeq-LAeq	7.9 dB	Location	Unallocated
LAleq	80.6 dB	Person	Unallocated
LAE	109.4 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 7:13:55 AM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	73.5 dB
Calibration (After) Date	5/8/2019 8:25:44 AM	LAF 90%	70 dB

Calibration Drift	0.1 dB	LAF 95%	69 dB
LAF 10%	83 dB		

Notes



Instrument Model	CEL-633C		
LAeq	76.6 dB	Battery Low	No
LCpeak with Time	108.3 dB (5/8/2019 8:22:44 AM)	Duration	00:20:02 HH:MM:SS
Lepd(Projected)	76.6 dB	End Date & Time	5/8/2019 8:27:06 AM
Lex8h(Projected)	76.6 dB	Overload	No
LAFmax with Time	90.8 dB (5/8/2019 8:16:12 AM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	92.6 dB (5/8/2019 8:16:12 AM)	Response	Random
LAFmin with Time	67.8 dB (5/8/2019 8:26:21 AM)	Run Number	56
LAImin with Time	68.3 dB (5/8/2019 8:26:24 AM)	Serial Number	2670911
LZeq	94.2 dB	Start Date & Time	5/8/2019 8:07:04 AM
LCeq	88.9 dB	Site	Unallocated
LCeq-LAeq	12.3 dB	Location	Unallocated
LAleq	77.7 dB	Person	Unallocated
LAE	107.4 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 8:00:44 AM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	75 dB
Calibration (After) Date	5/8/2019 8:27:26 AM	LAF 90%	71 dB
Calibration Drift	0.1 dB	LAF 95%	70 dB
LAF 10%	80 dB		
Notes			

Instrument Model	CEL-633C		
LAeq	75.8 dB	Battery Low	No
LCpeak with Time	114.3 dB (5/8/2019 5:02:35 PM)	Duration	00:20:07 HH:MM:SS
Lepd(Projected)	75.8 dB	End Date & Time	5/8/2019 5:13:54 PM
Lex8h(Projected)	75.8 dB	Overload	No
LAFmax with Time	92.9 dB (5/8/2019 4:55:51 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	95.0 dB (5/8/2019 4:55:51 PM)	Response	Random
LAFmin with Time	65.1 dB (5/8/2019 5:11:34 PM)	Run Number	62
LAImin with Time	65.4 dB (5/8/2019 5:11:30 PM)	Serial Number	2670911
LZeq	92.7 dB	Start Date & Time	5/8/2019 4:53:47 PM
LCeq	88 dB	Site	Unallocated
LCeq-LAeq	12.2 dB	Location	Unallocated
LAleq	77.2 dB	Person	Unallocated
LAE	106.6 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 4:50:20 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	74 dB
Calibration (After) Date	5/8/2019 5:14:34 PM	LAF 90%	68.5 dB
Calibration Drift	0.0 dB	LAF 95%	67.5 dB
LAF 10%	78.5 dB		

Notes

Instrument Model	CEL-633C		
LAeq	76.2 dB	Battery Low	No
LCpeak with Time	108.0 dB (5/8/2019 12:47:18 PM)	Duration	00:21:09 HH:MM:SS
Lepd(Projected)	76.2 dB	End Date & Time	5/8/2019 12:47:24 PM
Lex8h(Projected)	76.2 dB	Overload	No
LAFmax with Time	90.4 dB (5/8/2019 12:31:15 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	91.1 dB (5/8/2019 12:31:15 PM)	Response	Random
LAFmin with Time	66.8 dB (5/8/2019 12:29:07 PM)	Run Number	59
LAImin with Time	67.2 dB (5/8/2019 12:29:08 PM)	Serial Number	2670911
LZeq	94.1 dB	Start Date & Time	5/8/2019 12:26:15 PM
LCeq	88.3 dB	Site	Unallocated
LCeq-LAeq	12.1 dB	Location	Unallocated
LAleq	77.1 dB	Person	Unallocated
LAE	107.3 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 12:26:10 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	74 dB
Calibration (After) Date	5/8/2019 12:47:53 PM	LAF 90%	69.5 dB
Calibration Drift	0.2 dB	LAF 95%	69 dB
LAF 10%	79 dB		

Notes

Instrument Model	CEL-633C		
LAeq	65.8 dB	Battery Low	No
LCpeak with Time	101.6 dB (5/8/2019 7:56:34 AM)	Duration	00:20:02 HH:MM:SS
Lepd(Projected)	65.8 dB	End Date & Time	5/8/2019 8:00:24 AM
Lex8h(Projected)	65.8 dB	Overload	No
LAFmax with Time	82.2 dB (5/8/2019 7:41:25 AM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	84.5 dB (5/8/2019 7:41:25 AM)	Response	Random
LAFmin with Time	57.1 dB (5/8/2019 8:00:11 AM)	Run Number	55
LAImin with Time	57.5 dB (5/8/2019 8:00:11 AM)	Serial Number	2670911
LZeq	84.9 dB	Start Date & Time	5/8/2019 7:40:22 AM
LCeq	80.4 dB	Site	Unallocated
LCeq-LAeq	14.6 dB	Location	Unallocated
LAleq	67.1 dB	Person	Unallocated
LAE	96.6 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 7:13:42 AM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	64.5 dB
Calibration (After) Date	5/8/2019 8:00:44 AM	LAF 90%	61.5 dB
Calibration Drift	0.1 dB	LAF 95%	60.5 dB
LAF 10%	67.5 dB		
Notes			

Instrument Model	CEL-633C		
LAeq	65.1 dB	Battery Low	No
LCpeak with Time	101.7 dB (5/8/2019 12:15:34 PM)	Duration	00:20:02 HH:MM:SS
Lepd(Projected)	65.1 dB	End Date & Time	5/8/2019 12:21:57 PM
Lex8h(Projected)	65.1 dB	Overload	No
LAFmax with Time	80.3 dB (5/8/2019 12:21:49 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	81.2 dB (5/8/2019 12:21:50 PM)	Response	Random
LAFmin with Time	56.6 dB (5/8/2019 12:10:53 PM)	Run Number	58
LAImin with Time	57.0 dB (5/8/2019 12:10:52 PM)	Serial Number	2670911
LZeq	85.1 dB	Start Date & Time	5/8/2019 12:01:55 PM
LCeq	80.5 dB	Site	Unallocated
LCeq-LAeq	15.4 dB	Location	Unallocated
LAleq	66.3 dB	Person	Unallocated
LAE	95.9 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 12:01:04 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	63.5 dB
Calibration (After) Date	5/8/2019 12:26:10 PM	LAF 90%	61 dB
Calibration Drift	-0.1 dB	LAF 95%	60 dB
LAF 10%	67.5 dB		

Notes

Instrument Model	CEL-633C		
LAeq	62.8 dB	Battery Low	No
LCpeak with Time	99.8 dB (5/8/2019 4:37:28 PM)	Duration	00:20:03 HH:MM:SS
Lepd(Projected)	62.8 dB	End Date & Time	5/8/2019 4:49:59 PM
Lex8h(Projected)	62.8 dB	Overload	No
LAFmax with Time	74.1 dB (5/8/2019 4:43:54 PM)	Pause Duration	00:00:00 HH:MM:SS
LAImax with Time	75.0 dB (5/8/2019 4:43:54 PM)	Response	Random
LAFmin with Time	54.7 dB (5/8/2019 4:49:24 PM)	Run Number	61
LAImin with Time	55.3 dB (5/8/2019 4:49:25 PM)	Serial Number	2670911
LZeq	83.4 dB	Start Date & Time	5/8/2019 4:29:56 PM
LCeq	79 dB	Site	Unallocated
LCeq-LAeq	16.2 dB	Location	Unallocated
LAleq	63.6 dB	Person	Unallocated
LAE	93.6 dB	Process	Unallocated
Calibration (Before) Date	5/8/2019 4:18:19 PM	Result	Cumulative
Calibration (Before) SPL	114 dB	LAF 50%	62 dB
Calibration (After) Date	5/8/2019 4:50:20 PM	LAF 90%	59 dB
Calibration Drift	0.1 dB	LAF 95%	58 dB
LAF 10%	65 dB		

Notes

Certificate of Conformity and Calibration

Instrument Type:-	**CEL-633C**
Serial Number	2670911
Firmware revision	V006-03
Microphone Type:-	**CEL-251**
Serial Number	02540
Preamplifier Type:-	**CEL-495**
Serial Number	004208
Instrument Class/Type:-	**1**



Applicable standards:-

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

Note:- *The test sequences performed in this report are in accordance with the current Sound level meter Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.*

Test Conditions:-	19.8 °C 51.2 %RH 1020.2 mBar	**Test Engineer:-** **Date of Issue:-**	Stephen Potten November 26, 2018

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2008 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

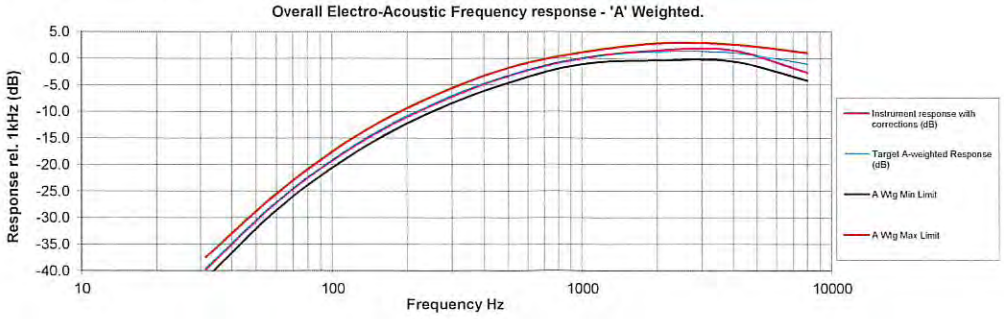
Test Summary:-

Self Generated Noise Test	**All Tests Pass**
Electrical Signal Test Of Frequency Weightings	**All Tests Pass**
Frequency & Time Weightings At 1 kHz	**All Tests Pass**
Level Linearity On The Reference Level Range	**All Tests Pass**
Toneburst Response Test	**All Tests Pass**
C-peak Sound Levels	**All Tests Pass**
Overload Indication	**All Tests Pass**
Acoustic Tests	**All Tests Pass**

Combined Electro-Acoustic Frequency Response - *A Weighted*

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.



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E-mail: info@casellausa.com
Web: www.casellausa.com

Certificate of Conformity and Calibration



Instrument Type:- CEL-633C

Serial Number 1488256
Firmware revision V006-02

Microphone Type:- CEL-251
Serial Number 02803

Preamplifier Type:- CEL-495
Serial Number 003987

Instrument Class/Type:- 1

Applicable standards:-

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

Note:- *The test sequences performed in this report are in accordance with the current Sound level meter Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.*

Test Conditions:- 29 °C, 45 %RH, 1006 mBar

Test Engineer:- Stephen Potten
Date of Issue:- August 3, 2018

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2008 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

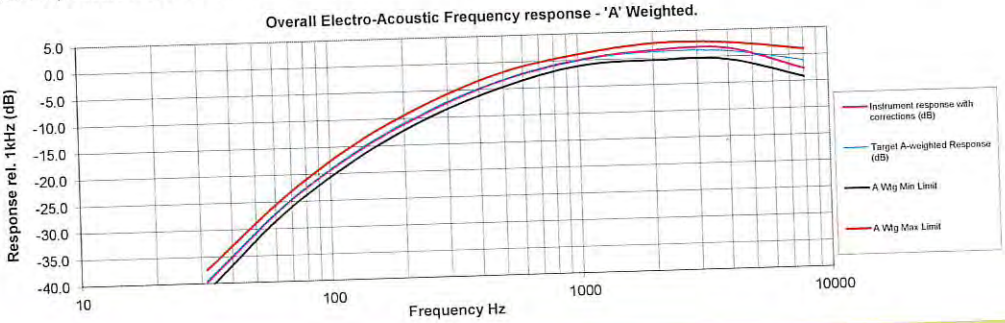
Test Summary:-

Self Generated Noise Test	All Tests Pass
Electrical Signal Test Of Frequency Weightings	All Tests Pass
Frequency & Time Weightings At 1 kHz	All Tests Pass
Level Linearity On The Reference Level Range	All Tests Pass
Toneburst Response Test	All Tests Pass
C-peak Sound Levels	All Tests Pass
Overload Indication	All Tests Pass
Acoustic Tests	All Tests Pass

Combined Electro-Acoustic Frequency Response - *A Weighted*

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.



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153 Mill St. Oneonta, NY 5/3/19

Personnel: JV

Scope: Noise

Depart: 5:00

Arrive: 6:45, Joel onsite @ 7:00 for access

Weather: 50's cloudy

- calibrator for all meters: 2383985
- Location 1 meter: 2670911
- Location 2 meter: 2670911
- Location 3 meter: 2670911
- Location 2 (Elevated) meter: 1488256

- Order of readings: 1.) location 3
  2.) location 2
  3.) location 1

Morning Traffic counts:

	location 2	location 1
car	439	2
SUV	595	1
red truck	59	0
heavy truck	17	0
Bus	14	0

Mid-day Traffic counts	location 2	location 1
cars	376	1
SUV	449	1
med. truck	38	1
heavy truck	12	0
Bus	10	0

Evening traffic counts:	location 2	location 1
cars	406	4
SUV	521	2
med. truck	50	3
heavy truck	20	1
Bus	12	0

- No traffic counts for location 3
- monitoring times: 7:30 - 9:00 (morning)
  12:00 - 13:30 (mid-day)
  16:30 - 18:00 (evening)

phase I Inspection:

Contact / Rep: Yoel Leftowitz 347-228-4154

current use: scaffold / flatbed truck storage yard
small-medium office buildings

utilities: electric - con ed
water - city
heat - natgas
sewer - city

hydraulic equip: 1 forklift stored onsite

storage tanks: N/A

No drums onsite

Drains: 2 drains outdoor in paved lot to city sewer, no roof drains

buildings + pavement in moderate condition

no signs of wells or soil borings

2 gas stations in close proximity, one south and one west

1 auto repair garage in close proximity to the south

no staining observed

site photos taken.

Inside buildings consists of empty unused office space w/ few chairs and desks left.

Yoel returns onsite to pick up garage door clicker @ 16:45

depart: 18:00