74 Bogart Street Rezoning

Environmental Assessment Statement

CEQR No. 25DCP029K

Prepared by:
Philip Habib & Associates, An AKRF Division

April 14, 2025

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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 74 Bogart Street Rezoning

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
25DCP029K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
250064ZMK	

2a. *Lead Agency Information*			**2b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT 74 Bogart LLC		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shelloee, AICP, Director Environmental Assessment and Review Division			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Andrew Ehinger Storage Deluxe		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 26 West 17th Street, Suite 801		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10011
TELEPHONE (212) 720-3328	EMAIL sshellooe@planning.nyc.gov		TELEPHONE (646) 680-0501	EMAIL aehinger@storagedeluxe.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): 6 CRR-NY 617.4(b)(6)(vi)

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, 74 Bogart LLC, is seeking a zoning map amendment to rezone 74 Bogart Street, Brooklyn (Block 3084, Lot 1; the "Project Site") from an M1-2 district to an M1-4A district (the "Proposed Action"). The zoning map amendment would facilitate the development of an approximately 134-foot-tall, 247,000-gross-square-foot (gsf) building to be used for art storage (Use Group IXA) (the "Proposed Development"). The Proposed Action would allow for an increase of permitted floor area on the Project Site by approximately 240,000 zoning square feet (zsf) to allow for the development of an art storage facility. Currently, the eastern portion of the Project Site is occupied by an approximately 193,785-gsf self-storage facility (which was developed as-of-right) and its required accessory parking, while the western portion contains an open parking lot for commercial vehicle storage. The existing self-storage facility would remain on the eastern portion of the Project Site, while the Proposed Development would replace the open parking lot on the western portion of the Project Site.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 1	STREET ADDRESS 74 Bogart Street
TAX BLOCK(S) AND LOT(S) Block 3084, Lot 1		ZIP CODE 11206

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Project Site is bounded by Bogart Street to the west, Ingraham Street to the north, Morgan Avenue to the east, and Harrison Place to the south.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-2	ZONING SECTIONAL MAP NUMBER 13B

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.): 80,000 sq ft
Waterbody area (sq. ft.) and type:
Roads, buildings, and other paved surfaces (sq. ft.): 80,000 sq ft
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): 247,000 gsf
NUMBER OF BUILDINGS: 1
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 247,000 gsf
HEIGHT OF EACH BUILDING (ft.): 118' (roof)
NUMBER OF STORIES OF EACH BUILDING: 7 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: 80,000 sf
The total square feet not owned or controlled by the applicant: NA

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: 40,000 sq. ft. (width x length)
VOLUME OF DISTURBANCE: 153,600 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 40,000 sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2027

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 20

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: 20-month construction; grading of the existing parking lot, then foundation and construction of the proposed art storage facility.

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

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

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

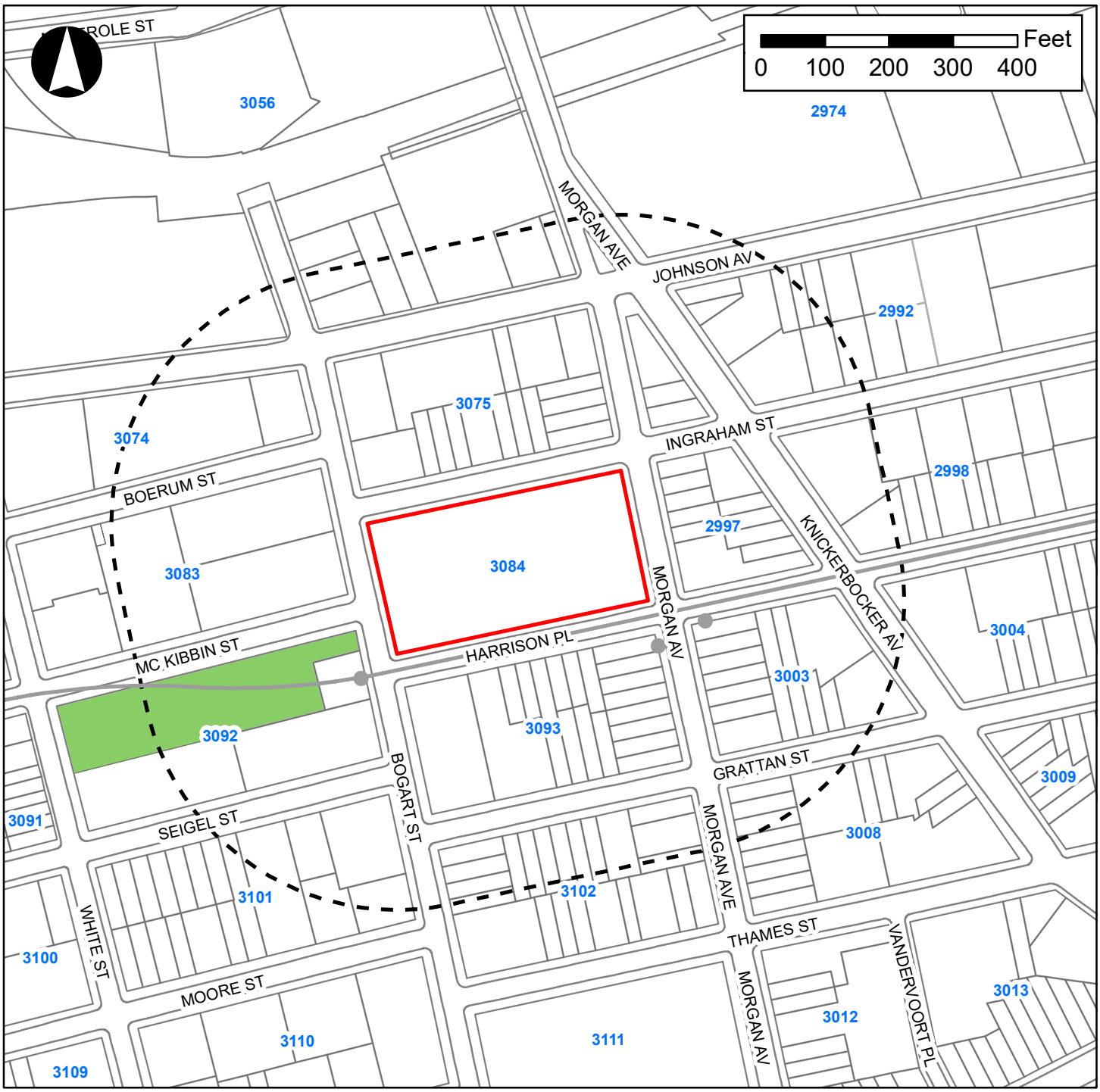
The information requested in this table applies to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory control. The increment is the difference between the No-Action and the With-Action conditions.

	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)	Self-Storage Facility, unoccupied space	Self-Storage Facility, Local Retail	Self-Storage Facility, Local Retail, Art Storage	Add Art Storage
Gross floor area (sq. ft.)	193,785	193,785	440,785	+247,000
Manufacturing/Industrial	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use				
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type				
Gross floor area (sq. ft.)				
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:	Vehicle Storage (outdoor)	Vehicle Storage (outdoor)		Remove vehicle storage (outdoor)
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	3	3	3	
Operating hours	M-Sa 8a-8p; Su 9a-6p	M-Sa 8a-8p; Su 9a-6p	M-Sa 8a-8p; Su 9a-6p	
Other (includes street parking)	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
POPULATION				
Residents	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify number:				
Briefly explain how the number of residents was calculated:				
Businesses	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	1 Self Storage	1 Self Storage, Retail	1 Self Storage, Retail, 1 Art Storage	Add Art Storage
No. and type of workers by business	5	53	83	+30
No. and type of non-residents who are not workers				
Briefly explain how the number of businesses was calculated:	The existing self-storage facility has three employees. Retail employees assumed with standard rate of 1 retail worker per 333.3 gsf.			
Other (students, visitors, concertgoers, *etc.*)	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If any, specify type and number:	Self-Storage customers	Self-Storage and retail customers	Self-Storage, retail, and art storage customers	Add art storage customers
Briefly explain how the number was calculated:	Numbers not available			
ZONING				
Zoning classification	M1-2	M1-2	M1-4A	M1-2 to M1-4A
Maximum amount of floor area that can be developed	160,000 zsf (C, M: 2.0 FAR); 384,000 zsf (CF: 4.8 FAR)	160,000 zsf (C, M: 2.0 FAR); 384,000 zsf (CF: 4.8 FAR)	400,000 zsf (C, M: 5.0 FAR); 520,000 (CF: 6.5 FAR)	+240,000 zsf (C, M: +3.0 FAR); +136,000 zsf (CF: +1.7 FAR)
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	M1-1, M1-2, M1-3	M1-1, M1-2, M1-3	M1-1, M1-2, M1-3, M1-4A	Add M1-4A
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.				

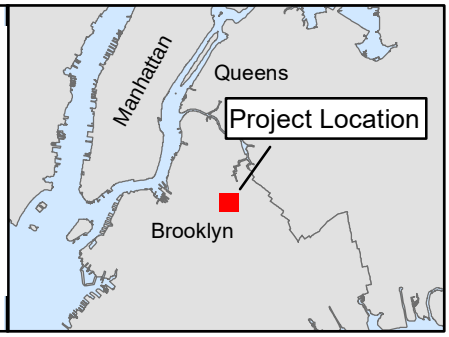
Figure 1

Project Location



Legend

- Project Site
- 400 Foot Radius
- L Train Subway Route
- Morgan Avenue L Subway Entrance
- 3084 Tax Block
- Open Space



Land Use



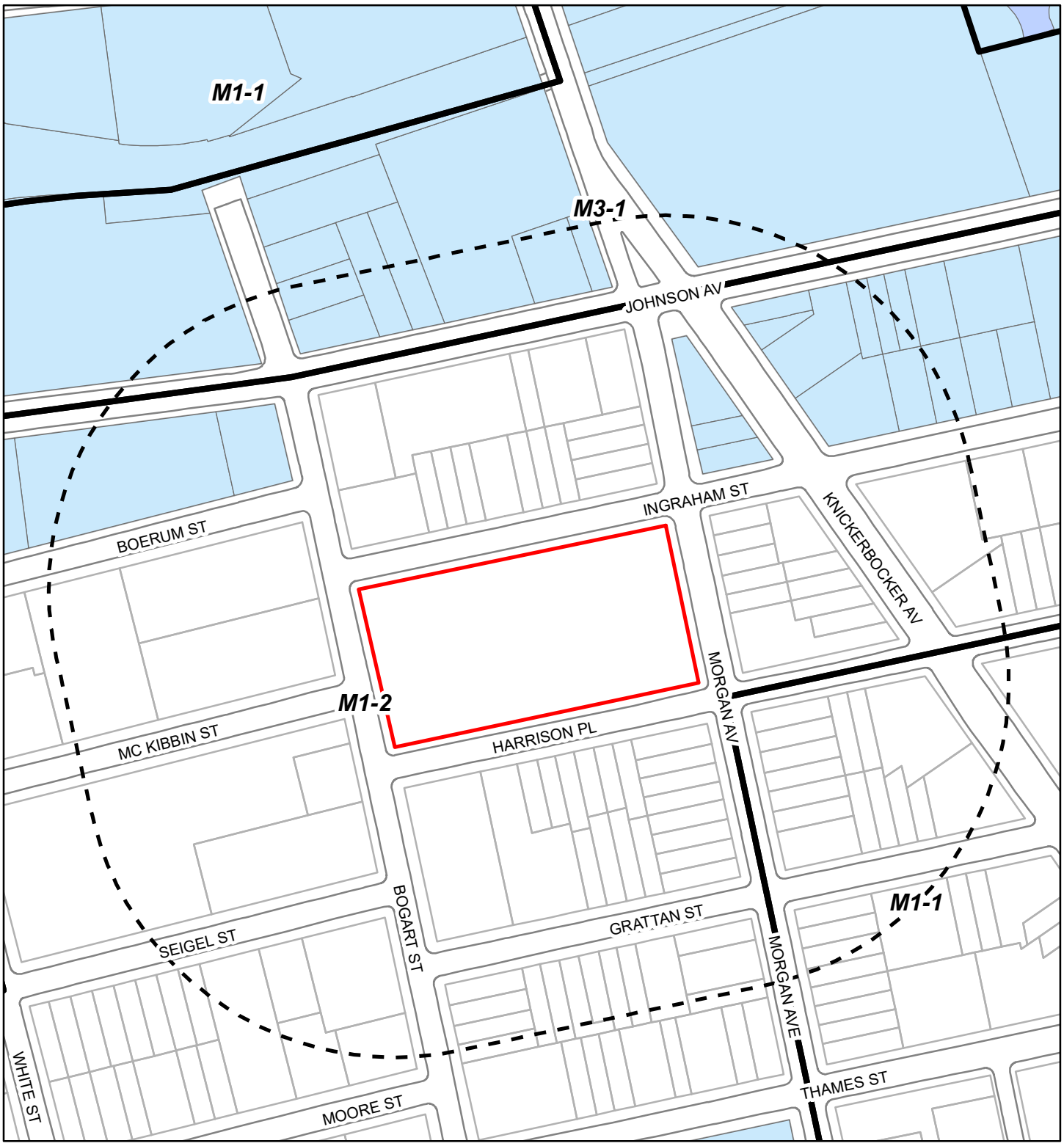
Legend

- Project Site
- 400 Foot Radius

Land Use

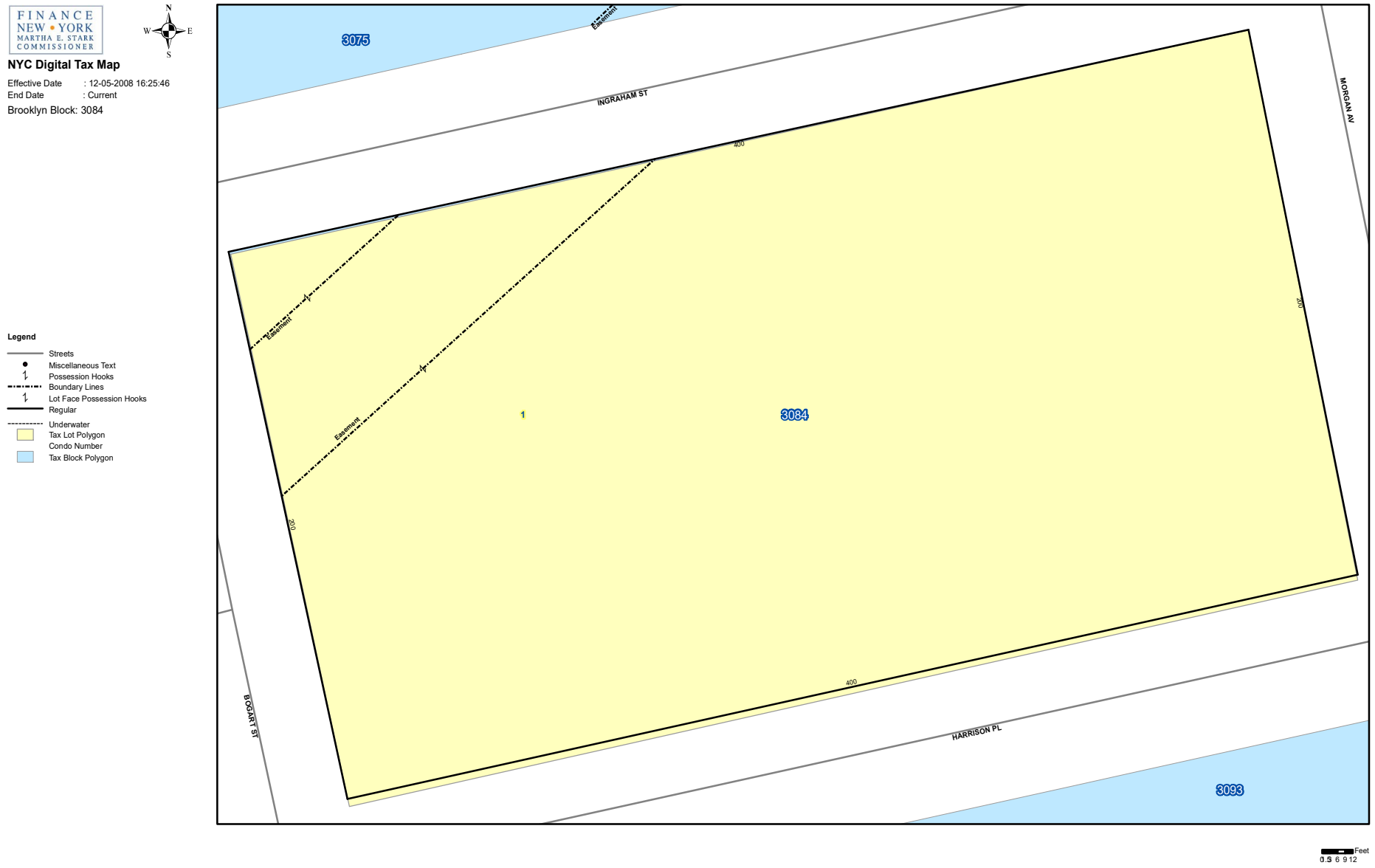
- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Buildings
- Mixed Commerical/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Utilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data

Existing Zoning



Legend

- 400 Foot Radius
- Project Site
- M1-2 Zoning District
- North Brooklyn Industrial Business Zone

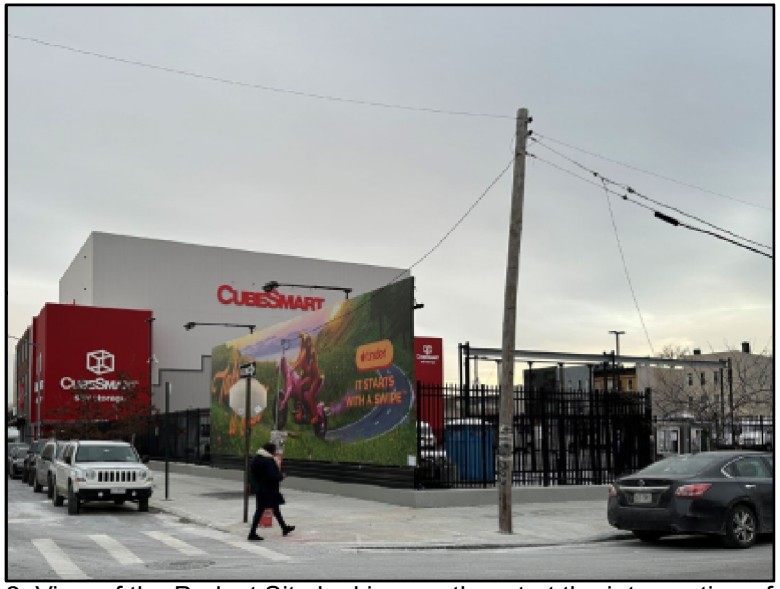


74 Bogart Street Rezoning

Figure 4
Tax Map



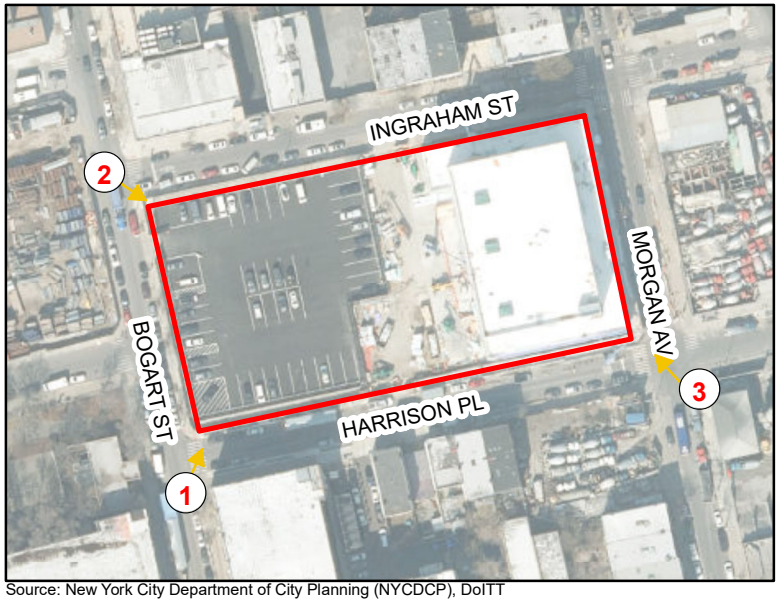
1. View of the Project Site looking northeast at the intersection of Bogart Street and Harrison Place.



2. View of the Project Site looking southeast at the intersection of Bogart Street and Ingraham Street.



3. View of Project Site looking northwest at the intersection of Morgan Avenue and Harrison Place.



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Project Site is outlined by a solid red line.

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 Attachment C, "Land Use, Zoning, and Public Policy"**		
Is the project a large, pub icly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(e) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
○ If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of more than 200 residential units *or* 200,000 square feet of commercial space?	☒	☐
▪ If "yes," answer *both* questions 2(b)(ii) and 2(b)(iv) below.		
○ Directly displace 500 or more residents?	☐	☒
▪ If "yes," answer questions 2(b)(i), 2(b)(ii), and 2(b)(iv) below.		
○ Directly displace more than 100 employees?	☐	☒
▪ If "yes," answer questions under 2(b)(iii) and 2(b)(iv) below.		
○ Affect conditions in a specific industry?	☐	☒
▪ If "yes," answer question 2(b)(v) below.		
(b) If "yes" to any of the above, attach supporting information to answer the relevant questions below. **See Attachment B, "Supplemental Screening"** If "no" was checked for each category above, the remaining questions in this technical area do not need to be answered.		
i. Direct Residential Displacement		
○ If more than 500 residents would be displaced, would these residents represent more than 5% of the primary study area population?	☐	☒
○ If "yes," is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?	☐	☐
ii. Indirect Residential Displacement		
○ Would expected average incomes of the new population exceed the average incomes of study area populations?	☐	☒
○ If "yes:"		
▪ Would the population of the primary study area increase by more than 10 percent?	☐	☐
▪ Would the population of the primary study area increase by more than 5 percent in an area where there is the potential to accelerate trends toward increasing rents?	☐	☐
○ If "yes" to either of the preceding questions, would more than 5 percent of all housing units be renter-occupied and unprotected?	☐	☐
iii. Direct Business Displacement		
○ Do any of the displaced businesses provide goods or services that otherwise would not be found within the trade area, either under existing conditions or in the future with the proposed project?	☐	☒

	YES	NO
○ Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it?	☐	☒
iv. Indirect Business Displacement		
○ Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☒
○ Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☒
v. Effects on Industry		
○ Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	☐	☒
○ 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		
○ 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		
○ Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a collective utilization rate of the Early Childhood Programs in the study area that is greater than 100 percent?	☐	☐
○ If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. Public Schools		
○ Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a utilization rate of the elementary or middle schools that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project generate 100 or more elementary or middle school students past the 100% utilization rate?	☐	☐
○ If "yes," would the project result in a utilization rate of the high schools that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project increase the high school utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
iii. Libraries		
○ Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
○ If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iv. Health Care Facilities		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of health care facilities in the area?	☐	☐
v. Fire and Police Protection		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of fire or police protection in the area?	☐	☐
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	☐	☒
(b) 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 Attachment D, "Shadows"**		

	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 Attachment B, "Supplemental Screening"**		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☒	☐
(c) If "yes" to either of the above, please provide the information requested in Chapter 10. **See Attachment E, "Urban Design and Visual Resources"**		
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Protection Plan Project Tracking Form and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12 **See Attachment B, "Supplemental Screening"**		
(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?	☐	☒
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify:	☐	☐
(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. **See Attachment B, "Supplemental Screening"**		
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): 15,148 lbs./week		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
○ If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☐
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 53,426,100 MMBtu		
(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:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☐	☒
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☐
○ Would the proposed project result in more than 200 subway/rail, 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?	☐	☐
○ 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?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. **See Attachment F, "Air Quality: Stationary Sources"**		
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?	☐	☒
○ 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		

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

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
Abir Sabet, AICP		4/3/2025

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).

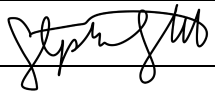
☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. 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
Director of Environmental Assessment and Review Division	NYC Department of City Planning
NAME	DATE
Stephanie Shellooe, AICP	4/18/25

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, 74 Bogart LLC, is seeking a Zoning Map Amendment to rezone an existing M1-2 district to an M1-4A district on Brooklyn Block 3084, Lot 1 (the "Proposed Action") in the Bushwick neighborhood of Brooklyn Community District 1. The project area is bounded by Bogart Street to the west, Ingraham Street to the north, Morgan Avenue to the east, and Harrison Place to the south. The Proposed Action would facilitate the development of a 124-foot tall, 247,000 gross square foot (gsf) art storage facility (the "Proposed Development") on the western portion of the project site, which currently contains an open parking lot for commercial vehicle storage. The Proposed Development, which would be located immediately adjacent to an existing self-storage facility, would be compatible with existing land uses in the immediate vicinity and within the study area. The proposed zoning map amendment would allow for greater commercial and community facility density, the elimination of parking requirements, and would change height and setback requirements, but the proposed M1-4A district is compatible with the existing land use and zoning character of the study area. In addition, the Proposed Action would not hinder or conflict with and public policies. Therefore, no significant adverse impacts on land use, zoning, or public policy would occur.

Shadows

A detailed analysis of shadows is included in the EAS. Within the longest shadow area of the Proposed Development there is one sunlight sensitive resource, Justice Gilbert Ramirez Park, that was determined to require a detailed analysis. The incremental shadows coverage was measured on three analysis days of the year and analysis showed that the shadows would neither significantly reduce nor completely eliminate direct sunlight expose to any of the sunlight sensitive resources in the identified open space and would not significantly alter the public's use of the open space or threaten viability of vegetation or other sunlight sensitive features. Therefore, incremental shadows from the Proposed Development would not be considered a significant adverse impact.

Urban Design and Visual Resources

A detailed analysis of urban design and visual resources is included in the EAS. The Proposed Action has the potential to change pedestrian experiences of public space surrounding the Project Site in comparison to the No-Action scenario, making it necessary to assess the Proposed Action's potential impacts on urban design and visual resources. An assessment of urban design concluded that the Proposed Action would not constitute a significant adverse impact as it would not alter the arrangement or functionality of the neighborhood. An assessment of visual resources concluded that while the Proposed Development would represent a change from a pedestrian perspective of a State and National Register of Historic Places eligible building at 56 Bogart Street, it would not represent a significant adverse impact as the building would still be visible from already partially-obstructed viewpoints. Therefore, the Proposed Action would not result in significant adverse impacts on urban design or visual resources in the Primary or Secondary Study Areas.

Historical and Cultural Resources

This EAS includes an analysis of historic and cultural resources. NYC Landmarks and Preservation Commission (LPC) determined that there are no significant archaeological resources that exist within the Project Area. Within 400-feet of the Project area there is a State and National Register eligible building located at 56 Bogart Street (Block 3093, Lot 1). In order to avoid the potential for significant adverse impacts, the applicant will enter a restrictive declaration requiring the implementation of project components related to the environment through a construction protection plan that would preclude any potential impacts to historic resources related to construction activities. With these measures in place, the proposed actions would not result in construction-period significant adverse impacts and no further analysis is warranted.

Disadvantaged Communities

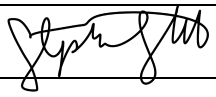
This EAS includes an assessment for effects on Disadvantaged Communities (DAC). The Project Site is located within a census tract identified as a DAC having comparatively higher burdens and vulnerabilities. As the CEQR Technical Manual has not been updated to include guidance for an assessment of Effects of Disadvantaged Communities, the SEQRA Environmental Assessment Form (EAF) has been consulted for guidance for this analysis. The Proposed Actions would not result in significant adverse impacts in any technical areas analyzed in this EAS: land use, zoning and public policy; shadows; urban design and visual resources; historical and cultural resources; hazardous materials and air quality. Based on this assessment, the Proposed Actions would not disproportionately affect disadvantages communities, nor cause or increase a disproportionate pollution burden.

Hazardous Materials and Air Quality

An (E) designation (E-841) related to hazardous materials and air quality 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 and air quality analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to hazardous materials and air quality.

Project Name: 74 Bogart Street Rezoning
CEQR # 25DCP029K
SEQRA Classification: Type I

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 Alexander Plackis at +1 212-720-3332.

TITLE Director, Environmental Assessment and Review Division	LEAD AGENCY Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3328
NAME Stephanie Shellooe, AICP	DATE 4/18/2025
SIGNATURE 	
TITLE Chair, City Planning Commission	
NAME Daniel R. Garodnick	DATE 4/23/2025
SIGNATURE	

Project Name: 74 Bogart Street Rezoning
CEQR # 25DCP029K
SEQRA Classification: Type I

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 3084, Lot 1

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials and air quality an (E) designation (**E-841**) would be established as part of approval of the proposed actions on Block **3084, Lot 1** as described below:

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

Hazardous Materials

The (E) designation requirements applicable to **Block 3084, Lot 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.

Air Quality

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

Project Name: 74 Bogart Street Rezoning
CEQR # 25DCP029K
SEQRA Classification: Type I

Block 3084, Lot 1: *Any new art storage facility development on the above-referenced property, where the heating, ventilation and air conditioning (HVAC) system and hot water equipment does not utilize electricity, must ensure that the HVAC and hot water stack is located at the building's highest level and at a height of at least 92 feet above grade to avoid any potential significant adverse air quality impacts.*

Attachment A

Project Description

I. INTRODUCTION

The Applicant, 74 Bogart LLC, is seeking a zoning map amendment to rezone 74 Bogart Street in Brooklyn (Block 3084, Lot 1; the "Project Site") from an M1-2 district to an M1-4A district (the "Proposed Action"). The zoning map amendment would facilitate the development of an approximately 247,000-gross-square-foot (gsf) building to be used for art storage (the "Proposed Development"). The Proposed Action would allow for an increase of permitted floor area on the Project Site by approximately 240,000 zoning square feet (zsf) to allow for the development of an art storage facility. Currently, the eastern portion of the Project Site is occupied by an approximately 193,785-gsf self-storage facility (which was developed as-of-right) and its required accessory parking, while the western portion contains an open parking lot for commercial vehicle storage.

This attachment provides a description of the Proposed Action, including information about the Project Site, the existing conditions, project purpose and need, the analysis framework and Reasonable Worst Case Development Scenario ("RWCDS"). The attached supplemental studies examine the potential for the Proposed Action to result in significant adverse impacts in any City Environmental Quality Review ("CEQR") technical areas, including separate attachments with a detailed analysis of land use, zoning, and public policy in **Attachment C,** a detailed analysis of shadows in **Attachment D**, a detailed analysis of Urban Design and Visual Resources in **Attachment E,** and a detailed analysis of air quality in **Attachment F.** All other preliminary screening analyses are summarized in **Attachment B, "Supplemental Screening."**

II. EXISTING CONDITIONS

Project Site

The Project Site is an approximately 80,000 square foot block comprising a single tax and zoning lot, bounded by Bogart Street to the west, Ingraham Street to the north, Morgan Avenue to the east, and Harrison Place to the south (see **Figure A-1**). It is a rectangular block, 400 feet long by 200 feet wide. The eastern portion of the Project Site is occupied by an approximately 193,785-gsf (160,000-zsf) self-storage facility, while the western portion contains an open surface vehicle storage lot. Under the current M1-2 zoning, the existing self-storage facility building utilizes all permitted floor area on the Project Site. The "L" subway line runs alongside the southern boundary of the Project Site below Harrison Place. The Morgan Avenue Station is located immediately adjacent to the Project Site and has entrances at the intersection of Bogart Street and Harrison Place, and at Morgan Avenue and Harrison Place.

The Project Site was originally zoned M1-1 with the 1961 Zoning Resolution (ZR). It was rezoned to M1-2 in 1965 (CP-19100). Within a 400-foot radius of the Project Site, the areas north and south were zoned M1-1 in the 1961 ZR. East of the Project Site was originally zoned M1-2, and west of the Project Site was originally zoned R6 in the 1961 ZR. In 1965 (CP-19100), the areas north, east, south, and west within a 400-foot radius of the Project Site also were all rezoned to M1-2 and have remained zoned as M1-2 since.

Figure A-1

Aerial View of Project Site



Legend

Project Site

Surrounding Area

Land Use

The area surrounding the Project Site is a mixed-use neighborhood primarily occupied by concrete plants, lofts and mid-rise buildings used for industrial and manufacturing uses, as well as several open lots for vehicle and contractor material storage. Other uses surrounding the Project Site include retail space, commercial offices, residential buildings, maker spaces, art galleries, bars, and restaurants. The New York City Department of City Planning's North Brooklyn Industrial and Innovation Plan, issued in 2018, describes the area as the "Growth District' which is generally a mixed-use manufacturing and commercial area that is characterized by street art, art galleries, restaurants and bars, music venues, office-based businesses, legacy large-scale industrial uses, and small manufacturers.

The area surrounding the Project Site is accessible through multiple forms of transportation. The area is highly accessible by bike and by public transit. There is a Citi Bike station located across from the Project Site at the intersection of Bogart and McKibbin Streets. There are also two dedicated bike lanes on the eastern side of the Project Site, southbound on Morgan Avenue and northbound along Knickerbocker Avenue. In terms of rail transit, the Morgan Avenue L Subway Station is located adjacent to the Project Site. Additionally, the B60 bus route, which connects Williamsburg to Canarsie, has four stops within 400 feet of the Project Site.

Zoning

As discussed above, the Project Site was originally zoned M1-1, was later rezoned to an M1-2 district in the mid-1960s and has been zoned M1-2 ever since. Additionally, as discussed above, M1 districts have been the predominate zoning in the surrounding area. M1 districts are characterized by one- or two-story warehouses with one or more loading bays and also typically include light industrial uses such as woodworking shops, repair shops and storage facilities. Floor area ratios (FAR) in M1 districts range from 1.0 to 10.0 depending on location. Parking and loading requirements vary as well, depending on location and land use. M1 districts do not allow new residential developments or enlargements. M1-2 zoning districts are a sub district of the broader M1 light manufacturing district. M1-2 districts allow for a FAR of 2.0 when the property is utilized for commercial or manufacturing uses. This is increased to a FAR of 4.8 for community facility uses in M1-2 districts. Other requirements of M1-2 districts include a 20-foot rear yard requirement for interior lots (but no rear yard requirement for zoning lots occupying entire blocks); and an initial front wall height of 60' or 4 stories (whichever is less) a 20-foot initial front wall setback on narrow streets (15-foot setback on wide streets), and buildings are thereafter subject to sky exposure plan regulations.

III. THE PROPOSED ACTION

The Applicant seeks a zoning map amendment of the Project Site from an M1-2 district to an M1-4A district to facilitate the development, of an approximately 247,000-gsf (240,000-zsf) building to be used for art storage.[1] The M1-4A zoning designation would allow for a commercial floor area ratio (FAR) of 5.0 to be developed as-of-right and would eliminate the requirement for accessory parking.

[1] The Metropolitan Transportation Authority (MTA) was consulted and have confirmed that an easement volume is not needed at the Proposed Development. See **Appendix II** for the MTA No Easement Determination Letter.

IV. PURPOSE AND NEED FOR THE PROPOSED ACTION

The Proposed Action would allow for an increase of permitted floor area on the Project Site by approximately 240,000 zsf to allow for the development of the proposed art storage facility. Currently, the eastern portion of the Project Site is occupied by an approximately 193,785-gsf self-storage facility (which was developed as-of-right) and its required accessory parking, while the western portion contains an open parking lot for commercial vehicle storage. The Applicant, who operates several other art-storage facilities in Brooklyn and Queens, believes there is a strong demand for this unique art storage-type facility in North Brooklyn, and intends to replace the portion of the lot currently containing commercial vehicle storage with the Proposed Development. The Applicant also believes that this is an appropriate location for an increase in permitted density due to the site's immediate adjacency to transit (a subway station), and for this type of use given the mixed land use pattern of this area, including light industrial and arts related uses.

V. DESCRIPTION OF THE PROPOSED DEVELOPMENT

The Proposed Action would allow for an increase of permitted floor area on the Project Site by approximately 240,000 zsf to allow for the development, on the western portion of the block at 74 Bogart Street of an approximately 247,000-gsf (240,000-zsf) building to be used for art storage. The proposed rezoning would only affect the Project Site (i.e., Block 3084).

The Proposed Development would be seven-stories, 118-foot tall, and would be purpose-built to house the fine art, antiques and sculptures of private collectors, NYC museums, galleries, fashion designers, artists, and other institutions. The Applicant would employ a team of technical art experts to handle and care for the art in a climate-controlled facility; building security to ensure protection of the art collections; and client-experience managers at the front desk. The ground floor of the proposed building would feature a lobby, a client greeting area, staff offices, a security office, a staging room, and loading areas. Floors 2-7 would exclusively be used as storage space. The proposed building would include four loading berths: two accessed from Ingraham Street, and two accessed from Harrison Place. Ingraham Street is a one-way street heading west. Along this street, designated larger trucks would back up into the loading berths at a 45-degree angle. Harrison Place is also a one-way street but heading east. Along this street, smaller trucks would back into the loading berths at a 90-degree angle. There would be no curbside loading. All loading-related activities would be modeled after operations at the Applicant's two existing NYC facilities, with all loading scheduled to ensure it would not interfere with through traffic. Given the site's close proximity to transit, no accessory parking would be provided.

VI. ANALYSIS FRAMEWORK

Analysis Year

For analysis purposes, it is anticipated that the Proposed Action would be approved in 2025. Construction of the Proposed Development is expected to last approximately 20 months. Therefore, the Proposed Development would be completed in 2027. Accordingly, the environmental documents will use 2027 as the Analysis Year for assessing future conditions pursuant to 2021 *City Environmental Quality Review (CEQR) Technical Manual* guidance.

Reasonable Worst Case Development Scenario (RWCDS)

A Reasonable Worst Case Development Scenario (RWCDS) is broadly defined as the potential development under both the future No-Action and With-Action conditions that is used to determine the change in permitted development created by an action. In order to assess the possible effects of the Proposed Action, RWCDS was established for both the future without the Proposed Action (No-Action condition) and the future with the Proposed Action (With-Action condition) for an analysis year, or Build Year, of 2027. The incremental difference between the No-Action and With-Action conditions will serve as the basis of the impact category analysis. The Proposed Action described above would maximize the M1-4A permitted commercial FAR, and the Proposed Development would be considered the RWCDS with the Proposed Action.

Future without the Proposed Actions (No-Action Condition)

Under the No-Action Scenario, the Project Site would remain zoned as M1-2. The eastern portion of the Project Site currently is occupied by an approximately 193,785-gsf commercial building, with approximately 177,000 gsf of self-storage space and 16,000 gsf of empty space on the ground floor. The Applicant plans to rent the 16,000 gsf of unused ground floor space within the facility to a tenant for local retail space. The remainder of the site will be used for commercial vehicle storage.

Future with the Proposed Actions (With-Action Condition)

In the With-Action Scenario, the Project Site would be rezoned from an M1-2 district to an M1-4A district. The allowable commercial and manufacturing FAR for commercial and manufacturing uses would increase from 2.0 to 5.0 and for community facility uses from 4.8 to 6.5. The Applicant would develop, on the western portion of the block, a 7-story, approximately 247,000-gsf building as-of-right in accordance with M1-4A district regulations to be used for art storage on the western portion of the Project Site, replacing the current area used for commercial vehicle storage. The existing self-storage facility on the eastern portion of the Project Site would continue to operate with or without the adoption of the Proposed Action.

Possible Effects on the Proposed Actions

The Proposed Development would be considered the most reasonable and conservative With-Action scenario for CEQR analysis purposes. Other uses that would be permitted as-of-right under the Proposed Project are unlikely to occur given the location and conditions of the site and its surroundings. The Project Site is located within a light manufacturing district, surrounded by concrete plants, lofts, open lots, and a variety of other industrial and manufacturing uses. While an office building would be permitted-as-of-right under the Proposed Project, it would be unlikely to be developed given current and foreseeable market conditions, where demand for new offices is relatively low and focused on locations in or close to established concentrations of other offices and commercial uses, or sites with special characteristics such as a waterfront location or an area served by multiple subway lines. Similarly, a “last mile” warehouse would be unlikely to be developed at this site. This is due to several considerations, including that the site is approximately 1.5 miles from the nearest highway access ramps, the size of the developable portion of the Project Site is only approximately 200 feet by 192 feet, which would not provide efficient floorplates for such a facility where cargo loading, unloading and transfer between vehicles occur at high frequencies, and the three bounding streets all operate generally with one moving lane and two parking lanes, which is not optimal for inbound trucks which can include 18-wheel semi-trucks. Lastly, a Use Group III community facility use, such as a house of worship or outpatient health facility, that would fully utilize the permitted community facility floor area alone or in combination with a commercial or manufacturing use

is unlikely given the surrounding primarily industrial and manufacturing existing land uses, limited range of permitted community facility use in M1 districts, and the fact that the Proposed Action would not appreciably increase the site's existing maximum FAR for community facility uses.

With respect to the size and shape of the building, the With-Action scenario assumes a building massing that matches the Proposed Development, as such a massing is the optimal design for the Applicant's proposed use. Given the need for upper-floor floorplates of maximal size for the efficient storage operations—combined with the need to maximize the ground floor plan to achieve minimal storage operations considering the ground-floor's required offices, security, loading, staging, receiving and back-of-house—the With-Action scenario assumes the facility is built full to the existing street lines and the proposed tax lot line. This allows for the development of a first floor with approximately 17,920 sf of storage, floors 2-5 with 35,800 sf of storage, and floors 6 and 7 with 24,900 sf of storage. While the proposed M1-4A district would allow a taller building with setbacks at greater heights, utilizing these extra density allowances would not be feasible given the available zoning floor area and the proposed use.

Table A-1 below provides a comparison of the No-Action and With-Action conditions identified for CEQR analysis purposes.

Table A-1: 2027 RWCDS Comparison of No-Action and With-Action Development Scenarios

Use (gsf)	**No-Action**	**With-Action**	**Increment**
Self-Storage	177,785	177,785	+0
Retail	16,000	16,000	+0
Outdoor Vehicle Storage	40,000	0	-40,000
Art Storage	0	247,000	+247,000
Population/Employment	**No-Action[1]**	**With-Action[2]**	**Increment**
Workers	53	83	+30

Notes:

[1] The self-storage facility has 5 employees. 3 employees per 1,000-sf of retail space assumed for the local retail space.

[2] 30 employees assumed for the art storage facility based on employee counts from existing facilities.

VII. REQUIRED APPROVALS

The Applicant is seeking a zoning map amendment to rezone 74 Bogart Street from an M1-2 district to an M1-4A district. The proposed zoning map amendment is a discretionary action that is subject to both the Uniform Land Use Review Procedure (ULURP) and CEQR.

The city's ULURP process, mandated by Sections 197-c and 197-d of the New York City Charter, is designed to allow public review of land use applications at four levels: Community Board, Borough President, the CPC, and the City Council. The procedure has mandated time limits for review at each stage to ensure a maximum review period of approximately seven months. The process begins with certification by DCP that the ULURP application is complete. The application is then referred to the relevant Community Board (in this case Brooklyn Community Board 1). The Community Board has up to 60 days to review and discuss the proposal, hold a public hearing, and adopt an advisory resolution on the ULURP application. The Borough President then has up to 30 days to review the application. The CPC then has up to 60 days, during which time a public hearing is held on the ULURP application. Should the CPC approve the application, it is then forwarded to the City Council, which has 50 days to review it. A decision by the City

Council to approve or disapprove a land use application is considered to be final unless the Mayor elects to veto a Council action within five days of the vote. The City Council can override a Mayor's veto of its decision within 10 days of the veto, by a supermajority vote.

CEQR is a process by which agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment. The City of New York established CEQR regulations in accordance with the New York State Environmental Quality Review Act ("SEQRA"). In addition, the city has published a guidance manual for environmental review, the aforementioned *CEQR Technical Manual*. CEQR rules guide environmental review through the following steps:

- *Establish a Lead Agency*. Under CEQR, the "lead agency" is the public entity responsible for conducting the environmental review. The environmental review for the Proposed Action will be reviewed by DCP, which is serving as the lead agency for this project.

- *Environmental Review and Determination of Significance*. The lead agency will determine whether the Proposed Actions may have a significant impact on the environment. To do so, an Environmental Assessment Statement ("EAS") must be prepared. This EAS will be reviewed by the lead agency, which will determine if the Proposed Action and subsequent development will result in any significant adverse impacts on the environment.

Attachment B

Supplemental Screening

I. INTRODUCTION

This Environmental Assessment Statement ("EAS") has been prepared in accordance with the guidance and methodologies presented in the 2021 *City Environmental Quality Review* ("CEQR") *Technical Manual*. For each technical area, thresholds are defined, which, if met or exceeded, require that a detailed technical analysis be undertaken. Part II of the EAS Full Form identifies those technical areas that warrant additional assessment. The technical areas that warranted a "Yes" answer in Part II of the EAS Full Form were Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Shadows; Urban Design and Visual Resources; Hazardous Materials; Water and Sewer Infrastructure; Transportation; Air Quality; Noise, Neighborhood Character; and Construction. It was determined that certain of these technical areas require detailed analysis, including Land Use, Zoning, and Public Policy; Shadows; Urban Design and Visual Resources; and Air Quality. Those analyses are provided in Attachments C, D, E, and F respectively. A supplemental screening assessment for each of the remaining technical areas is provided in this attachment. All remaining technical areas described in the *CEQR Technical Manual* were not deemed to require supplemental screening because they do not trigger initial CEQR thresholds and/or are not expected to result in significant adverse impacts.

Table B-1: Summary of CEQR Technical Areas Screening

TECHNICAL AREA	SCREENED OUT PER EAS FORM	SCREENED OUT PER SUPPLEMENTAL SCREENING	DETAILED ANALYSIS REQUIRED
Land Use, Zoning, and Public Policy			X
Socioeconomic Conditions		X	
Community Facilities and Services	X		
Open Space	X		
Shadows			X
Historic and Cultural Resources	X[1]		
Urban Design and Visual Resources			X
Natural Resources	X		
Hazardous Materials		X	
Water and Sewer Infrastructure		X	
Solid Waste and Sanitation Services	X		
Energy	X		
Transportation	X		
Air Quality - Mobile Sources - Stationary Sources	X[2]		 X
Greenhouse Gas Emissions	X		
Noise		X	
Public Health		X	
Neighborhood Character		X	
Construction[1]		X	

[1] Historic and cultural resources effects related to construction are addressed under Construction.

[2] Detailed analyses of Air Quality: Mobile Sources can be screened out per the EAS Form. Information supporting this screening determination is provided in **Appendix IX.**

II. SUPPLEMENTAL SCREENING

LAND USE, ZONING, AND PUBLIC POLICY

See Attachment C, "Land Use, Zoning, and Public Policy."

SOCIOECONOMIC CONDITIONS

According to the *CEQR Technical Manual*, the five principal issues of concern with respect to socioeconomic conditions are whether a proposed action would result in significant adverse impacts due to: (1) direct residential displacement; (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business and institutional displacement; and (5) adverse effects on specific industries. According to the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if an action may reasonably be expected to create substantial socioeconomic changes in an area. This can occur if an action would directly displace a residential population, substantial numbers of businesses or employees, or eliminate a business or institution that is unusually important to the community. It can also occur if an action would bring substantial new development that is markedly different from existing uses and activities in the neighborhood and therefore would have the potential to lead to indirect displacement of businesses or residents from the area.

Direct Residential Displacement

According to the *CEQR Technical Manual*, if a project would directly displace more than 500 residents, it may have the potential to alter the socioeconomic character of a neighborhood, and a preliminary assessment of direct residential displacement is appropriate. As described in **Attachment A, "Project Description,"** the eastern portion of the Project Site is occupied by an approximately 193,785-gross-square-foot (gsf) self-storage facility, while the western portion contains an open surface vehicle storage lot. The Proposed Action would facilitate the development of an approximately 247,000-gsf commercial building to be used for art storage. As the Project Site does not include any residential uses, the Proposed Action would not result in the displacement of any residents. As such, there would be no direct residential displacement impacts related to the Proposed Action, and no further assessment is warranted.

Direct Business Displacement

According to the *CEQR Technical Manual*, if a project would directly displace more than 100 employees, or directly displace a business whose products or services are uniquely dependent on its location, a preliminary assessment of direct business displacement is appropriate. The Proposed Action would result in an incremental increase of approximately 247,000 gsf of commercial space and introduce 30 employees to the Project Site. As mentioned above, the eastern portion of the Project Site is occupied by an approximately 193,785-gsf self-storage facility, while the western portion contains an open surface commercial vehicle storage lot. The self-storage facility located on the eastern portion of the Project Site currently employees approximately 5 workers. As the Proposed Development would be built on the western portion of the Project Site, replacing the open surface commercial vehicle storage lot which does not have any dedicated employees, the Proposed Action would not directly displace the existing self-storage facility or its employees. As such, there would be no direct business displacement impacts related to the Proposed Action, and no further assessment is warranted.

Indirect Residential Displacement

According to the *CEQR Technical Manual*, if a project would result in a net increment of 200 new residential units, a preliminary assessment of indirect residential displacement is appropriate. The Proposed Action would facilitate the development of an approximately 247,000-gsf commercial building to be used for art storage. As the Project Site does not include any residential uses, the Proposed Action would not result in the indirect displacement of any residents. As such, there would be no indirect residential displacement impacts related to the Proposed Action, and no further assessment is warranted.

Indirect Business Displacement

According to the *CEQR Technical Manual*, if a project would result in a net increment of 200,000 gsf or more of commercial space, a preliminary assessment of indirect business displacement is appropriate. The Proposed Action would result in the development of an approximately 247,000-gsf commercial building to be used for art storage. However, the Proposed Development would not be utilized for retail space, and therefore would not capture retail sales from other nearby commercial uses. Therefore, the Proposed Development would not have the potential to draw a substantial number of sales from existing businesses near the Project Site, resulting in indirect business displacement due to market saturation. As such, the Proposed Action does not have the potential to result in indirect business displacement and therefore no further assessment is warranted.

Adverse Effects on Specific Industries

Based on *CEQR Technical Manual* guidance, a preliminary assessment of effects on specific industries should be conducted to determine whether the Proposed Action would significantly affect business conditions in any industry or category of businesses within or outside the study area, or whether the Proposed Action would substantially reduce employment or impair viability in a specific industry or category of businesses. The Proposed Action would not result in development warranting an assessment of direct or indirect business displacement, nor would it include any citywide regulatory changes that would adversely affect the economic and operational conditions of certain types of businesses or processes; therefore, an assessment for adverse effects on specific industries is not warranted.

SHADOWS

See Attachment D, “Shadows.”

HISTORIC AND CULTURAL RESOURCES

See “Construction” below for assessment of historic and cultural resources effects related to construction.

URBAN DESIGN AND VISUAL RESOURCES

See Attachment E, “Urban Design and Visual Resources.”

HAZARDOUS MATERIALS

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

The *CEQR Technical Manual* indicates that any development on or near a brownfield site (e.g., solid waste landfill site, inactive hazardous waste site, brownfield cleanup program site) is subject to further analysis for hazardous materials. The Project Site is recognized as a brownfield by the New York State Department of Environmental Conservation ("NYSDEC") and is part of NYSDEC's Brownfield Cleanup Program, which encourages cleanups of brownfields and promotes their redevelopment. However, the Applicant has completed remediation, undergone coordination with NYSDEC to develop a Site Management Plan ("SMP") and has received documentation confirming completion of cleanup action at the Project Site. Based on an assessment of the documentation described below, the Proposed Action would not result in significant adverse impacts related to hazardous materials. These documents are summarized below and included as **Appendices V-VII** to the EAS.

- Environmental Easement, issued by the New York State Department of Environmental Conservation, filed December 2022
- Site Management Plan, prepared by Langan Engineering, published January 2023
- Brownfield Cleanup Program- Cleanup Action Completion Documentation, issued by NYS Department of Environmental Conservation, filed January 2023

Pursuant to Article 71, Title 36 of the New York State Environmental Conservation Law, the New York State Department of Environmental Conservation granted an Environmental Easement on December 1, 2022, to the Applicant. This document confirms that given that the NYSDEC SMP controls and requirements are followed, the Project Site can be developed as a commercial use as described in 6 NYCRR Part 375-1.8(g)(2)(iii).

The Site Management Plan, a required element of the remedial program, was issued in January 2023. The SMP confirms that remediation was completed in June 2022 and establishes institutional and engineering controls that the Applicant must follow at the Project Site to control exposure to remaining contamination and to provide protection of public health and the environment.

The established institutional controls (IC) are as follows:

1. The property may be used for Restricted-Residential use as defined in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial use as defined in 6 NYCRR Part 375-18(g)(2)(iii), and Industrial use as defined in 6 NYCRR Part 375-1.8(g)(2)(iv)[1]

[1] The uses permitted under the SMP and Environmental Easement also remain subject to NYC zoning regulations and in the case of the Project Site, with its existing and proposed manufacturing zoning, residential use is not permitted as-of-right pursuant to zoning notwithstanding the IC.

2. All ECs must be operated and maintained as specified in this SMP
3. All ECs must be inspected at a frequency and in a manner defined in the SMP
4. The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or the New York City Department of Health and Mental Hygiene to render it safe to use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the NYSDEC
5. Groundwater and other environmental or public health monitoring must be performed as defined in this SMP
6. Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP
7. On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP
8. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP
9. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP
10. Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP
11. Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
12. The potential for vapor intrusion must be evaluated for any potential future buildings developed in the area within the IC boundaries, and any potential impacts that are identified must be monitored or mitigated
13. Vegetable gardens and farming on the site are prohibited
14. The Volunteer must provide all persons who acquire any interest in the site a complete copy of the SMP that the NYSDEC approves for the site and all NYSDEC-approved amendments to the SMP

The established engineering controls (EC) are as follows:

1. Composite cover system
2. In-situ stabilization/solidification monolith and capillary break

NYSDEC issued confirmation that cleanup action was completed at the brownfield site (Site No. C224036 in NYSDEC Region 2) in January 2023. This document confirms that all cleanup activities were performed by the Applicant with oversight provided by NYSDEC. Site cleanup included: demolition and off-site disposal of the former building, excavation and disposal of 2,789 tons of concrete, 519 tons of hazardous soils, and 32,768 tons of contamination soil, solidification of metal-impacted soils, the placement of a site cover system, the development and issuance of the aforementioned SMP, and the issuance of the aforementioned Environmental Easement.

As such, to avoid the potential for any significant adverse impacts associated with new construction resulting from the Proposed Action, the Applicant or its successors in title must remain in compliance with the SMP, as outlined above. In following these guidelines, the Proposed Action and resultant Proposed

Development would not result in any significant adverse impacts related to hazardous material and no further analysis is warranted.

(E) Designation

Development on the Project Site would take place in accordance with the protocols outlined above. In order to ensure that these measures are enacted, an (E) Designation will be recorded against Block 3084, Lot 1, which is not currently subject to an (E) Designation.

The (E) Designation (E-841) text related to hazardous materials is as follows:

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

A written report with findings and a summary of the data must 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.

WATER AND SEWER INFRASTRUCTURE

A preliminary analysis of a project's effects on the water supply system is warranted if a project would result in an exceptionally large demand for water (e.g., those that would use more than one million gallons per day) or would be located in an area that experiences low water pressure (e.g., Rockaway Peninsula or Coney Island). A preliminary analysis of a project's effects on wastewater or stormwater infrastructure is warranted depending on a project's proposed density, its location, and its potential to increase impervious surfaces.

Water Supply

Given the size of New York City's water supply system and the City's commitment to maintaining adequate water supply and pressures, few actions have the potential to cause significant impacts on this system. Therefore, only very large developments or actions having exceptionally large water demands (e.g., more than one million gallons per day) would warrant a detailed water supply assessment. Based on the average daily water use rates provided in Table 13-2 of the *CEQR Technical Manual*, it is estimated that the Proposed Development's water demand would be approximately 66,609 gallons per day. Therefore, an assessment of water supply is not warranted, and no significant adverse impacts on water supply are anticipated.

Wastewater and Stormwater Conveyance and Treatment

With regards to wastewater and stormwater conveyance and treatment, the *CEQR Technical Manual* indicates that a preliminary assessment would be needed if a project is located in a combined sewer area and would exceed the following incremental development of residential units or commercial space: (a) 1,000 residential units or 250,000 sf of commercial space or more in Manhattan; or, (b) 400 residential units or 150,000 sf of commercial space or more in the Bronx, Brooklyn, Staten Island or Queens. The Project Site is located in a combined sewer area in Brooklyn and the Proposed Development would yield 247,000 gsf of incremental commercial space.

Because the City's sewers are sized and designed based on designated zoning for an area, related population density, and surface coverage characteristics, projects that greatly increase density would be located in an area of concern, or would substantially increase impervious surfaces, merit further analysis for potential impacts to the City's wastewater and stormwater infrastructure.

While the Proposed Action would facilitate the development of 247,000 gsf of incremental commercial space, the Proposed Development would be utilized as a storage facility, which would not yield comparable impacts to water usage and sewage generation as other commercial uses, such as retail, office, or hotel land uses that generate higher gallons per day (gpd) rates. The Proposed Development would yield an approximate increment of 30 employees to the Project Site. Whereas retail land uses of equal size would warrant an approximate increase of 720 employees. Additionally, the Proposed Action would not facilitate any residential units to be introduced to the Project Site.

The Project Site is located in Brooklyn Community District 1 and is located in a combined sewer area that does not experience low water pressure. Based on Figure 13-1 in the *CEQR Technical Manual*, the Project Site is served by the Newtown Creek Wastewater Treatment Plant. The Newtown Creek Wastewater Treatment Plant is the largest sewage treatment facility operated by the New York City Department of Environmental Protection (DEP) and has a capacity of approximately 310 million gallons of water a day (mgd). As mentioned above, based on the average daily water use rates provided in Table 13-2 of the *CEQR Technical Manual*, it is estimated that the Proposed Development's water demand would be approximately 66,609 gallons per day. This incremental increase in sewage generation is approximately 0.02 percent of the average daily flow at Newtown Creek Wastewater Treatment Plant and would not result in an exceedance of the plant's permitted capacity of 310 mgd.

Additionally, as mentioned previously, the eastern portion of the Project Site is currently occupied by a self-storage facility, while the western portion (where the Proposed Development would be built) contains

an open surface commercial vehicle storage lot. As the Proposed Development would be built on the open surface commercial vehicle storage lot, there would not be an increase in impervious surfaces and the Proposed Action would not warrant an increase in the total volumes to combined sewers.

As the Proposed Action would not warrant a detailed assessment of water supply or wastewater or stormwater infrastructure, no significant adverse impacts related to water, and sewer infrastructure are anticipated to occur as a result of the Proposed Action.

TRANSPORTATION

The objective of the transportation analysis 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, cyclists, transit users, and motorists), on- and off-street parking, and/or goods movement.

The *CEQR Technical Manual* identifies minimum development densities potentially requiring transportation analysis. Development at less than the development densities presented in Table 16-1 of the *CEQR Technical Manual* generally result in fewer than 50 peak hour vehicle trips (with "trips" referring to trip-ends), 200 peak hour subway/rail or bus transit riders, and 200 peak hour pedestrian trips, where significant adverse impacts are generally considered unlikely. According to the *CEQR Technical Manual*, if a proposed project would result in development densities greater than the minimum development densities presented in Table 16-1, a Level 1 (Project Trip Generation) Screening Assessment should be prepared. In most areas of New York City, if a proposed project is projected to result in fewer than 50 peak hour vehicle trip-ends, 200 peak hour subway/rail or bus transit riders, or 200 peak hour pedestrian trips, it is unlikely that further analysis would be necessary. If these Level 1 Screening Assessment thresholds are exceeded, a Level 2 (Project Generated Trip Assignment) Screening Assessment should be prepared to determine if a proposed project would generally result in intersections with 50 or more vehicle trips, pedestrian elements with 200 or more pedestrian trips, 50 or more bus trips in a single direction on a single route, 25 or more passenger ferry trips in a single direction on a single route, 50 or more passengers at a ferry landing, or 200 or more passengers at a subway station or on a subway line during any analysis peak hour. If these Level 2 Screening Assessment thresholds are met or exceeded, further detailed analysis may be needed for a particular travel mode.

As detailed in **Attachment A, "Project Description,"** the Proposed Action would result in the incremental development of approximately 247,000 gsf of commercial space. A Level 1 Screening Assessment was prepared for the net incremental development program to determine if the Proposed Action would result in 50 or more peak hour vehicle trips, 200 or more peak hour subway/rail or bus riders, and 200 or more peak pedestrian trips. The Level 1 Screening Assessment is provided in **Appendix VIII, "Transportation Planning Factors and Travel Demand Forecast Technical Memorandum." Table B-2** below presents a summary of incremental trips, by mode, generated by the Proposed Development.

Table B-2: Summary of Incremental Peak Hour Travel Demand

	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Vehicle Trips	39	33	33	10
Subway Trips	14	13	15	3
Bus Trips	4	4	4	1
Walk Trips	38	35	42	10

Traffic and Parking

As shown in **Table B-2,** the Proposed Development would generate less than 50 vehicle trips in the weekday AM, midday, and PM peak hours, and the Saturday peak hour. As the Proposed Development would generate net incremental trips below the Level 1 Screening Assessment threshold, significant adverse traffic and parking impacts would not occur, and no further assessment of traffic and parking is warranted pursuant to *CEQR Technical Manual* guidance.

Transit

As shown in **Table B-2,** the Proposed Development would generate less than 200 subway trips and less than 50 bus trips in the weekday AM, midday, and PM peak hours, and the Saturday peak hour. As the Proposed Development would generate incremental subway and bus trips below the applicable Level 1 Screening Assessment thresholds, significant adverse transit impacts would not occur, and no further assessment of transit is warranted pursuant to *CEQR Technical Manual* guidance.

Pedestrians

For the Proposed Development, pedestrian trips include not only walk trips but also trips by public transit modes that include a walking segment of travel between the Project Site and transit facilities such as subway station entries/exits, and bus stops and off-site parking facilities. As shown in **Table B-2**, the Proposed Development would generate less than 200 pedestrian trips in the weekday AM, midday, and PM peak hours, and the Saturday peak hour. As the Proposed Development would generate incremental pedestrian trips below the applicable Level 1 Screening Assessment Threshold, significant adverse pedestrian impacts would not occur, and no further assessment of pedestrian trips is warranted pursuant to *CEQR Technical Manual* guidance.

AIR QUALITY

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

Mobile Sources

Refer to **Appendix IX, "Air Quality: Mobile Source Screening"**, for technical documentation supporting the determination that detailed mobile source air quality analyses can be screened out for the Proposed Action.

Stationary Sources

See **Attachment F, "Air Quality"** for a detailed stationary source air quality analysis.

NOISE

The purpose of a noise analysis is to determine both a proposed action's potential effects on sensitive noise receptors and the effects of ambient noise levels on new sensitive uses introduced by the proposed action(s). The principal types of noise sources affecting the New York City environment are mobile sources (primarily motor vehicles), stationary sources (typically machinery or mechanical equipment associated with manufacturing operations or building HVAC systems) and construction noise (e.g. trucks, bulldozers, power tools, etc.).

The Proposed Action would facilitate the development of a 247,000-gsf art storage facility and would only include a small portion of the building for staff offices and a security office, therefore, no significant new or additional sensitive receptors would be introduced to the Project Area given the nature of the facilities operations Typically, art storage facilities do not generate noise that would warrant analysis, a stationary source noise analysis is not warranted. Building mechanical systems (i.e., HVAC systems) would be required to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, the Proposed Action would not result in any significant adverse noise impacts related to building mechanical equipment.

In terms of mobile sources, although the Proposed Action would generate vehicular traffic, the number of project-generated vehicles would be minimal. As mentioned previously, the Proposed Action would result in an increment of 39 vehicle trips in the weekday AM peak hour, 33 vehicle trips in the weekday midday peak hour, 33 vehicle trips in the weekday PM peak hour, and 10 vehicle trips in the Saturday peak hour. Therefore, the Proposed Action would not result in sufficient traffic to have the potential to cause a significant adverse noise impact (i.e., it would not result in the doubling of noise passenger car equivalents [Noise PCEs], which would be necessary to cause a 3 dBA increase in noise levels). Furthermore, the facades of the Proposed Building will be facing local paved roads with average daily traffic fewer than 5,000 vehicles, where noise levels are expected to be insignificant.

In summary, as the Proposed Action would be required to meet certain noise performance standards and all applicable noise regulations related to the building's HVAC system, the Proposed Action would not result in significant adverse noise impact and no further analysis is required.

PUBLIC HEALTH

Public health involves the activities that society undertakes to create and maintain conditions in which people can be healthy. Many public health concerns are closely related to air quality, water quality, hazardous materials, and noise.

According to the 2021 *CEQR Technical Manual*, a public health assessment may be warranted if a project results in (a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; (b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect groundwater to be used as a source of drinking water; (c) solid waste management practices that could attract vermin and result in an increase in pest populations; (d) potential significant adverse impacts to sensitive receptors from noise and odors; (e) vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts; (f) exceedances of accepted federal, state, or local standards; or (g) other actions that might not exceed the preceding thresholds but might, nonetheless, result in significant health concerns.

As detailed in the analyses provided in this EAS, the Proposed Action would not result in significant adverse impacts in the areas of air quality, water quality, hazardous materials, or noise. Therefore, the Proposed Action does not have the potential to result in significant adverse public health impacts, and further assessment is not warranted.

NEIGHBORHOOD CHARACTER

According to the *CEQR Technical Manual*, an assessment of neighborhood character may be appropriate if a proposed action(s) has the potential to result in significant adverse impacts on land use, zoning, public policy, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, transportation, or noise, or when an action may have moderate effects on several of the elements that define a neighborhood's character. As the EAS provides assessments of land use, zoning, and public policy (**Attachment C**), shadows (**Attachment D**), and urban design and visual resources (**Attachment E**), a preliminary screening analysis is necessary to determine if a detailed neighborhood character analysis is warranted.

Neighborhood character is a blend of various elements that give neighborhoods their distinct "personality." According to the *CEQR Technical Manual*, a preliminary assessment may be appropriate if a project has the potential to result in any significant adverse impacts on any of the technical areas mentioned. Per the analyses provided in this EAS, although the Proposed Action required supplemental screening or assessment of some of these technical areas, there would be no action-generated significant adverse impacts.

The *CEQR Technical Manual* also states that for projects not resulting in significant adverse impacts to any technical areas related to neighborhood character, additional analyses may be required to determine if the Proposed Actions would result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. However, the *CEQR Technical Manual* indicates that neighborhood character impacts are rare, and it would be unusual that, in the absence of a significant adverse impact in any of the relevant technical areas, a combination of moderate effects in the neighborhood would result in any significant adverse impact to neighborhood character.

The Proposed Action would not adversely affect any component of the surrounding area's neighborhood character, conflict with the surrounding activities, or significantly affect land use patterns. As discussed in **Attachment A, "Project Description,"** the Proposed Action would rezone the Project Site from an M1-2 district to an M1-4A district to facilitate the development of an approximately 247,000-gsf building to be

used for art storage. The Project Site and the surrounding area are currently zoned M1-2 and are primarily occupied by concrete plants, lofts and mid-rise buildings used for industrial and manufacturing uses, as well as several open lots for vehicle and contractor material storage. Other uses surrounding the Project Site include retail space, commercial offices, residential buildings, maker spaces, art galleries, bars, and restaurants. City Planning's North Brooklyn Industrial and Innovation Plan, issued in 2018, describes the area as the "Growth District" which is generally a mixed-use manufacturing and commercial area that is characterized by street art, art galleries, restaurants and bars, music venues, office-based businesses, legacy large-scale industrial uses, and small manufacturers. The Proposed Development would be consistent with existing land use trends as it would contain a large commercial storage use that would support the art industry.

Although there are currently no M1-4A zoning districts in the primary or secondary study areas, the proposed zoning would allow uses and densities that are already present in the area. With the Proposed Action, the permitted use groups would remain the same.[2] The only changes with the proposed rezoning as compared to the existing zoning would be greater commercial and community facilities density, elimination of parking requirements, and changes to height and setback requirements. The permitted FAR would increase from 2.0 under the existing M1-2 zoning to 5.0 under the proposed M1-4A zoning, while the permitted community facility and maximum permitted FAR would increase from 4.8 to 6.5 under the proposed M1-4A zoning.

The Proposed M1-4A district is consistent with the existing land use and zoning character of the study areas. As the Proposed Action would result in zoning that is compatible with the range of existing uses and densities found in the secondary study area and surrounding neighborhood and given that the area has characteristics supportive of increased density, it would not result in any significant adverse zoning impacts on the rezoning area or in the secondary study area. As the Proposed Action would not be considered to have any significant adverse impacts on any of the technical areas relating to neighborhood character and, furthermore, the effects on these technical areas would be minimal, a neighborhood character assessment can be screened out, and no significant adverse neighborhood character impacts would occur. Therefore, no additional analysis is warranted for neighborhood character.

CONSTRUCTION

Construction activities, although temporary in nature, can sometimes result in significant adverse impacts. A proposed project's construction activities may affect a number of technical areas analyzed for the operational period, such as air quality, noise, and traffic; therefore, a construction assessment relies, to a significant extent, on the methodologies and resulting information gathered in the analyses of these technical areas.

The Proposed Action would facilitate the development of an approximately 247,000-gsf art storage facility. It is anticipated that the Proposed Action would be approved in 2025, and construction of the Proposed Development is expected to last approximately 20 months, with construction completion in 2027. The anticipated construction duration of 20 months is based on the Applicant's expertise and direct experience constructing similar storage facilities in New York City.

[2] While prior to the COYEO-M Districts text amendment, such uses were designated as Use Groups 4-14, 16 and 17, they are now designated as Use Groups I, III(B), IV to X (subject to limitations and restrictions on size, location and other conditions as set forth in the Zoning Resolution).

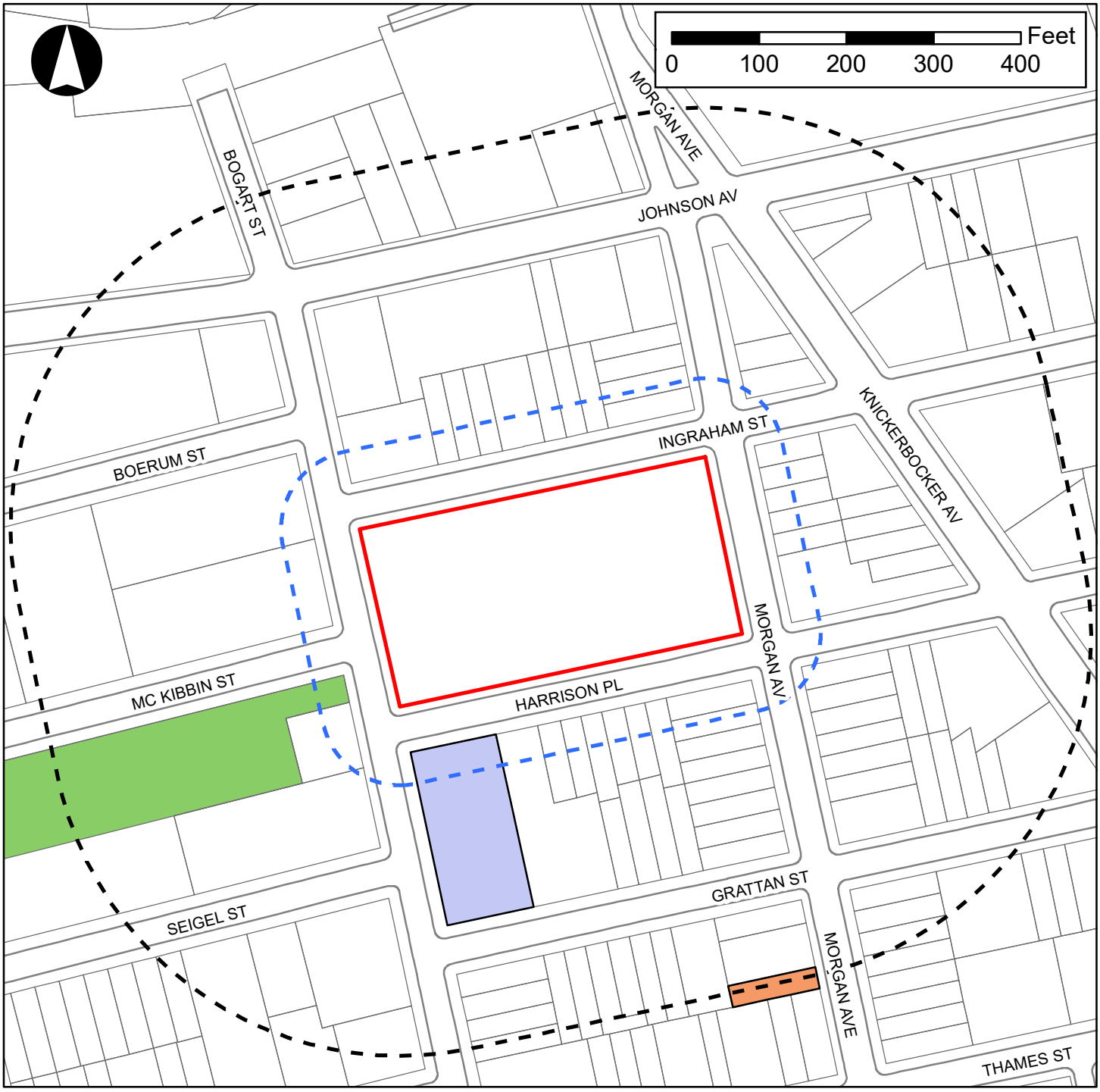
Construction impacts may occur on historic and cultural resources if in-ground disturbance or vibrations associated with construction activities could undermine the foundation or structural integrity of nearby historic and cultural resources. As shown in **Figure B-1**, the Project Site is located within 400 feet of two historic and cultural resources. 56 Bogart Street, known as 'the Bogart' (Block 3093, Lot 1) and Engine Company No. 237 (Block 3102, Lot 23) are both historic buildings that are eligible for listing on the State/National Registers of Historic Places ("S/NR"). S/NR-eligible 56 Bogart Street is located approximately 60 feet south of the Project Site, directly across Harrison Place. S/NR-eligible Engine Company No. 237 is at 43 Morgan Avenue, approximately 350 feet south of the Project Site.

The New York City Building Code provides some measure of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. Additional protective measures apply to historic resources located within 90 linear feet of a proposed construction site. For these structures, the New York City Department of Building's *Technical Policy and Procedure Notice ("TPPN") #10/88* applies. *TPPN #10/88* supplements the standard building protections afforded by the New York City Building Code by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent historic resources (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

As the S/NR-eligible building located at 56 Bogart Street (Block 3093, Lot 1) is within 90 linear feet of the Project Site, in order to avoid the potential for significant adverse construction impacts, the Applicant would be responsible for voluntarily abiding by the requirements outlined in the *TPPN #10/88*, regarding procedures for the avoidance of damage to historic structures resulting from adjacent construction. To achieve this, the Applicant would be required to develop a Construction Protection Plan ("CPP") with established construction protection measures to avoid adverse physical impacts to historic resources near the Project Site. A Restrictive Declaration (RD) would be issued as part of the environmental review process and would include details of the CPP and its applicable construction protection measures.

As construction is anticipated to be completed in under 24 months and in a single phase, it is considered short-term. Construction activities would also be contained within the Project Site; therefore, construction is not expected to adversely affect any surrounding land uses and there would be no closing of all street lanes and no disruptions to any local transportation networks. Additionally, as the western portion of the Project Site where the Proposed Development would be constructed is currently an open surface vehicle storage lot, construction would not involve the demolition of any existing buildings. As such, construction activities associated with the Proposed Development are not expected to adversely affect the surrounding area. As the Proposed Action would require the development and implementation of a CPP to ensure historic structures are protected during construction of the Proposed Development, the Proposed Action would not result in significant adverse construction impacts, and no further analysis is required.

Historic and Cultural Resources



Legend

- Project Site
- 90-Foot Radius
- 400-Foot Radius
- Open Space
- S/NR-Eligible Engine Company No. 237
- S/NR-Eligible 56 Bogart Street



Attachment C

Land Use, Zoning, and Public Policy

I. INTRODUCTION

Under 2021 *City Environmental Quality Review (CEQR) Technical Manual* guidance, a land use analysis evaluates the uses and development trends in the area that may be affected by a proposed action and determines whether the action would be compatible with those uses or potentially affect them. Similarly, the analysis considers a proposed action's compliance with, and effect on, the area's zoning and other applicable public policies.

As discussed in **Attachment A, "Project Description,"** the Proposed Action includes a zoning map amendment to rezone the block containing 74 Bogart Street (Block 3084, Lot 1; the "Project Site") from an M1-2 district to an M1-4A district (the "Proposed Action"). The zoning map amendment would facilitate the development of an approximately 247,000-gross-square-foot (gsf) building to be used for art storage (the "Proposed Development"). The Proposed Action would allow for an increase of permitted floor area on the Project Site by approximately 240,000 zoning square feet (zsf) to allow for the development of an art storage facility. Currently, the eastern portion of the Project Site is occupied by an approximately 193,785-gsf self-storage facility (which was developed as-of-right) and its required accessory parking, while the western portion contains an open lot for commercial vehicle storage.

According to the *CEQR Technical Manual*, a land use and zoning analysis is warranted for actions facilitating a change in land use or zoning. As the Proposed Action involves a zoning map amendment, an analysis of land use and zoning is warranted and consistent with CEQR practices a public policy assessment is also provided.

II. METHODOLOGY

The purpose of this attachment is to examine the effects of the Proposed Action and determine whether it would result in any significant adverse impacts on land use, zoning, or public policy. The analysis methodology is based on the guidance of the *CEQR Technical Manual* and examines the Proposed Action's consistency with land use patterns and development trends, zoning regulations, and other applicable public policies. Following the guidance of the *CEQR Technical Manual*, the analysis describes existing and anticipated future conditions to a level necessary to understand the relationship of the Proposed Action to such conditions, assesses the nature of any changes on these conditions that would be created by the Proposed Action, and identifies those changes, if any, that could be significant or adverse.

Analysis Year

As discussed in **Attachment A, "Project Description,"** for analysis purposes it is anticipated that the Proposed Action would be approved in 2025. Construction of the Proposed Development is expected to last approximately 20 months. Therefore, the Proposed Development would be completed in 2027. Accordingly, the environmental documents will use 2027 as the Analysis Year for assessing future conditions pursuant to *CEQR Technical Manual* guidance.

The analysis of land use, zoning, and public policy first provides a description of the existing land use, zoning, and public policy conditions in each of the study areas. The analysis then projects land use, zoning, and public policy conditions in the 2027 build year without the Proposed Action. This is the "No-Action" or "Future without the Proposed Action" scenario, which is developed by identifying known and proposed developments and other relevant changes anticipated to occur within the primary and secondary study areas within this time frame. The No-Action scenario describes the baseline conditions in each of the study areas against which the Proposed Action incremental changes are measured. Finally, the analysis projects land use, zoning, and public policy conditions in 2027 with the approval of the Proposed Action. This is the "With-Action" or "Future with the Proposed Action" scenario.

Study Area Definition

As shown in **Figure C-1**, land use, zoning, and public policy are addressed and analyzed for two geographical areas for the Proposed Action. The study areas include: (1) the primary study area, which is the Project Site (Block 3084, Lot 1); and (2) a secondary study area that has the potential to experience indirect impacts as a result of the Proposed Action. The secondary study area extends an approximate 400-foot radius from the boundary of the primary study area. The secondary study area is generally bounded by the midblock between Johnson Avenue and Meserole Street to the north, Knickerbocker Avenue to the east, midblock between Grattan and Thames Streets to the south, and midblock between Bogart Street and White Street to the west. The primary and secondary study areas described above have been established in accordance with *CEQR Technical Manual* guidance.

Data Sources

Existing land uses within the primary and secondary study areas were determined based on the New York City Primary Land Use Tax Lot Output ("PLUTO") data files for 2024 and June 2024 field visits; no discrepancies between PLUTO data files and existing field conditions were observed. New York City Zoning and Land Use ("ZoLa"), New York City Zoning maps, and the *Zoning Resolution of the City of New York* ("ZR") were consulted to describe existing zoning districts in each of the study areas. Relevant public policy documents, recognized by the New York City Department of City Planning ("DCP") and other city agencies were utilized to describe existing public policies pertaining to the primary and secondary study areas.

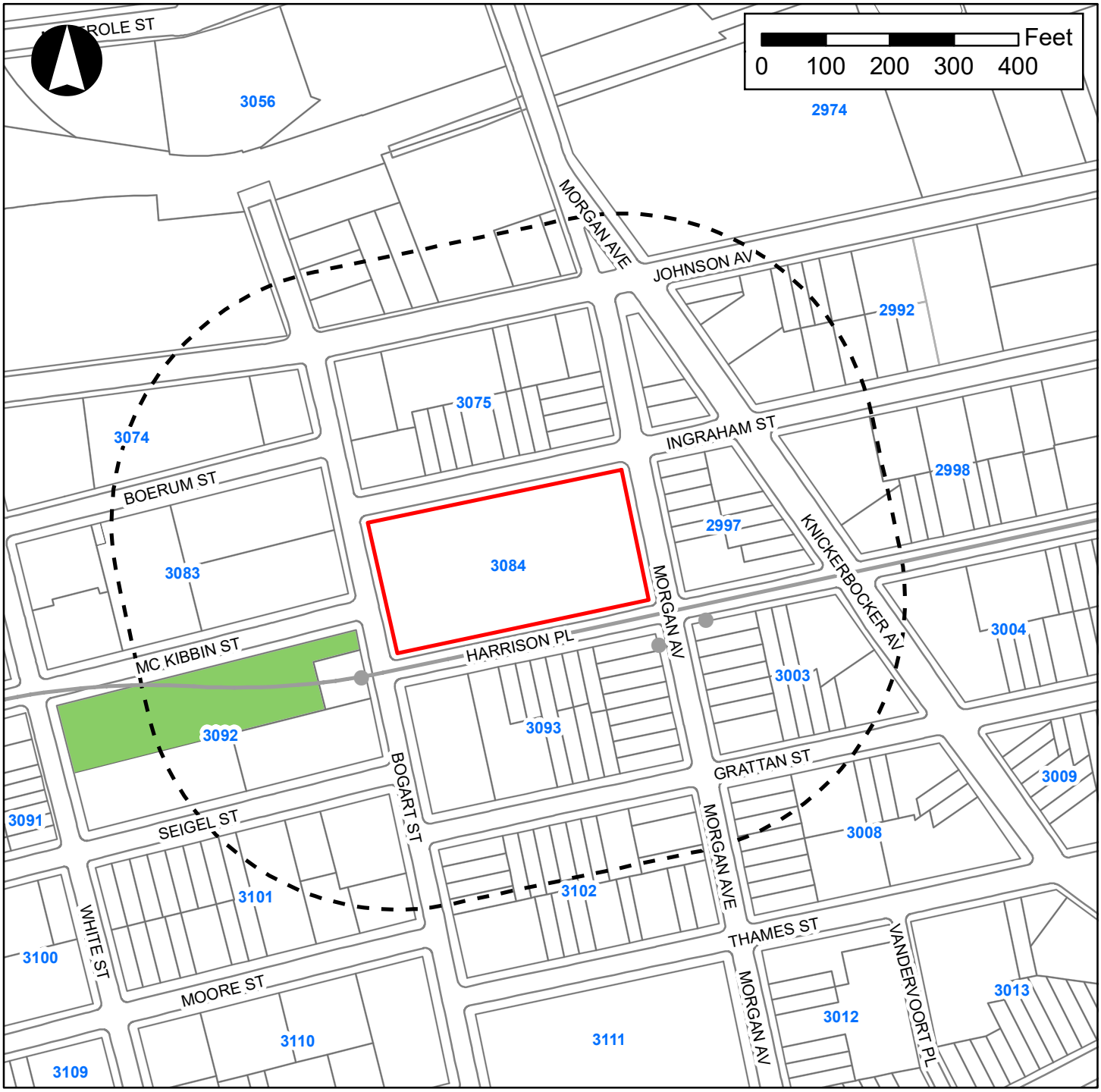
III. EXISTING CONDITIONS

Land Use

Primary Study Area (Project Site)

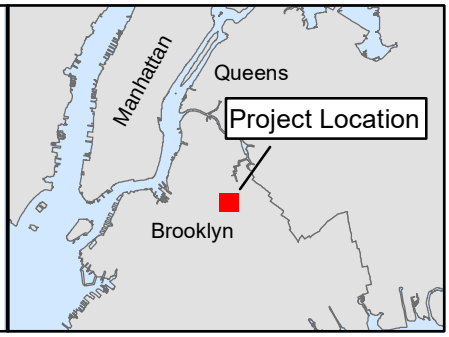
The primary study area is the Project Site, which in its entirety is approximately 80,000 square feet (sf) and is one street block, tax lot and zoning lot bounded by Bogart Street to the west, Ingraham Street to the north, Morgan Avenue to the east, and Harrison Place to the south (see **Figure C-1**). The eastern portion of the Project Site is occupied by an approximately 193,785-gsf (160,000-zsf) self-storage facility, while the western portion contains an open surface commercial vehicle storage lot. Under the current M1-2 zoning, the existing self-storage facility building utilizes all permitted floor area on the Project Site. The "L" subway line runs alongside the south side of the Project Site below Harrison Place, with the

Figure C-1
Study Areas



Legend

- Project Site (Primary Study Area)
- 400 Foot Radius (Secondary Study Area)
- L Train Subway Route
- Morgan Avenue L Subway Entrance
- Open Space
- 3084 Tax Block



Morgan Avenue Station located immediately adjacent to the Project Site, which has entrances at the intersection of Bogart Street and Harrison Place, and at Morgan Avenue and Harrison Place.

Secondary Study Area (400-foot Radius)

The secondary study area (400-foot radius surrounding the Project Site) is a mixed-use neighborhood primarily occupied by concrete plants, lofts and mid-rise buildings used for industrial and manufacturing uses, as well as several open lots for vehicle and contractor material storage. Other uses surrounding the Project Site include retail space, commercial offices, residential buildings, maker spaces, art galleries, bars, and restaurants. Within the Secondary Study Area there are two historic resources, as shown in **Figure C-2**. 56 Bogart Street (Block 3093, Lot 1) and Engine Company No. 237 (Block 3102, Lot 23) are both historic buildings that are eligible for listing on the State/National Registers of Historic Places ("S/NR"). S/NR-eligible 56 Bogart Street is located approximately 50 feet south of the Project Site, directly across Harrison Place. S/NR-eligible Engine Company No. 237 is at 43 Morgan Avenue, approximately 350 feet south of the Project Site.

Lot size and building footprint in the secondary study area are mixed with large, predominately industrial lots mixed in with smaller residential and commercial buildings. The secondary study area also includes multiple vacant lots and parking facilities. Additionally, Justice Gilbert Ramirez Park is the only open space located in the secondary study area. The area surrounding the Project Site is served by multiple public transit options. In terms of rail transit, the Morgan Avenue L Subway Station is located adjacent to the Project Site. Additionally, the B60 bus route, which connects Williamsburg to Canarsie, has 4 stops within 400 feet of the Project Site.

Table C-1 provides an overview of all land uses within the secondary study area, which corresponds with **Figure C-3**. As shown in the table, the built floor area within the secondary study area is predominantly comprised of industrial and manufacturing land uses.

Table C-1: Existing Land Uses within the Secondary Study Area

Land Use	Number of Lots	Percentage of Total Lots	Lot Area (sf)	Percentage of Total Lot Area (%)	Building Area (sf)	Percentage of Total Building Area (%)
Residential	17	16%	67,170	9.70%	155,960	17.38%
Mixed Commercial/ Residential	10	10%	46,762	6.75%	95,601	10.65%
Commercial/Office	8	8%	41,828	6.04%	63,951	7.13%
Industrial/Manufacturing	32	30%	315,794	45.61%	566,353	63.11%
Transportation/ Utility	1	3%	12,241	1.77%	10,330	1.15%
Public Facilities & Institutions	1	1%	2,500	0.36%	4,500	0.50%
Open Space	1	1%	68,504	9.89%	--	--
Parking Facilities	6	6%	16,630	2.40%	700	0.08%
Vacant Land	4	4%	11,975	1.73	--	--
Other/No Data	24	23%	109,022	15.74%	--	--
Total	***106***	***100%***	***680,451***	***100%***	***897,395***	***100%***

Source: NYCDCP (PLUTO 2024v1)
Notes: Includes all lots fully or mostly within the 400-foot radius.

Figure C-3
Land Use



Legend

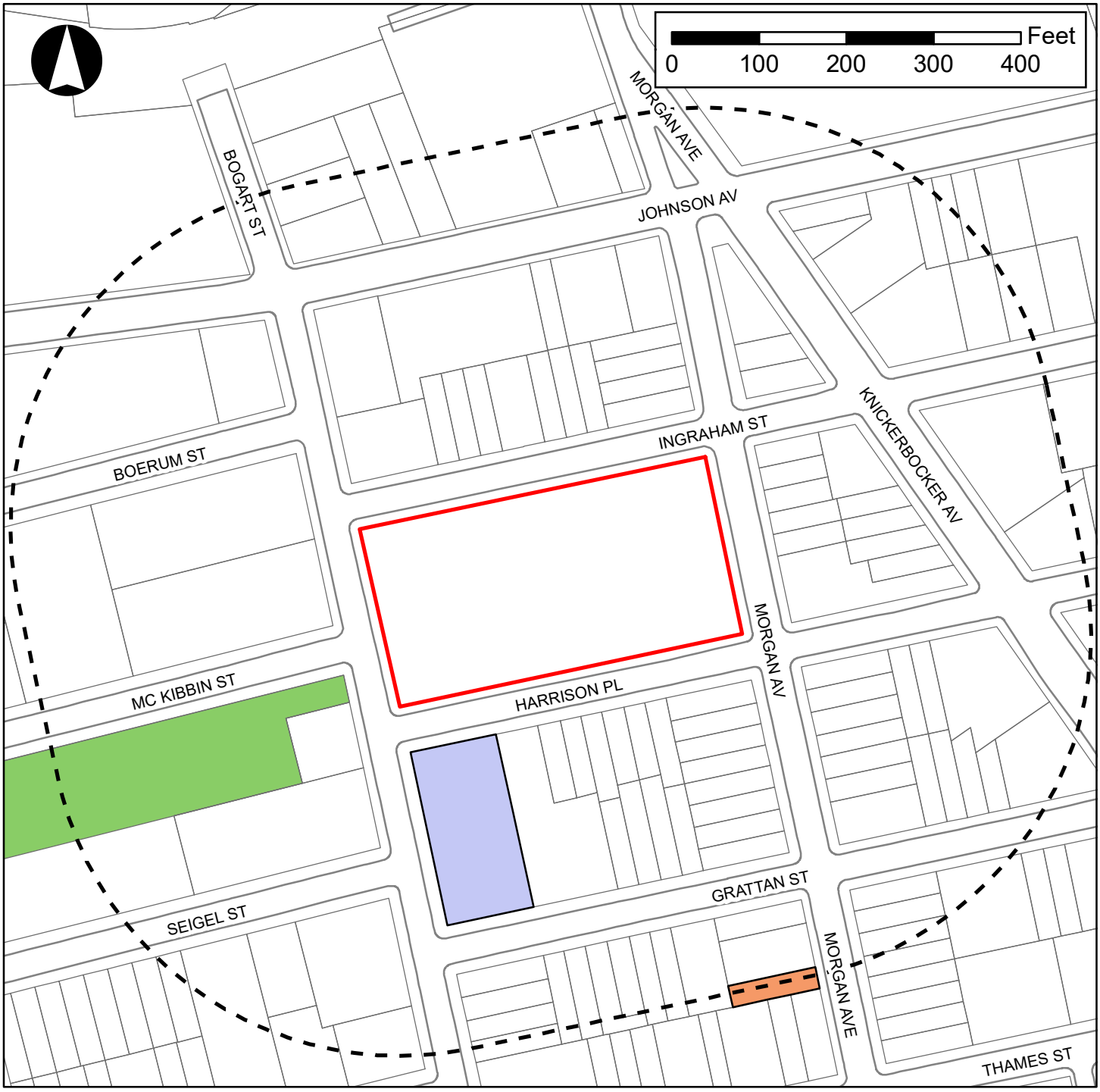
Primary Study Area (Project Site)

Secondary Study Area (400 Foot Radius)

Land Use

- One & Two Family Buildings
- Multi-Family Walkup Buildings
- Multi-Family Elevator Building
- Mixed Commerical/Residential Buildings
- Commercial/Office Buildings
- Industrial/Manufacturing
- Transportation/Utility
- Public Utilities & Institutions
- Open Space
- Parking Facilities
- Vacant Land
- All Others or No Data

Historic and Cultural Resources



Legend

- Project Site
- 400-Foot Radius
- Open Space
- S/NR-Eligible Engine Company No. 237
- S/NR-Eligible 56 Bogart Street



Zoning

Primary Study Area (Project Site)

As shown in **Figure C-4**, the Project Site is currently zoned M1-2. M1-2 districts are low-density manufacturing zoning districts that allow a wide range of commercial and light manufacturing uses. M1-2 districts allow industrial and commercial uses at a maximum FAR of 2.0, which includes uses such as offices, repair shops, and wholesale service facilities. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. Most industrial uses are allowed in M1 district, so long as they meet M1 performance standards. A performance standard is a minimum requirement or maximum allowable limit on noise, vibration, smoke, odor and other effects of industrial uses. M1-2 allows community facility uses at a maximum FAR of 4.8 and residential uses are not permitted. Heights in M1-2 districts are governed by a sloping Sky Exposure Plane, which begins at the base height of 60 feet. Above this height, the building must be located entirely beyond the sloping plane. One parking space is generally required for every 300 square feet of commercial use and for every 1,000 square feet of industrial use in M1-2 districts.

Secondary Study Area (400-foot Radius)

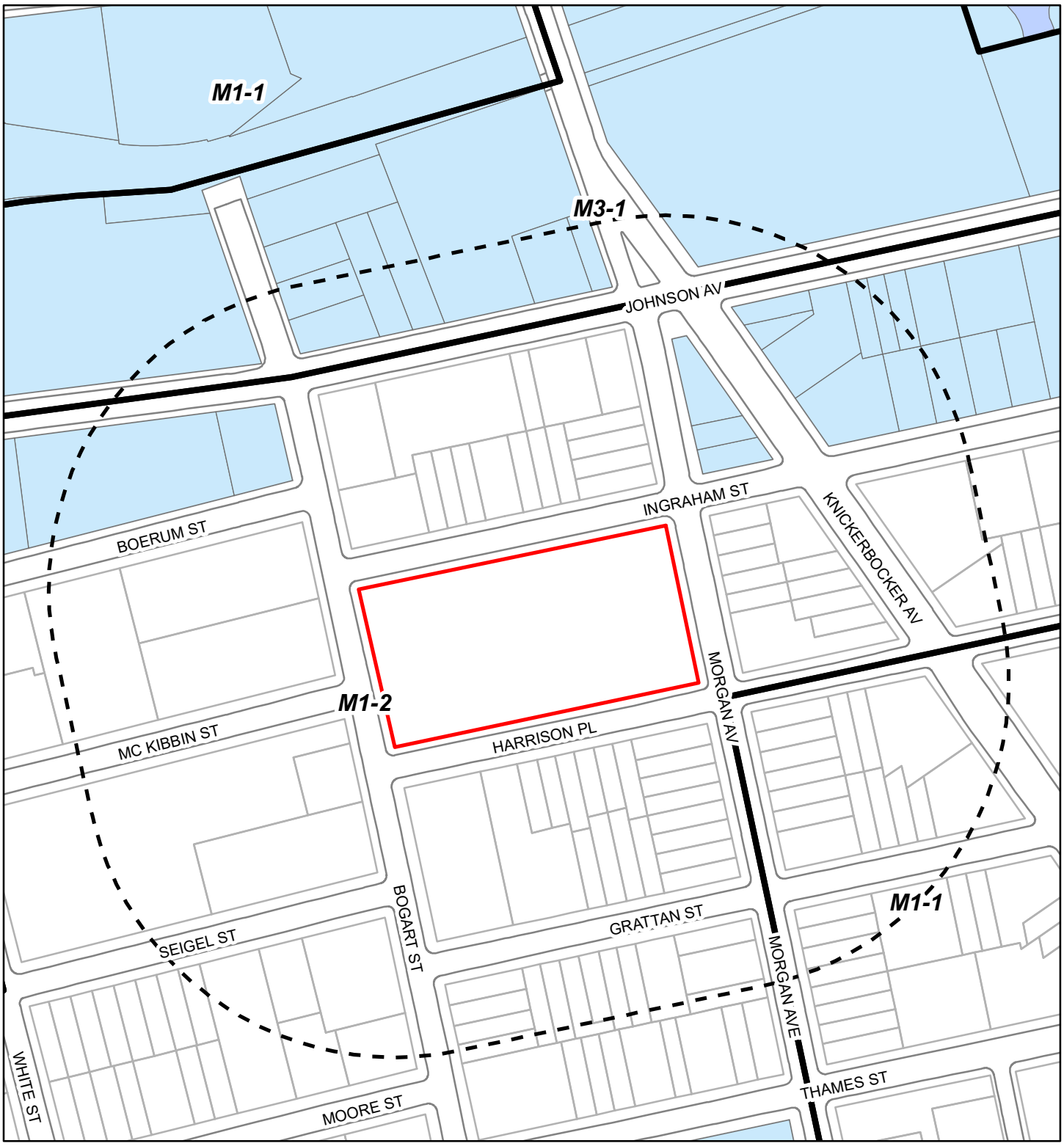
Within a 400-foot radius of the Project Site, the areas north and south were zoned M1-1 in the 1961 ZR. East of the Project Site was originally zoned M1-2, and west of the Project Site was originally zoned R6 in the 1961 ZR. In 1965, the areas north, east, south, and west within a 400-foot radius of the Project Site also were all rezoned to M1-2 (CP-19100). In addition to the Project Site, M1-2 zoning covers most of the secondary study area, except for small portions which are located in M3-1 and M1-1 districts. As shown in **Figure C-4**, the M3-1 district is located in the northwest portion of the secondary study area, and the M1-1 district is found in a small section on the southeastern portion of the secondary study area. Zoning classifications within the secondary study area are described below in **Table C-2**.

Table C-2: Study Area Zoning Districts

District	Definition/General Use	Commercial FAR	Total FAR
M1-1	M1-1 districts are Light Manufacturing Zoning districts and are found in every borough in NYC. M1-1 districts allow for multiple uses including manufacturing, commercial, and community facility uses. 1 parking space is required for every 300 sf of commercial area and for every 1,000 sf of industrials area.	1.0	2.4
M1-2	M1-2 districts are Light Manufacturing Zoning districts which allow for multiple uses including manufacturing, commercial, and community facility districts. M1-2 districts are found in Manhattan, Queens, Brooklyn and the Bronx. 1 parking space is required per 300 sf of built area.	2.0	4.8
M3-1	M3-1 districts are Heavy Manufacturing Zoning districts. There are many restrictions as to what manufacturing uses are allowed in these districts. 1 parking space is required per 300 sf of built area.	2.0	2.0

Source: Zoning Resolution of the City of New York

Figure C-4
Existing Zoning



Legend

- 400 Foot Radius
- Project Site
- Zoning District
- North Brooklyn Industrial Business Zone

As shown in **Figure C-5**, built FAR in the secondary study area varies from 0.0 to greater than 4.0. The Project Site currently has a FAR of 2.0. A majority of the buildings in the secondary study area have an FAR of 0.0-2.0, however, there are multiple buildings in the secondary study area with FARs greater than the Project Site, including 100 Bogart Street, (Block 3075, Lot 2) an industrial building north of the Project Site with an FAR of 6.8. Additionally, the S/NR-eligible historic building at 56 Bogart Street (Block 3093, Lot 1) has an FAR of 4.5.

Public Policy

In addition to zoning, officially adopted and promulgated public policies also describe the intended use applicable to an area or particular site(s) in New York City. These include Urban Renewal Plans, 197-a Plans, Industrial Business Zones (IBZs), the New York City Comprehensive Waterfront Plan, the Criteria for the Location of City Facilities ("Fair Share" criteria), Solid Waste Management Plan, the New York City Landmarks Law, and the Waterfront Revitalization Program ("WRP"). Some of these policies have regulatory status, while others describe general goals. They can help define the existing and future context of the land use and zoning of an area.

Public Policies Applicable to the Primary and Secondary Study Area

In 2022, the New York City Mayor released the economic recovery plan, Rebuild, Renew, Reinvent: A Blueprint for New York City's Economic Recovery ("the Economic Recovery Plan"). The Economic Recovery Plan was released with long-term strategies to make New York City's economy more equitable and accessible, particularly in response to the COVID-19 pandemic. To accelerate New York City's economic recovery, and build a more resilient economy, the five overarching strategies discussed in the Economic Recovery Plan are:

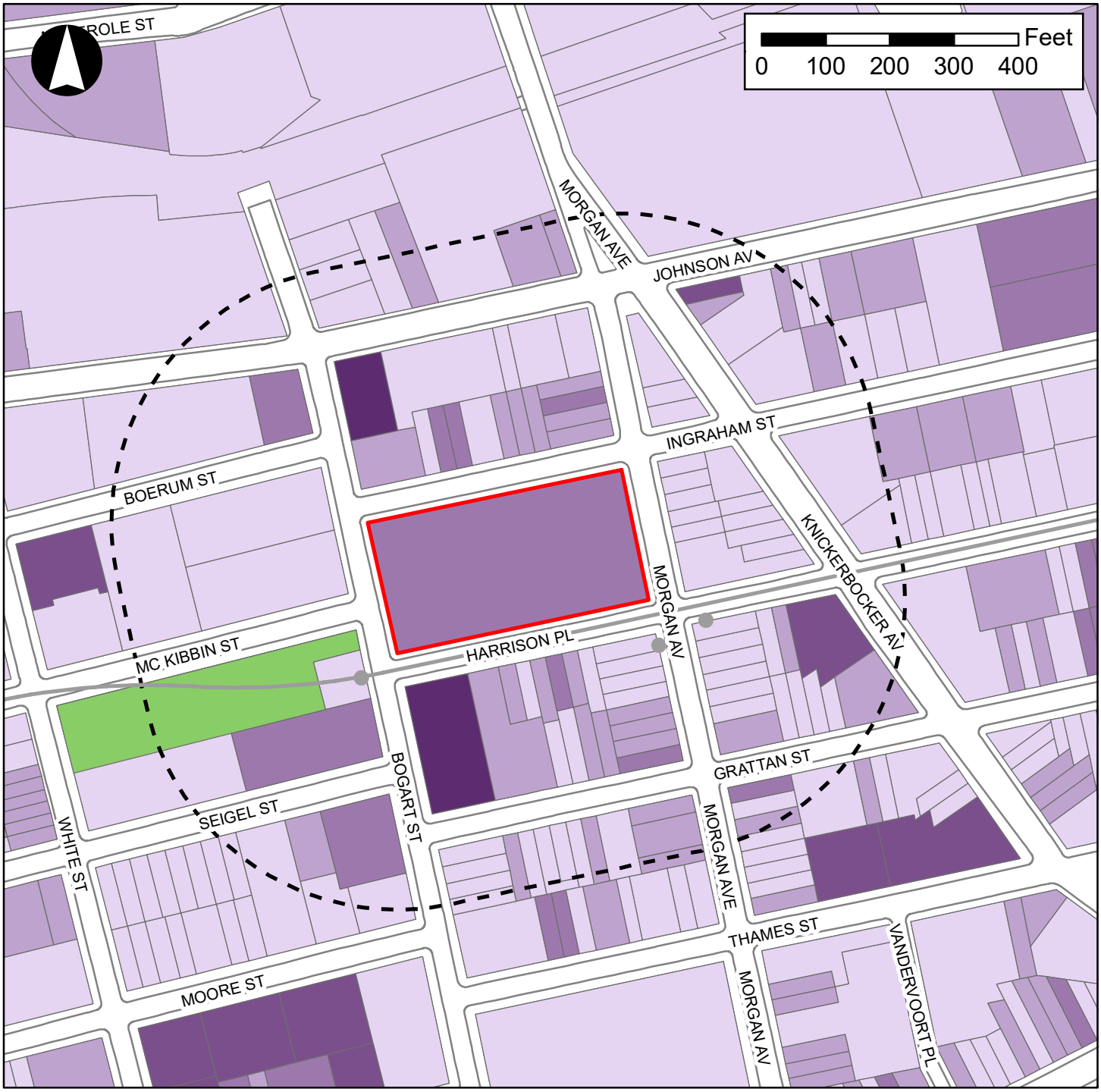
- Restart our city's economic engines and reactivate the public realm.
- Support small businesses, entrepreneurship, and a more equitable economy.
- Drive inclusive sector growth and build a future-focused economy.
- Connect New Yorkers to quality jobs and in-demand skills.
- Plan and build for inclusive growth now and in the future.

As shown in **Figure C-6**, the primary and secondary study areas are located within the boundaries of the DCP's North Brooklyn Industry and Innovation Plan ("the Plan")[1]. The Plan, issued in 2018, describes the area as a "Growth District" which is generally a mixed-use manufacturing and commercial area that is characterized by street art, art galleries, restaurants and bars, music venues, office-based businesses, legacy large-scale industrial uses, and small manufacturers. The goals of the Plan are to:

- Retain areas that can support and grow industrial/manufacturing jobs that provide essential services to the city and offer significant jobs.
- In targeted areas near transit, increase job density in growing office sectors such as TAMI (tech, advertising, media, information).

[1] The North Brooklyn Industry and Innovation Plan was substantially incorporated into DCP's City of Yes for Economic Opportunity (COYEO) program upon its City Council approval in June 2024.

Figure C-5
Built FAR



Legend

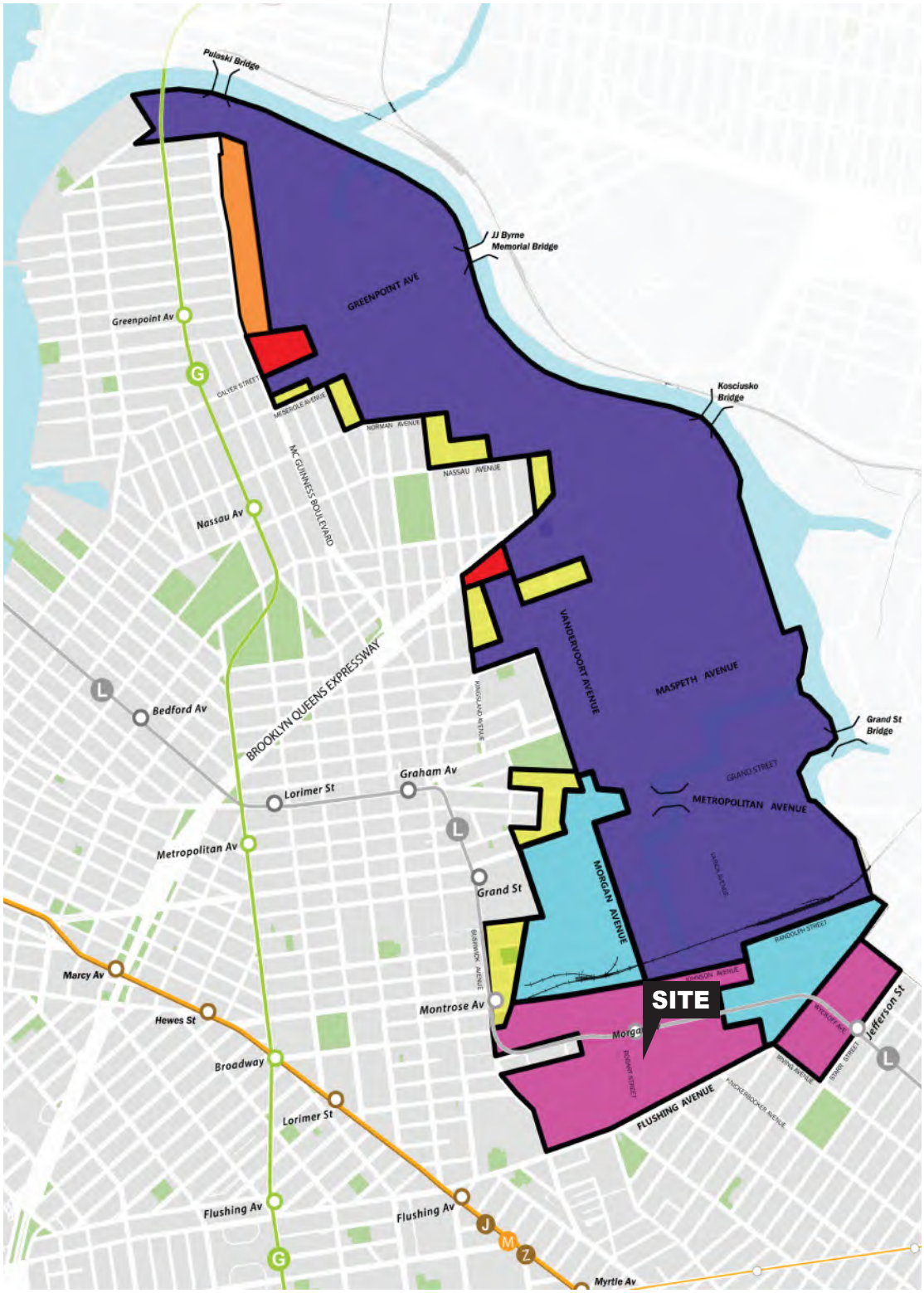
- Project Site
- 400 Foot Radius
- Morgan Avenue L Subway Entrance
- L Train Subway Route
- Open Space

Built FAR

- 0 - 1
- 1 - 2
- 2 - 3
- 3 - 4
- Greater than 4

Figure C-6

North Brooklyn Industry and Innovation Plan



Core Industrial Area:

A central hub for essential industrial businesses that create jobs and keep New York City running.

Transition Area:

A mix of industrial and non-industrial uses serving as a buffer between subareas.

Growth District:

A dynamic, transit-accessible district for creative and tech-driven jobs of the future.

Mixed Edge:

A longstanding mix of residential and industrial uses with no predominant use. No zoning change recommended.

Commercial Edge:

Selected active commercial properties adjacent to residential neighborhoods outside the Study Area. No zoning change recommended.

Established Residential:

Peripheral, predominantly residential areas that are currently zoned for industrial uses but are similar in character to adjacent residential neighborhoods. New residential zoning is appropriate to match existing conditions in these small areas.

- Create a balanced strategy that channels businesses into different subareas where they can thrive and reduces competition for space and potential for conflicts between industrial/manufacturing and non-industrial businesses.
- Support an improved quality of life for workers and residents within the Study Area and nearby and connect workers with a variety of skill levels to quality jobs.
- Identify potential improvements to transportation and infrastructure that would support growth in economic activity.

IV. THE FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION CONDITION)

Under the No-Action Scenario, the Project Site would remain zoned as M1-2. The eastern portion of the Project Site currently would remain occupied by an approximately 193,785-gsf commercial building. The Applicant plans to rent the 16,000 gsf of unused ground floor space within the building to a tenant for local retail space. The remainder of the site would remain as at-grade commercial vehicle storage.

Land Use

Primary Study Area (Project Site)

As discussed in **Attachment A**, in the future without the Proposed Action, the Project Site would remain zoned as M1-2. The eastern portion of the Project Site would remain occupied by an approximately 193,785-gsf commercial building, with approximately 177,785 gsf of self-storage space and 16,000 gsf of empty space on the ground floor. The Applicant plans to rent the 16,000 gsf of unused ground floor space within the facility to a tenant for local retail space. The remainder of the site will be used for at-grade commercial vehicle storage.

Secondary Study Area (400-foot Radius)

There are no known or anticipated development projects that are intended to be completed within the secondary study area by the build year of 2027.

Zoning

Primary Study Area (Project Site)

In the future No-Action condition, no zoning changes are anticipated within the primary study area. As such, it is anticipated that the existing M1-2 zoning district would be retained.

Secondary Study Area (400-foot Radius)

There are currently no planned zoning changes in the 400-foot study area in the future without the Proposed Action.

Public Policy

There are no anticipated changes to public policy in the primary or secondary study areas in the 2027 future without the Proposed Action.

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

In the With-Action Scenario, the Project Site would be rezoned from an M1-2 district to M1-4A district. The allowable FAR for commercial and manufacturing uses would increase from 2.0 to 5.0 and for community facility uses from 4.8 to 6.5. The Applicant would develop an approximately 247,000-gsf building as-of-right under M1-4A district regulations to be used for art storage on the western portion of the Project Site, replacing the current open surface parking lot. The existing self-storage facility on the eastern portion of the Project Site would continue to operate with or without the adoption of the Proposed Action. Additionally, as mentioned previously, under the No-Action scenario, the Applicant plans to rent 16,000 gsf of vacant space within the self-storage facility to a tenant to be used for local retail space and this would also occur under the With-Action scenario. In other words, the retail space would operate with or without the adoption of the Proposed Action.

Land Use

The Proposed Action would result in the development of an art storage facility to be built on the Project Site, where there is currently an open surface parking lot. Within the Project Site, there is an existing self-storage facility. Given that the Proposed Development is also a storage facility, the Proposed Development would be consistent with and compatible with the existing land uses within the Project Site.

The Proposed Development is also consistent and compatible with surrounding land uses and is not expected to alter development trends or patterns in the study area. As described previously and shown in **Table C-1**, the predominate land uses within the secondary study area are industrial and manufacturing land uses. The Proposed Development would be consistent with the land uses within the surrounding area and would be complimentary to the character of the uses within East Williamsburg.

Therefore, the Proposed Action would not introduce any new land uses that would be incompatible with their surroundings, and the Proposed Action would not represent a significant adverse impact on land use in the primary and secondary study areas in accordance with the criteria set forth in the *CEQR Technical Manual*.

Zoning

In the future With-Action condition, a zoning map amendment would be implemented to rezone the Project Site from an M1-2 district to an M1-4A district (see **Figure C-7**). As shown in **Table C-3**, the Proposed Action would modify the maximum allowable density to 6.5 FAR for community facility uses and 5.0 FAR for commercial or manufacturing uses. The Proposed Action would also negate the need for new accessory parking at the Project Site in connection with the Proposed Development.

Table C-3: Comparison of Existing and Proposed Zoning

	Existing: M1-2	Proposed: M1-4A
Use Groups	I, III(B), IV to X	I, III(B), IV to X
Maximum Permitted FAR		
Residential	0	0
Community Facility	4.8	6.5
Commercial	2	5
Manufacturing	2	5
Parking		
Manufacturing Uses	1 per 1,000 sf of floor area	None Required
Retail Uses	1 per 300 sf of floor area	None Required

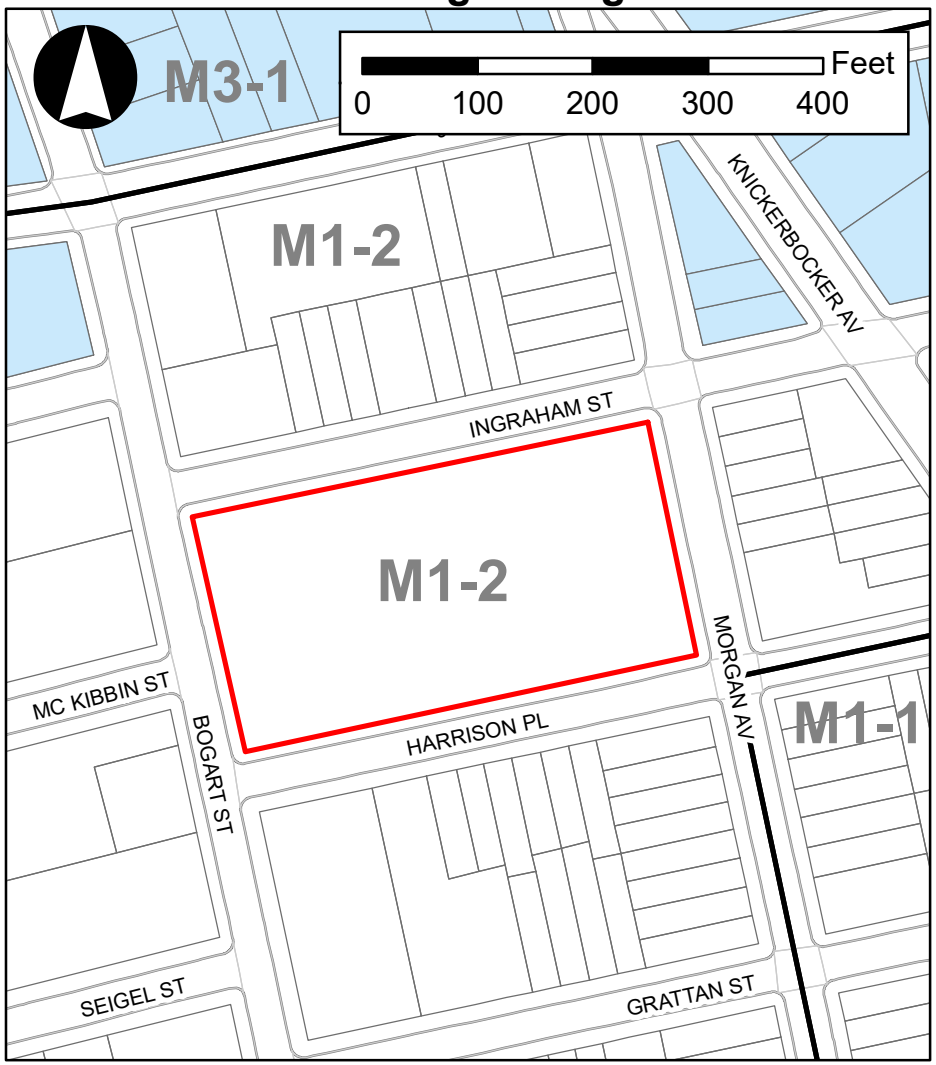
Source: Zoning Resolution of the City of New York

The newly created M1-4A district was formally established as a companion action to DCP's City of Yes for Economic Opportunity initiative, which was passed by the City Council on June 6, 2024. City of Yes for Economic Opportunity was developed to support businesses and job growth by ensuring a wider range of businesses can use existing commercial space. M1-4A districts are—with respect to use—light manufacturing districts (similar to M1-2 districts) which permit most commercial uses as well as industrial uses (such as Use Group IX self-storage and general storage/warehouse uses), but do not permit residential use However, with respect to density, M1-4A district bulk regulations promote more contextual loft-like envelopes with wider floor plates, higher base heights and maximum buildings heights (as opposed to non-contextual M districts subject to front wall height limits and sky exposure planes). With respect to floor area, M1-4A districts permit a greater maximum FAR of 5.0 for commercial/manufacturing use and 6.5 for community facility use. Front yards and side yards are not required; and for zoning lots occupying entire blocks (such as the Project Area) no rear yards or rear yard equivalents are required. Height and setback regulations allow a maximum base height of 125' at the street line, an initial minimum setback of 15' along narrow streets, and a maximum building height of 155'. Additionally, for buildings on zoning lots greater than 20,000 sf in area (such as the Project Site), the maximum base and maximum buildings heights may be increased by up to 25%. No accessory parking is required; and for a 240,000 zsf Use Group IX art storage use building, four accessory loading berths would be required.

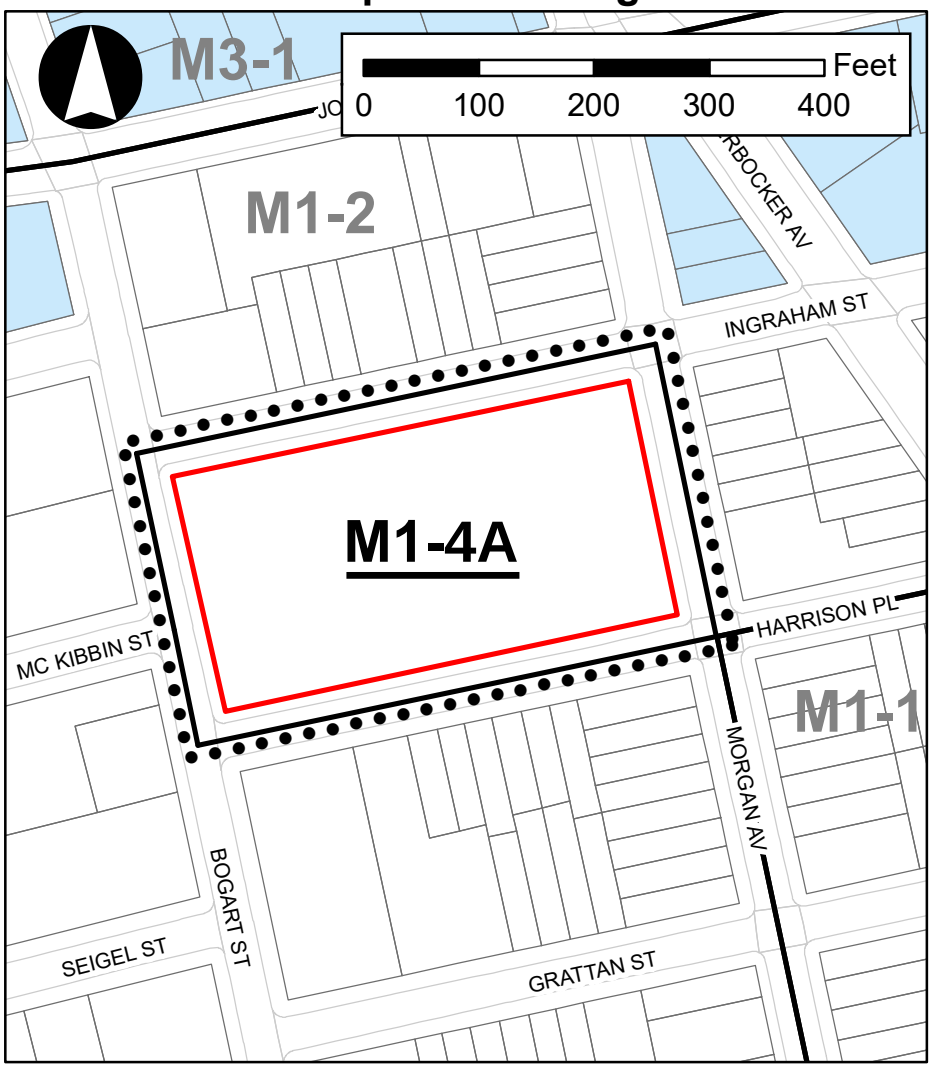
Although there are currently no M1-4A zoning districts in the primary or secondary study areas, the proposed zoning would allow uses and FARs that are already present in the area. With the Proposed Action, the permitted use groups would remain the same.[2]. The only changes with the proposed rezoning as compared to the existing zoning would be greater commercial and community facilities density, elimination of parking requirements, and changes to height and setback requirements. The permitted FAR would increase from 2.0 under the existing M1-2 zoning to 5.0 under the proposed M1-4A zoning, while the permitted community facility and maximum permitted FAR would increase from 4.8 to 6.5 under the proposed M1-4A zoning.

[2] While prior to the COYEO-M Districts text amendment, such uses were designated as Use Groups 4-14, 16 and 17, they are now designated as Use Groups I, III(B), IV to X (subject to limitations and restrictions on size, location and other conditions as set forth in the Zoning Resolution).

Existing Zoning



Proposed Zoning



Legend

- Project Site
- North Brooklyn Industrial Business Zone
- M1-2 Existing Zoning
- Zoning District Boundaries

Legend

- Project Site
- North Brooklyn Industrial Business Zone
- M1-4A Proposed Zoning
- Rezoning Area

Figure C-7
Existing and Proposed Zoning

The Proposed M1-4A district is consistent with the existing land use and zoning character of the study areas. As such, the Proposed Action would result in zoning that is compatible with the range of existing uses and FARs found in the secondary study area and surrounding neighborhood. As described below, the area has characteristics supportive of increased density. The Proposed Development would not result in any significant adverse zoning impacts on the rezoning area or in the secondary study area. For these reasons, the Proposed Action would not represent a significant adverse impact on zoning within the primary or secondary study areas, in accordance with criteria set forth in the *CEQR Technical Manual*.

Public Policy

The Proposed Action would not hinder the advance of, or conflict with, any applicable public policy, including the Rebuild, Renew, Reinvent: A Blueprint for New York City's Economic Recovery Plan. Rather, the Proposed Action would advance the overarching goals of the Economic Recovery Plan through the creation of new jobs, promoting the 'creative economy', and increasing employment access in a mixed-use neighborhood.

The Project Site is located within the boundaries of the area recognized by the North Brooklyn Industry and Innovation Plan, and specifically within the Growth District. This area is considered as a dynamic, transit-accessible district for creative and tech-driven jobs of the future. The Proposed Action would not hinder the advancement of the North Brooklyn Industry and Innovation Plan (which has largely been incorporated via the COYEO and M-Districts text amendments), but rather it would increase density for a commercial use that would promote creative jobs in the area. This would not occur on the Project Site under No-Action conditions. As such, the Proposed Action would not result in any significant adverse public policy impacts to either the primary or secondary study areas.

VI. CONCLUSION

The Proposed Action would not directly displace any land uses so as to adversely affect surrounding land uses, nor generate land uses that would be incompatible with land uses, zoning, or public policy in the secondary study area. The Proposed M1-4A district is consistent with the existing land use and zoning character of the study areas. As such, the Proposed Action would result in zoning that is compatible with the range of existing uses and FARs found in the secondary study area and surrounding neighborhood. The Proposed Action would also not hinder the advance of, or conflict with, any applicable public policies. Instead, the Proposed Action would advance and enforce the strategic public policy goals associated with both the North Brooklyn Industry and Innovation and the Rebuild, Renew, Reinvent: A Blueprint for New York City's Economic Recovery Plans. Therefore, no significant adverse impacts on lane use, zoning, or public policy are anticipated in the future with the Proposed Action in the primary or secondary study area in the 2027 analysis year.

Attachment D

Shadows

I. INTRODUCTION

This attachment assesses the potential for the Proposed Action to result in incremental shadows long enough to reach any nearby publicly accessible open spaces or other sunlight-sensitive resources. According to the 2021 *City Environmental Quality Review* (CEQR) *Technical Manual*, a shadows assessment is required if a proposed action would result in structures (or additions to existing structures) of 50 feet in height or greater, or those that would be located adjacent to, or across the street from, a sunlight sensitive resource. As discussed in **Attachment A, "Project Description,"** the Proposed Action would facilitate the development of a building that would be taller than 50 feet and is located adjacent to sunlight-sensitive resources. As such, a detailed shadows analysis was prepared in accordance with *CEQR Technical Manual* guidance to determine the potential for the Proposed Action to result in significant adverse impacts on sunlight-sensitive resources.

II. METHODOLOGY

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. For projects or actions resulting in structures less than 50 feet tall, a shadow assessment is generally not necessary, unless the site is adjacent to a park, historic resource, or important natural feature (if the feature that makes the structure significant depends on sunlight). First, a preliminary screening assessment must be conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year. The *CEQR Technical Manual* defines sunlight-sensitive resources as those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. The following are considered to be sunlight-sensitive resources:

- *Public open space* (e.g., parks, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions or roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The use of vegetation in an open space establishes its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather dependent features, like wading pools and sandboxes, or vegetation that could be affected by loss of sunlight during the growing season (i.e., March through October); and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include passive use, such as sitting or sunning; active use, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants, and plots in community gardens. Generally, six to eight hours a day of sunlight, particularly in the growing season, is a minimum requirement.

- *Features of historic architectural resources that depend on sunlight for their enjoyment by the public.* Only the sunlight-sensitive features are considered, as opposed to the entire architectural resource. Sunlight-sensitive features include the following: design elements that are part of a recognized architectural style that depends on the contrast between light and dark (e.g., deep recesses or voids,

such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); elaborate, highly carved ornamentation; stained glass windows; exterior building materials and color that depend on direct sunlight for visual character (e.g., the multicolored features found on Victorian Gothic Revival or Art Deco façades); historic landscapes, such as scenic landmarks, including vegetation recognized as an historic feature of the landscape; and structural features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as an historic landmark.

- *Natural resources where the introduction of shadows could alter the resource's condition or microclimate.* Such resources could include surface water bodies, wetlands, or designated resources, such as coastal fish and wildlife habitats.

The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the proposed building(s) representing the longest shadow that could be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier, which reduces the area that could be affected by project-generated shadows by accounting for a specific range of angles that can never receive shade in New York City due to the path of the sun in the Northern Hemisphere. If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by new shadows by looking at specific representative days of the year and determining the maximum extent of shadow over the course of each representative day. If the third tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow resulting from the project.

In accordance with the *CEQR Technical Manual*, shadows on sunlight-sensitive resources of concern are modeled for four representative days of the year. For the New York City area, the months of interest for an open space resource encompass the growing season (i.e., March through October) and one month between November and February representing a cold-weather month (usually December). Representative days for the growing season are generally the March 21st vernal equinox (or the September 21st autumnal equinox, which is approximately the same), the June 21st summer solstice, and a spring or summer day halfway between the summer solstice and equinoxes, such as May 6th or August 6th (which are approximately the same). For the cold-weather months, the December 21st winter solstice is included to demonstrate conditions when open space users rely most heavily on available sunlight warmth. As these months and days are representative of the full range of possible shadows, they are also used for assessing shadows on sunlight-sensitive historic and natural resources. The *CEQR Technical Manual* defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset.

The detailed analysis provides the data needed to assess the shadow impacts. The effects of the new shadows on the sunlight-sensitive resources are described, and their degree of significance is considered. The results of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text. As described in the *CEQR Technical Manual*, an incremental shadow is generally not considered significant when its duration is no longer than ten 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 ten minutes or longer falls on a sunlight-sensitive resource and results in one of the following:

- *Vegetation:* a substantial reduction in sunlight available to sunlight-sensitive features of the resource to less than the minimum time necessary for its survival (when there would be sufficient sunlight in the future without the project), or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).

- *Historic and cultural resources:* a substantial reduction in sunlight available for the enjoyment or appreciation of the sunlight-sensitive features of an historic or cultural resource.

- *Open space utilization:* a substantial reduction in the usability of open space as a result of increased shadow, including information regarding anticipated new users and the open space's utilization rates throughout the affected time periods.

- *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.

In general, a significant adverse shadow impact occurs when the incremental shadow added by a proposed action falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources.

III. PRELIMINARY ASSESSMENT

Tier I Screening Assessment

According to the *CEQR Technical Manual*, the longest shadow that a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. The Proposed Development's maximum shadow radius (593.4 feet) was determined using the Proposed Development's maximum height of approximately 138 feet, which includes a 20-foot-tall rooftop bulkhead (Tier I Assessment).[1] Within this longest shadow study area, there is one sunlight-sensitive open space resource and two historic resources. Therefore, further screening was warranted to determine whether any resources could be affected by project-generated shadows. A list of these resources is provided below in **Table D-1**.

TABLE D-1:
Possible Sunlight-Sensitive Resources

No.[2]	Open Space and Historic Resources
1	Justice Gilbert Ramirez Park (Open Space Resource)
2	56 Bogart Street (Historic Resource)
3	Firehouse Engine Co. 237 (Historic Resource)

[1] In accordance with *CEQR Technical Manual* guidance, the maximum shadow radius was calculated by combining the maximum building height of the Proposed Development (inclusive of the rooftop bulkhead) (totaling approximately 138 feet) and multiplying that number by 4.3. Although the Proposed Development is intended to only include mechanical bulkheads reaching a height of approximately 16 feet, for conservative analysis purposes, the rooftop obstructions (bulkheads) were assumed to reach a height of 20 feet.

[2] Numbers Keyed to **Figure D-1**

Tier II Screening Assessment

Due to the path of the sun across the sky in the Northern Hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, this area lies between -108 and +108 degrees from true north. The purpose of the Tier II screening is to determine whether the sunlight-sensitive resources identified in the Tier I Screening are located within portions of the longest shadow study area that can receive shade from the Proposed Development.

Figure D-1 illustrates the results of the Tier I and Tier II screening assessments (i.e., the portion of the longest shadow study area lying within -108 degrees from the true north and +108 degrees from true north as measured from southernmost portion of the Project Site). Based on the Tier I and II analysis, Site 1, Justice Gilbert Ramirez Park, was identified as the only sunlight-sensitive resource warranting further assessment.

Tier III Screening Assessment

According to the *CEQR Technical Manual*, a Tier III screening assessment should be performed to determine if, in the absence of intervening buildings, shadows resulting from a proposed action can reach a sunlight-sensitive resource, thereby warranting a detailed shadow analysis. The Tier III screening assessment is used to determine if shadows resulting from a proposed action can reach a sunlight-sensitive resource at any time between 1.5 hours after sunrise and 1.5 hours before sunset on representative analysis dates.

As project-generated shadows could reach a sunlight-sensitive resource, a Tier III assessment (see **Figure D-2a and D-2b**) was performed using three-dimensional (3D) computer mapping software. The 3D model was used to calculate and display project-generated shadows on individual representative analysis dates. The model contained 3D representations of the elements in the base map used in the preceding assessments and a 3D model of the Proposed Development. Per *CEQR Technical Manual* guidance, at this stage of the assessment, surrounding buildings within the study area were not included in the model so that it may be determined whether project-generated shadows would reach any sunlight sensitive resources.

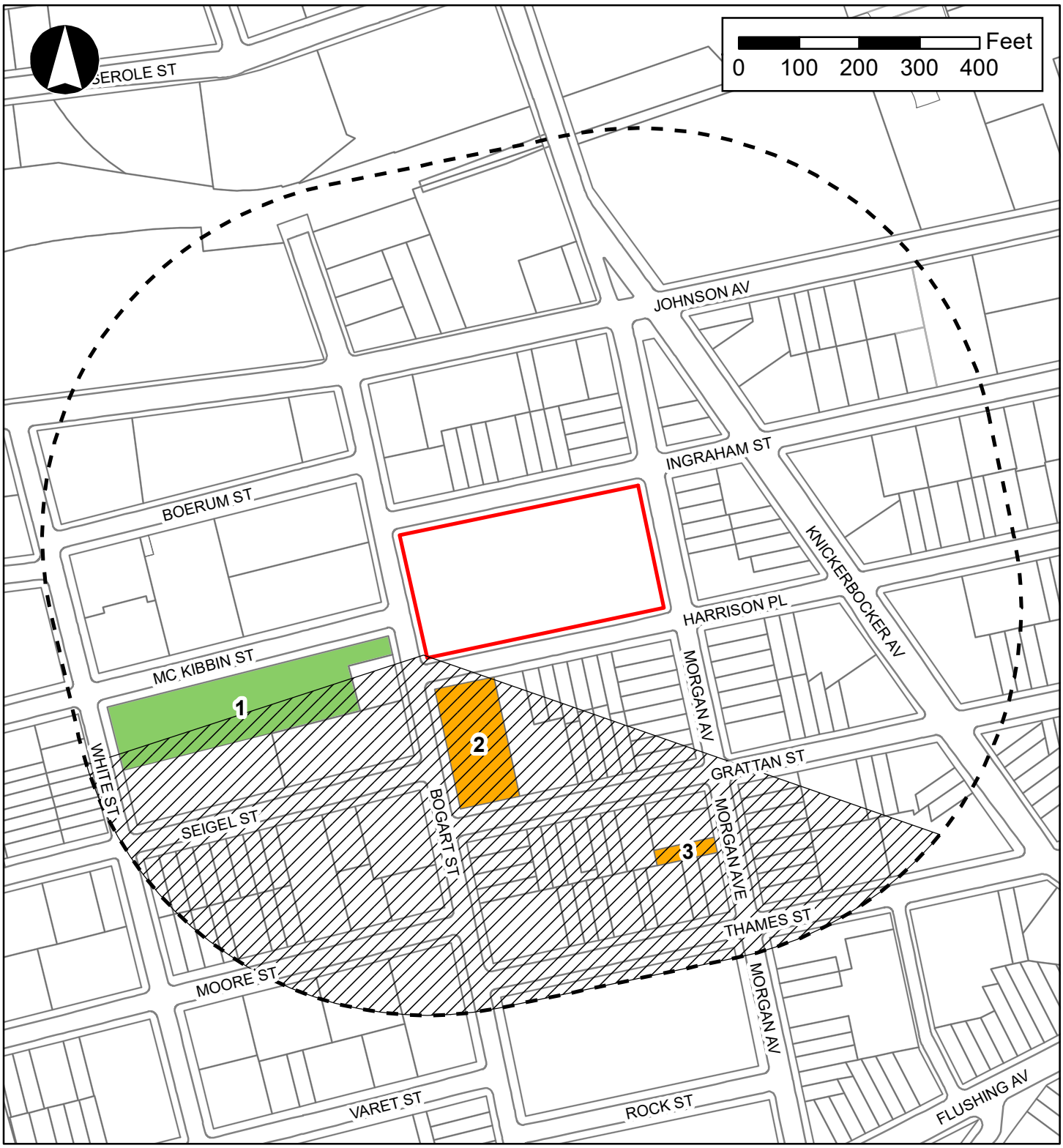
Table D-3 presents a summary of the Tier III assessment, showing the three days on which the open space resource would, in the absence of intervening buildings, receive project-generated shadows. The Tier III analysis was completed for four representative days of the year: March 21st/September 21st, the equinoxes; May 6th, the midpoint between the summer solstice and the equinox (and equivalent to August 6th); June 21st, the summer solstice and the longest day of the year; and December 21st, the winter solstice and shortest day of the year. As there were no incremental shadows on the December 21st analysis day, the detailed analyses only examined incremental shadows on the other three analysis days.

TABLE D-3: Tier III Assessment Results

No.[3]	Resource Name	Mar. 21st / Sep. 21st 7:36 AM – 4:29 PM	May 6th / Aug. 6th 6:27 AM – 5:18 PM	June 21st 5:57 AM – 6:01 PM	Dec. 21st 8:51 AM – 2:53 PM	Analysis Days
1	Justice Gilbert Ramirez Park	YES	YES	YES	NO	3

[3] Numbers keyed to **Figure D-1**.

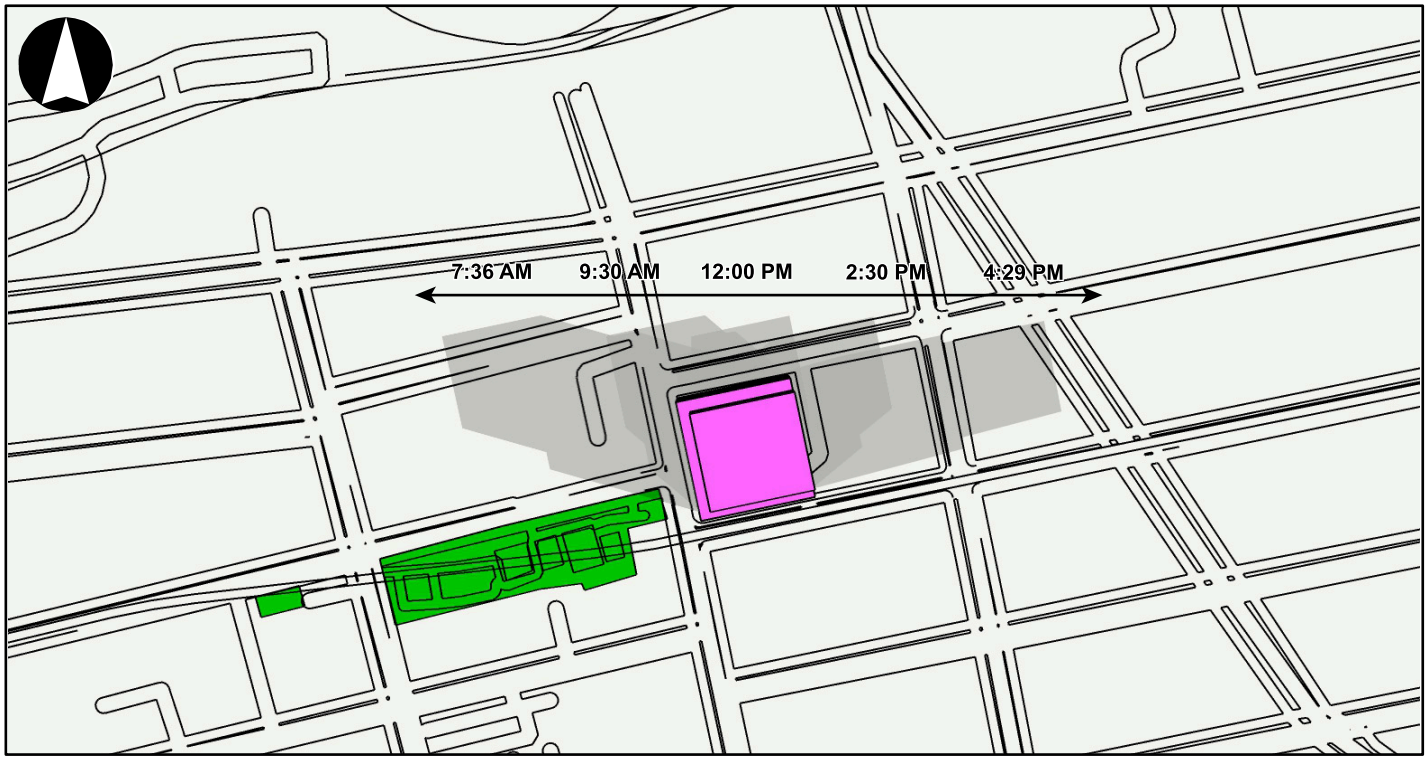
Tier I & II Shadow Assessment



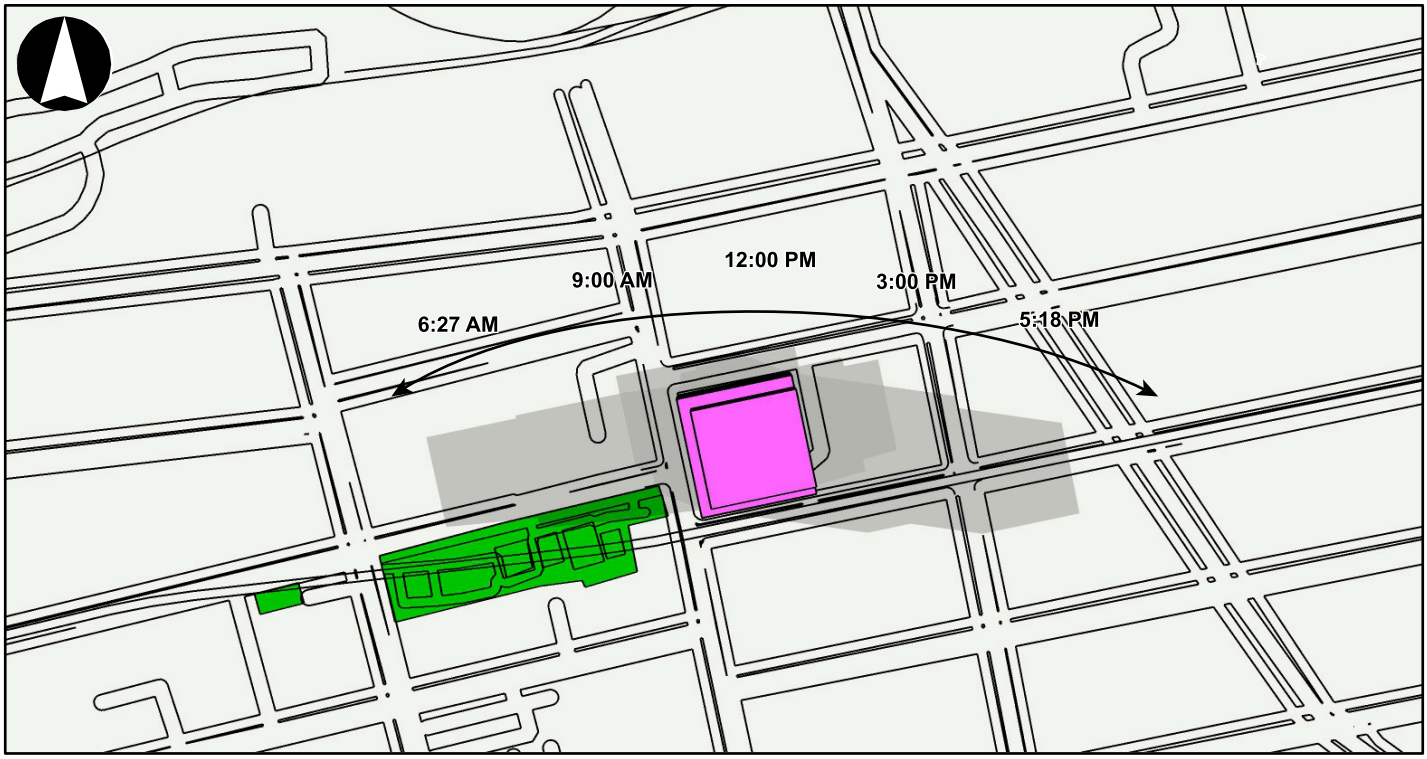
Legend

- Primary Study Area (Project Site)
- Open Space
- Historic Resources
- Shadows Tier I: Longest Shadow Study Area Boundary
- Shadows Tier II: Area that could never be shaded by the Proposed Development

Tier III Screening: May 21/September 21 and May 6/August 6



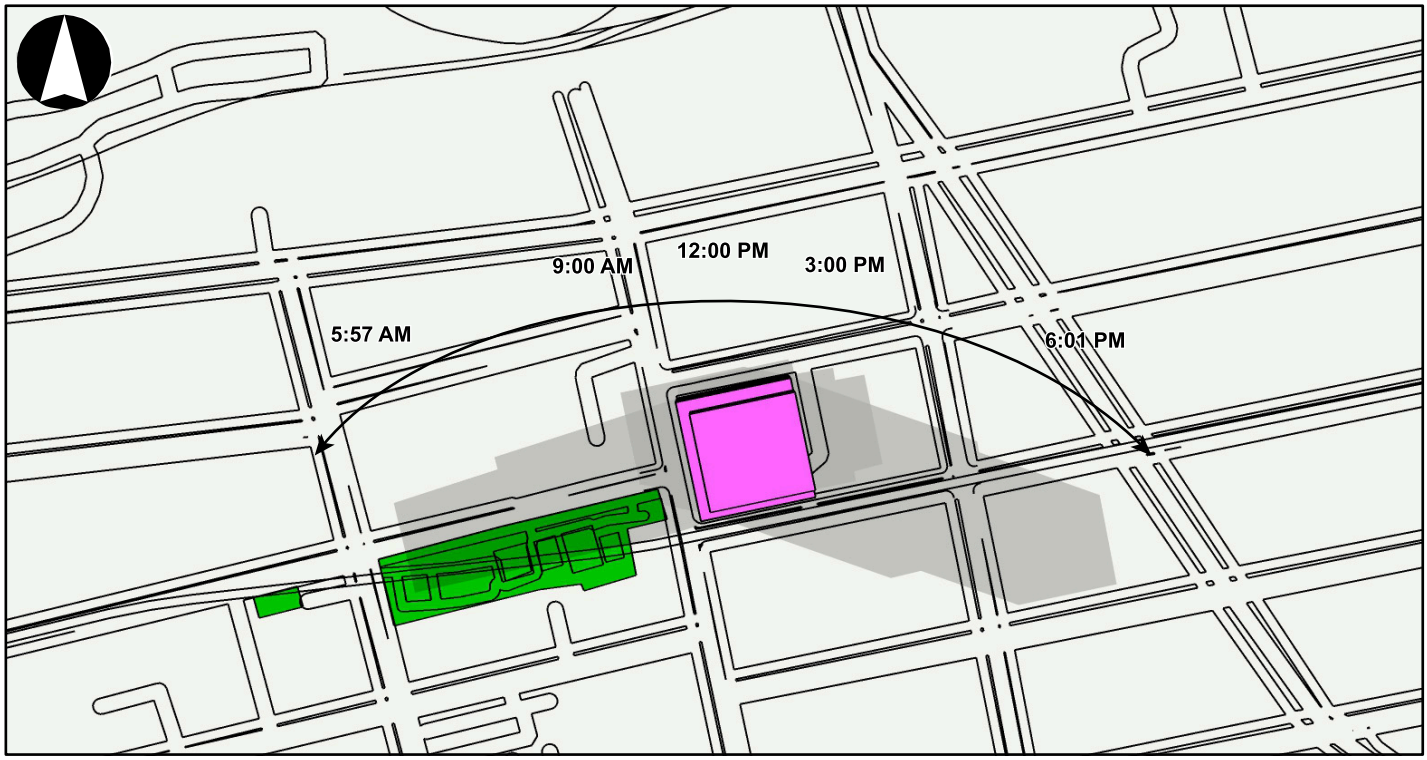
March 21/September 21



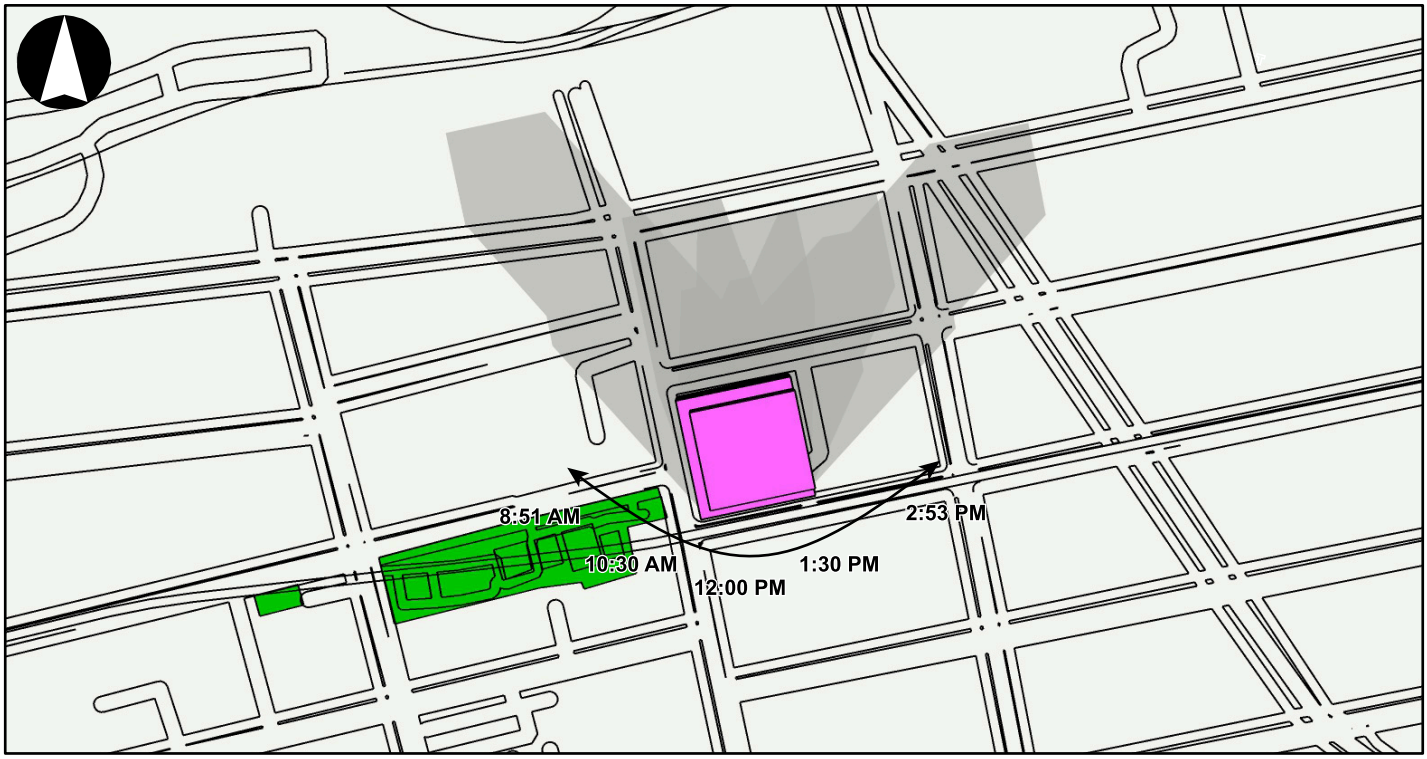
May 6/August 6

Legend Proposed Project Open Space

Tier III Screening: June 21 and December 21



June 21



December 21

Legend Proposed Project Open Space

IV. DETAILED ANALYSIS

Sunlight-Sensitive Resources

Justice Gilbert Ramirez Park

Justice Gilbert Ramirez Park is an approximately 1.03-acre park. The park, located southwest of the Project Site, is bound by McKibbin Street to the north, Seigel Street to the south, White Street to the west, and Bogart Street to the east. Justice Gilbert Ramirez Park features a playground, basketball and handball courts, benches, landscaping, and trees. Justice Gilbert Ramirez Park is open to the public daily from 6:00 AM to 9:00 PM.

Shadows Analysis

Per *CEQR Technical Manual* guidance, shadow analyses were performed for the one sunlight-sensitive resource identified above on three representative days of the year: March 21st/September 21st, the equinoxes; May 6th, the midpoint between the summer solstice and the equinox (and equivalent to August 6th); and June 21st, the summer solstice and the longest day of the year. CEQR guidance defines the temporal limits of a shadow analysis period to fall from 1.5 hours after sunrise to 1.5 hours before sunset. As discussed above, the results of the shadows analysis show the incremental difference in shadow coverage between the No-Action and With-Action conditions (refer to **Table D-3**, located on the subsequent page). Per the *CEQR Technical Manual*, all times reported herein are Eastern Standard Time and do not reflect adjustments for daylight savings time that is in effect from mid-March to early November.

As shown in **Table D-3**, incremental project-generated shadows would reach the sunlight-sensitive resource on three of the four analysis days. Increases in shadow coverage would occur at Justice Gilbert Ramirez Park on the analysis days of March 21st/September 21st, May 6th/August 6th, and June 21st. **Figures D-3** through **D-5b** show representative shadow views of the three representative analysis days mentioned above.

TABLE D-3: Duration of Shadows on Sunlight Sensitive Resources (Increment Compared to the No-Action Condition)

Resource	Analysis Day	Mar. 21st/Sep. 21st	May 6th/Aug. 6th	June 21st	Dec. 21st
		7:36 AM – 4:29 PM	**6:27 AM – 5:18 PM**	**5:57 AM – 6:01 PM**	**8:51 AM – 2:53 PM**
Justice Gilbert Ramirez Park	Shadow enter-exit time	7:36 AM –8:40 AM	6:27 AM – 9:12 AM	5:57 AM –9:09 AM	N/A
	Incremental shadow duration	1 hour 4 minutes	2 hours 45 minutes	3 hours 12 minutes	N/A

Notes:
All times are Eastern Standard Time (EST).
Daylight Savings Time (EDT) was not used.
Table indicates the entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource.

March 21st/September 21st

On the March 21st/September 21st analysis days, the Proposed Development would cast incremental shadows on portions of Justice Gilbert Ramirez Park beginning at 7:36 AM EST (8:36 AM EDT) and continuing until 8:40 AM EST (9:40 AM EDT), for a duration of approximately one hour and 4 minutes. As indicated in **Figure D-3**, incremental shadows would cover the northeast corner of the park. Incremental shadow coverage would be minimal and would only affect passive park uses on the eastern side of the park briefly. Active park uses would not be affected by incremental shadows. After 8:40 AM EST (9:40 AM EDT), the open space would not experience any incremental shadow coverage.

May 6th/August 6th

On the May 6th/August 6th analysis days, the Proposed Development would cast incremental shadows on portions of Justice Gilbert Ramirez Park beginning at 6:27 AM EST (7:27 AM EDT) and continuing until 9:12 AM EST (10:12 AM EDT), for a duration of approximately two hours and 45 minutes. After 9:12 AM EST (10:12 AM EDT), the open space would not experience any incremental shadow coverage as a result of the Proposed Development. As indicated in **Figures D-4a** and **D-4b**, incremental shadows would cover the northeastern corner of the park, and the incremental shadows would only affect the eastern passive park uses. Active park uses would not be affected by incremental shadows.

June 21st

June 21st is the summer solstice, which is the day of the year with the longest period of daylight. The sun is most directly overhead and generally shadows are shortest and move across the widest angular range from west to east. On this date, the Proposed Development would cast incremental shadows on portions of Justice Gilbert Ramirez Park beginning at 5:57 AM EST (6:57 AM EDT) and continuing until 9:09 AM EST (10:09 AM EDT), for a duration of approximately three hours and 12 minutes. After 9:09 AM EST (10:09 AM ESD), the open space would not experience any incremental shadow coverage as a result of the Proposed Development. As indicated in **Figures D-5a** and **D-5b**, incremental shadows would cover a majority of the park at 5:57 AM EST (6:57 AM EDT), but by 6:30 AM EST (7:30 AM EDT)—just over a half hour later--the incremental shadows would only cover the northeastern corner of the park. This is the only analysis day in which both passive and active park uses would be affected by incremental shadows.

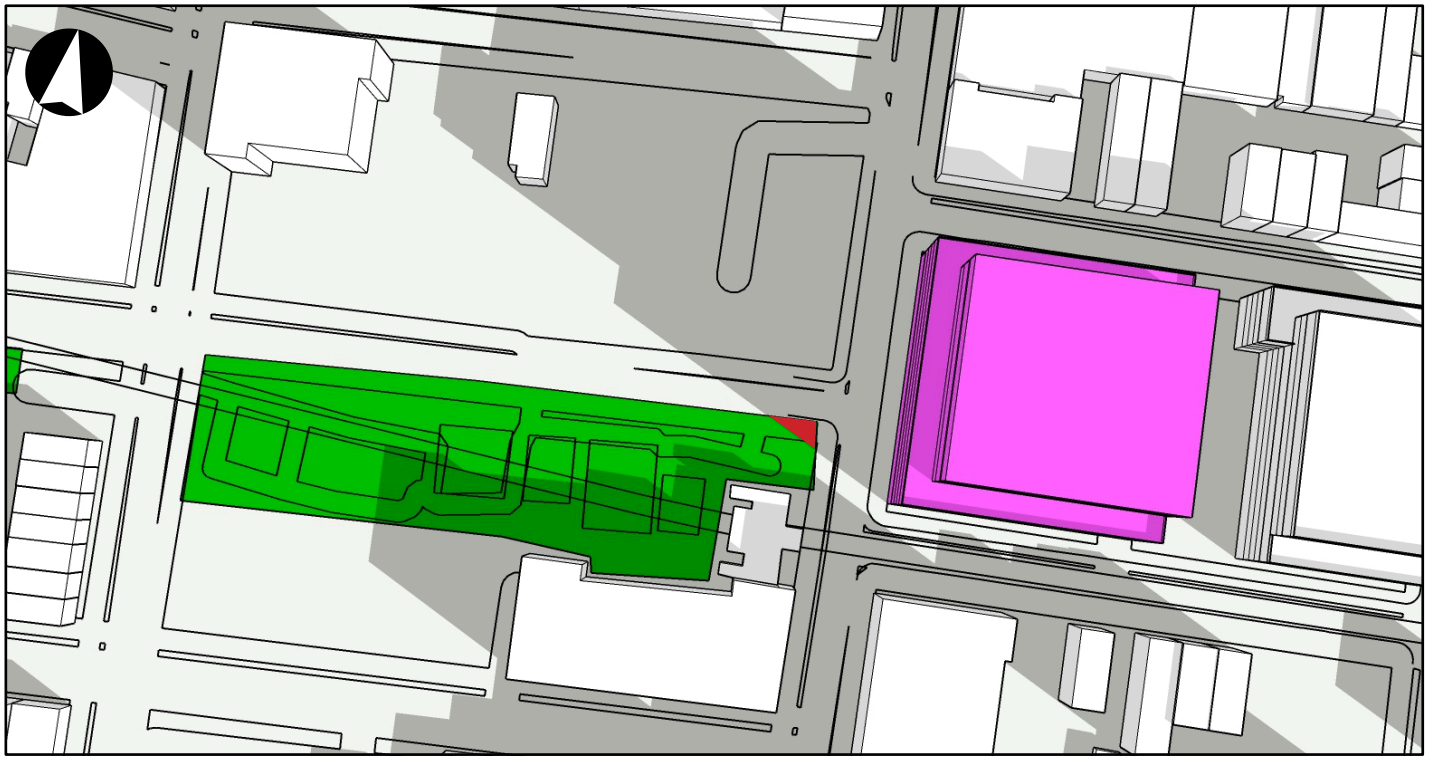
Assessment

A shadow impact occurs when the incremental shadow from a proposed project falls on a sunlight sensitive resource or feature and reduces its direct sunlight exposure. Determining whether this impact is significant or not depends on the extent and duration of the incremental shadow and the specific context in which the impact occurs.

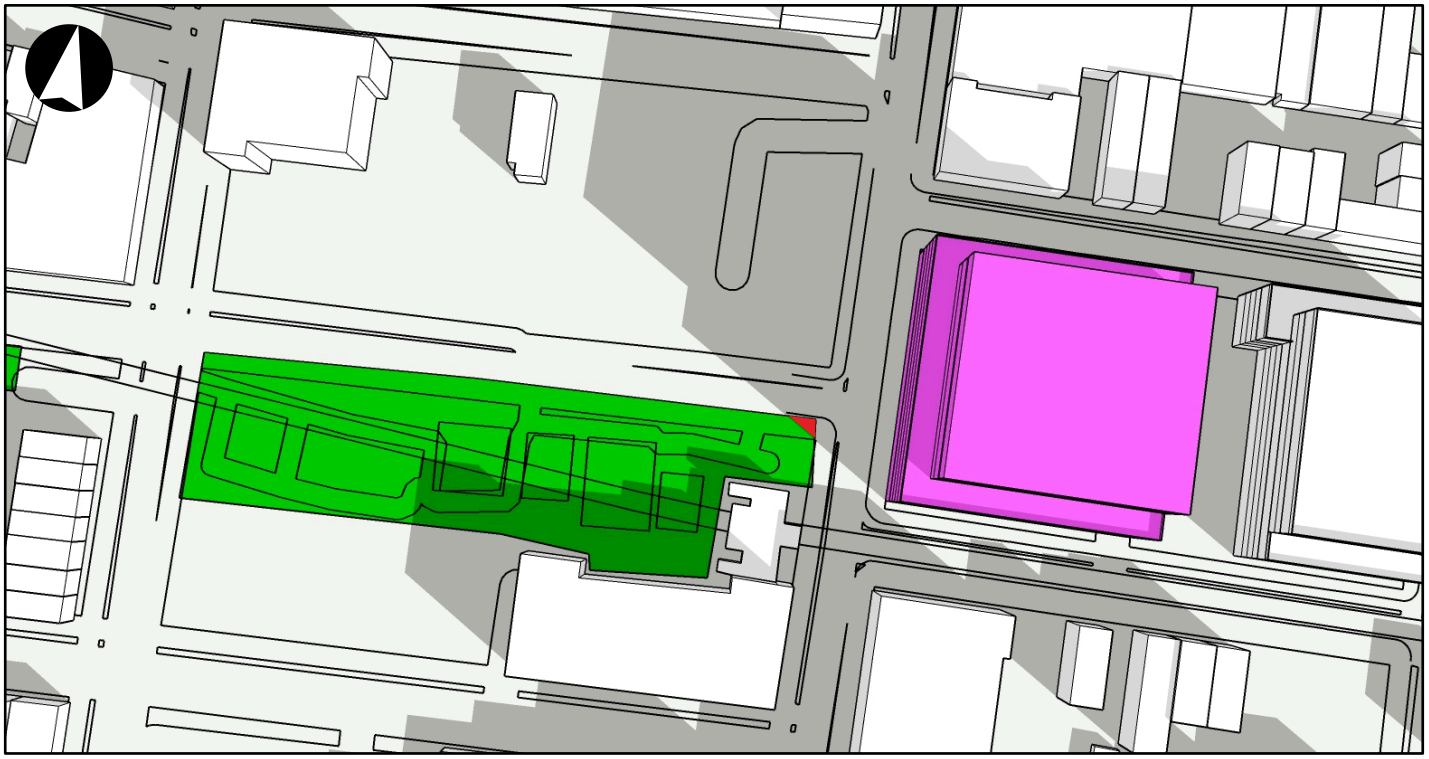
For sunlight-sensitive open space resources, the uses and features of the space indicate its sensitivity to shadows. Shadows occurring during the cold-weather months of interest generally do not affect the growing season of outdoor vegetation; therefore, this sensitivity is assessed for both (1) warm-weather-dependent features or vegetation that could be affected by a loss of sunlight during the growing season; and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include passive use, such as sitting or sunning; active use, such as playfields or paved courts; and activities such as gardening, or children's wading pools and sprinklers. Generally, six to eight hours a day of sunlight, particularly in the growing season, is often a minimum requirement. Consequently, the

Figure D-3

Justice Gilbert Ramirez Park
Incremental Shadows on March 21/September 21



7:36 AM



8:00 AM

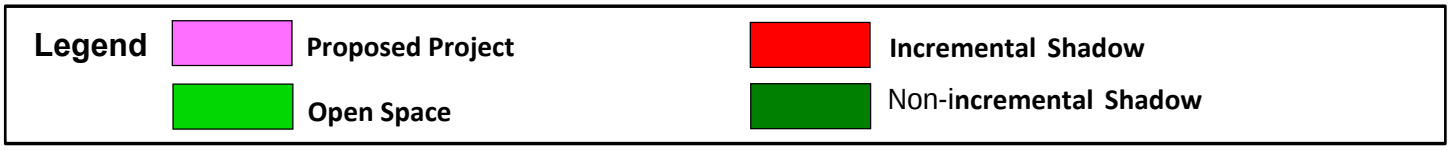
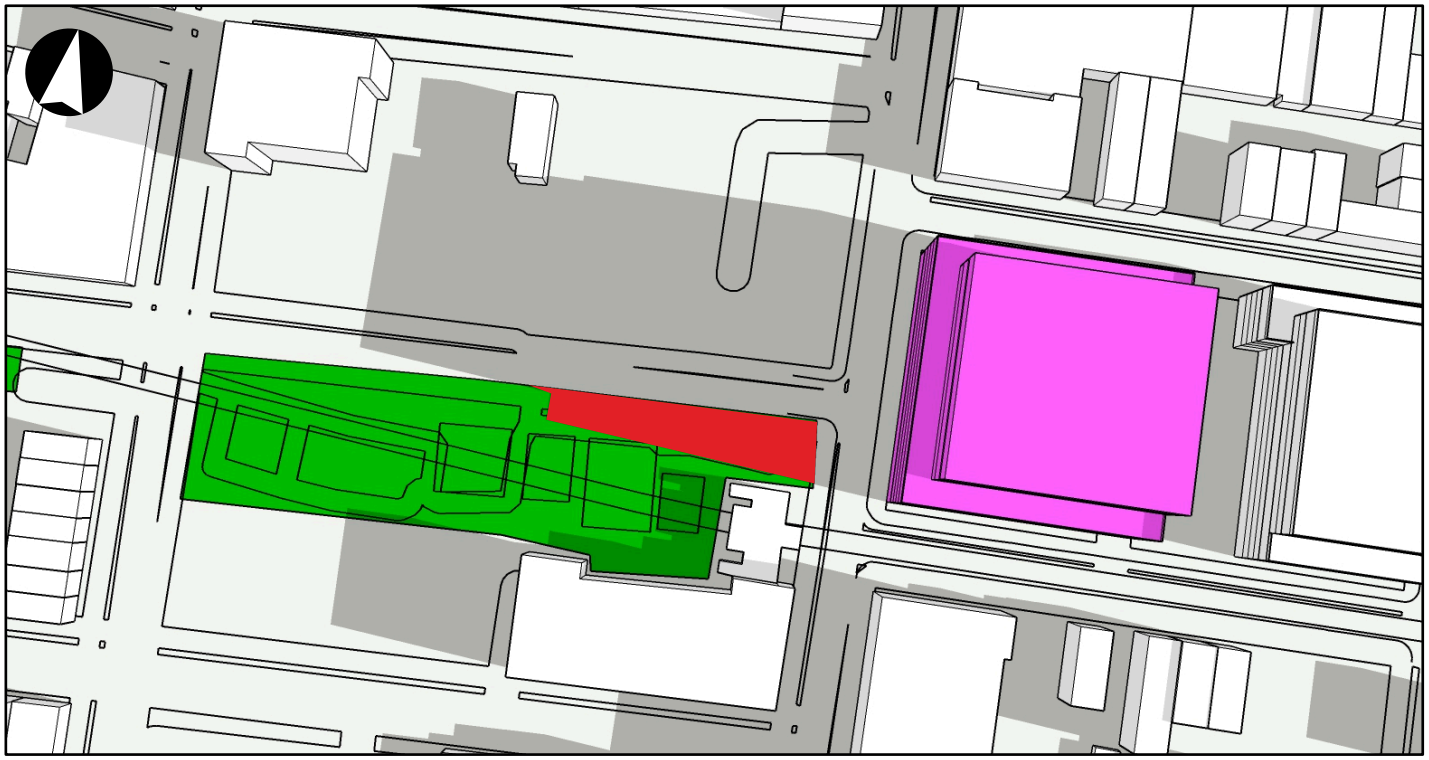
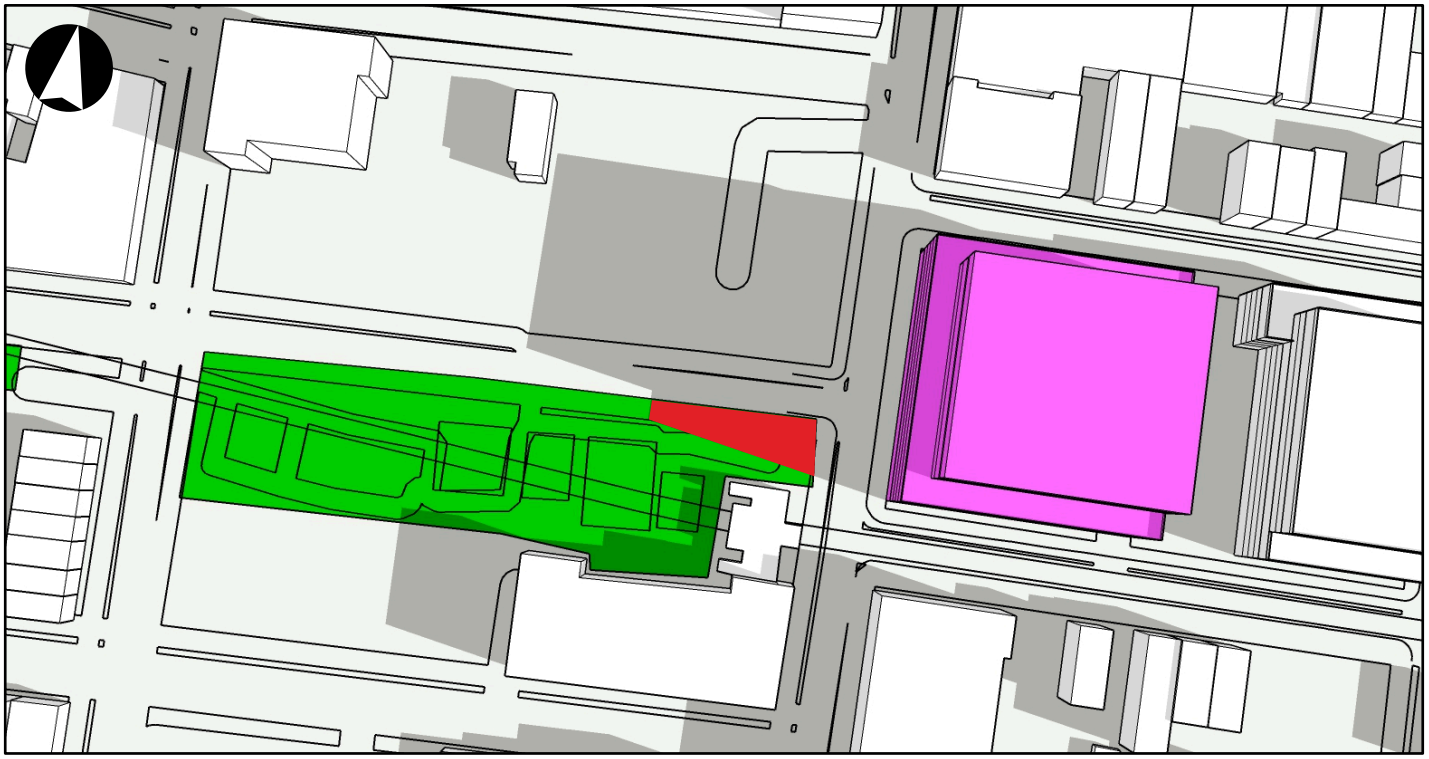


Figure D-4a

Justice Gilbert Ramirez Park
Incremental Shadows on May 6/August 6



6:27 AM



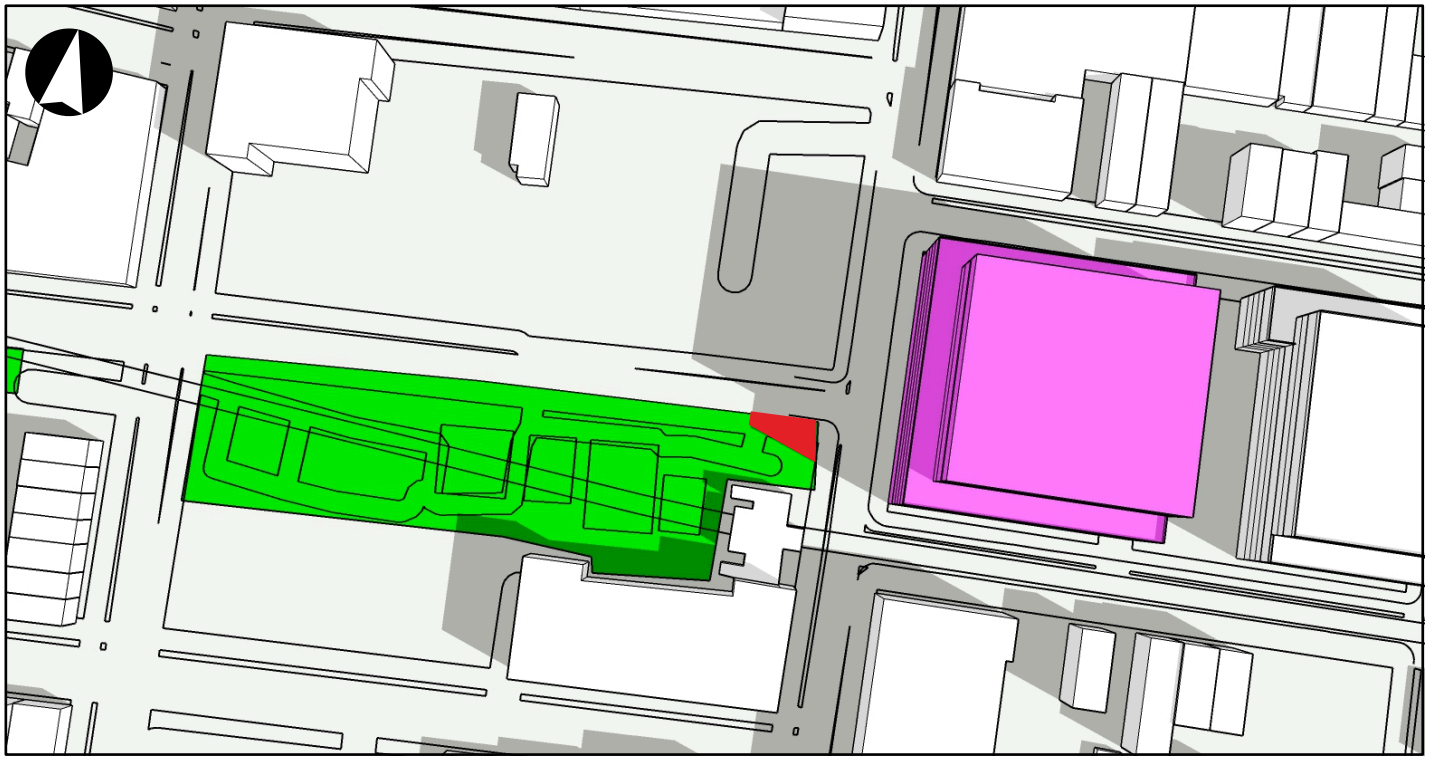
7:00 AM

Legend

- Proposed Project
- Incremental Shadow
- Open Space
- Non-incremental Shadow

Figure D-4b

Justice Gilbert Ramirez Park
Incremental Shadows on May 6/August 6



8:00 AM



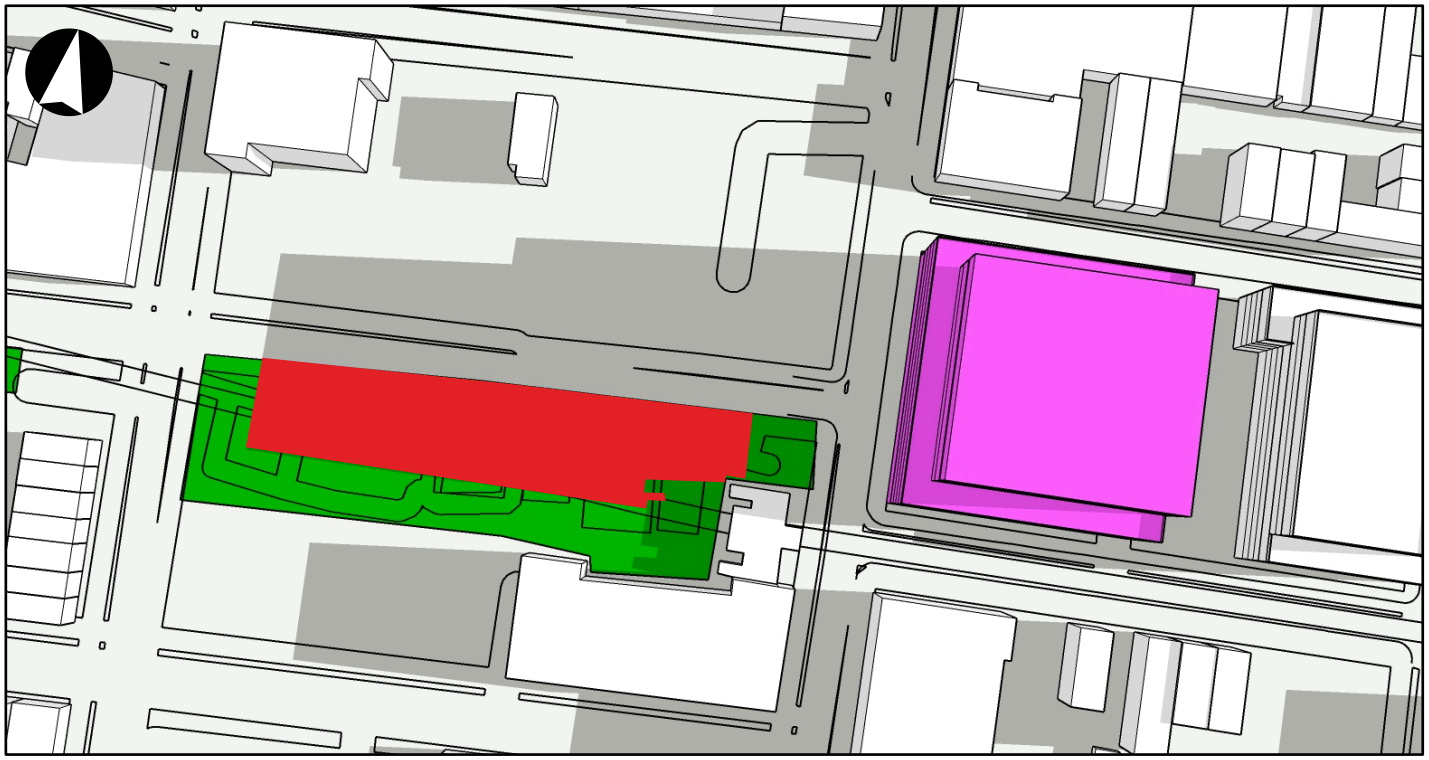
9:00 AM

Legend

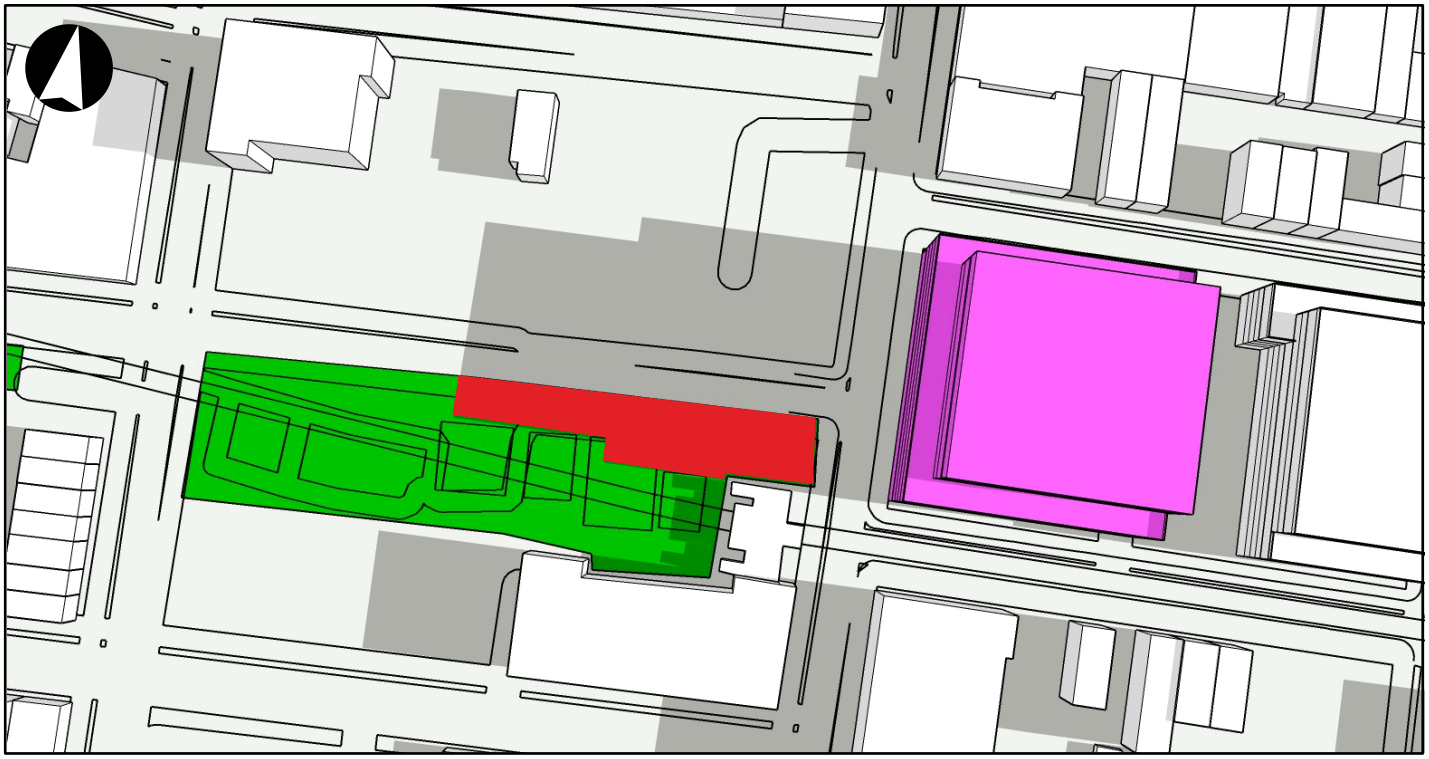
- Proposed Project
- Incremental Shadow
- Open Space
- Non-incremental Shadow

Figure D-5a

Justice Gilbert Ramirez Park
Incremental Shadows on June 21



5:57 AM



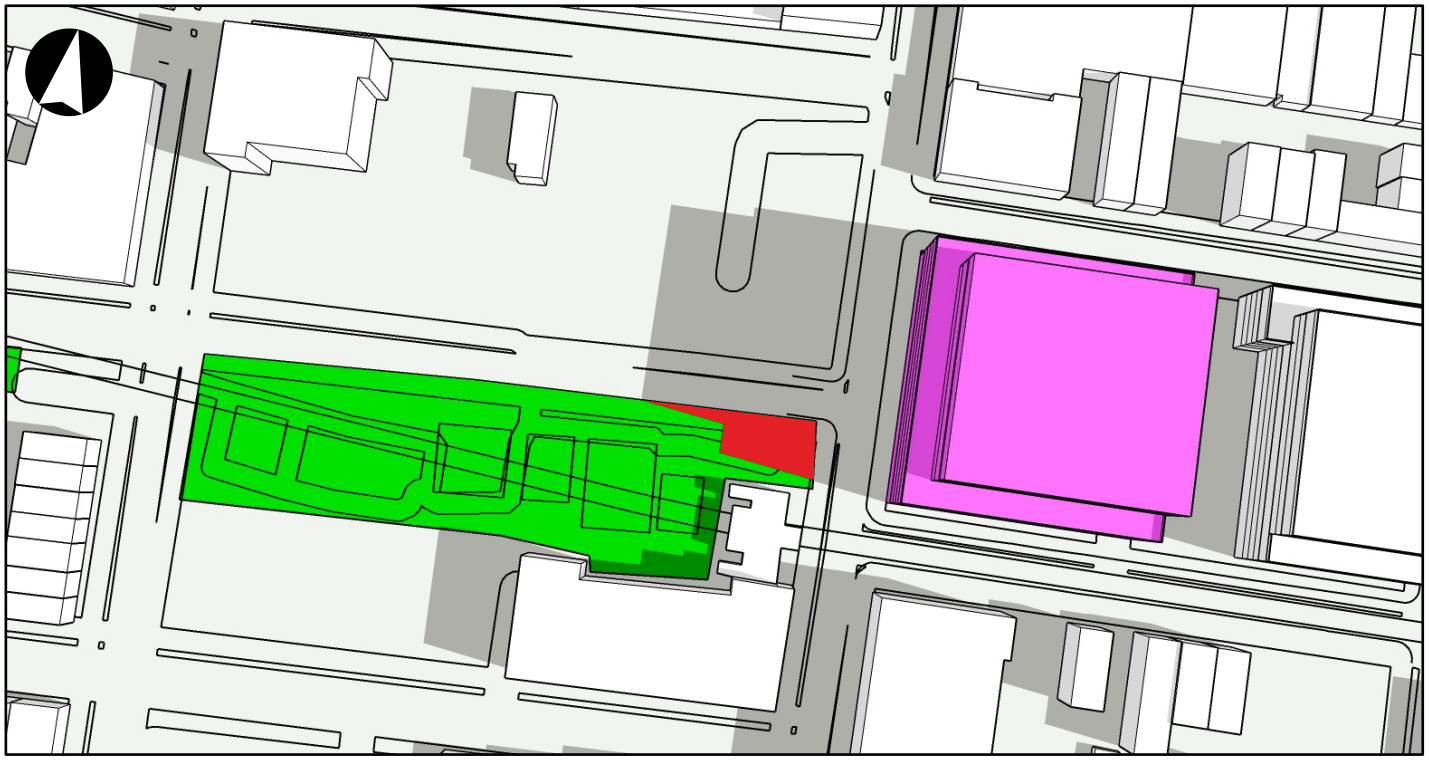
6:30 AM

Legend

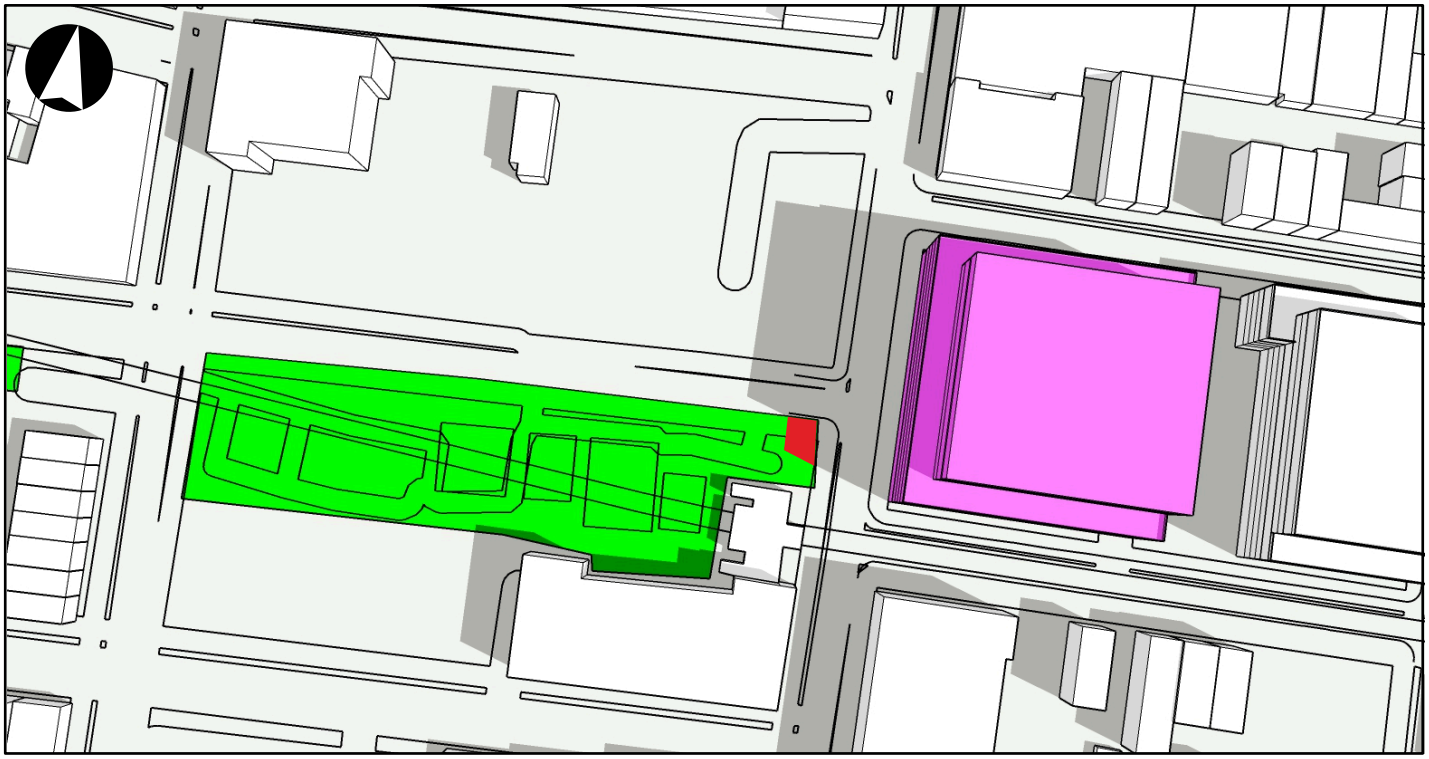
- Proposed Project
- Incremental Shadow
- Open Space
- Non-incremental Shadow

Figure D-5b

Justice Gilbert Ramirez Park
Incremental Shadows on June 21



7:30 AM



8:30 AM

Legend

- Proposed Project
- Incremental Shadow
- Open Space
- Non-incremental Shadow

assessment of an open space resource's sensitivity to increased shadow focuses on identifying the existing conditions of its facilities, plantings, and uses, and the sunlight requirements for each.

Justice Gilbert Ramirez Park

As described above and shown in **Table D-3**, all incremental shadows on all analysis days would be limited to the morning hours before 9:12 AM EST (10:12 AM EDT). As the park is open daily from 6:00 AM to 9:00 PM, the park would not experience any incremental shadows for almost 12 hours of its total operating hours. Additionally, incremental shadow coverage would not be cast on any single area of the open space for an extended period of time, as shadows move from west to east throughout the day, allowing the park's sunlight-sensitive features to receive adequate direct sunlight (at least eight hours) throughout the analysis day.

Figure D-6 shows the boundaries of Justice Gilbert Ramirez Park (in red) and separates the active (shaded blue) from the passive park uses. Active park uses include the handball and basketball courts, playgrounds and the swing set, while the passive park uses are the eastern garden, the western lawn, and the trees and benches throughout the park.

Active park uses would only be affected by incremental shadows for approximately one hour on the June 21st analysis day. As shown in **Figure D-5a**, incremental shadows begin exiting active park uses by 6:30 AM EST (7:30 AM EDT), and as shown in **Figure D-5b**, incremental shadows no longer affect active park uses an hour later by 7:30 AM EST (8:30 AM EDT). The park is open to the public from 6:00 AM – 9:00 PM, which means that active park uses would not be affected by incremental shadows for a majority of the operating hours (from the operating hours of 8:30 AM to 9:00 PM).

As mentioned above, passive park uses include the garden, lawn, trees and benches throughout the park. The garden on the eastern side of the park would receive the most incremental shadows as a result of the Proposed Development. The garden includes vegetation, namely trees, shrubs, and flowers that could potentially be affected by loss of sunlight during the growing season. On the March 21/September 21, May 6/August 6, and June 21st analysis days, incremental shadows would exit the eastern garden by 8:40 AM EST (9:40 EDT), 9:12 AM EST (10:12 AM EDT), and 9:09 AM EST (10:09 AM EDT), respectively. As such, on all three analysis days, the garden, and all other passive park uses, would receive direct sunlight for over eight hours. Therefore, vegetation within the park would not be affected by the loss of sunlight.

Justice Gilbert Ramirez Park is open daily from 6:00 AM to 9:00 PM. For all three analysis days, the early morning hours that would experience incremental shadows are hours in which the park would be least utilized by the public, and the park would still receive direct sunlight for a majority of its operating hours. Incremental shadow coverage is not expected to have a significant effect on the utilization or enjoyment of Justice Gilbert Ramirez Park or on the sunlight needs of vegetation for any of the analysis days.

V. CONCLUSION

The Proposed Action would result in incremental shadow coverage on one open space resource, Justice Gilbert Ramirez Park, located southwest of the Project Site during the March 21/September 21, May 6/August 6, and June 21 analysis days from 7:36 AM – 8:40 AM EST, 6:27 AM – 9:12 AM EST, and 5:57 AM to 9:09 AM EST, respectively. For all three analysis days, incremental shadow coverage would not be cast

Aerial View of Justice Gilbert Ramirez Park



Legend

- Park Boundary
- Park Active Uses

on any single area of the open space for an extended period of time, as shadows move from west to east throughout the day, allowing the open space's sunlight-sensitive features to receive adequate direct sunlight (over eight hours) throughout the analysis days.

The extent and duration of the incremental shadows would: (1) not significantly reduce or completely eliminate direct sunlight exposure on any of the sunlight-sensitive features found within the open space; and (2) would not significantly alter the public's use of the open space resource or threaten the viability of vegetation or other sunlight-sensitive features. As such, incremental shadows from the Proposed Development on Justice Gilbert Ramirez Park would not be considered a significant adverse impact, in accordance with *CEQR Technical Manual* guidance.

Attachment E

Urban Design and Visual Resources

I. INTRODUCTION

This attachment assesses the Proposed Action's potential effects on urban design and visual resources. As discussed in **Attachment A, "Project Description"**, the Proposed Action is a zoning map amendment to rezone the Project Site (Block 3084, Lot 1) from an M1-2 district to an M1-4A district. The zoning map amendment would facilitate the development of an approximately 247,000-gross-square-foot (gsf) building to be used for art storage (the "Proposed Development"). The Proposed Action would allow for an increase of permitted floor area on the Project Site by 240,000 zoning square feet (zsf) to allow for the development of an art storage facility. Currently, the eastern portion of the Project Site is occupied by an approximately 193,785-gsf self-storage facility (which was developed as-of-right) and its required accessory parking, while the western portion contains an open lot for commercial vehicle storage.

The 2021 *City Environmental Quality Review ("CEQR") Technical Manual* defines urban design as the totality of elements – including streets, buildings, visual resources, open space, natural features, and wind – that shape and affect a pedestrian's experience of public space. A visual resource is defined as the connection from the public realm to significant natural or built features, including, but not limited to, views of the waterfront, public parks, public art, statues or sculptures, landmark structures or districts, otherwise distinct buildings or groups of buildings that may be iconic or historic, or natural resources. In an urban design assessment pursuant to CEQR, one considers whether and how a project may change the experience of a pedestrian in the project area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built and natural environment in the context of the project. An assessment of the potential impacts of the Proposed Action on urban design and visual resources was prepared in conformance with the *CEQR Technical Manual*.

II. METHODOLOGY

In general, an assessment of urban design is warranted when a project may have effects on one or more of the elements that contribute to a pedestrian's experience of public space. As mentioned above, the Proposed Action would facilitate the development of an approximately 247,000-gsf art storage facility. As the Proposed Development has the potential to change pedestrians' experience of public space surrounding the Project Site in comparison to conditions in the No-Action scenario, it is necessary to assess the Proposed Action's potential impacts on urban design and visual resources.

A pedestrian wind condition analysis is not warranted for the Proposed Action pursuant to *CEQR Technical Manual* methodology. The Project Site is not located in a high wind location (such as along the waterfront) and the Proposed Action would not result in the construction of multiple tall buildings that would have the potential to alter wind conditions. Therefore, a pedestrian wind condition analysis is not warranted for the Proposed Action.

Following *CEQR Technical Manual* guidance, the analysis is based on field visits, aerial views, photographs, and other graphic images of the zoning lot and surrounding area. The following preliminary analysis also considers the effects of the Proposed Development on the surrounding area's visual resources, which are

generally considered important public view corridors, vistas, or natural or built features. Visual resources can include waterfront views, public parks, landmarked structures or districts, or natural features, such as rivers or geologic formations.

Study Areas

The study areas for the assessment of urban design and visual resources corresponds to the areas where the proposed project may influence land use patterns, the built environment, and pedestrian's experiences in the public realm surrounding the project area. The study area is consistent with the study area used for the land use analysis. For visual resources, the view corridors within the study area from which such resources are publicly viewable should be identified.

The urban design analysis considers both a primary study area, which is the Project Site (Block 3084, Lot 1), and a secondary study area that has the potential to experience indirect impacts as a result of the Proposed Action. The secondary study area extends an approximate 400-foot radius from the boundary of the primary study area. Consistent with the Secondary Study Area presented in **Attachment C, "Land Use, Zoning, and Public Policy,"** the Secondary Study Area is generally bounded by the midblock between Johnson Avenue and Meserole Street to the north, Knickerbocker Avenue to the east, midblock between Grattan and Thames Streets to the south, and midblock between Bogart Street and White Street to the west. The Primary and Secondary Study Areas described above have been established in accordance with *CEQR Technical Manual* guidance and are presented in **Figure E-1**.

III. EXISTING CONDITIONS

Urban Design

Project Site (Primary Study Area)

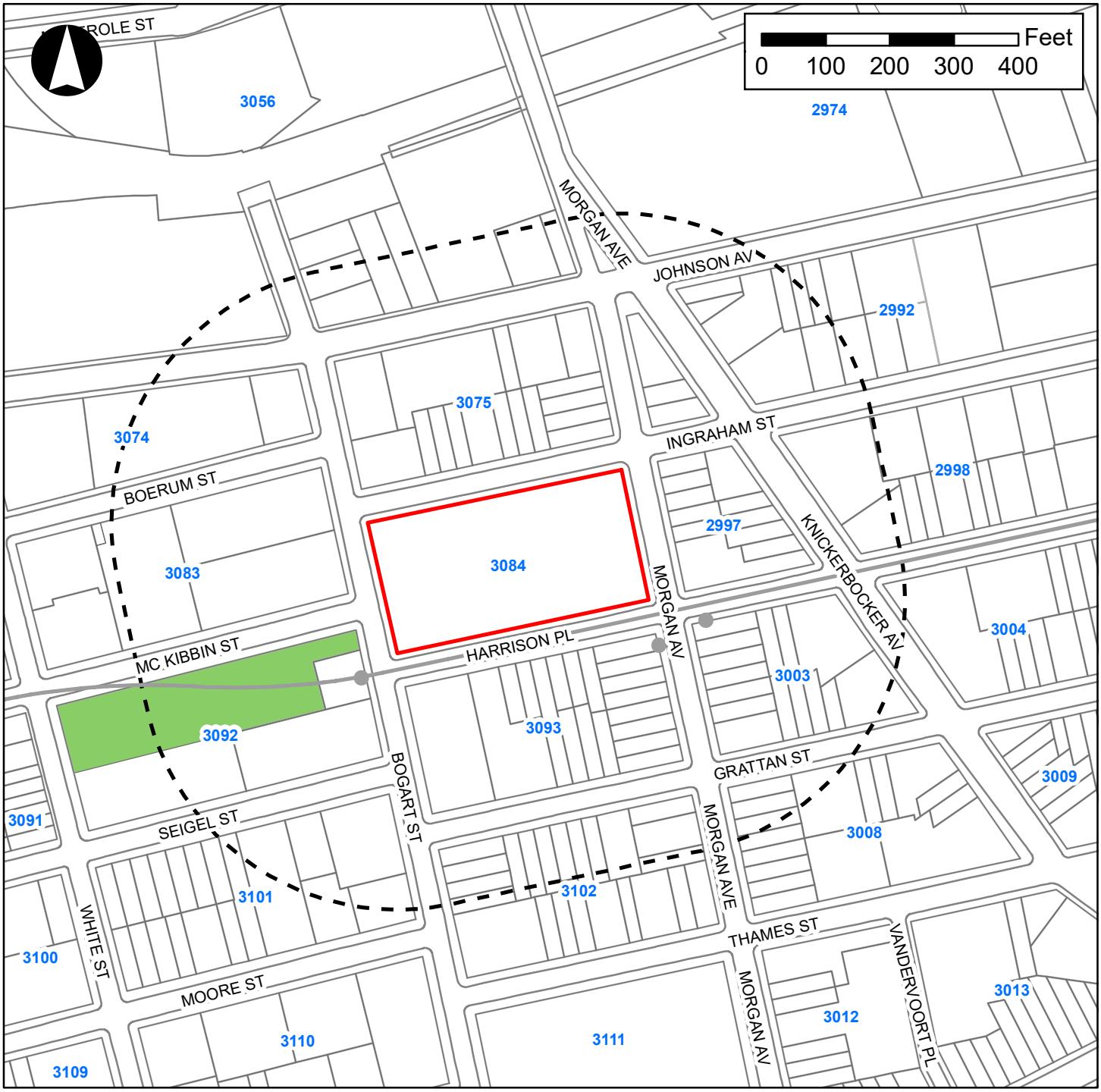
The approximately 80,000-gsf Project Site, which is coterminous with the Primary Study Area, comprises a single block, tax lot, and zoning lot bounded by Bogart Street to the west, Ingraham Street to the north, Morgan Avenue to the east, and Harrison Place to the south. The lot is located in the East Williamsburg neighborhood of Brooklyn (Block 3084, Lot 1). The Project Site contains approximately 200 feet of frontage on the east side of Bogart facing towards McKibbin Street, and approximately 400 feet of frontage on the south side of Ingraham Street. The eastern portion of the lot is a self-storage facility with an adjoining accessory parking lot, while the western portion of the lot is a lot for vehicle storage.

Buildings

As shown in **Figure E-2**, the eastern portion of the Project Site is currently occupied by an approximately 193,785-gsf (160,000-zsf) commercial building (approximately 2.0 FAR) built in 2021. Currently, approximately 177,785 gsf is being used for self-storage space, while approximately 16,000 gsf of ground floor space is not currently being utilized. Under the current M1-2 zoning, the existing facility utilizes all permitted floor area on the Project Site. The 7-story self-storage facility has approximately 200 feet of frontage along Morgan Avenue to the east, approximately 150 feet of frontage along the south side of Ingraham Street and 150 feet of frontage along the north side of Harrison Place. The main building entrance is located on its western frontage, facing the accessory parking lot.

Figure E-1

Urban Design and Visual Resources Study Areas



Legend

- Project Site (Primary Study Area)
- 400 Foot Radius (Secondary Study Area)
- L Train Subway Route
- Morgan Avenue L Subway Station Entrance
- Open Space
- 3084 Tax Block





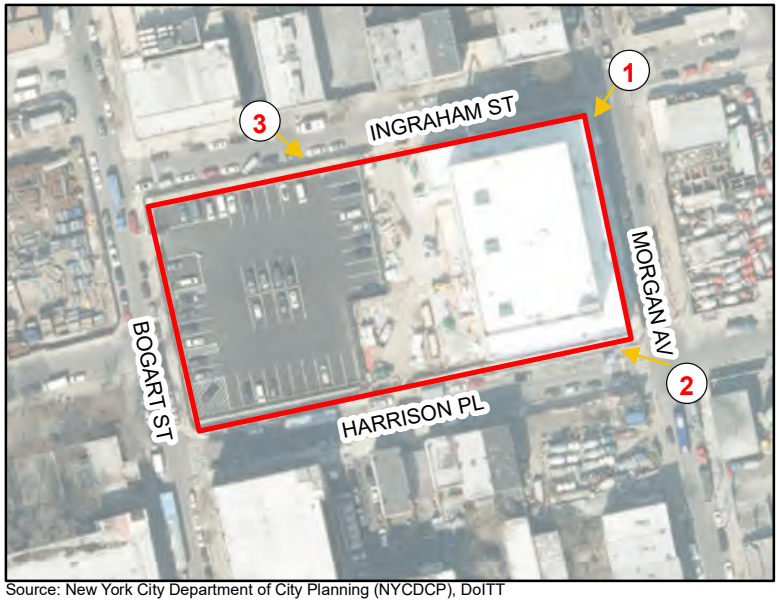
1. View of the Primary Study Area looking southwest at the intersecton of Morgan Avenue and Ingraham Street.



2. View of the Primary Study Area looking northwest at the intersection of Morgan Avenue and Harrison Place.



3. View of Primary Study Area looking southeast on the northern side of Ingraham Street between Bogart Street and Morgan Avenue.



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Project Site is outlined by a solid red line.

Figure E-2
Primary Study Area - Self Storage Facility

As shown in **Figure E-3**, the western portion of the Project Site contains an open surface lot, which has approximately 200 feet of frontage along Bogart Street, and approximately 350 feet of frontage on the south side of Ingraham Street and north side of Harrison Place. It is currently used for commercial vehicle storage and is gated with the main entrance on Bogart Street just south of Ingraham Street (see **Figure E-3, Photo 3**). There is existing signage used for advertising along the northern gate on Ingraham Street, as shown in **Figure E-3, Photo 2**.

Streets and Streetscape

Bogart Street, Ingraham Street, Morgan Avenue and Harrison Place are all 60-foot-wide one-way streets bounding the Project Site. Bogart Street is a southbound street with one moving lane that connects Ingraham Street, McKibbin Street and Harrison Place adjacent to the Project Site. There is street parking available on both sides of Bogart Street, and a bicycle parking rack is available on the west side of Bogart Street just south of its intersection with McKibbin Street. Ingraham Street is a westbound street with one moving lane with street parking on both sides and connects Morgan Avenue to the east to Bogart Street to the west. Morgan Avenue is a southbound street with one moving lane that connects Ingraham Street to Harrison Place. Morgan Avenue has street parking on both sides and a designated bike lane on the eastern side of the street. There are three entrances to the Morgan Avenue L Subway Station located at the northeast, southeast, and southwest corners at the intersection of Morgan Avenue and Harrison Place. Lastly, Harrison Place is an eastbound street with one moving lane and parking on both sides that connects Bogart Street to Morgan Avenue. The northern sidewalks along Harrison Place have subway grates to allow for ventilation to the Morgan Avenue L Subway Station located underneath the sidewalk. Sidewalks surrounding the Project Site vary in width from approximately 6 feet to 14 feet. To access the Project Site, vehicles can enter through gates on either Bogart Street on the west side of the parking lot, Ingraham Street on the north side, or Harrison Place on the south side.

Streetscape elements along the Project Site's street frontages include trees along the Ingraham Street's northern sidewalk, Morgan Avenue's western sidewalk and Bogart Street's eastern sidewalk. Other streetscape elements include standard parking signage, standard cobra head street lights, fire hydrants, stop signs, and street signs.

Natural Features and Open Space

The topography of the area surrounding the Project Site is generally flat. Additionally, there are no natural features or open space located at the Project Site.

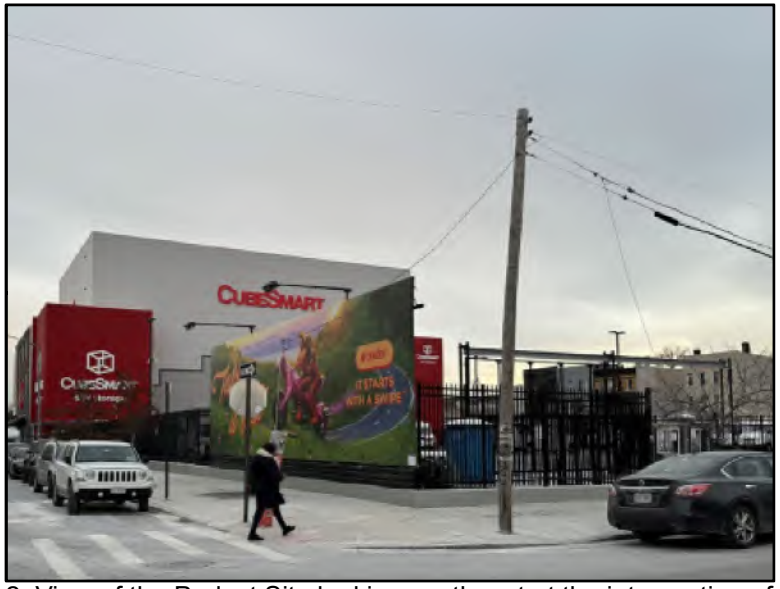
Secondary Study Area (400-foot Radius)

Buildings

As described in **Attachment C, "Land Use, Zoning, and Public Policy,"** the Secondary Study Area (400-foot radius surrounding the Project Site) is a mixed-use neighborhood primarily occupied by concrete plants, lofts and mid-rise buildings used for industrial and manufacturing uses, as well as several open lots for vehicle and contractor material storage. Other uses surrounding the Project Site include retail space, commercial offices, residential buildings, maker spaces, art galleries, bars, and restaurants. As described in **Table C-1**, in the Secondary Study Area, 30% of lots in are industrial/manufacturing land uses, 16% of lots are residential land uses, 10% are mixed-use commercial and residential land uses, and 8% are commercial/office land uses. **Figure E-4** showcases the wide variety of building types, designs, and heights.



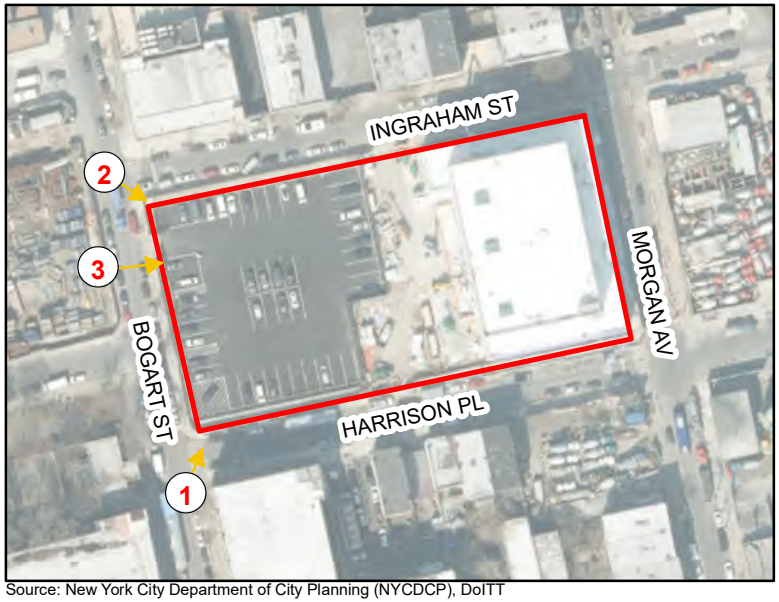
1. View of the Project Site looking northeast at the intersection of Bogart Street and Harrison Place.



2. View of the Project Site looking southeast at the intersection of Bogart Street and Ingraham Street.



3. View of Project Site looking east from the west side of Bogart Street between Ingraham Street and McKibbin Street.



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Project Site is outlined by a solid red line.



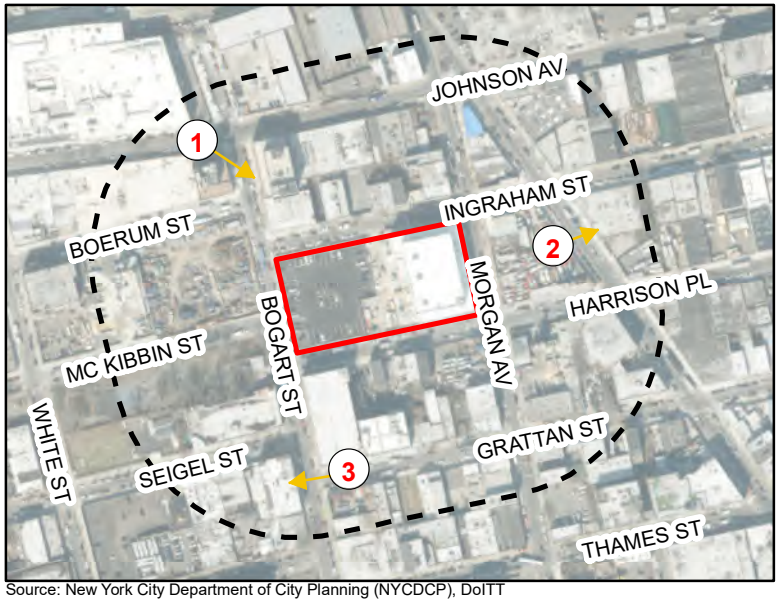
1. View of 100 Bogart Street looking southeast on the corner of Johnson Avenue and Bogart Street



2. View of 27 Knickerbocker Avenue facing east on on Knickerbocker between Ingraham Street and Harrison Place.



3. View of 49 Bogart Street facing west at the intersection of Bogart Street and Grattan Street.



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Primary Study Area is outlined by a solid red line.
2. The Secondary Study Area is outlined by a dashed black line.

A large majority of the buildings in the Secondary Study Area also have graffiti murals or other art featured on their facade, which reinforces the artistic nature of the area.

Lot size and building footprint in the Secondary Study Area are mixed with large, predominately industrial lots mixed in with smaller residential and commercial buildings. Most residential buildings are multi-family walk up apartment buildings, some of which are built over commercial ground floors. Most buildings are oriented to the street and are largely built to the street line. As shown in **Figure E-5**, built FARs are varied throughout the Secondary Study Area and range from between 0 (on vacant lots), to greater than 4 FAR. A majority of buildings are between 0 and 2 FAR.

As shown in **Figure E-6**, the tallest building within the Primary and Secondary Study Areas is the existing, 7-story self-storage facility at the Project Site. Most buildings are 4 stories or under, with the exception of the Project Site and two buildings: 360 Johnson Avenue (Block 3074, Lot 23), which is a 6-story hotel, and 100 Bogart Street (Block 3075, Lot 2), which is a 6-story industrial building.

Within the Secondary Study Area are two historic resources, described in greater detail below. 56 Bogart Street (Block 3093, Lot 1) and Engine Company No. 237 (Block 3102, Lot 23) are both historic resources that are eligible for listing on the State/National Registers of Historic Places ("S/NR"). S/NR-eligible 56 Bogart Street is located approximately 60 feet south of the Project Site, directly across Harrison Place. S/NR-eligible Engine Company No. 237 is at 43 Morgan Avenue, approximately 350 feet south of the Project Site.

Streets and Streetscape

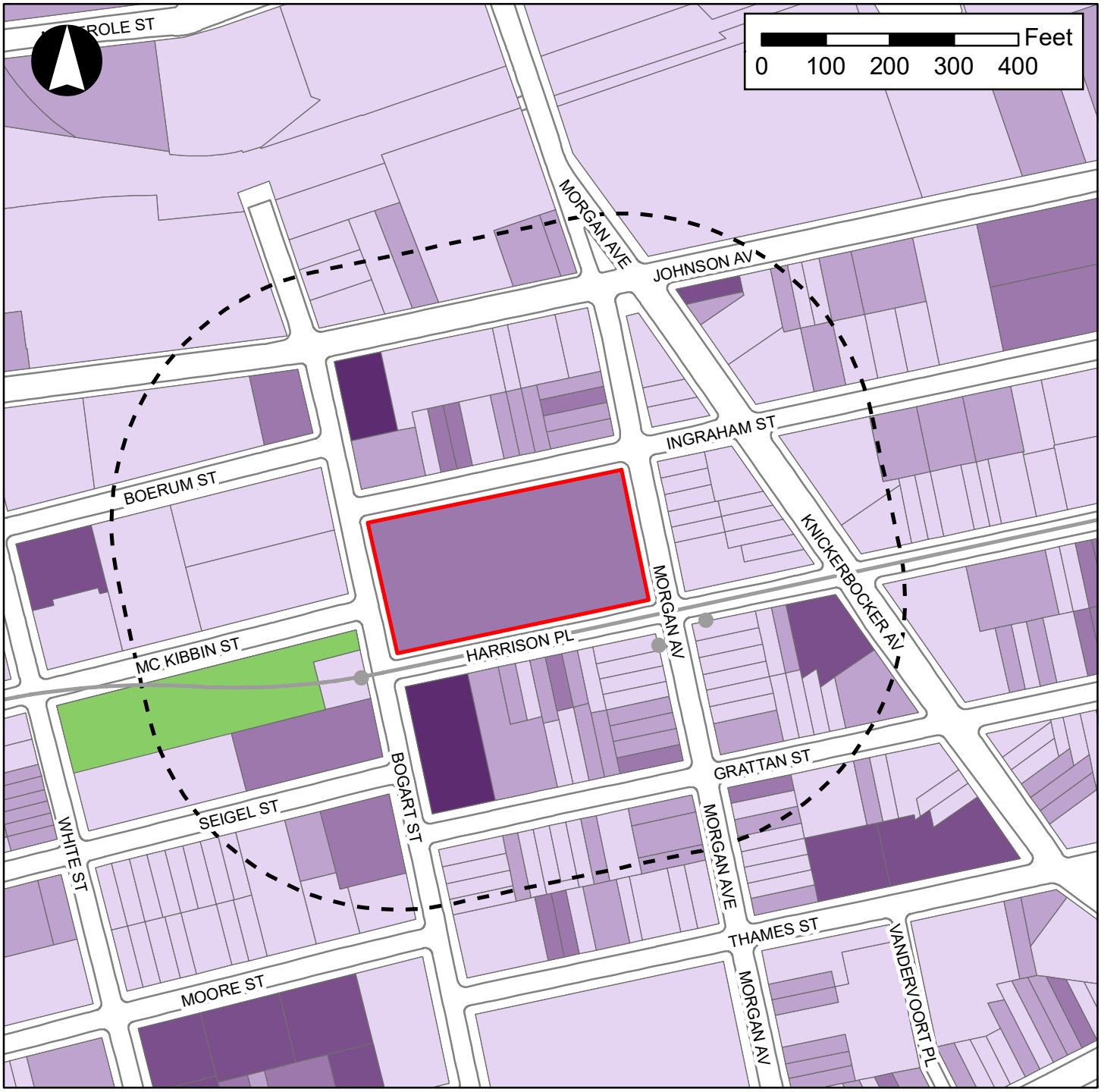
The street pattern in the Secondary Study Area is characterized by an interrupted grid pattern. While a majority of the streets run east-west and north-south, Knickerbocker Avenue cuts diagonally through the Secondary Study Area, east of the Project Site. East-west oriented streets include Johnson Avenue, Boerum Street, Ingraham Street, McKibbin Street, Harrison Place, Seigel Street and Grattan Street intersecting north-south oriented streets Bogart Street and Morgan Avenue. All streets within the Secondary Study Area are 60 feet wide, with the exception of Knickerbocker Avenue, which is 70 feet wide.

Johnson Avenue is a two-way street in the northern section of the Secondary Study Area that connects Bogart Street to the west to Knickerbocker Avenue to the east. Street parking is generally prohibited but is available intermittently on both sides of the street. Parking is not available at the B60 route bus stops (see **Figure E-7a**) located on the north and south sides of Johnson Avenue between Bogart Street and Morgan Avenue, in loading and unloading zones, and in front of curb cuts along Johnson Avenue for garages and parking facilities serving commercial buildings. There are few streetscape elements along this street segment, with the exception of standard signage, streetlights, fire hydrants, and some street trees.

Boreum Street is a one-way eastbound street with no lane markings located south of Johnson Avenue and connects to Bogart Street. Boreum Street serves industrial land uses, and as such does not allow street parking due to curbside loading regulations, has many curb cuts, and there are no streetscape elements, except signage and streetlights.

As previously mentioned, Ingraham Street is a one-way westbound street that runs along the northern border of the Primary Study Area. With the exception of curb cuts for loading and unloading, street parking is allowed along Ingraham Street. Streetscape elements on Ingraham Street that were not

Figure E-5
Built FAR



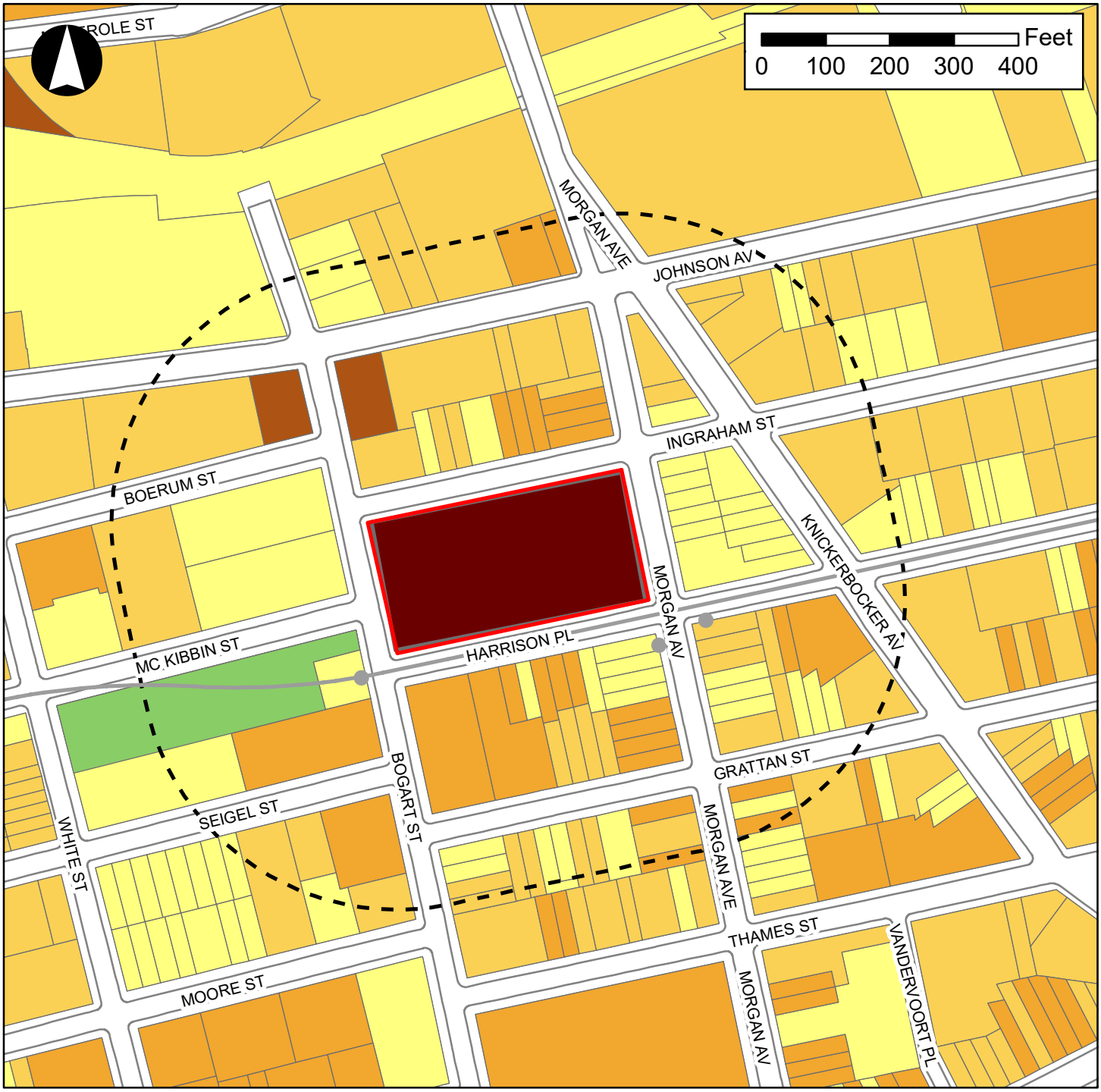
Legend

- Project Site
- 400 Foot Radius
- Morgan Avenue L Subway Entrance
- L Train Subway Route
- Open Space

Built FAR

- 0 - 1
- 1 - 2
- 2 - 3
- 3 - 4
- Greater than 4

Figure E-6
Building Heights



Legend

- Project Site
- 400 Foot Radius
- Morgan Avenue L Subway Entrance
- L Train Subway Route
- Open Space

Number of Stories

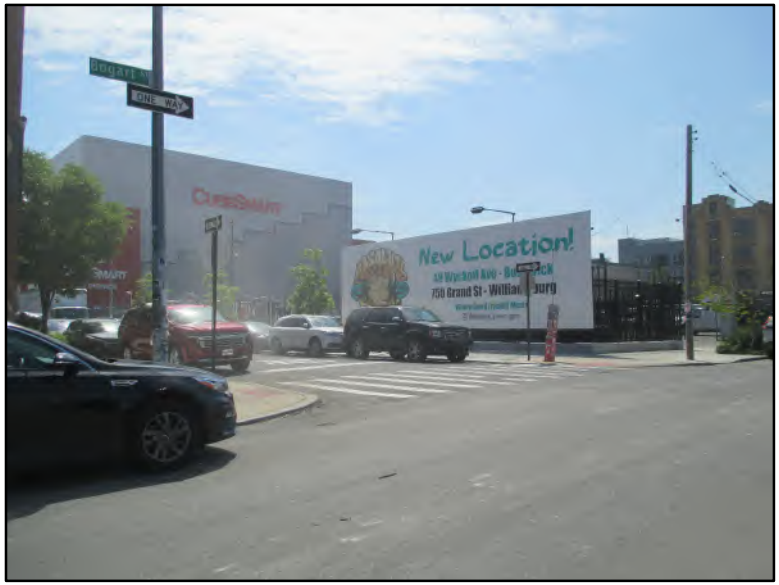
- 0 Stories
- 1 - 2 Stories
- 3 - 4 Stories
- 5 - 6 Stories
- Greater than 6 Stories



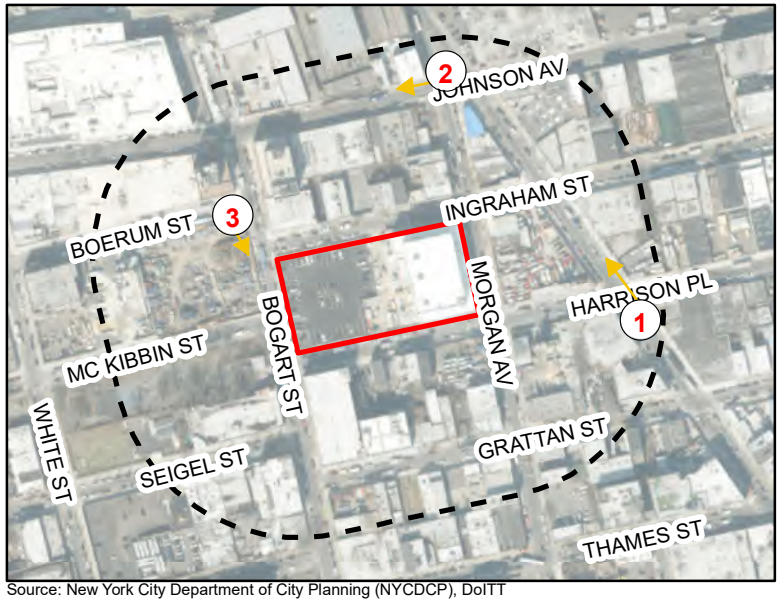
1. Looking northwest at the intersection of Knickerbocker Avenue and Harrison Place.



2. Looking west at the intersection of Johnson and Morgan Avenues.



3. Looking southeast at the intersection of Boerum and Bogart Streets.



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Primary Study Area is outlined by a solid red line.
2. The Secondary Study Area is outlined by a dashed black line.

Figure E-7a
Secondary Study Area- Streetscapes

previously described include a street tree located on the north side of Ingraham Street towards the intersection with Knickerbocker Avenue.

McKibbin Street, a one-way westbound street, intersects with Bogart Street on the western side of the Project Site. Street parking is available along the southern side of the street, and along the northern side of the street, west of the industrial lot at 318 Boreum Street. Fencing along the industrial facilities on McKibbin Street are covered in graffiti and street art (see **Figure E-7b**). McKibbin Street borders Justice Gilbert Ramirez Park to the north and features a Citi Bike station along McKibbin's southern sidewalk. Other streetscape elements along this portion of McKibbin Street include signage and streetlights.

Harrison Place is a one-way eastbound street that runs along the southern portion of the Project Site and intersects Morgan Avenue and Knickerbocker Avenue within the Secondary Study Area. Consistent with other streets near the Project Site, Harrison Place runs along industrial uses, and allows street parking, except at the curb cuts of the industrial sites. There are no additional streetscape elements along Harrison Place, aside from standard signage, street lights, and street art seen along industrial fencing.

Seigel Street is a one-way eastbound street located southwest of the Project Site and intersects with Bogart Street on its eastern border. Seigel Street features street trees on both sides of the street, as well as street parking. Other streetscape elements on Seigel Street include street lights, signage, and a fire hydrant.

Grattan Street is a one-way eastbound street located south of the Project Site and intersects with Bogart Street and Morgan Avenue within the Secondary Study Area. Parking is available along both sides of Grattan Street. As seen in **Figure E-7b**, there is a parklet along Grattan Street, near Morgan Avenue that allows for outdoor restaurant seating. There are also street trees along the northern side of Grattan Street, one of which can be seen in **Figure E-7b**. In addition to standard signage and street lights, Grattan Street also features a designated bike lane on the north side of Grattan Street east of Morgan Avenue that continues past the boundaries of the Secondary Study Area.

As mentioned previously, Bogart Street is a one-way, unstriped street with one moving lane and parking on both sides that runs southbound adjacent to the Project Site. Within the Secondary Study Area, Bogart Street intersects with Johnson Avenue to the north, then Ingraham Street, Harrison Place, and Grattan Street to the south. Along Bogart Street there are primarily industrial land uses, with residential uses along Bogart Street near the intersection with Grattan Street. Additionally, the Morgan Avenue L Subway Station is located along Bogart Street at its intersection with Harrison Place (**Figure E-7c**). Many buildings along Bogart Street feature murals on their façade, consistent with the rest of the Secondary Study Area. There are street trees found along both sides of Bogart Street, along with standard signage, street lights, and a food truck parked at the northwest corner of the intersection of Bogart and Seigel Streets.

Morgan Avenue is a one-way southbound street with one moving lane, parking on both sides, and a designated bike lane. Within the Secondary Study Area, Morgan Avenue intersects with Johnson Avenue to the north, then Ingraham Street, Harrison Place, and Grattan Street to the south. There are three entrances to the Morgan Avenue L Subway Station (see **Figure E-7c**) located at the northeast, southeast, and southwest corners at the intersection of Morgan Avenue and Harrison Place. The B60 bus route runs along Morgan Avenue and has a stop at its intersection with Harrison Place. There are street trees found along both sides of Morgan Avenue, along with standard signage, street lights, and fire hydrants.

Knickerbocker Avenue runs diagonally through the Secondary Study Area from the intersection of Morgan Avenue to the north, past Johnson Avenue, Ingraham Street, Harrison Place and just north of Grattan



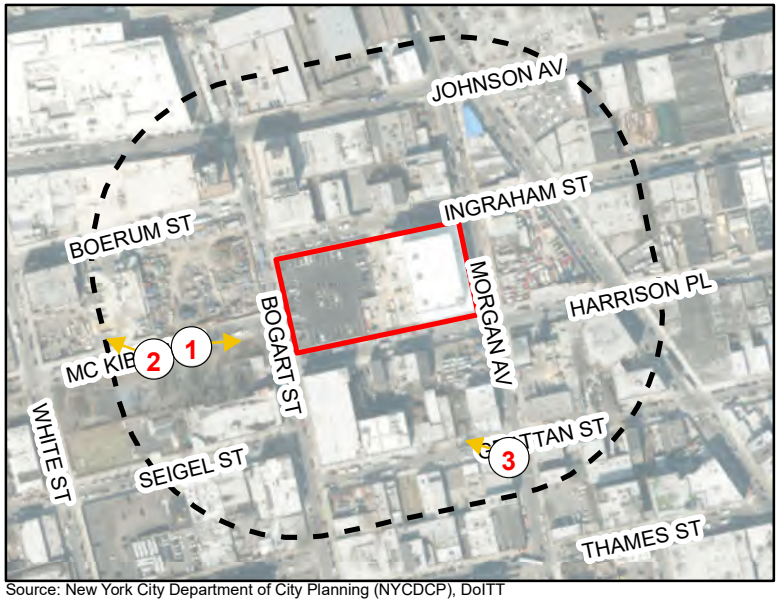
1. View of the Citi Bike station located on the southern side of McKibbin Street near the intersection of McKibbin and Bogart Streets.



2. Looking west on McKibbin Street at graffiti mural along industrial sites on the northern side of McKibbin Street, west of Bogart Street.

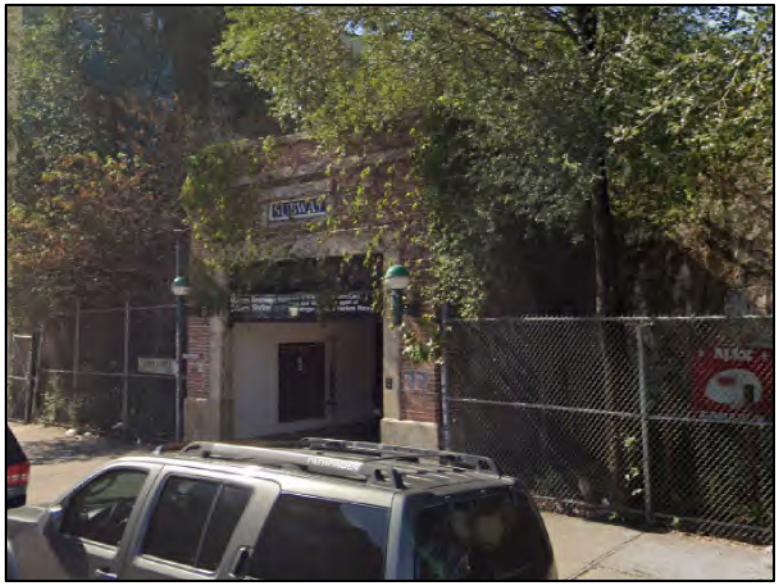


3. View of outdoor restaurant seating on the north side of Grattan Street near the intersection with Morgan Avenue.



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Primary Study Area is outlined by a solid red line.
2. The Secondary Study Area is outlined by a dashed black line.

Figure E-7b
Secondary Study Area- Streetscapes



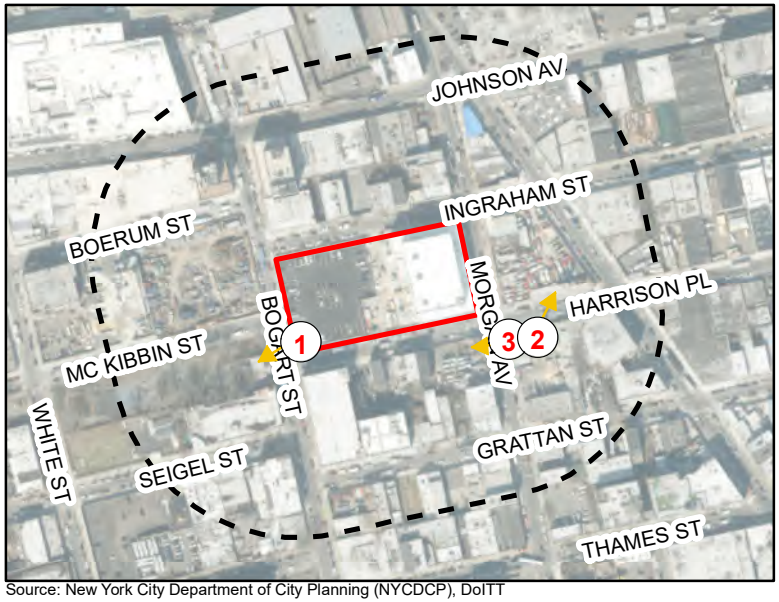
1. View of one of the four Morgan Avenue L Subway entrances - looking southwest at the intersection of Bogart Street and McKibbin Street.



2. View of one of the four Morgan Avenue L Subway entrances - looking northeast at the intersection of Morgan Avenue and Harrison Place.



3. View of one of the four Morgan Avenue L Subway entrances - looking west at the intersection of Morgan Avenue and Harrison Place.



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Primary Study Area is outlined by a solid red line.
2. The Secondary Study Area is outlined by a dashed black line.

Figure E-7c
Secondary Study Area- Streetscapes

Street to the south. Unlike all the other streets within the Secondary Study Area, Knickerbocker Avenue is 70 feet wide. It is a one-moving-lane northbound street with parking lanes on either side of the moving lane and a designated bike lane between the eastern parking lane and sidewalk. Much like the other aforementioned streets, many buildings and fences along Knickerbocker Avenue are covered in graffiti, signage and street art. Other streetscape elements along Knickerbocker Avenue include standard signage, streetlights, bike racks, fire hydrants, and some street trees located just north of the intersection with Ingraham Street.

Natural Features and Open Space

The topography of the Secondary Study Area is generally flat. The only designated open space is in the form of a public park, Justice Gilbert Ramirez Park, which includes a handball court, tennis court, two basketball courts, large playground, and a garden.

Visual Resources

Project Site (Primary Study Area)

There are no visual resources located within the Primary Study Area. Visible from the Project Site's south frontage are views of the S/NR-eligible historic building located at 56 Bogart Street. Justice Gilbert Ramirez Park is also visible from the Project Site, looking southwest. Visual resources are shown in **Figure E-8**.

Secondary Study Area (400-foot Radius)

There are three visual resources located within the Secondary Study Area. One is Justice Gilbert Ramirez Park (Block 3092, Lot 1), which is visible from McKibbin Street, as well as from the southwest corner of the Project Site, and along portions of Bogart Street. This park is lined with trees and features a playground, basketball and handball courts, and a small garden. The second and third are the two historic buildings in the Secondary Study Area: the Bogart and the Firehouse Engine Co. 237.

The Bogart, located at 56 Bogart Street (Block 3093, Lot 1) is an S/NR-eligible historic resource that was designed by Murray Klein in 1930. This four-story building sits on Bogart Street between Harrison Place and Grattan Street in East Williamsburg, Brooklyn. It was constructed in 1930 and previously used for manufacturing and commercial uses; today it is used by artists mainly as lofts, galleries, and art spaces. The building is made of yellow brick with a steel frame. It is rectangular in shape with projecting corners which contain stairwells. The Bogart is visible from the southern edge of the Project Site and is bordered by Harrison Place to the north, Bogart Street to the east, and Grattan Street to the south. The Bogart is also visible from the intersections of Bogart and McKibbin Streets, as well as Bogart and Seigel Streets. The Bogart is also visible along its bordering streets, Harrison Place to the north and Grattan Street to the south from Bogart Street to Morgan Avenue. From further away, the Bogart is partly visible from the intersections of Bogart and Boerum Streets, White and Seigel Streets, Bogart and Moore Streets, Bogart and Varet Streets, and along Ingraham Street, north of the Project Site. However, the current parking lot, fencing around the parking lot, and signage at the Project Site somewhat obstruct the views of the Bogart.

The Firehouse Engine Co. 237, located at 43 Morgan Avenue (Block 3102, Lot 23) is an S/NR-eligible historic resource that was designed by P. J. Lauritzen and completed in 1894. This three-story firehouse is made of stone and brick with the first floor being made of rusticated limestone. The other two floors are made with orange colored brick with Roman style arches on the façade of the third floor. The Firehouse



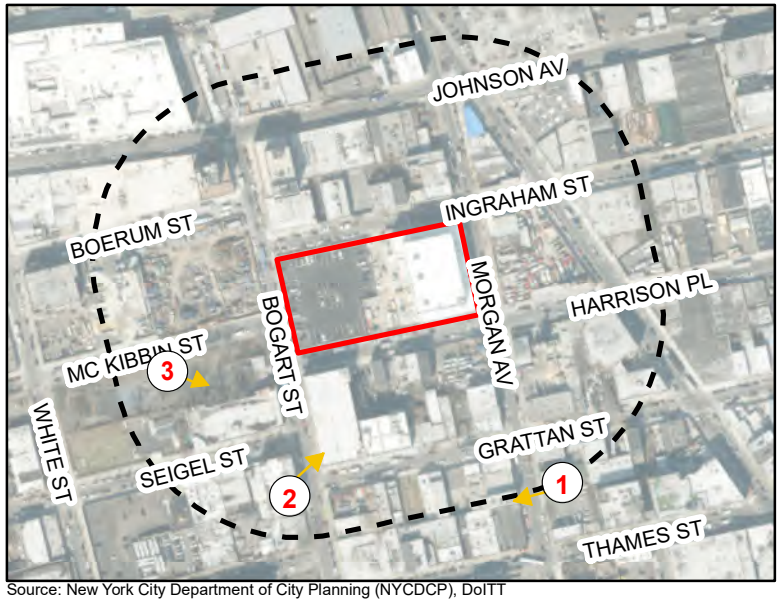
1. Looking west from the east side of Morgan Avenue at the S/NR-eligible Engine Company No. 237 at 43 Morgan Avenue.



2. Looking northeast at the intersection of Grattan and Bogart Streets to the S/NR-eligible building, 56 Bogart Street.



3. View of the basketball court and playground located within Justice Gilbert Ramirez Park.



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Primary Study Area is outlined by a solid red line.
2. The Secondary Study Area is outlined by a dashed black line.

Figure E-8
Secondary Study Area- Visual Resources

Engine Co. 237 is not visible from the Project Site but is visible along Morgan Avenue between Grattan Street and Thames Street.

IV. FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION SCENARIO)

Urban Design

Project Site (Primary Study Area)

Buildings

As described in **Attachment A, "Project Description,"** in the future without the Proposed Action, the Project Site would remain zoned as M1-2. The eastern portion of the Project Site currently is occupied by an approximately 193,785-gsf commercial building, with approximately 177,000 gsf of self-storage space and 16,000 gsf of empty space on the ground floor. The Applicant plans to rent the 16,000 gsf of unused ground floor space within the self-storage facility to a tenant for local retail space. The remainder of the site would remain as an open surface parking lot for commercial vehicle storage.

Streets and Streetscape

In the future without the Proposed Action, there would be no changes to streets or streetscapes within the Primary Study Area.

Natural Features and Open Space

In the future without the Proposed Action, there would be no changes to natural features or open spaces within the Primary Study Area.

Secondary Study Area (400-foot Radius)

Buildings

As described in **Attachment C, "Land Use, Zoning, and Public Policy,"** there are no known developments anticipated to be built within the Secondary Study Area by the anticipated build year of 2027.

Streets and Streetscape

In the future without the Proposed Action, no changes to streets or streetscape are anticipated within the Secondary Study Area. There are no known streetscape improvement plans within the Secondary Study Area.

Natural Features and Open Space

In the future without the Proposed Action, the only open space within the Secondary Study Area, Justice Gilbert Ramirez Park, would remain unchanged from existing conditions.

Visual Resources

Project Site (Primary Study Area)

There are no visual resources located within the Primary study area and there are no new visual resources anticipated to be introduced within the Primary study in the absence of the Proposed Action. In the future without the Proposed Action, views of surrounding resources are not expected to change.

Secondary Study Area (400-foot Radius)

As mentioned above, in the future without the Proposed Action, construction on the Project Site would not occur. In the future without the Proposed Action, views of the visual resources would not change. Additionally, no new visual resources would be introduced within the Secondary Study Area in the absence of the Proposed Action.

V. FUTURE WITH THE PROPOSED ACTION (WITH-ACTION SCENARIO)

Urban Design

Project Site (Primary Study Area)

In the With-Action Scenario, the Project Site would be rezoned from M1-2 to M1-4A. The allowable commercial and manufacturing FAR for commercial and manufacturing uses would increase from 2.0 to 5.0 and for community facility uses from 4.8 to 6.5. The Applicant would develop, at 74 Bogart Street, an approximately 247,000-gsf building as-of-right to be used for art storage on the western portion of the Project Site, replacing the current open surface commercial vehicle storage lot. The existing self-storage facility on the eastern portion of the Project Site would continue to operate with or without the adoption of the Proposed Action. Additionally, as mentioned previously, the Applicant plans to rent 16,000 gsf of unused space within the self-storage facility to a tenant to be used for local retail space. The retail space would operate with or without the adoption of the Proposed Action.

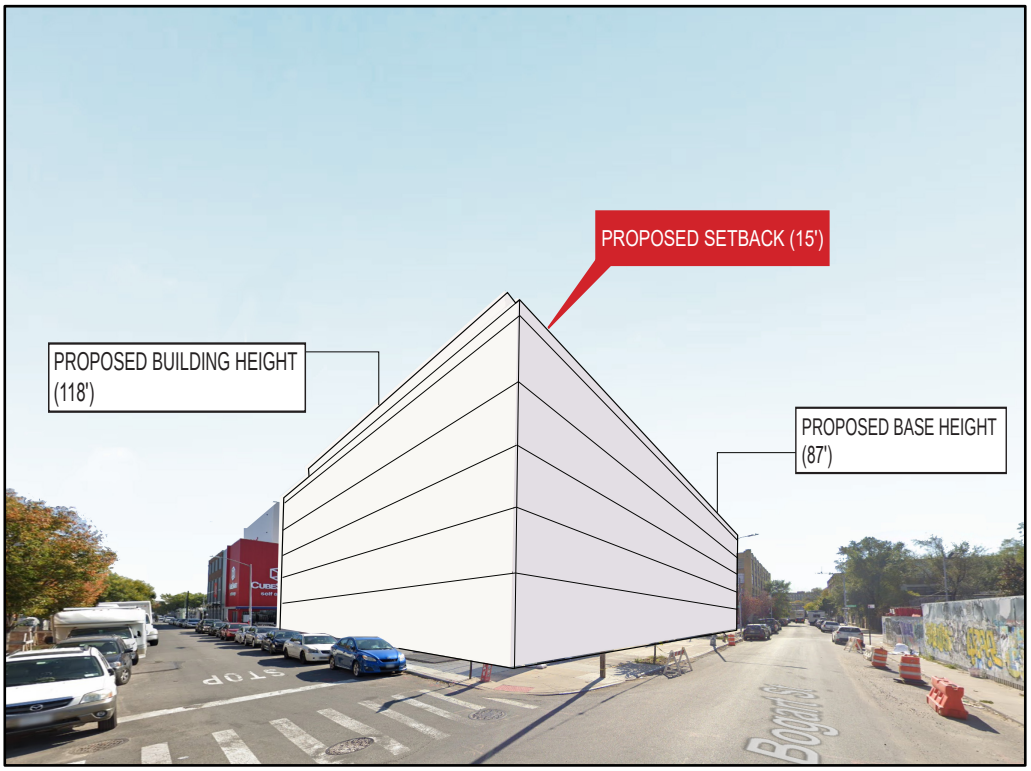
Buildings

As shown in **Figures E-9** through **E-1**0, under With-Action conditions, the Proposed Development (fronting Bogart Street, Ingraham Street, and Harrison Place) would rise seven stories to a roof height of approximately 118 feet. The ground floor of the proposed building would feature a lobby, a client greeting area, staff offices, a security office, a staging room, and loading areas. Floors two through seven would exclusively be used as storage space, with floors two through five each providing approximately 35,800 gsf for storage, and floors six and seven each providing approximately 24,900 gsf for storage. The Proposed Development would include four loading berths, two accessed from Ingraham Street, and two accessed from Harrison Place. Ingraham Street is a one-way street heading west. Along this street, designated larger trucks would back up into the loading berths at a 45-degree angle. Harrison Place is also a one-way street but heading east. Along this street, smaller trucks would back into the loading berths at a 90-degree angle. As shown in the illustrative building renderings, the facade would be made of red brick painted with faces in addition to offset corrugated metal sheets wrapping the building in some places. This design, which is illustrative of the Applicant's intent to provide a façade with artistic decoration, would incorporate well into the current urban context of East Williamsburg's street art and graffiti, so the design on the proposed building would further lend to the artistic nature of the area. As the building also

Illustrative Street View:
Looking Northeast at the Intersection of Bogart Street and Harrison Place



NO-ACTION

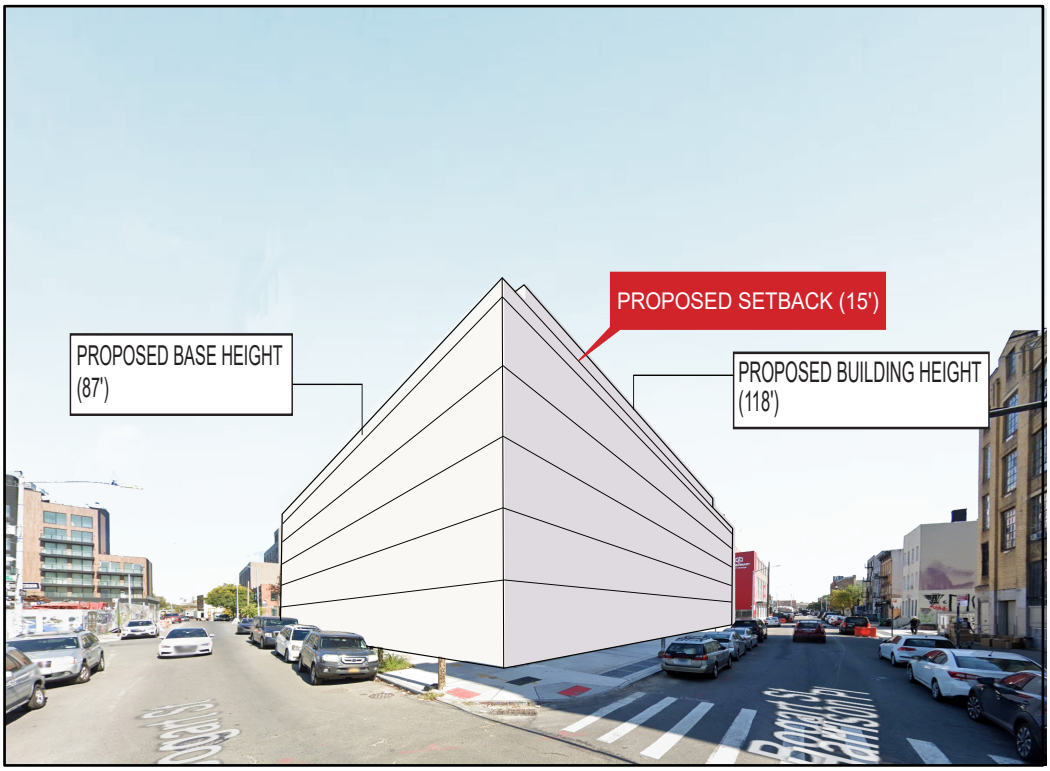


WITH-ACTION

Illustrative Street View:
Looking Southeast at the Intersection of Ingraham Street and Bogart Street



NO-ACTION



WITH-ACTION

is covered in metal panels, it would blend well with the industrial aspects of the area, as many other buildings in the area are similarly used for industrial and manufacturing purposes.

Streets and Streetscape

Construction of the Proposed Development would result in some changes to vehicular access to the Project Site from adjacent streets. However, access to the self-storage facility in the eastern portion of the Project Site would remain unchanged. At this time, it is expected that vehicles would access the Proposed Development via curb cuts to be installed at Ingraham Street and Harrison Place as described above. The existing vehicle entrance on Bogart Street on the western edge of the Project Site would not exist in the future With-Action condition and the existing curb cut would be removed and the curb and full height sidewalk would be restored. At this time, it is also expected that 'No Standing Anytime' signage would be installed on the northern side of Ingraham Street to ensure that delivery trucks would have enough space to back into the loading berth on Ingraham Street. The With-Action condition would otherwise not change the configuration of existing streets and would not change the arrangement, dimensions, or orientation of street space.

The Proposed Action would, however, alter the pedestrian experience of the streetscape surrounding the Primary Study Area. The Applicant's intention is that the Proposed Development would replace the existing parking lot with an art storage facility that incorporates artistic design along the façade, consistent with the surrounding neighborhood. The ground floor is anticipated to feature windows glazed with transparent materials, which would create an enhanced pedestrian realm, provide street users with views of art within the ground floor of the building, and would make the area more attractive and inviting overall.

Open Space and Natural Resources

There are no open spaces or natural resources located within the Primary Study Area.

Secondary Study Area (400-foot Radius)

Buildings

Within the Secondary Study Area, there are no known development projects anticipated to be completed by the 2027 build year. In the future with the Proposed Action, the built character of the Secondary Study Area would remain primarily made up by a mix of concrete plants, lofts, and mid-rise buildings used for industrial and manufacturing uses, as well as open lots for vehicle and contractor material storage. The Proposed Action would not alter the built character of the Secondary Study Area.

Streets and Streetscape

The Proposed Action would not alter any street patterns, street hierarchies, streetscape arrangements, or block forms within the Secondary Study Area.

Open Space and Natural Resources

As the Proposed Action would only affect the Project Site, there would be no impact on Justice Gilbert Ramirez Park, the only open space within the Secondary Study Area.

Visual Resources

Project Site (Primary Study Area)

There are no visual resources within the Primary Study Area and no new visual resources are anticipated to be introduced within the Primary Study Area in the future with the Proposed Actions. Therefore, the Proposed Actions would not result in any significant adverse impacts on visual resources within the Primary Study Area.

Secondary Study Area (400-foot Radius)

The Proposed Action is localized and would not alter building uses, bulks, or arrangements in the surrounding area, or result in any changes to streets, blocks, topography, open spaces, or natural features within the Secondary Study Area under the With-Action scenario. There are three visual resources located in the Secondary Study Area: Engine Company No. 237 (S/NR-eligible), Justice Gilbert Ramirez Park, and The Bogart (S/NR-eligible).

In the future with the Proposed Action, views of the S/NR-eligible Engine Company No. 237 would not change in comparison to the future without the Proposed Action as this visual resource cannot be seen from the Project Site and all view corridors of this visual resource would not be affected by the Proposed Action. In the future with the Proposed Action, the context and setting of the Engine Company No. 237 building would remain unchanged.

Justice Gilbert Ramirez Park is located southwest of the Project Site and is currently visible from the Project Site. The park would remain visible from the Project Site in the future with the Proposed Action. There are no view corridors within the Secondary Study Area that would be affected by the Proposed Development. In the future with the Proposed Action, the park would still serve as an open space refuge in the midst of surrounding industrial and commercial uses. Justice Gilbert Ramirez Park is bordered by trees and vegetation, disrupting view corridors from the park to the Project Site. In the future with the Proposed Action, the context and setting of Justice Gilbert Ramirez Park would remain unchanged.

The S/NR-eligible Bogart building (56 Bogart Street) is located directly south of the Project Site and is currently visible from the Project Site. The Bogart would remain visible from the Project Site in the future with the Proposed Action. Other view corridors that would remain unaffected by the Proposed Development are the view corridors from: the intersection of Bogart and McKibbin Streets, the intersection of Bogart and Seigel Streets, the intersection of White and Seigel Streets, the intersection of Bogart and Moore Streets, the intersection of Bogart and Varet Streets, along Harrison Place and Grattan Street between Bogart Street and Morgan Avenue, and along Seigel Street between White and Bogart Streets. There are multiple view corridors within the Secondary Study Area that would be affected by the Proposed Development. The view corridors from the intersection of Bogart and Boreum Streets, and along Ingraham Street from Bogart Street to midblock towards Morgan Avenue would be affected as a result of the Proposed Development. However, it should be noted that these existing view corridors are obstructed partially by the existing parking lot, fencing, and signage at the western portion of the Project Site.

Assessment

The Proposed Action would facilitate development that is not currently permitted as-of-right, which would create a change in the urban design character of the area. Compared to the future without the Proposed Action, the visual appearance, and thus the pedestrian experience of the study areas, would change.

However, this change would not constitute a significant adverse urban design impact as it would not alter the general arrangement, appearance, or functionality of the neighborhood, thus not negatively affecting a pedestrian's experience. The Proposed Development would be constructed on an existing block and would not entail any changes to topography, street patterns, street hierarchy, street shapes, or natural features in both the Primary and Secondary Study Areas. The Proposed Action would not create land uses nor structure that would be substantially incompatible with the existing land uses and manufacturing character of the East Williamsburg neighborhood. Additionally, development anticipated in the Project Site in the future with the Proposed Action is expected to positively affect the urban design of the area and improve the pedestrian experience, through the redevelopment of a vehicle storage lot with a building that would include facades with dynamic visual texture provided by planned artistic decoration.

As detailed in **Attachment C, "Land Use, Zoning, and Public Policy,"** the requested zoning changes would be compatible with the surrounding area. The rezoning of the Project Site from M1-2 to M1-4A would allow for light manufacturing (similar to that allowed in M1-2 districts), which permits most commercial uses as well as industrial uses (such as storage and warehouse uses). As such, this district would allow the same uses as the current zoning. However, with respect to density, M1-4A district bulk regulations promote more contextual loft-like envelopes with wider floor plates, higher base heights and maximum buildings heights (as opposed to non-contextual M districts subject to front wall height limits and sky exposure planes). With respect to floor area, M1-4A districts permit a greater maximum FAR of 5.0 for commercial/manufacturing use and 6.5 for community facility use. While the Proposed Action would represent a visual change in terms of bulk and height, the Proposed Development is similar in bulk and height to the current self-storage facility on the eastern portion of the Project Site.

The shape and orientation of the Proposed Development has been designed to maximize the public experience, reduce shadow impacts, and create a gateway along the Bogart Street corridor. By incorporating murals and artwork along the façade of the Proposed Development, a softer relationship is achieved between the buildings and the open space. The Proposed Action would rezone the Proposed Development Site to a higher density; however, the Proposed Development seeks to improve the pedestrian experience, by replacing a fenced-in vehicle storage lot with an articulated street wall building that would provide a visual anchor for the neighborhood adjacent to the Morgan Avenue L subway station. The Proposed Action facilitates a design that adds important benefits to the community including increased visual resources.

While the Proposed Development would alter some view corridors of the S/NR eligible building, The Bogart, at 56 Bogart Street, these changes would not be significant or adverse. The affected view corridors are already partially obstructed without the Proposed Action, and while they would be slightly altered by the Proposed Development, the Bogart would nonetheless still be visible from these viewpoints. Moreover, a majority of the viewpoints of the historic building would remain unaffected by the Proposed Development.

VI. CONCLUSION

Urban Design

Development facilitated by the Proposed Action would not result in significant adverse impacts on urban design. While the Proposed Action would facilitate a change in the urban design character of the area, this change would not constitute a significant adverse urban design impact as it would not alter the

general arrangement, or functionality of the neighborhood, thus not negatively affecting a pedestrian's experience

Visual Resources

Development facilitated by the Proposed Action would not result in significant adverse impacts on visual resources. While the Proposed Development would alter some view corridors of the S/NR eligible building, The Bogart, at 56 Bogart Street, these changes would not be significant or adverse. The affected view corridors are already partially obstructed without the Proposed Action, and while they would be slightly altered by the Proposed Development, the Bogart would nonetheless still be visible from these viewpoints. Moreover, a majority of the viewpoints of the historic building would remain unaffected by the Proposed Development.

Therefore, while the addition of the Proposed Development would represent a change from the perspective of a pedestrian, it would not represent a significant adverse impact. As such, the Proposed Action would not result in a significant adverse urban design or visual resource impact in the Primary Study Area or surrounding Secondary Study Area.

Attachment F

Air Quality

I. INTRODUCTION

The Applicant, 74 Bogart LLC, is proposing a zoning map amendment to the full block Project Site at 74 Bogart Street in Brooklyn (Block 3084, Lot 1) to facilitate the development of a building to be used as an art storage facility. The proposed building would be approximately 118 feet tall and comprise approximately 247,000 gross square feet (gsf) (aka, the Proposed Development) on the western portion of the Project Site.

According to guidance provided in the 2021 *City Environmental Quality Review* (*CEQR) Technical Manual*, air quality analyses are conducted in order to assess the effect of an action on ambient air quality (i.e., the quality of the surrounding air), or effects on the project because of ambient air quality. Air quality can be affected by "mobile sources," pollutants produced by motor vehicles, and by pollutants produced by fixed facilities, i.e., "stationary sources". As per the *CEQR Technical Manual*, an air quality assessment should be carried out for actions that can result in either significant adverse mobile source or stationary source air quality impacts.

Localized increases in pollutant levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of a proposed project. According to the applicable screening threshold criteria outlined in Section 210 of Chapter 17 of the *CEQR Technical Manual*, detailed analysis is required for the Project Site if 170 or more auto-trips are generated in any given peak period at intersections near the Project Site as a result of a Proposed Action. As discussed in **Attachment B, "Supplemental Screening,"** further analysis of air quality mobile sources from action-generated vehicle trips can be screened out per the EAS form. Per the EAS Form, the Proposed Action would not generate peak hour vehicle volumes in exceedance of the CEQR threshold of 170 vehicle trips and would not generate peak hour vehicle volumes in exceedance of the CEQR thresholds for heavy-duty diesel vehicle (HDDV) traffic or the vehicular emissions equivalent on adjacent roadways. Information supporting this screening determination is provided in **Appendix IX**.

Stationary source impacts could occur with actions that create new stationary sources or pollutants, such as emission stacks for industrial plants, hospitals, or other large institutional uses, or a building's boiler stacks used for heating/hot water, ventilation, and air conditioning ("HVAC") systems, that can affect surrounding uses. Impacts from boiler emissions associated with a development are a function of fuel type, stack height, minimum distance of the stack on the source building to the closest building of similar or greater height, building use, and the square footage size of the source building. In addition, stationary source impacts can occur when new uses are added near existing or planned emissions stacks, or when new structures are added near such stacks and those structures change the dispersion of emissions from the stacks so that they affect surrounding uses.

In accordance with the *CEQR Technical Manual*, an HVAC screening was conducted for the Proposed Development. Additionally, as industrial facilities are located within 400 feet of the Project Site, an analysis was conducted to determine whether the potential impacts of the air toxic emissions released from these

facilities would significantly impact the Proposed Development. Potential air quality impacts were estimated following the procedures and methodologies prescribed in the *CEQR Technical Manual*.

II. STATIONARY SOURCE HVAC SCREENING

According to *CEQR Technical Manual* guidance, a preliminary screening analysis is recommended as a first step to predict whether the potential impacts of an action would be significant. As such, a preliminary screening analysis was conducted to predict whether the potential impacts of the HVAC emissions would be significant and if a detailed analysis would be required.

Figure 17-1 of the *CEQR Technical Manual* was used to assess the potential effects of the project on existing land uses. If the source building (the Proposed Development) is taller than the receptor building or the distance between the two buildings falls below the applicable curve provided in Figure 17-1, a potential significant impact due to boiler stack emissions is unlikely and no further analysis is needed. If the distance between the source and receptor buildings is less than or equal to the threshold distance, further analysis may be required.

The proposed art storage facility would be approximately 118 feet tall and comprised of approximately 247,000 gsf on the western portion of the Project Site. As shown in **Figure F-1**, based on the Proposed Development's square footage and estimated stack height, the minimum required distance between the Project Site and another building of similar or greater height would be approximately 88 feet. On the eastern portion of the Project Site, and directly adjacent to the Proposed Development (approximately 50 feet away), is an existing 7-story, 87-foot-tall self-storage facility. All buildings within an 88-foot radius of the Project Site are shorter than Proposed Development. Therefore, the Proposed Development would pass the boiler emissions screening analysis, and no further analysis is needed.

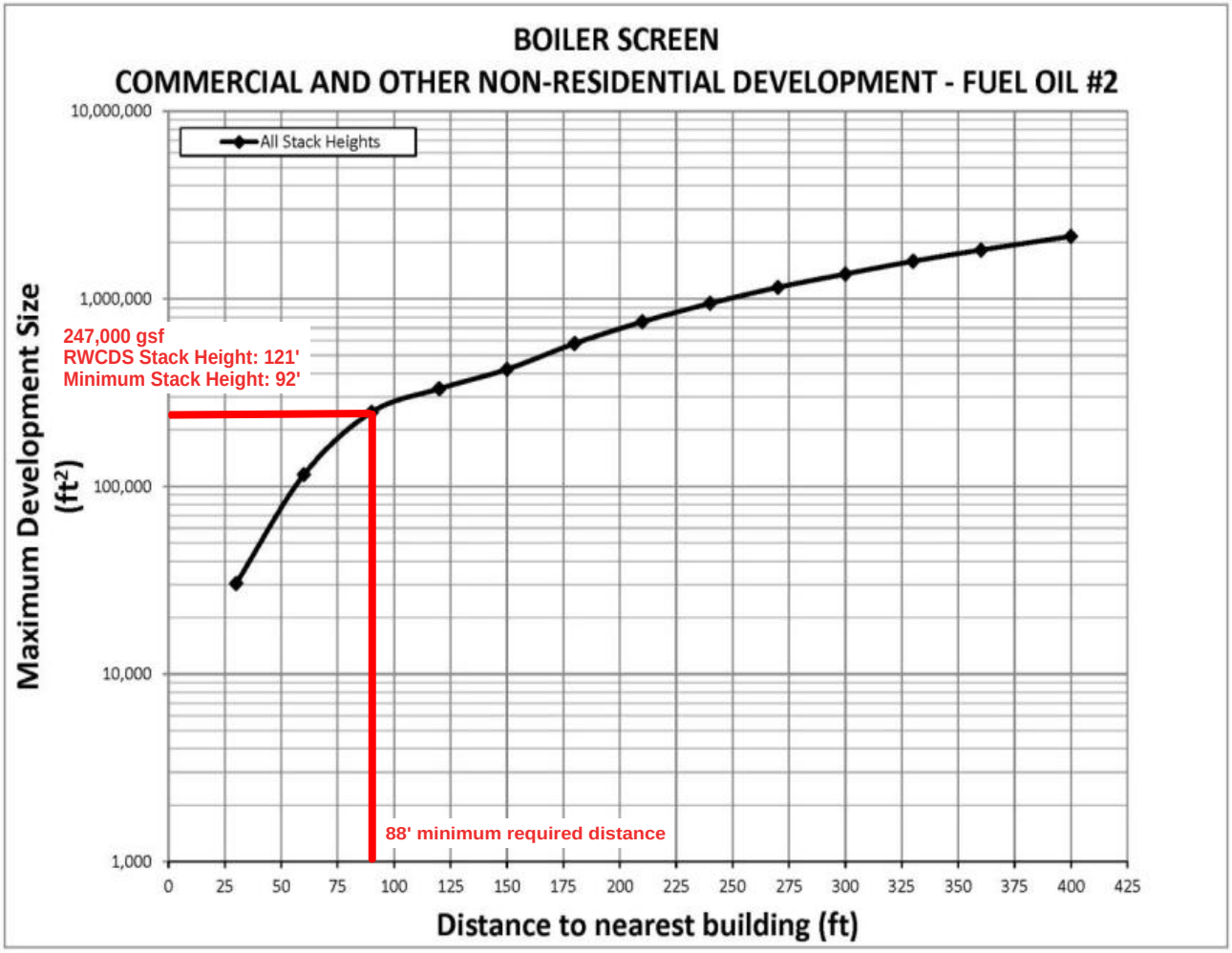
However, given the stack height plotted in the nomograph, to avoid any potential impacts associated with air quality on the Project Site as part of the Proposed Action, an (E) designation for air quality would be recorded against the property. The text for the (E) designation, E-841, would be as follows:

"Block 3084, Lot 1: Any new art storage facility development on the above-referenced property, where the heating, ventilation and air conditioning (HVAC) system and hot water equipment does not utilize electricity, must ensure that the HVAC and hot water stack is located at the building's highest level and at a height of at least 92 feet above grade to avoid any potential significant adverse air quality impacts."

III. INDUSTRIAL SOURCE ANALYSIS

A search of nearby permitted industrial sources compiled by the New York City Department of Environmental Protection (NYCDEP) identified four industrial sources operating within 400 feet of the Project Site. Three of these are cement-batching plants. The fourth facility, Mark's Automotive Inc., is located at 51-53 Grattan Street. However, based on a field survey, this facility does not contain any emission source. Therefore, only the cement plants were subject to an air quality analysis to determine whether the emissions from the following facilities have the potential to significantly impact the Proposed Development:

Figure App 17-1



- United Transit Mix Inc. (318 Boreum Street, Block 3083, Lot 11);
- Transit Mix Corp (60 Morgan Avenue, Block Lot 3003, Lot 6); and
- All American Transit Mix Corp (46 Knickerbocker Street, Block 2997, Lot 15).

United Transit Mix Inc. plant is located approximately 300 feet west of the Project Site; the Transit Mix plant is approximately 80 feet east of the Project Site; and the All-American Transit Mix Corp is approximately 60 feet east of the Project Site. **Figure F-2** shows the locations of these cement plants relative to the Proposed Development. **Figure F-3** provides photographs of the cement plants.

PERMIT INFORMATION

United Transit Mix has two NYCDEP permits -- PB023806 and PW002023; Transit Mix Corp. has one permit -- PB062507, and All-American Transit has two permits -- PW000617 and PW006216. The facilities' addresses, block and lot numbers, and permit numbers are provided in **Table F-1**. The map numbers provided in the table correspond with **Figure F-2**.

Table F-1
Cement Plants Permit Information

Map No.	Permit No.	Expiration Date	Address	Block	Lot	Facility Name
1	PB023806	6/6/2027	318 Boreum Street	3083	11	United Transit Mix Inc
	PW002023	6/6/2027				
2	PB062507	3/3/2026	60 Morgan Avenue	3003	6	Transit Mix Corp
3	PW000617	4/10/2026	46 Knickerbocker Avenue	2997	15	All American Transit Mix Corp
	PW006216	4/10/2026				

Note: Permit PW002023 was not available in NYCDEP's files. As such, data from PB023806, which is a permit for the same type of facility, was used in this analysis.

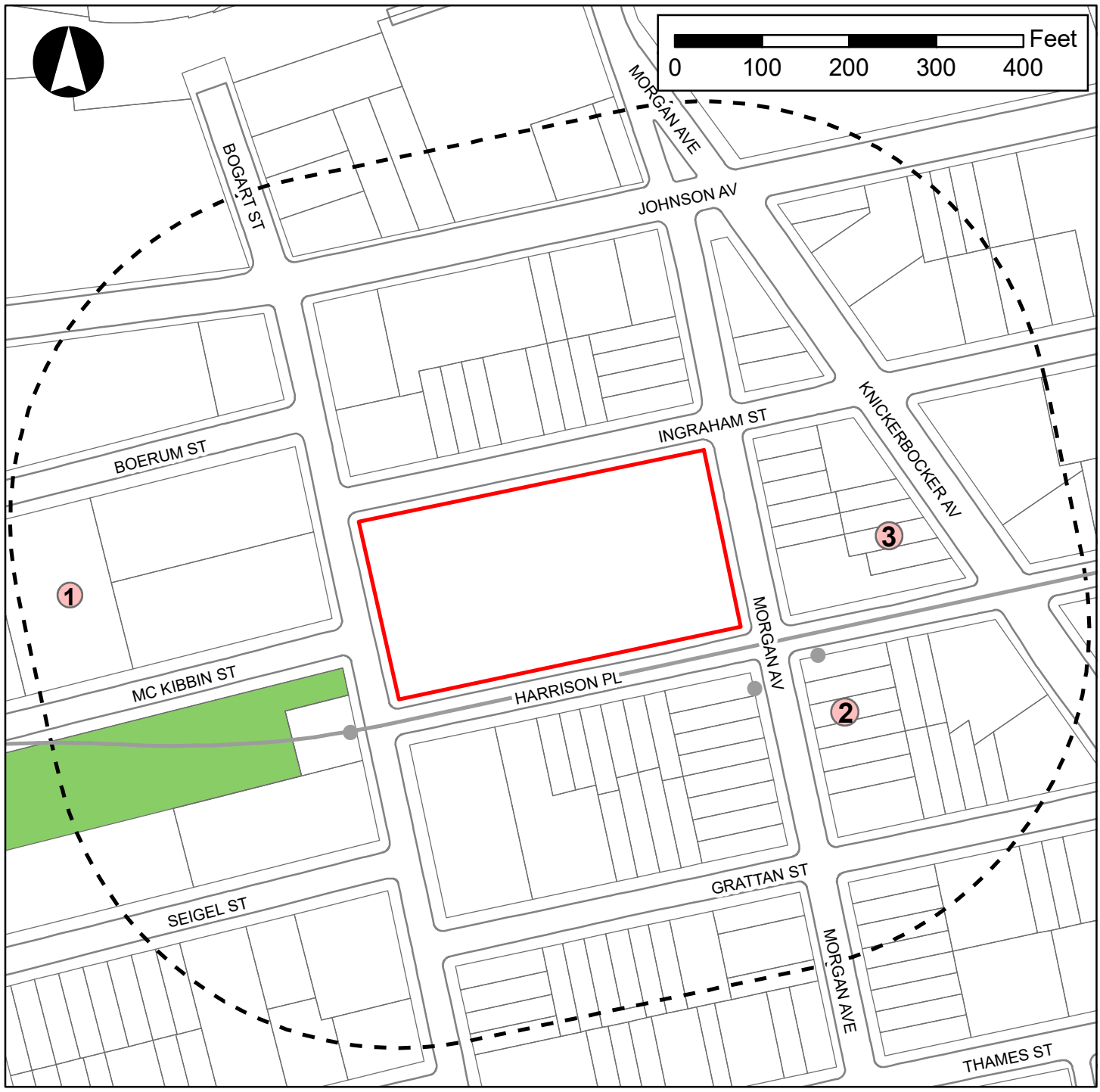
CRITICAL POLLUTANTS

The emissions listed in the NYCDEP permits from cement plants' baghouses and/or dust collectors, which are known as point source emissions, are released during the pneumatic air transfer of cement to storage silos. The silos are where the cement is stored before it is used in the process of making ready-mix products. All of the permits identify dust as a pollutant. Dust (or particulate matter [PM]) is a complex mixture of tiny particles and liquid droplets in the air. Air quality standards and guidelines for dust particles have been established for PM_{10} (particulate matter smaller than 10 microns) and $PM_{2.5}$ (particulate matter smaller than 2.5 microns). PM_{10} includes dust, pollen, and mold; $PM_{2.5}$ includes combustion particles and organic compounds, including those found in smoke. Cement dust particles typically range in size from 0.05 microns to 5 microns.

APPLICABLE STANDARDS/GUIDELINES

While no federal standards have been promulgated for toxic air pollutants, the New York State Department of Environmental Conservation (NYSDEC) has issued guidance DAR-1 that establishes

Figure F-2
Cement Plant Location Map



Legend

- Primary Study Area (Project Site)
- Secondary Study Area (400-Foot Radius)
- Morgan Avenue L Subway Entrance
- L Train Subway Route
- Open Space
- 1 United Transit Mix
- 2 Transit Mix Corp
- 3 All-American Transit Mix





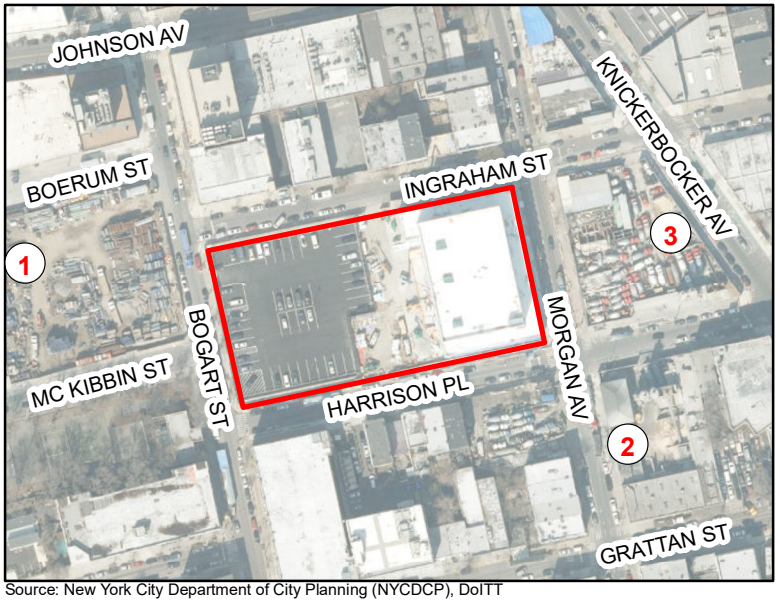
1. United Transit Mix Inc - 318 Boreum Street



2. Transit Mix Corp - 60 Morgan Avenue



3. All-American Transit Mix Corp - 46 Knickerbocker Avenue



Source: New York City Department of City Planning (NYCDCP), DoITT
Notes:
1. The Project Site is outlined by a solid red line.

acceptable ambient levels for these pollutants. These guideline values are short-term ambient guideline concentrations (SGCs) and the ambient annual-average-based guideline concentrations (AGCs), which are the maximum allowable concentrations below which there should be no health-related adverse effects. If no exceedances of the SGCs or AGCs are found, no adverse health effects would occur. If the concentration of any pollutant exceeds its applicable guideline value (either SGC or AGC), a more detailed analysis would be required.

The current (February 2021) edition of the DAR-1 no longer includes guideline values (SGC and AGC) for $PM_{2.5}$ (and PM_{10}); the National Ambient Air Quality Standards (NAAQS) for these pollutants is used instead. As noted in DAR-1, federal standards for $PM_{2.5}$/PM_{10} are not SGCs or AGCs and are only included in DAR-1 to facilitate screening or regulatory analysis. $PM_{2.5}$ is the most critical pollutant for this analysis because it has both stringent *de minimis* criteria established by the *CEQR Technical Manual* and the stringent NAAQS. For the conservative purposes of this analysis, it was assumed that all of the stationary source dust emitted would consist of $PM_{2.5}$ particles.

Standards

The NAAQS for $PM_{2.5}$ is 35 µg/m^3 for a 24-hour period and 9 µg/m^3 for an annual period.

CEQR Significant Impact Criteria

CEQR Technical Manual guidance includes the following criteria for evaluating significant adverse $PM_{2.5}$ incremental impacts:

> *Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour $PM_{2.5}$ background concentration and the 24-hour standard.*

The 3-year 2019-2021 average of 98th percentile 24-hour $PM_{2.5}$ background concentration from Brooklyn JHS 126 (F) monitoring station is 19.8 µg/m^3. Half the difference between the 24-hour $PM_{2.5}$ NAAQS of 35 µg/m^3 and the background value of 19.8 µg/m^3 is 7.6 µg/m^3. As such, a significant impact criterion of 7.6 µg/m^3 was used for determining whether potential 24-hour $PM_{2.5}$ impacts would be significant. For an annual average adverse $PM_{2.5}$ incremental impact, according to *CEQR* guidance:

> *Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 µg/m^3 at any receptor location for stationary sources.*

The above 24-hour and annual significant impact criteria were used to evaluate the significance of predicted $PM_{2.5}$ impacts from cement plant emissions.

EMISSION PARAMETERS

Five DEP permits are associated with the three cement plants surrounding the Project Site. However, one of the permits (PW002023) for the United Transit Mix plant is missing from DEP's files. As such, data from permit PB023806, for the same facility type, was used as an equivalent[1], and data from the four available permits for three cement plants were used in the analysis.

[1] Per DCP guidance from previous Air Quality analyses, when applicable pollutant information or permits are not available, data from similar facilities should be utilized.

Not all permits have full emission-related data. One permit for the Transit Mix Corp (PB062507) identifies only stack parameters but not emission rate information; the permit for United Transit Mix Inc. has emission rate information but no stack parameters. Only the two permits for the All-American Transit Mix Corporation (PW000716 and PW006216) include stack parameters, emission rates, and emission rate calculations.

United Transit Mix has data for three silos -- two for cement silos, and one for the slag silo. Plant operation consists of pneumatic pumping of cement or cement slag (conveying system) from delivering truck tankers into silos. Slag cement is a hydraulic cement used to replace a portion of Portland cement. The facility operates 8 hours a day, 365 days a year. The facility is equipped with baghouses and dust collectors that control emissions from the loading process from the drop points (trucks) to the silos. The baghouses are equipped with an air-powered or electric-powered vibrator used for cleaning the bags. Fans exhaust dust emissions through this control equipment into the atmosphere. Baghouses have a removal efficiency of 99.8%. According to the permit, there are three exhaust points -- one for each silo. Emission rates were originally calculated based on cement pumping rate but were then re-calculated based on USEPA's "Compilation of Air Emissions Factors from Stationary Sources" (AP-42) emission factors. Emissions were then combined to represent a total of PB023806 and the missing PB002923 emission rate, assuming the same data for PB002023 as for PB023806. An explanation for the use of EPA AP-42 emission factors is provided below.

Since the baghouse sits on top of silos, the height and locations of the exhaust stacks were approximated based on the silos' heights and Google Maps coordinates. The following emission paraments were applied:

Permit PW002023 for United Transit Mix -- Because the permit PW002023 is not available from DEP's files, the information for permit PB023806 was used.

Permit PB062507 for Transit Mix Corp – This permit is for two concrete batching silos and a truck loading station. Silos are equipped with duct collectors. The control system exhausts emissions through three emission points. Emission rates are not provided in the permit and were calculated based on AP-42 emission factors. The facility operates 8 hours a day, 260 days a year. Stack heights were obtained from the permit.

Permit PW006216 for All American Transit Mix Corp – This permit is for cement silos equipped with dust collector, which has a 99% removal efficiency. The permit contains dust emission rates, calculation procedures, and exhaust stack parameters. Emissions were re-estimated using the AP-42 emission factors. The facility operates 4 hours a day, 312 days a year.

Permit PW000617 for All American Transit Mix Corp -- The permit is for cement slag with silo emissions controlled by baghouses. The permit contains dust emission rates, calculation procedures, and exhaust stack parameters. Baghouses have a removal efficiency of 99%. Emissions were estimated using AP-42 emission factors.

$PM_{2.5}$ Emission Rates

As mentioned above, all five permits for cement plants are for the same operations - loading cement into silos via pneumatic transport of cement or cement supplements from trucks. The pneumatic system uses pressurized air to move cement from the truck to the silo, and once the cement is loaded, the pressurized

air needs to be released (vented out). During this process, fine cement particles can get entrained in the outgoing air, leading to dust emissions. If no adequate dust collection system is in place, these fine particles escape into the surrounding environment, contributing to dust pollution. However, effective dust control measures like filters, cyclones, or baghouses capture most of these particles before the air is released.

The calculations procedure used in PW000716 and PW006216 permits assumes that 99% of the truck load drops into the silo, while the remaining 1% of each ton is collected by the baghouses or dust collectors. The assumption that 1% of each ton goes to the dust collector or baghouses, however, is not reflective of actual conditions because it results in an exceedingly high emission factor (20 lb/ton of dust) -- representing 1% of one ton. This value is substantially higher than those provided in USEPA's AP-42 as well as those used in *CEQR* analyses for other similar cement plant operations.

Comparing the 20 lb/ton emission factor with AP-42 emission factors for similar cement plant operations reveals a significant discrepancy. According to USEPA's AP-42 (Table 11-12.2), emission factors for concrete batching -- specifically for cement or cement supplements unloading to elevated storage silos (as those listed in the permits) -- are 0.47 lb/ton (uncontrolled) for cement loading and 1.10 lb/ton (uncontrolled) for cement supplement loading. The controlled PM_{10} emission factors are 0.00034 lb/ton for cement loading and 0.0049 lb/ton for cement supplement loading. As such, the 20 lb/ton emission factor leads to unreasonably high emission rates.

A comparison to the other permitted emission rates for silos is similar. For example, the Queens Ready Mix cement plant[2] uses a dust emission factor of 1.5 lb/ton of cement to the baghouse, which is 13 times lower than the permitted value. The Kings Ready Mix cement plant[3] in Brooklyn has much lower permitted dust emission rates. A preliminary analysis, as shown in **Table F-2** below, shows that the 20 lb/ton factor and associated dust emission rates would have caused a dust-modeled concentration significantly exceeding both the 24-hour $PM_{2.5}$ *CEQR* significant impact criterion and the NAAQS. As such, the permit-listed dust emission rates, even after applying a 99.8% removal efficiency, remain unrealistically high. These were therefore re-estimated to align with USEPA and other cement plant's point source emission factors.

Table F-2 provides a comparison of dust emission rates provided in permits, load factors from other permits for cement plants, and USEPA AP-42 emission factors.

[2] Permit PA022297
[3] Permit PB026910

Table F-2:
Comparison of Dust Emission Rates and Factors

Cement Plants	Permit	Permitted Emission Rate (controlled)		Emission Factors (lb./ton)	
		Lb./hr.	g/sec	Uncontrolled	Controlled
Permitted Facilities					
All American Transit Corp.	PW000716	2.4	0.302	20 (1%)	
All American Transit Corp.	PW006216	4.0	0.503	20 (1%)	
United Transit Mix Inc.	PB023806	3.8	0.482	4.3 (est.)	
Other Cement Plants					
City Ready Mix, Queens	PA022297	0.038	0.005	1.5	
Kings Ready Mix, Inc.	PB026910	0.11	0.014		
Atlas Cement Plant, Queens	147-20 94th Ave EAS		0.007		
USEPA AP-42					
EPA AP-42, cement	AP-42, Table 11-12-2	0.085(1)	0.010	0.47	0.0034
EPA AP-42, slag	AP-42, Table 11-12-2	0.123(1)	0.015	1.1	0.0049

Note:
1. Calculated based on AP-42 emission factors and assumption of 25 tons truck load per hour

Based on this information, $PM_{2.5}$ emissions were re-calculated using EPA AP-42 uncontrolled emission factors of 0.47 lb/ton for cement and 1.10 lb/ton for cement supplement from trucks. Control efficiencies were then applied. The following factors/assumptions were used to estimate the emission rates used in this analysis:

Permit PB023806

- 20 tons of cement loaded for 75 minutes or 40,000 lb/hr and AP-42 emission factor of 0.47 lb/ton for cement and 1.1 lb/ton for cement slag
- Silos stack height is measured via Google Maps
- Equivalent diameter for a cross-section of 16”x18”
- The facility operates 8 hours a day, 250 days a year

Permit PB002023

- Assumed the same data as for PB023806

PB062507

- 20 tons of cement loaded for 75 minutes or 40,000 lb/hr and AP-42 averaged emission factor for cement
- Stack heights and exhaust flow rate are from the permit
- The facility operates 8 hours a day, 260 days a year

Permit PW006216

- 20 tons of cement loaded for 75 minutes or 40,000 lb/hr and AP-42 emission factor of 0.47 lb/ton for cement
- Equivalent diameter for a cross-section of 4”x12”
- Stack height and exhaust flow rate are from the permit
- Exit velocity is 100 ft/sec in permit
- The facility operates 4 hours a day, 312 days a year

Permit PW000617

- 15 tons of cement loaded for 75 minutes or 24,000 lb/hr and AP-42 emission factor of 1.1 lb/ton for cement slag
- Equivalent diameter for a cross-section of 4”x12”
- Stack height and exhaust flow rate are from the permit

Estimated $PM_{2.5}$ emission rates and stack parameters used in this analysis are provided in **Table F-3**.

Table F-3
Estimated Emission Rate and Stack Parameters Used in Dispersion Analysis

Facility ID	Permit No.	Emission Rate		Stack Height			D	Flow Rate			Exit Velocity		
		24-hr $PM_{2.5}$	Annual $PM_{2.5}$	Silo 1	Silo 2	Silo 3		Silo 1	Silo 2	Silo 3	Silo 1	Silo 2	Silo 3
		g/sec	g/sec	feet	feet	feet	inches	cfm	cfm	cfm	ft/sec	ft/sec	ft/sec
United Transit Mix Inc	PB023806	0.00237	5.41E-04	45	45	45	18.5	375	375	375	3.3	3.3	3.3
		0.01109	1.08E-03	45	45	45	18.5	375	375	375	3.3	3.3	3.3
Transit Mix Corp	PB062507	0.00655	1.56E-03	72	72	67	18.5	2,340	1760	1760	126.5	95.1	95.1
All American Transit Mix	PW006216	0.01184	3.95E-03	50	50		7.3	2,000	2,000	-	100	100	
	PW000617	0.01663	2.37E-03	50	50		7.3	2,000	2,000	-	100	100	

D= diameter

DISPERSION ANALYSIS

An industrial source analysis was conducted to determine whether the dust emissions released from cement plants surrounding the proposed development would significantly impact the Proposed Development. The analysis was conducted in accordance with the procedures and methodologies prescribed in the *CEQR Technical Manual* and as identified above.

A dispersion analysis was conducted to estimate the potential impacts of the $PM_{2.5}$ emissions from the cement plants. The latest version (23132) of the EPA’s AERMOD dispersion model was used. AERMOD is a steady-state plume model that is applicable in rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). It can be used to calculate pollutant concentrations from one or more points (e.g., exhaust stacks) based on hourly meteorological data, and has the capability of calculating pollutant concentrations at locations when the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures.

Following *CEQR Technical Manual* guidance, the analysis was conducted assuming stack tip downwash, urban dispersion surface roughness length, and elimination of calms, with and without the effects of wind flow around the proposed buildings (i.e., with and without downwash effects). All emission sources were included in one modeling run to estimate cumulative $PM_{2.5}$ impacts.

The analysis was conducted using the latest available five consecutive years of meteorological data (from 2017 through 2021) provided by the New York State Department of Environmental Conservation

(NYSDEC). Surface data were obtained from La Guardia Airport and upper air data were obtained from Brookhaven station, New York. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5 years.

The Proposed Development would be primarily used as an art storage facility, with a few openable windows for the offices located on the lower floor. However, office buildings are regarded as sensitive receptors and subject to NAAQS for air quality assessments. Consequently, receptors were placed around the perimeter of the building in the AERMOD dispersion model, from the ground level to just below the roof, horizontally and vertically, in 10-foot increments. Over 1,300 receptors were considered to ensure comprehensive coverage, including possible air intake locations, to estimate maximum impacts.

Results of the dispersion analysis were compared to the *CEQR* $PM_{2.5}$ significant impact criteria and respective NAAQS. Results of the cumulative $PM_{2.5}$ analyses with and without downwash are provided in **Table F-4**. The estimated cumulative $PM_{2.5}$ concentrations are compared with *CEQR* significant impact criteria and NAAQS.

Table F-4
Results of the Cumulative $PM_{2.5}$ Analyses

	Max 24-hr Impact (ug/m^3)	Background Conc. (ug/m^3)	Max Total Conc. (ug/m^3)	*CEQR* Significant Impact Criteria (ug/m^3)	NAAQS (ug/m^3)
24-hour $PM_{2.5}$ Concentration With Downwash	3.2	19.8	23.0	7.6	35
24-hour $PM_{2.5}$ Concentration Without Downwash	3.2	19.8	23.0	7.6	35
Annual $PM_{2.5}$ Concentration With Downwash	0.1	7.5	7.6	0.3	9
Annual $PM_{2.5}$ Concentration Without Downwash	0.1	7.6	7.6	0.3	9

Note:
24-hour and annual $PM_{2.5}$ background concentrations for the 2019-2021 period are 19.8 ug/m^3 and 7.5 ug/m^3, respectively.

The result of the analysis is that the cumulative point source dust particulate emissions from the three cement plants combined do not cause an exceedance of the 24-hour/annual *CEQR* significant impact criteria or the NAAQS for $PM_{2.5}$ at the Project Site.

IV. CONCLUSION

As described above, the Proposed Action would not generate peak hour vehicle volumes in exceedance of the CEQR threshold of 170 vehicle trips and would not generate peak hour vehicle volumes in exceedance of the CEQR thresholds for heavy-duty diesel vehicle (HDDV) traffic or the vehicular emissions equivalent on adjacent roadways. As such, the Proposed Action would not result in a significant mobile source air quality impact.

Additionally, to avoid any potential stationary source air quality impacts on the project area as part of the Proposed Action, an (E) designation for air quality would be recorded against the property.

Finally, the result of the industrial source analysis is that no exceedances of the applicable *CEQR* significant impact criteria, NAAQS, and SGC/AGC DAR-1 guideline concentrations are predicted. As such, the point source emissions associated with the three nearby cements are not predicted to significantly impact the Proposed Development.

Attachment G

Effects on Disadvantaged Communities

I. INTRODUCTION

Effective 30 December 2024, Section 8-0109(2)(k) of the New York State Environmental Conservation Law requires that environmental review documentation includes a statement of the effects of the Proposed Actions on disadvantaged communities, including whether the action may cause or increase a disproportionate pollution burden. The 2021 *City Environmental Quality Review (CEQR) Technical Manual* does not provide guidance regarding the scope of this analysis. On January 29, 2025, the New York State Department of Environmental Conservation (NYSDEC) proposed draft State Environmental Quality Review Act (SEQRA) Amendments to implement this new statutory provision. This assessment of the effects on disadvantaged communities considers the impacts identified using *CEQR Technical Manual* guidance.

As described in **Attachment A, "Project Description"**, the Applicant is seeking a zoning map amendment to rezone 74 Bogart Street in Brooklyn (Block 3084, Lot 1; the "Project Site") from an M1-2 district to an M1-4A district. The zoning map amendment would facilitate the development of an approximately 247,000-gross-square-foot (gsf) building to be used for art storage.

II. IDENTIFICATION OF DISADVANTAGED COMMUNITIES

Disadvantaged communities (DAC) in New York State were identified based on criteria adopted in 2023 by the Climate Justice Working Group (CJWG), a group composed of representatives from State Agencies and Environmental Justice groups across the State. The CJWG used 45 indicators to identify 35 percent of Census Tracts within New York State as DACs. The criteria include multiple indicators that represent the environmental burdens or climate change risks within a community, or population characteristics and health vulnerabilities that can contribute to more severe adverse effects of climate change. Each Census Tract was scored based on relative burden, risk, vulnerability, or sensitivity. Specifically, the percentile ranks of the indicators for each Census Tract were combined to produce a value measuring a Census Tract's relative level of "Environmental Burdens and Climate Change Risks" as well as "Population Characteristics and Health Vulnerabilities" relative to other Census Tracts. Census Tracts with higher scores relative to other Census Tracts statewide or to their region (i.e., New York City) were identified as DACs.

NYSDEC's Disadvantaged Community Assessment Tool (DACAT) compares three scores (Combined Score, Burden Component Score, and Vulnerability Component Score) for each Census Tract. It also displays the percent difference between the three scores and the statewide mean or median for each. The DACAT compares the three scores with the identified aggregate denominators. If the Combined Score is 25 percent higher than its aggregate denominator, and one or both the Burden and Vulnerability Component Scores are 35 percent higher than their aggregate denominators, then DACAT highlights the Census Tract as having comparatively higher existing burdens or vulnerabilities. This indicates an increased likelihood that a proposed action may have a moderate or large impact on the disadvantaged community. If the conditions above are not met, then the DACAT highlights the Census Tract as having comparatively lower

existing burdens or vulnerabilities, and therefore a decreased likelihood that a proposed action may have a moderate or large impact on the DAC.

III. ASSESSMENT

As shown in **Figure G-1**, the Project Site is located within a Census Tract (Brooklyn Tract 453) that is identified as a DAC with higher burdens and vulnerabilities. Per DACAT, this DAC has a combined component score of 107.00, with a burden component score of 39.03, a vulnerability component score of 67.97, and a combined component score percentage difference of 27.86 percent.

Census Tract 453 is identified as having "higher" burdens and vulnerabilities, with both high vulnerability and burden component scores, indicating that the Population Characteristics, Health Vulnerability, Environmental Burdens and Climate Change Risks for this Census Tract is higher than other tracts state- and/or City-wide. The indicators used to determine this include:

Environmental Burdens and Climate Change Risk:

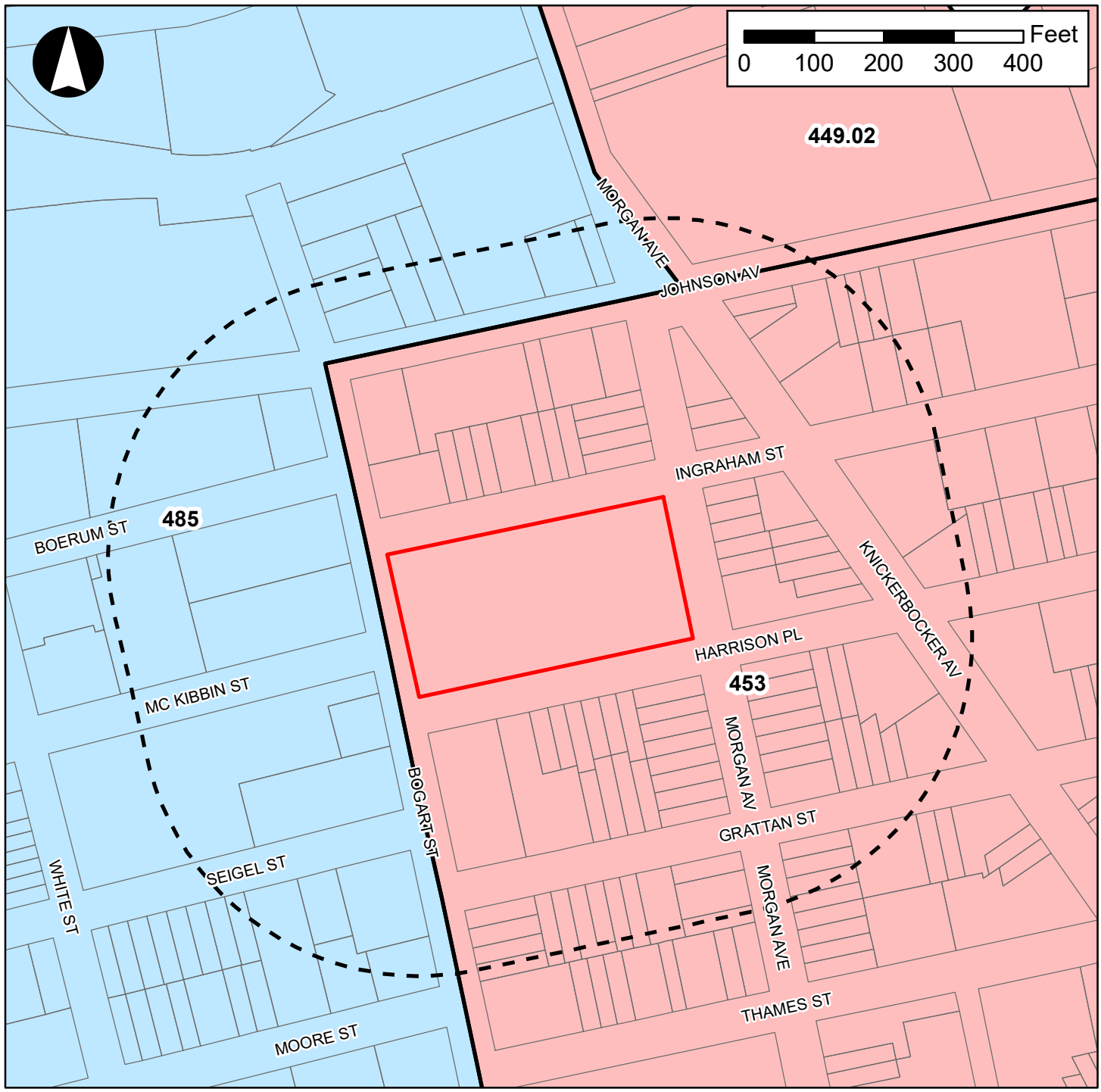
- *Land Use and Facilities Associated with Historical Discrimination or Disinvestment*. Proximity to remediation sites; proximity to regulated management plan sites; proximity to major oil storage facilities; proximity to power generation facilities; proximity to active landfills; proximity to scrap metal processors; industrial/ manufacturing/mining land use; and housing vacancy rate.
- *Potential Climate Change Risks*. Extreme heat projections; flooding in coastal and tidally influenced areas (projected); flooding in inland areas (projected); low vegetative cover; agricultural land; and driving time to hospitals or urgent/critical care.
- *Potential Pollution Exposures*. Vehicle traffic density diesel truck and bus traffic; particulate matter ($PM_{2.5}$); benzene concentration; and wastewater discharge.

Population Characteristics and Health Vulnerability

- *Income*. Percent <80% area median income; percent <100% of federal poverty line; percent without bachelor's degree; unemployment rate; and percent single-parent households.
- *Race and Ethnicity.* Percent Latino/a or Hispanic; percent Black or African American; percent Asian; percent Native American or Indigenous; limited English proficiency; historical redlining score.
- *Health Outcomes and Sensitivities.* Asthma emergency department visits; COPD emergency department visits; heart attack (MI) hospitalization; premature deaths; low birthweight; percent without health insurance; percent with disabilities; percent of adults age 65+.
- *Housing Mobility and Communications.* Percent renter-occupied homes; housing cost burden (rental costs); energy poverty / cost burden; manufactured homes; homes built before 1960; percent without internet.

For Environmental Burdens and Climate Change Risk, Census Tract 453 had high scores (above 90 percent) for proximity to industrial land uses, proximity to remediation sites, and low vegetative cover. For Population Characteristics and Health Vulnerability, Census Tract 453 had high scores (above 90 percent) for unemployment rates, premature deaths, asthma emergency department visits, percent renter-occupied homes, and percent below the federal poverty line.

NYSDEC Disadvantaged Communities



Legend

- Project Site
- 400 Foot Radius
- 453 Census Tract
- DACs identified with having comparatively higher burdens and vulnerabilities
- DACs identified with having comparatively lower burdens and vulnerabilities

While this DAC has high burdens and vulnerabilities, the Proposed Action would not result in significant adverse impacts in the following technical areas analyzed in this EAS: land use, zoning, and public policy; socioeconomic conditions; community facilities; open space; shadows; historic and cultural resources; urban design and visual resources; natural resources; hazardous materials; water and sewer infrastructure; solid waste and sanitation services; energy; transportation; air quality; greenhouse gas emissions and climate change; noise; public health; neighborhood character; or construction. As such, the Proposed Action would not cause a disproportionate impact on DACs with respect to any of these technical areas, including cumulative effects from multiple technical areas.

As the *CEQR Technical Manual* has not been updated to include guidance for an assessment of Effects of Disadvantaged Communities, the SEQRA Environmental Assessment Form (EAF) has been consulted for guidance for this analysis. The EAF Full Form identifies direct or indirect impacts that may affect a DAC, including new noise sources or expansions/modifications of existing noise sources (i.e., noise from operational sources or construction activities); emissions of air pollutants including mobile emissions; wastewater discharges; generation of odors; light pollution; new or modified radiation sources; or new or modified sources of solid waste generation, management, or disposal. The Proposed Action would not result in significant adverse impacts in any of these technical areas, nor would it cause a combination of moderate effects which together may result in a pollution impact at the Project Site or in the surrounding study area. Additionally, the Proposed Action would not require any State agency approvals or any DEC Permits.

Based on the foregoing assessment, the Proposed Action would not disproportionately affect disadvantaged communities, nor would it cause or increase a disproportionate pollution burden.

Appendix I:

Landmarks Preservation Commission Determination Letter

NYC 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: LA-CEQR-K (DEPARTMENT OF CITY PLANNING)
Project:
Address: 74 BOGART STREET BBL: 3030840001
Date Received: 5/17/2024

[X**] No architectural significance**

[X**] No archaeological significance**

[ ] Designated New York City Landmark or Within Designated Historic District

[ ] Listed on National Register of Historic Places

[ ] Appears to be eligible for National Register Listing and/or New York City Landmark Designation

[ ] May be archaeologically significant; requesting additional materials

Comments:

S/NR ELIGIBLE 56 BOGART STREET AND ENGINE CO. 237, 43 MORGAN AVENUE WITHIN RADIUS.

Gina Santucci 5/22/2024

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 37345_FSO_ALS_05222024.docx

Appendix II:

MTA No Easement Determination Letter

2 Broadway, 4th Floor
New York, NY 10004-2207

TRANSIT ORIENTED DEVELOPMENT

Construction & Development

No Easement Determination Letter

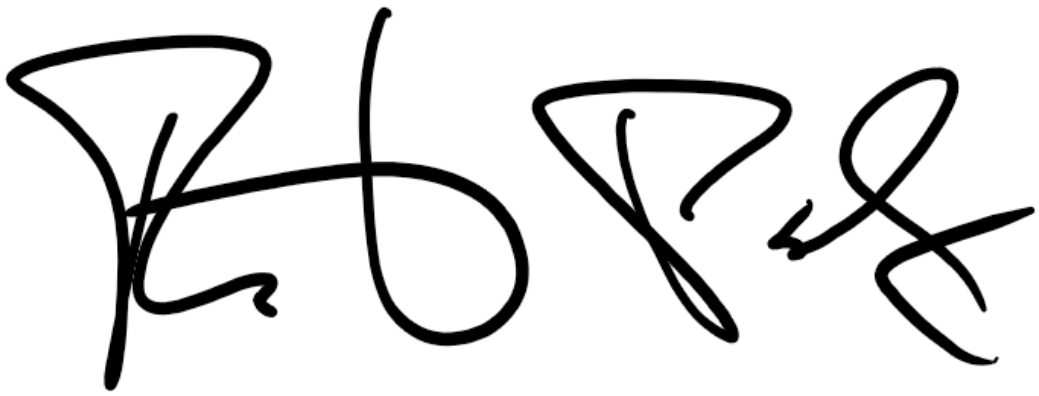
Creation Date	Apr 02, 2024		
Address	DOB BROOKLYN: Kazimir Vilenchik, P.E. 210 Joralemon Street, 8th Floor, Brooklyn, NY 11201		
Applicant Location			
Borough	Brooklyn		
Station Name	Morgan Avenue(BK)	**Line Name**	Canarsie
Street Number	74	**Street Name**	Bogart Street
Block	3084	**Lot Number(s)**	1,
Zip Code	11206	**Cross Street/Intersection**	Harrison Place
Closest Approx. Distance to Station/Transit Asset (in Feet)	5		
Property Owner Information			
First Name	Andrew	**Last Name**	Ehinger
Email Address	aehinger@storagedeluxe.com	**Company Name**	74 Bogart LLC
Phone Number	6466800501	**Full Address**	26 West 17th Street, Suite 801, New York, NY 10011
Applicant Information			
First Name	Stephane	**Last Name**	Lefebvre
Email Address	slefebvre@vhb.com	**Company Name**	VHB
Phone Number	2128577380		
Relationship to the Project	Transit Consultant		

Dear Mr. Vilnechik:

The Owner of the above Project Location (Brooklyn Block 3084, Lot 1) recently submitted an application to the Metropolitan Transportation Authority (“MTA”) for MTA's determination on whether a transit easement volume is needed pursuant to Section 66-21 of the New York City Zoning Resolution.

After a review of the property, the MTA has made the determination that a transit easement volume at this location is **not needed.**

Reviewed By

Name	Robert Paley	**Job Title**	Senior Director, Transit Oriented Development
Company Name	Metropolitan Transportation Authority		
Signature			

Appendix III:

Phase I Environmental Site Assessment

PHASE I ENVIRONMENTAL SITE ASSESSMENT

for

74 Bogart Street
Brooklyn, New York
Tax Block 3084, Lot 1

Prepared For:

74 Bogart LLC
26 W. 17th Street, Suite 801
New York, New York 10011

Prepared By:

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001

Michael Burke, P.G., CHMM, LEED[AP]
Principal/Vice President

LANGAN

April 17, 2019
Langan Project No. 170519402

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EXECUTIVE SUMMARY

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) was retained by 74 Bogart LLC, for the benefit of Storage Deluxe Realty, (the "User") to prepare a Phase I Environmental Site Assessment (ESA) for 74 Bogart Street located in the East Williamsburg neighborhood of Brooklyn, New York ("Subject Property"). Bogart Holdings LLC is the current property owner. The Subject Property is approximately 80,000 square feet (1.8 acres) and occupies Block 3084, Lot 1 on the Brooklyn Borough Tax Map. Alternate addresses for the property include 74-92 Bogart Street, 1-39 Harrison Place, 2-40 Ingraham Street, and 75-91 Morgan Avenue. The Subject Property is bound by Ingraham Street to the north, Morgan Avenue to the east, Harrison Place to the south, and Bogart Street to the west. The Subject Property is comprised of a one-story warehouse building that encompasses the entire block. The building contains a partial cellar and has been vacant since around April 2016. The northwest corner of the Subject Property includes an easement for New York City Water Tunnel No. 3, which is currently under construction by the New York City Department of Environmental Protection (NYCDEP) and is over 500 feet below grade surface (bgs) within bedrock. The NYC Metropolitan Transportation Authority (MTA) L train subway tunnel runs underneath Harrison Place, adjacent to the southern Subject Property boundary.

The Subject Property is enrolled in the New York State Brownfield Cleanup Program (NYSBCP) as a Volunteer. The NYSBCP is a state program that provides financial and liability incentives for the investigation and remediation of underutilized contaminated properties. As the Volunteer, the User is not required to remediate off-site environmental impacts. Upon successful completion of the program, the NYSDEC issues a Certificate of Completion, which allows the Volunteer to receive a limitation of liability from the State of New York and makes the Volunteer eligible to apply for state income tax credits. Pursuant to the Subject Property's enrollment in the BCP, between December 2018 and February 2019, Langan implemented an NYSDEC-approved Supplemental Remedial Investigation Work Plan (SRIWP). The investigation consisted of a site-wide geophysical survey, advancement of soil borings, installation of groundwater monitoring wells, installation of soil vapor points, collection and analysis of soil, groundwater, and soil vapor samples, and a site-wide survey of sample locations and key site features. Data and observations from the investigation are being used to prepare a Remedial Investigation Report (RIR), which will inform remedial action objectives. RIR conclusions will be used to scope a subsequent Interim Remedial Measures Work Plan (IRMWP) and Remedial Action Work Plan (RAWP) for the Subject Property. The IRMWP and RAWP will be implemented in conjunction with redevelopment, and will likely consist of building demolition, shallow excavation of contaminated historic fill, treatment of groundwater through a dewatering treatment system and/or in situ treatment, and off-site vapor intrusion mitigation to achieve

either a Track 2 or Track 4 cleanup. The anticipated cleanup would be implemented in 2019 and 2020 in support of obtaining a 2020 Certificate of Completion.

This Phase I ESA was conducted in accordance with ASTM International (ASTM) Practice E1527-13 (Standard Practice for ESA: Phase I ESA Process) and the United States Environmental Protection Agency's (USEPA) All Appropriate Inquiry (AAI) Rule. The objective of this Phase I ESA was to identify the presence or likely presence, use, or release of hazardous substances or petroleum products on the Subject Property as defined in ASTM E1527-13 as a recognized environmental condition (REC) and to satisfy the AAI needed to qualify for the bona fide prospective purchaser liability protections available under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

A REC is defined by ASTM E1527-13 as the presence of likely presence of any hazardous substances or petroleum products in, on, or at a property due to any release to the environmental, under conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment. The Phase I identified the followings RECs:

Recognized Environmental Conditions

REC 1 – Historical Use and Generation of Hazardous Waste at the Subject Property

The Subject Property was used as an electric equipment manufacturer (1951), metal finishing manufacturer (1965-2007), zipper manufacturer (1965-2001), and an umbrella manufacturer (1960-2005). Records of cyanide, metal sludges and solvent hazardous waste generation from 1992 are associated with Subject Property. Releases of petroleum products, solvents and/or other hazardous substances related to these former uses may have impacted soil, groundwater and/or soil vapor.

REC 2 – Historical Metal Finishing Operations

From about 1951 to 2007, the northwestern portion of the Subject Property was occupied by Jayer Plating, a metal finishing manufacturer. Based on previous reports, Jayer Plating used chromium and nickel as plating fluids and likely washed excess fluids and spills into the trench drain. Yellow and dark brown-staining and apparent chromium precipitates were observed on exposed soil, floor cracks, walls and concrete slabs in the surrounding area of the trench drain in the northwestern portion of the Subject Property and are likely remnants of the historical metal plating operation. Operations associated with the former plating facility are known to have impacted soil and groundwater at the Subject Property.

The Subject Property was enrolled in the New York State Voluntary Cleanup Program to remediate impacts associated with New York State Department of Environmental Conservation (NYSDEC) Spill No. 98-30001, which is associated with solvent and metal impacts. The spill remains open due to a prior owner's noncompliance with the Voluntary Cleanup Program.

REC 3 – Historical Use of Adjoining and Surrounding Properties

Adjoining properties are, or were historically, occupied by the following: chemical works facility (1907); lacquer spraying facility (1951 to 1990); an unspecified manufacturer (1965-1995); and metal finishing/plating companies (1970 to 1992). Surrounding properties are, or were historically, occupied by the following: an ash removal station (1907); two gasoline filling stations (1933 to 1951, and 1969 to 1933); three auto repair facilities (1951 to 2007); packing box manufacturer (1933 to 2007); and dry cleaner (2003).

Inadvertent releases of petroleum products, solvents, and other hazardous substances related to these surrounding property uses may have migrated and adversely impacted groundwater and/or soil vapor at the Subject Property.

Business Environmental Risks

A Business Environmental Risk (BER) is defined by ASTM 1527-13 as a risk, which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. The following BERs were identified for the Subject Property:

- BER 1 – Historic Fill Material: Based on previous environmental investigations, historic fill is present beneath the concrete building slab at the Subject Property. The presence of this material does not trigger a regulatory reporting requirement, but will require implementation of specific soil handling, management and off-site disposal procedures at a cost premium during any future site redevelopment.

- BER 2 – Mold Growth: About 2-feet of water infiltration was observed in the cellar of the Subject Property and may be associated with mold growth. If identified, mold growth is an indoor air quality concern and is associated with cost premiums to remediate.

De Minimis Condition

Black staining was observed on the concrete slab in the southwestern portion of the Subject Property. The staining was localized and the slab appeared competent with no cracks or signs

of spalling; however, miscellaneous trash on the ground prevented a full inspection. Staining on the concrete slab is considered a de minimis condition. No further action is required at this time.

Non-ASTM Environmental Considerations

A Non-ASTM Consideration is identified by ASTM E1527-13 as an environmental issue or condition at a property that parties may wish to assess in connection with commercial real estate that is outside the scope of ASTM E1527-13.

Based on the age of the building, asbestos-containing material and lead-based paint may be present. 9-inch by 9-inch flooring tiles were observed in the eastern portion of the Subject Property and may contain asbestos-containing material (ACM). Fluorescent light bulbs and ballasts (suspect polychlorinated biphenyl [PCB] equipment) was observed during the site reconnaissance. If identified, ACM and lead-based paint (LBP) must be abated prior to renovations or redevelopment of the Subject Property. However, no further action is required at this time.

Historical and Controlled REC conditions were not identified.

Additional information related to the above-listed RECs and BERs can be found within the body of this report.

1.0 INTRODUCTION

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) was retained by 74 Bogart LLC, for the benefit of Storage Deluxe Realty (the "User") to prepare a Phase I Environmental Site Assessment (ESA) for 74 Bogart Street located in the East Williamsburg neighborhood of Brooklyn, New York ("Subject Property"). The Subject Property is currently owned by Bogart Holdings LLC and is identified on the Brooklyn Borough Tax Map as Block 3084, Lot 1. This Phase I ESA was performed in general accordance with ASTM International (ASTM) Standard E1527-13 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process) and the guidelines set forth in the United States Environmental Protection Agency's (USEPA) All Appropriate Inquiries (AAI) Rule, 40 Code of Federal Regulations (CFR) Part 312.

1.1 Purpose

The purpose of this Phase I ESA is to accomplish the following:

> (1) Identify Recognized Environmental Conditions (RECs) in connection with the Subject Property, as defined in The Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E1527-13, which states: The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.
>
> (2) Satisfy the criteria of USEPA 40 CFR Part 312 Subpart C Standards and Practices §312.20 AAI Rule.

1.2 Scope of the Phase I ESA

This Phase I ESA was conducted using a standard of good commercial and customary practice that is consistent with the ASTM Standard E1527-13. Any significant scope-of-work additions, deletions, or deviations to ASTM E1527-13 are noted in Section 8.0 of this report. In general, the scope of this assessment consisted of obtaining information from the User, reviewing reasonably ascertainable information and environmental data relating to the Subject Property,

reviewing maps and records maintained by federal, state, and local regulatory agencies, interviewing persons knowledgeable about the Subject Property, and conducting a site inspection. The specific scope of this assessment included the following:

1. A site reconnaissance to characterize conditions and assess the Subject Property's location with respect to adjoining and surrounding property uses and natural surface features. The reconnaissance included the surrounding roads and observations of surrounding properties from public rights-of-way to identify obvious potential environmental conditions on neighboring properties. The site reconnaissance was conducted in a systematic manner focusing on the spatial extent of the Subject Property and then progressing to adjoining and surrounding properties. Photographs taken as part of the site reconnaissance are provided in Appendix A.
2. A review of the responses to the User/Client Questionnaire. The completed questionnaire is provided in Appendix B.
3. A review of available previous environmental reports relating to the Subject Property. Copies of the reports are included in Appendix C.
4. A review of environmental databases maintained by the USEPA, state, and local agencies within the approximate minimum search distance. The environmental database report was provided by Environmental Data Resources, Inc. (EDR), and is included in Appendix D.
5. Filing of Freedom of Information Act (FOIA) requests with federal, state, and local agencies. Copies of the FOIA requests are included in Appendix E.
6. A review of New York City Department of Buildings (NYCDOB) records and a Planning Commission Zoning Map. Available NYCDOB records and the Zoning Map are included in Appendices F and G, respectively.
7. A review of physical characteristics of the Subject Property through a review of referenced sources for topographic, geologic, soils and hydrologic data.
8. A review and interpretation of aerial photographs, Sanborn Fire Insurance Maps (Sanborn Maps), historical topographic maps, and city directories to identify previous activities on and in the vicinity of the Subject Property. Copies are included in Appendices H, I, J, and K respectively.
9. A review of environmental lien searches for the lots at the Subject Property. A copy of the environmental lien search report is included as Appendix L.
10. A review of published radon occurrence maps to evaluate whether the Subject Property is located in an area with a propensity for elevated radon levels.

1.3 Assumptions, Limitations, and Exceptions

This Phase I ESA was prepared for the User for the Subject Property identified as Tax Block 3084, Lot 1 in the East Williamsburg neighborhood of Brooklyn, New York. The report is intended to be used in its entirety. Excerpts taken from this report are not necessarily representative of the assessment findings. Langan cannot assume responsibility for use of this report for any property other than the Subject Property addressed herein, or by any other third party without a written authorization from Langan.

Langan's scope of services, which is described in Section 1.2, was limited to that agreed to with the User and no other services beyond those explicitly stated are implied. The services performed and agreed upon for this effort comports to those prescribed in the ASTM Standard E1527-13. Intrusive sampling (e.g., soil borings and groundwater sampling) was not performed as part of this Phase I ESA.

This Phase I ESA was not intended to be a definitive investigation of possible environmental impacts at the Subject Property. The purpose of this investigation was limited to determining if there is reason to suspect the possibility of RECs. It should be understood that even the most comprehensive Phase I ESA may fail to detect environmental liabilities at a particular Subject Property. Therefore, Langan cannot "insure" or "certify" that the Subject Property is free of environmental impacts. No expressed or implied representation or warranty is included or intended in this report, except that our services were performed, within the limits prescribed by our client, with the customary standard of care exercised by professionals performing similar services under similar circumstances within the same jurisdiction.

The conclusions, opinions, and recommendations provided in this report are based solely on the specific activities as required for the performance of ASTM E1527-13 and are intended exclusively for the purpose stated herein, at the specified Subject Property, as it existed at the time of our site visit.

2.0 SITE DESCRIPTION

2.1 Location and Description

The Subject Property is located at 74 Bogart Street in the East Williamsburg neighborhood of Brooklyn, New York, and is identified on the Brooklyn Borough Tax Map as Block 3084, Lot 1. Alternate addresses for the property include 74-92 Bogart Street, 1-39 Harrison Place, 2-40 Ingraham Street, and 75-91 Morgan Avenue. The Subject Property is approximately 80,000 square feet (1.8 acres) and encompasses the entire city block bound by Ingraham Street to the north, Morgan Avenue to the east, Harrison Place to the south, and Bogart Street to the west. The Subject Property contains a one-story warehouse building with a partial cellar and has been vacant since around April 2016. The northwest corner of the Subject Property includes an easement for New York City Water Tunnel No. 3, which is currently under construction by the New York City Department of Environmental Protection (NYCDEP) and is over 500 feet below grade surface (bgs) within bedrock. The NYC Metropolitan Transportation Authority (MTA) L train subway tunnel runs underneath Harrison Place, adjacent to the southern Subject Property boundary. A site location map is included as Figure 1.

The Subject Property is enrolled in the New York State Brownfield Cleanup Program (NYSBCP) as a Volunteer. The NYSBCP is a state program that provides financial and liability incentives for the investigation and remediation of underutilized contaminated properties. As the Volunteer, the User is not required to remediate off-site environmental impacts. Upon successful completion of the program, the NYSDEC issues a Certificate of Completion, which allows the Volunteer to receive a limitation of liability from the State of New York and makes the Volunteer eligible to apply for state income tax credits. Pursuant to the Subject Property's enrollment in the BCP, between December 2018 and February 2019, Langan implemented an NYSDEC-approved Supplemental Remedial Investigation Work Plan (SRIWP). The investigation consisted of a site-wide geophysical survey, advancement of soil borings, installation of groundwater monitoring wells, installation of soil vapor points, collection and analysis of soil, groundwater, and soil vapor samples, and a site-wide survey of sample locations and key site features. Data and observations from the investigation are being used to prepare a Remedial Investigation Report (RIR), which will inform remedial action objectives. RIR conclusions will be used to scope a subsequent Interim Remedial Measures Work Plan (IRMWP) and Remedial Action Work Plan (RAWP) for the Subject Property. The IRMWP and RAWP will be implemented in conjunction with redevelopment, and will likely consist of building demolition, shallow excavation of contaminated historic fill, treatment of groundwater through a dewatering treatment system and/or in situ treatment, and off-site vapor intrusion mitigation to achieve either a Track 2 or Track 4 cleanup. The anticipated cleanup would be implemented in 2019 and 2020 in support of obtaining a 2020 Certificate of Completion.

According to the United States Geological Survey (USGS) Brooklyn, N.Y. 7.5-minute Series Topographic Quadrangle Map, the Subject Property is at an elevation of about 20 feet above mean sea level, and the surrounding area slopes gradually towards the north towards English Kills, a tributary of Newtown Creek. Based on observations of the surrounding area during the site reconnaissance, the Subject Property is located in an urban area characterized by commercial, manufacturing, industrial and residential uses. Site reconnaissance photographs are provided in Appendix A.

Surrounding property usage is summarized in the following table:

DIRECTION	ADJACENT PROPERTIES	SURROUNDING PROPERTIES
North	The following properties are located across Ingraham Street: • 92 Bogart Street (two-story commercial building) • 11 Ingraham Street (vacant lot) • 15 Ingraham Street (two-story commercial building) • 17 Ingraham Street (two-story mixed-use commercial and warehouse building) • 21 Ingraham Street (vacant lot) • 23, 27, and 29 Ingraham Street (three three-story residential buildings) • 95 Morgan Avenue (two-story mixed commercial and residential building with outdoor space)	Various one-story / multiple-story warehouse buildings and retail / office buildings
East	The following properties are located across Morgan Avenue: • 46 Knickerbocker Avenue (concrete production and truck parking facility)	Various one-story warehouse buildings and retail properties
South	The following properties are located across Harrison Place: • 72 Bogart Street (five-story industrial and commercial building) • 10 Harrison Place (construction site) • 14 Harrison Place (three-story residential building) • 16 Harrison Place (vacant lot) • 18 Harrison Place (three-story mixed use commercial and residential building) • 20 and 22 Harrison Place (two four-story residential buildings) • 71 Morgan Avenue (concrete truck parking)	Manufacturing warehouses, residential buildings
West	The following properties are located across Bogart Street: • Subway station (Morgan Avenue MTA L train station) • Gilbert Ramirez Park • 79 Bogart Street (construction materials staging and truck parking facility)	Concrete company, multiple parks and warehouses

2.2 Description of Subject Property Improvements

Improvements at the Subject Property are summarized in the following table:

SUBJECT PROPERTY DESCRIPTION	
Size of the Subject Property	80,000 square feet (1.8 acres)
Buildings/Spaces/Structures	One- story warehouse building with a partial cellar
Surface Water	None
Potable Water Source	The City of New York
Sanitary and Storm Sewer Utilities	The City of New York
Electrical Utilities	Consolidated Edison
Construction Completion Date	1946
General Construction Type	Brick, cement block and steel masonry
Heating/Cooling System Type	Roof-mounted exhaust fan units, electric space heaters
Emergency Power	Emergency power is not provided.

2.3 Title Records

Langan researched ownership records through the New York City Department of Finance (NYCDOF), Office of the City Register Automated City Register Information System (ACRIS) website at http://a836-acris.nyc.gov/CP/. The following table provides available ownership and transactional information for the Subject Property:

BLOCK 3084, LOT 1			
Recorded/ Filed Date	**Document Type**	**Party 1**	**Party 2**
8/30/2012	Deed	STARWOOD LLC	BOGART HOLDINGS LLC
8/30/2012	Deed	SMITH EQUITIES LLC	STARWOOD LLC
12/5/2003	Deed	ASHPOL REALTY CORP.	SMITH EQUITIES LLC
12/10/1999	Deed	MILHAN PRODUCTS INC	ASHPOL REALTY CORP
1/4/1968	Deed	BOGART HOLDING CO	MILHAN PRODUCTS INC

The title record search did not reveal RECs associated with the Subject Property.

3.0 USER PROVIDED INFORMATION

3.1 User/Client Questionnaire

Per ASTM E1527-13, a questionnaire was provided to the User to inquire about specialized information related to the Subject Property. The User questionnaire was completed by Jonathan Orr, Authorized Signatory of 74 Bogart LLC, on February 18, 2019. Mr. Orr stated that he is aware of Activity Use Limitations and presence of releases at the Subject Property. He also indicated that he is not aware of any environmental cleanup liens or environmental cleanups at the Subject Property. According to Mr. Orr, the purchase price reasonably reflects fair market value and is not affected by contamination known or believed to be present at the Subject Property. The completed questionnaire is provided as Appendix B.

3.2 Owner/Operator Questionnaire

Per ASTM E1527-13, an Owner/Operator questionnaire was provided to Bogart Holdings LLC. As of the date of this report, a completed questionnaire has not been received.

3.3 Previous Environmental Reports

Previous environmental reports were summarized in ESPL's Final IRMWP and are attached as Appendix C. Available previous reports are listed below, followed by a brief summary of previous environmental findings:

- Phase I ESA, prepared by ERD, dated November 1996;
- Focused Phase II Soil Investigation Report, prepared by Excel Environmental Resources, Inc. (Excel), dated May 22, 1997;
- Site Investigation Report, prepared by AKRF, Inc., dated December 1, 1997;
- RIWP, prepared by MC Environmental, dated November 2011;
- Draft RIR, prepared by ESPL, dated February 2014;
- SRIWP, prepared by ESPL, dated October 2014;
- Final IRMWP, prepared by ESPL, dated November 2016; and
- Supplemental Remedial Investigation Work Plan (SRIWP), prepared by Langan, dated November 29, 2018.

The November 1996 Phase I ESA described the former nickel and chromium plating operation in the northwest portion of the Subject Property. The report noted corrosion of the concrete floor slab in the former plating area, possibly due to drips and spills from chemicals used during the plating process. According to an interview with the former general manager of the adjoining tenant space (Macon Umbrella), a concrete floor trench and drain were used to collect

excess fluids from the plating process (at the former Jayer Plating facility) and discharge them into the city sewer. Several unidentified drums were observed on Subject Property during the Phase I site reconnaissance, including six drums within the former metal plating area.

Multiple subsequent subsurface investigations were performed from 1997 to the present by consultants including ERD, Excel, AKRF, and ESPL. Investigations included sampling of soil, groundwater, and soil vapor, with some investigations focusing on the metal plating trench area and others intending to characterize the entire Subject Property. At least 46 soil borings, 11 groundwater monitoring wells, and 5 soil vapor sampling points have been installed across the Subject Property. Findings reported by previous consultants include the following:

- Subject Property stratigraphy includes a surficial layer of historic fill underlying the property-wide reinforced concrete floor slab. The historic fill layer extends to a maximum of about 16 feet bgs and comprises silty sand and gravel with brick, concrete, coal, ash, cinders, and plastic debris. Native soil underlying the historic fill comprises varying amounts of sand, silt, clay, and gravel.
- The average depth to groundwater is about 15 feet bgs, with groundwater inferred to flow toward the north based on historical monitoring well gauging data and the location of English Kills, a tributary of Newtown Creek, about 0.14 miles northeast of the Subject Property.

The remedial measures proposed in the NYSDEC-approved November 2016 IRMWP were not implemented. Langan prepared an SRIWP to investigate and characterize the nature and extent of contamination at the Subject Property in conjunction with existing historical data. The scope of work included:

- A property-wide geophysical survey;
- Advancement of 41 soil borings and collection and analysis of soil samples;
- Installation of eight monitoring wells and collection and analysis of groundwater samples from newly installed, existing and off-site monitoring wells;
- Survey and synoptic gauging of all on-site and off-site monitoring wells; and
- Installation of nine soil vapor probes, reinstallation of four pre-existing soil vapor probes, and collection and analysis of soil vapor samples.

The SRIWP investigation was completed by the time of the Phase I ESA; however, complete data and the report were not available for review as of the date of this report.

Copies of the previous environmental reports are included in Appendix C.

Conclusions Regarding Previous Environmental Reports

Potential impacts from historical nickel and chromium plating operations (Jayer Plating) are considered a REC for the Subject Property. According to interviews, the concrete floor trench and drain were used to collect excess fluids from the plating process and discharge them into the city sewer. Cracks within the floor slab and/or drainage system may have allowed excess fluids from the plating process to leak into the subsurface and impacted soil, groundwater and soil vapor at the Subject Property.

The subsurface investigations identified historic fill property-wide underlying the concrete floor slab. The transport and disposal of historic fill during redevelopment activities may be associated with premium contractor fees, due to potential for fill to contain elevated contaminant concentrations. Historic fill material is therefore considered a Business Environmental Risk (BER).

4.0 RECORDS REVIEW

4.1 Environmental Records

A regulatory database search was provided by Environmental Data Resources, Inc. (EDR) and is included in Appendix D. The EDR report is a listing of sites identified on select federal and state standard source environmental databases within the approximate search radius specified by ASTM E1527-13. Langan reviewed each environmental database on a record-by-record basis to determine if certain sites identified in the report are suspected to represent a potential impact to the Subject Property. Langan also reviewed "Orphan Sites" listed within the report. Orphan Sites are those sites that could not be mapped due to inadequate address information. Any Orphan Sites that were identified by Langan within the ASTM search radii, either during the site reconnaissance or by cross-referencing to mapped listings, are addressed in the discussion below. All distances are measured from the perimeter of the Subject Property.

The following table lists the number of sites by database within the prescribed search radius and appearing in the EDR Report.

DATABASE RECORD SUMMARY			
Database Reviewed (Date of government version)	**Minimum Search Area**	**Subject Property listed**	**Number of Sites Within Minimum Search Area**
United States Environmental Protection Agency (USEPA) DATABASES			
National Priorities List (NPL) (12/12/2018)	1 Mile Radius	No	1
Delisted NPL (12/12/2018)	1 Mile Radius	No	0
Superfund Enterprise Management System (SEMS, formerly CERCLIS) and SEMS-Archive (formerly known as CERCLIS-NFRAP) (12/13/2018)	1/2 Mile Radius	No	4
Resource Conservation and Recovery Act (RCRA) Corrective Reports (CORRACTS) (3/1/2018)	1 Mile Radius	No	1
RCRA Treatment, Storage, and Disposal Facilities (TSDF) (3/1/2018)	1/2 Mile Radius	No	0

DATABASE RECORD SUMMARY			
Database Reviewed (Date of government version)	**Minimum Search Area**	**Subject Property listed**	**Number of Sites Within Minimum Search Area**
USEPA DATABASES (Continued)			
RCRA Generators (Large Quantity Generator [LQG], Small Quantity Generator [SQG], Conditionally Exempt Small Quantity Generator [CESQG], Non-Generators [NonGen]) (3/1/2018)	Subject Property and Adjoining	Yes	3
Facility Index System (FINDS) (11/15/2018)	Subject Property	Yes	1
Enforcement & Compliance History Online (ECHO) (9/2/2018)	Subject Property*	Yes	1
Environmental Response Notification System (ERNS) (9/24/2018)	Subject Property	No	N/A
Federal Engineering Controls (US ENG CONTROLS) Sites Lists (7/31/2018)	Subject Property	No	N/A
Federal Institutional Controls (US INST CONTROLS) Sites Lists (7/31/2018)	Subject Property	No	N/A
US Brownfields (12/17/2018)	1/2 Mile Radius	No	0
New York State Department of Environmental Conservation (NYSDEC) DATABASES			
Inactive Hazardous Waste Disposal Site (NY SHWS) (11/12/2018)	1 Mile Radius	Yes	11
Hazardous Substance Waste Disposal Site Inventory (NY HSWDS) (1/01/2003)	1/2 Mile Radius	Yes	3
Solid Waste or Landfill Facilities (NY SWF/LF) (9/30/2018)	1/2 Mile Radius	No	14
Registered Recycling Facility (NY SWRCY) (9/30/2018)	1/2 Mile Radius	No	3
New York Leaking Storage Tank Incident Reports (NY LTANKS) (11/12/2018)	1/2 Mile Radius	No	38
SPILLS Information Database (NY SPILLS) (11/12/2018)	1/8 Mile Radius	Yes	15
Voluntary Cleanup Program (NY VCP) (11/239/2018)	1/2 Mile Radius	Yes	10
NY Brownfields (11/12/2018)	1/2 Mile Radius	Yes	5

DATABASE RECORD SUMMARY			
Database Reviewed (Date of government version)	**Minimum Search Area**	**Subject Property listed**	**Number of Sites Within Minimum Search Area**
New York Engineering Controls Sites List (NY ENG CONTROLS) (11/12/2018)	Subject Property	No	0
New York Institutional Controls Sites List (NY INST CONTROLS) (11/12/2018)	Subject Property	No	0
Chemical Bulk Storage (CBS) (9/25/2018) UST (1/01/2002) and Aboveground Storage Tank (AST) (1/01/2002)	Subject Property and Adjoining	No	0
Major Oil Storage Facilities (NY MOSF) UST and AST Databases (1/1/2002)	Subject Property and Adjoining	No	0
Registered and Historical Dry Cleaners (NY DRYCLEANERS) (3/7/2018)	1/4 Mile Radius	No	2
Petroleum Bulk Storage Facilities (PBS) UST and AST Databases (9/25/2018)	Subject Property and Adjoining	Yes	2
EDR (PROPRIETARY) DATABASES			
EDR Former Manufactured Gas Plant (MGP) Sites (N/A)	1 Mile Radius	No	3
EDR US Historical Auto Stations (N/A)	1/4 Mile Radius	No	1
EDR US Historical Cleaners (N/A)	1/4 Mile Radius	No	0

N/A: Not Applicable

* = Database was reviewed as part of the Phase I ESA but not required as per ASTM E1527-13. Provided radii are from the EDR summary.

A summary of the Subject Property database listing and listings for other sites identified in one or more of the reviewed databases within the prescribed search area are presented below.

4.1.1 Federal Agency Database Findings

The Subject Property and/or sites within their respective minimum search distances as specified by ASTM E1527-13 were not listed in the following federal agency databases: Delisted NPL, TSDF, ERNS, US ENG CONTROLS, US INST CONTROLS, and US BROWNFIELDS.

NPL

The NPL database identifies sites for priority cleanup under the Superfund Program. The Subject Property was not listed in the NPL database; however, one listing was identified within the minimum 1-mile search distance. The listing, Newtown Creek, is related to crude oil, sewage, petroleum-contaminated sediments along a 3.5-mile stretch of the Newtown Creek between Queens and Brooklyn, New York. Based its topographically down-gradient location from the Subject Property, this NPL site is not considered a REC.

SEMS, formerly CERCLIS and SEMS-Archive (formerly known as CERCLIS-NFRAP)

The SEMS database contains data on potentially hazardous waste sites that were reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The list was formerly known as CERCLIS and was renamed to SEMS by the USEPA in 2015. SEMS contains sites that are either proposed or on the NPL and sites that are in the screening assessment phase for possible inclusion on the NPL. SEMS Archive sites are sites that were removed and archived from the inventory of SEMS sites. Archived sites indicate that, to the best of USEPA's knowledge, assessment at a site was completed and that USEPA determined no further steps will be taken to list this site on the NPL, unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time.

The Subject Property was not listed in the SEMS or SEMS-Archive databases; however, four sites were identified on the SEMS-Archive list within the minimum search distance. Of the four SEMS-Archive sites, two are located more than 600 feet west of the Subject Property and topographically down-gradient from the Subject Property, so it is not likely that hazardous substances from these sites have migrated to and impacted the Subject Property. The remaining sites are described below:

Site Name: Kornblum, Sidney
Site Address: 394 Johnson Avenue
Location: About 350 feet north (down-gradient) of the Subject Property
Description: Kornblum, Sidney is listed in SEMS Archive database and is also listed in the LEAD SMELTER SITES database. Lead is not anticipated to migrate freely with groundwater flow; therefore, the lead smelting operations at this site are unlikely to have impacted the Subject Property.

Site Name: Brooklyn Scrap Metal Co.
Site Address: 171 Cook Street

Location: About 1,600 feet southwest (up-gradient) of the Subject Property
Description: Brooklyn Scrap Metal Co. is listed in SEMS Archive database and is also listed in the LEAD SMELTER SITES database. The site did not qualify for the NPL based on unspecified existing information. Because lead is not anticipated to migrate freely with groundwater flow, the lead smelting operations at this site is unlikely to have impacted the Subject Property.

RCRA CORRACTS

The RCRA CORRACTS database identified hazardous waste handlers with RCRA corrective action activity. The Subject Property was not listed in the RCRA CORRACTS database; however, one site, Pfizer Inc (11 Bartlett Street, about 4,600-feet southwest and topographically down-gradient), was identified in the RCRA CORRACTS database within the minimum search distance. The site (Facility number CA075ME-CA) was also listed into the RCRA-LQG, FINDS, TRIS and ECHO databases for contamination associated with hazardous mercury and ignitable hazardous wastes {D001, D002, and D003}, arsenic, F001, F002, F003, multiple VOCs waste. Based on distance and its topographically down-gradient location in relation to the Subject Property, it is unlikely that hazardous substances on the site have impacted the Subject Property

RCRA Generators

The RCRA Generators database is USEPA's comprehensive information system, providing access to data supporting the RCRA of 1976 and the Hazardous Solid Waste Amendments (HSWA) of 1984. The database includes selective information of sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. LQGs generate over 1,000 kilograms of hazardous waste or over 1 kilogram of acutely hazardous waste per month; SQGs generate between 100 and 1,000 kilograms of hazardous waste per month; CESQGs generate less than 100 kilograms of hazardous waste or less than 1 kilogram of acutely hazardous waste per month; and RCRA Non-Gen are former hazardous waste generators.

The minimum search radius for the RCRA-LQG, RCRA-SQG, RCRA-CESQG and RCRA-NonGen database includes the Subject Property and adjoining properties. The Subject Property and two other adjoining property were listed in the database. Adjoining listings, MTA NYCT – Morgan Avenue Station – L Line and Con Edison Service Box 8606, were identified in the RCRA-SQG database in 2009 for the generation of lead and in 2014 for nonhazardous waste, respectively. Because of the lack of violations reported for the listing and MTA and Con Edison's strict policies regarding the handling and reporting of contaminated materials releases, it does not indicate the likely presence of hazardous substances that has impacted the Subject Property. The listing for the Subject Property is described below:

Site Name: Milhan Realty Corporation
Site Address: 40 Ingraham Street (Subject Property)
Description: The Subject Property was listed as a Non-Gen in 2007 (USEPA ID No. NYD986974392), and was historically listed in 2006 for the generation of unspecified waste (D000), corrosive waste (D002), reactive waste (D003), wastewater treatment sludge (F006), and spent stripping and cleaning bath solutions from electroplating operations (F009). No violations were listed. NY Manifest records also indicated that about 150 gallons of ignitable waste (D001), 600 pounds of corrosive waste (D002), 2,855 gallons of corrosive waste (D002), 3,200 pounds of reactive waste (D003), 55 gallons of chromium (D007), 11,350 gallons of silver (D011), 55 gallons of spent halogenated solvents (F001), 4,845 gallons of wastewater treatment sludge (F006), 1,732 gallons of spent cyanide plating bath solutions from electroplating operations, 60 gallons of copper cyanides (P029), 110 gallons of potassium cyanide (P098), and 110 gallons of zinc cyanide (P121) were exported from the Subject Property in 1992. Generation of hazardous wastes at the Subject Property may have impacted soil, groundwater, and/or soil vapor and is considered a REC.

FINDS and ECHO Databases

The FINDS database contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in their report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statues), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statues), and PADS (PCB Activities Data System). The Enforcement & Compliance History Online (ECHO) database provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

The Subject Property was listed as Milhan Realty Corp (40 Ingraham Street – Registry ID No. 110004477842) in the FINDS database with a listing in the ECHO. The property is also listed in the USEPA Facility Detail Report (FDR) and RCRAInfo, a national information system that supports the RCRA program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo also tracks the notification, permit, compliance, and corrective action activities required under RCRA. The RCRAInfo listing likely corresponds to the historical RCRA generator status and NY Manifests associated with the Subject Property.

The Subject Property is listed in ECHO database for violation of air quality standards in relation to the ozone (in 1997, 2008, and 2016), particulate matter (in 1997 and 2006) and carbon monoxide (in 1971). Further details were not provided.

4.1.2 State Agency Database Findings

The Subject Property and/or sites within their respective minimum search distances as specified by ASTM E1527-13 were not listed in the following state agency databases: NY ENG CONTROLS, NY INST CONTROLS, NY CBS UST, NY CBS AST, NY MOSF and NY PBS UST.

SHWS Database

The SHWS database is a comprehensive listing of sites that are the state's equivalent to SEMS. These consist of priority sites planned for cleanup using state funds (state equivalent of Superfund) and or potentially responsible parties. The Subject Property and ten surrounding sites were identified in the NY SHWS database within the minimum search distance. Three of these sites are located more than 2,500 feet to the north, west and southeast, and topographically cross- or up-gradient of the Subject Property and seven are located more than 1,200 feet to the north and topographically down-gradient of the Subject Property. Because of the distance from and topographic location in relation to the Subject Property, it is unlikely hazardous substances and/or petroleum at these sites have impacted groundwater and/or soil vapor at the Subject Property. The Subject Property listing is described below:

> **Site Name:** 2 Ingraham Street
> **Site Address:** 2 Ingraham Street (Subject Property)
> **Description:** 2 Ingraham Street is listed in in the SHWS database, as well as in the VCP and BROWNFIELDS databases. According to the SHWS listing, the site was entered into the VCP in November 2000 and then was transferred into the Brownfield Cleanup Program (BCP) (Site No. C224036) in 2010. Contamination at the site includes: mercury hotspots in soil; metal impacts in soil and groundwater; solvent impacts in soil, groundwater, and soil vapor; and property-wide groundwater and soil vapor contamination.

HSWDS

The HSWDS database includes any known or suspected hazardous substance waste disposal sites. The Subject Property and two surrounding properties were identified in the HSWDS database within the minimum search distance and are described below:

Site Name: Former Jayer Plating
Site Address: 2 Ingraham Street (Subject Property)
Description: Former Jayer Plating is listed in the HSWDS database, but did not qualify for the New York State Registry of Hazardous Waste Disposal Sites. However, the property has multiple addresses, including 40 Ingraham Street which discusses historically hazardous waste export from the site. Therefore, this listing is similarly considered a REC.

Site Name: Morgan Terminal
Site Address: 200 Morgan Avenue
Location: About 650 feet north (down-gradient) of the Subject Property
Description: Morgan Terminal is listed in the HSWDS database as an oil terminal for over 40 years. The site has a history of leaking tanks, drums, and other containers. Further details were not provided; however, based on distance and topographically down-gradient location from the Subject Property, it is unlikely that hazardous substances on the site have impacted the Subject Property.

Site Name: Varick Avenue
Site Address: 165 Varick Avenue
Location: About 2,100 feet northeast (down-gradient) of the Subject Property
Description: Varick Avenue is listed in the HSWDS database as a construction and demolition debris site. Further details were not provided; however, based on distance and topographically down-gradient location from the Subject Property, it is unlikely that hazardous substances on the site have impacted the Subject Property.

SWF/LF

The SWF/LF database is a comprehensive listing of State permitted/recorded solid waste facilities. The Subject Property was not listed in the SWF/LF database; however, fourteen facilities were identified within the minimum search radius. Of the 14 listings, eleven of the sites are located more than 1,300 feet and at topographically down-gradient locations from the Subject Property; therefore, it is not likely that operations at these facilities have impacted the Subject Property. One of the remaining sites is an inactive vehicle dismantling facility and is located more than 1,200 feet south and topographically up-gradient. Due to lack of known releases, distance from the Subject Property, and other solvent-related sites identified in closer proximity to the Subject Property, this SWF/LF listing is not expected to impact the Subject Property. The remaining sites are described below:

Site Name: U.S. Waste Management, Inc.

Site Address: 48 Knickerbocker Avenue
Location: About 400 feet east (cross-gradient) of the Subject Property
Description: U.S. Waste Management, Inc. is a municipal trash and construction debris facility listed in the SWF/LF database as an inactive transfer station (No. 24TA4). Further details on types of material handled were not provided; however, based on lack of reported violations, it is unlikely that hazardous substances on the site have impacted the Subject Property.

Site Name: CityGreen Organics.
Site Address: 105-115 Thames Street
Location: About 1,200 feet southeast (up-gradient) of the Subject Property
Description: CityGreen Organics is listed in the SWF/LF database as an active transfer station (No. 24T40) of corrugate cardboard, metals and residential/institutional/commercial waste. Further details on types of material handled were not provided; however, based on lack of reported violations and distance from the Subject Property, it is unlikely that hazardous substances on the site have impacted the Subject Property.

NY SWRCY

The SWRCY database is a comprehensive list of soil waste disposal and recycling facilities registered with New York State. The Subject Property was not listed in the database; however, three SWRCY sites were identified within the minimum search radius. Two of these facilities are located more than 1,400 feet northeast and topographically down-gradient of the Subject Property and the third facility is located more than 1,400 feet north of and topographically up-gradient of the Subject Property. Due to the down- and up-gradient locations and/or distances from the Subject Property, is it not likely that operations at these facilities have impacted the Subject Property.

LTANKS Database

The LTANKS database contains an inventory of reported leaking storage tank incidents, including leaking USTs and ASTs. The minimum search radius for the LTANKS database includes the Subject Property and any sites within a 1/2-mile radius. The Subject Property was not listed in the LTANKS database; however, 38 sites were listed within the minimum search radius. All 38 LTANK incidents were closed by the NYSDEC and are not considered RECs.

Spills Database

The NY Spills database is an inventory of sites where spills have been identified and reported to the NYSDEC. The minimum search radius for the Spills database includes the Subject Property and any sites within a 1/8-mile radius. The Subject Property was listed in the Spills database, as well as 14 other sites within the minimum search distance. All of the surrounding property listings have been closed by the NYSDEC and are unlikely to have impacted the Subject Project. The spill at the Subject Property is discussed below:

Site Name: Former Jayer Plating
Site Address: 2 Ingraham Street (Subject Property)
Description: NYSDEC Spill No. 98-30001 is associated with solvent and metal impacts encountered on December 31, 1997 and reported on August 8, 1998. The spill was opened by the NYSDEC due to the prior Volunteer's lack of compliance with the VCP. The NYSDEC administratively kept the spill open so that they would be capable of implementing enforcements on the property. This spill listing is associated with elevated metals and solvent impacts related to the former Jayer Plating facility and is considered a REC.

VCP Databases

VCP sites are properties at which redevelopment or re-use may be complicated by the presence or potential presence of hazardous substances, pollutants, or contamination. The Subject Property and nine surrounding properties were identified in the VCP database within a 1/2-mile radius of the Subject Property. Nine of the listed VCP sites are located more than 1,100 feet from the Subject Property at topographically up- or down-gradient locations. Based on distance from the Subject Property, the listed VCP sites are not expected to impact subsurface conditions at the Subject Property. The Subject Property and remaining site are described below:

Site Name: 2 Ingraham Street
Site Address: 2 Ingraham Street (Subject Property)
Description: The Subject Property applied for the VCP; however, the VCP investigation was never completed and the Volunteer Cleanup Agreement negotiations were closed. The Subject Property was then entered into the BCP in 2010, as discussed in the following section.

Site Name: 88 Ingraham Realty Corp
Site Address: 88 Ingraham Street
Location: About 800 feet east (cross-gradient) of the Subject Property

Description: The remediation at this VCP site is considered complete. Prior environmental concerns include elevated concentrations of chlorinated solvents in soil, groundwater, and soil vapor. Remaining contamination in soil vapor is being managed under a Site Management Plan. Because the remedial action is considered completed and measures have been taken to address residual contamination, it is unlikely the contamination at this site has impacted the Subject Property and is not considered a REC.

NY Brownfield Sites

Brownfield sites are those at which investigation and remediation are being conducted or were completed pursuant to the New York State Brownfield Cleanup Program. A brownfield site is any real property where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance adopted by NYSDEC that are applicable based on the reasonably anticipated use of the property. The Subject Property and four surrounding properties were identified as a NY Brownfield site; within a 1/2-mile radius of the Subject Property. Two of the sites are located more than 1,200 feet north and east of the Subject Property at topographically down-gradient locations and therefore hazardous substances or petroleum products at the sites are unlikely to have migrated to the Subject Property. The Subject Property and remaining site are described below:

Site Name: 2 Ingraham Street
Site Address: 2 Ingraham Street (Subject Property)
Description: The Subject Property is registered as a Brownfield site (BCP No. C224036) and is listed on the NYSDEC Environmental Site Remediation Database as an active remediation site with volatile organic compounds (VOC), semivolatile organic compounds (SVOC), and metals as contaminants of concern.

Site Name: 353 McKibben Street
Site Address: 353 McKibben Street
Location: About 500 feet west (down-gradient) of the Subject Property
Description: The Brownfield site at 353 McKibben Street (BCP No. C224102) is listed on the NYSDEC's online Environmental Site Remediation Database as having completed remediation of VOCs, SVOCs, and metal contamination in either soil, groundwater and/or soil vapor. Because groundwater flow is not anticipated to migrate towards the Subject Property due to the site's topographically down-gradient location, and site remediation with engineering and institutional controls is complete, it is unlikely that the contamination at this site has impacted the Subject Property.

NY DRYCLEANERS

The DRYCLEANERS database is a listing of registered dry cleaning facilities. Dry cleaning facilities are associated with the use of PCE, a chlorinated solvent with the potential to infiltrate groundwater and migrate to surrounding properties if released into the environment. The Subject Property was not listed in the DRYCLEANERS database; however, two DRYCLEANER sites were identified within 1/4 mile of the Subject Property. One of these facilities, Flushing Bay Dry Cleaners, is recorded to be a drop shop, indicating that dry cleaning does not take place on-site. Based on its location about 1,200 feet topographically up-gradient location from the Subject Property and drop-shop status, the listing is not considered a REC. The remaining site is described below:

Site Name: Popular Uniform
Site Address: 88 Ingraham Street
Location: About 800 feet northeast (up-gradient) of the Subject Property
Description: The site was registered under Facility No. 2-6104-01034. The last inspection reported at the site occurred on October 17, 2003 and it is recorded as shutdown. It was not clear from the EDR report whether chlorinated solvents were used in site cleaning operations or whether the facility was a drop shop. Because of its topographically up-gradient location, proximity in relation to the Subject Property and lack of information in the listing, hazardous substances associated with site operations may have migrated to and impacted groundwater and/or soil vapor at the Subject Property. The listing is considered a REC.

NY PBS TANKS, UST and AST Database

The PBS UST and AST databases are listings of all properties with petroleum storage capacities in excess of 1,100-gallons, but less than 400,000 gallons. A registered petroleum bulk storage tank, UST and/or AST does not constitute a REC, in and of itself. However, properties listed on the TANKS, UST and/or AST lists with a reported leak, spill, or release could constitute a REC with respect to the Subject Property. As per ASTM E1527-13, the minimum search distance required for USTs and ASTs is the Subject Property and adjoining properties. The Subject Property was listed in the PBS database twice, as described below:

Site Name: 40 Ingraham Street
Site Address: 40 Ingraham Street (Subject Property)
Description: PBS ID No. 2-083879 corresponds to one 3,000-gallon #2 fuel oil inactive AST that has been converted into non-regulated use. There are no LTANK or SPILLS incidents recorded for this listing. Soil, groundwater, and soil vapor sampling results

from previous reports (discussed in Section 3.2) did not indicate on-site impacts from operations at the facility. The listing is therefore not considered a REC.

Site Name: Milhan Realty Corporation
Site Address: 2-40 Ingraham Street (Subject Property)
Description: PBS ID No. 2-603519 corresponds to four 3000-gallon No. 2 fuel oil ASTs that have been closed/removed. There are no LTANK or SPILLS incidents recorded for this listing. Soil, groundwater, and soil vapor sampling results from previous reports (discussed in Section 3.2) did not indicate on-site impacts from operations at the facility. The listing is therefore not considered a REC.

4.1.3 Other Database Findings

Manufactured Gas Plant Sites

The MGP sites database is a proprietary database that includes records of manufactured coal gas plants compiled by EDR. The Subject Property was not listed in the MGP database; however, three MGP sites were identified. The MGP facilities were located about 1,100 feet or more from the Subject Property at topographically down-gradient locations. Because of their distance and topographic location from Subject Property, it is unlikely that hazardous substances and/or petroleum have migrated to and impacted at the Subject Property.

Historical Auto

The Historical Auto database is a proprietary database that lists potential gas station/filling station/service station sites based on review of national collections of business directories that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The Subject Property was not listed in the EDR Historical Auto database; however, one site was identified within the minimum search distance. Ideal Servicenter, 66 Knickerbocker Avenue, was located about 300 feet southeast and topographically up-gradient of the Subject Property. The facility was listed as a gasoline service station from 1969 to 1993, and as an auto repair shop from 1993 to 1995. Further information regarding the facility was not provided. The proximity and hydraulic relationship of this facility to the Subject Property indicates that hazardous substances associated with former operations may have migrated underneath the MTA subway tunnel and impacted groundwater and/or soil vapor at the Subject Property.

4.1.4 Local Regulatory Agency Findings

FOIA Requests

FOIA requests were submitted on February 8, 2019 to the following federal, state, and local agencies via written correspondence:

- New York City Department of Environmental Protection (NYCDEP)
- New York City Department of Health (NYCDOH)
- FDNY
- New York State Department of Health (NYSDOH)
- NYSDEC
- USEPA, Region 2

The following table summarizes acknowledgements of receipt and responses to date.

Agency	Acknowledgement of Receipt Date	Response
NYCDEP	Not Received	As of the date of this report, responses have not been received.
NYCDOH	Not Received	4/5/2019
FDNY	None Received	As of the date of this report, responses have not been received.
NYSDOH	2/11/2019	4/9/2019
NYSDEC	Not Received	As of the date of this report, responses have not been received.
USEPA Region 2	Not Received	3/7/2019

Responses from the NYCDOH, NYSDOH and USEPA Region 2 did not find any records of environmental concerns at the Subject Property. Should pending responses alter the conclusions provided within this report, we will issue the modified conclusions as an addendum. Copies of the FOIA requests, acknowledgments and responses are included in Appendix E.

New York City Department of Buildings (NYCDOB)

Langan conducted a records search of the tax lots through the NYCDOB online query system on September 24, 2018. Six Certificates of Occupancy (CO) were available for The Subject Property; however, two were illegible. The remaining four were all dated November 27, 1940.

CO No. 99118 is for a former laundry building at the Subject Property and indicated that the cellar contained a boiler and a laundry machine, and the first floor of the building contained receiving area, laundry machines and shipping area.

CO No. 99119 is for a former convent building at the Subject Property and indicated that the building had three-stories. The cellar contained a boiler room, storage area, and laundry; the first floor of the building contained a kitchen, dining room, chapel and sitting room; the second floor of the building contained bed rooms and a sitting room; and the attic contained bed rooms and storage space.

CO No. 99120 is for a former orphanage building at the Subject Property and indicated that the building had three-stories. The cellar contained a boiler room, playroom and storage area; the first floor of the building contained a dining room, kitchen and parlor; the second floor of the building contained dormitories, sitting rooms and additional bedrooms; the third floor of the building contained bed rooms and a chapel; and the attic contained bed rooms and storage space.

CO No. 99121 is for a former garage at the Subject Property and indicated that the building had two-stories. The first floor contained space for five cars and storage; and the second floor contained the chauffeur's quarters and additional storage space.

Six boiler records are available for the Subject Property. All boilers are listed with a "void" status. A search through the New York City Department of Environmental Protection (NYCDEP) Clean Air Tracking System (CATS) records revealed that there are eight boilers associated with the property, and all have been canceled with the exception of one boiler that is listed as "expired". There are no violations associated with any of the boiler listings.

Ten Environmental Control Board (ECB) and 49 NYCDOB violations are listed for the Subject Property. The violations correspond to construction, elevator maintenance and plumbing installation. There is one open NYCDOB violation dated November 1, 1968, further details were not provided. Copies of the NYCDOB records are included in Appendix F.

Zoning Department

According to the New York City Planning Commission Zoning Map 13b, the Subject Property is located in an M1-2 zoning district. The M1-2 zoning district typically includes light industrial uses. A copy of the zoning map is included in Appendix G.

4.2 Physical Setting Sources

4.2.1 Topography

According to the USGS Brooklyn, N.Y. 7.5-minute Series Topographic Quadrangle Map, the Subject Property is at an elevation of approximately 20 feet above mean sea level. The Subject Property is generally flat and the general topographic gradient of the surrounding area gently slopes north towards English Kills, a tributary of Newtown Creek, which is approximately 0.14 miles to the north. Properties to the south of the Subject Property are considered up-gradient. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) dated September 5, 2007 (Map Number 3604970208F), the Subject Property is located in Zone X, or the 0.2% annual chance floodplain.

4.2.2 Bedrock

The bedrock stratigraphy of Manhattan generally consists of a layer of historical fill that overlies glacial till, decomposed unconsolidated bedrock, and bedrock. According to the 1992 USGS Bedrock and Engineering Geology Maps of Bronx County, and parts of New York and Queens Counties, New York by C.A. Baskerville, bedrock stratigraphy in the area consists of rock of the Hartland Formation, which is generally comprised of gray, white, and greenish-black schist, granite, gneiss and amphibolite. The Hartland formation is interlaid with coarse pegmatite, amphibolite, and gneiss. Bedrock is expected to be overlain by native, glacially-derived unconsolidated sediment and historic fill material.

4.2.3 Soil

Most developed sites in Manhattan contain a surficial layer of historic fill material underlain by native silt, gravel, sand and bedrock. Previous environmental reports identified the site stratigraphy as including a surficial layer of historic fill underlying the property-wide reinforced concrete floor slab. The historic fill layer extends to a maximum of about 16 feet bgs and comprises silty sand and gravel with brick, concrete, coal, ash, cinders, and plastic debris. Native soil underlying the historic fill comprises varying amounts of sand, silt, clay, and gravel. Historic fill material can contain contaminant concentrations above applicable regulatory levels and sometimes hazardous concentrations. The presence of this material does not trigger a regulatory reporting requirements, but will require implementation of special soil handling, management and off-site disposal procedures at a cost premium during any future site redevelopment. Therefore, historic fill is considered a BER.

4.2.4 Hydrology

Groundwater flow is typically hydraulically influenced, as shallow groundwater tends to originate in areas of topographic highs and flow toward areas of topographic lows, such as rivers, stream valleys, ponds, and wetlands. A broader, interconnected hydrogeologic network often governs groundwater flow at depth or in the bedrock aquifer. Groundwater depth and flow direction are also subject to hydrogeologic and anthropogenic variables such as precipitation, evaporation, extent of vegetative cover, and extent of impervious cover. Other factors influencing groundwater include depth to bedrock, the presence of artificial fill, and variability in local geology and groundwater sources or sinks.

Based off previous environmental reports, the depth to groundwater is about 15 feet bgs. Based on the regional topography, groundwater in the area is expected to flow to the north-towards English Kills, a tributary of Newtown Creek, which is about 0.14 miles from the Subject Property. Groundwater in New York City is not used as a potable water source. Potable water is provided to the Subject Property by the City of New York and is derived from surface impoundments in the Croton, Catskill, and Delaware watersheds.

4.3 Historical Use Information

Langan reviewed available historic resources (including aerial photographs, Sanborn and topographic maps, and city directories) dated between 1888 and 2017. Findings from the review are presented below.

4.3.1 Aerial Photographs

Langan reviewed aerial photographs of the Subject Property and surrounding areas for the years 1924, 1941, 1951, 1954, 1961, 1966, 1974, 1976, 1980, 1984, 1991, 1994, 2006, 2009, 2013 and 2017. The photographs indicate that the Subject Property was located in an urban area developed as early as 1924. The Subject Property was occupied by low-rise building from the earliest available aerial photograph (1924) to 1941. By 1951, the Subject Property appears in its current configuration and remains unchanged through 2017. A review of aerial photographs did not reveal any evidence indicating the likely presence of hazardous substances and/or petroleum at the Subject Property. Copies of aerial photographs are included in Appendix H.

4.3.2 Sanborn Fire Insurance Maps

A search for historical fire insurance maps for the Subject Property and surroundings properties was conducted by EDR and reviewed by Langan. Sanborn Fire Insurance Maps (Sanborn

Maps) constitute a database of prior site uses for real properties located in many cities and towns across the United States. Langan reviewed Sanborn Maps for the Subject Property years 1888, 1907, 1933, 1951, 1965, 1968, 1977, 1979, 1980, 1981, 1982, 1986 through 1989, 1990, 1991, 1993, 1994, 1995, and 2001 through 2007. Details for the subject Property and nearby up-gradient sites were not legible in the 1979, 1980, 1986, 1988, 1993 maps. Copies of the maps are included in Appendix I.

Langan's review revealed that the Subject Property was located in a moderately developed urban area as early as 1888. Between 1907 and 1933, the Subject Property was occupied by an orphanage (labeled "Orphan Home of the Sorrowful Mother"), church (labeled as "R.C. Church of our Lady of Sorrows"), convent, rectory, and 2 two-story dwellings. Additionally in 1933, a laundry facility and shelter were added to the Subject Property and the MTA Subway station first appeared on the maps, about 50 feet to the southwest. The existing building configuration was constructed and an electric equipment manufacturer (labeled "Windsor Manufacturing and Rep. Corporation and Electrical Equipment Manufacturing") occupied the Subject Property by 1951. By 1965, the Subject Property was operating as a metal finishing and zipper manufacturer. The Subject Property remained relatively unchanged through 2007; however, in 2001 the zipper manufacturer was no longer an occupant and an umbrella manufacturer operation worked in conjunction with the metal finishing works from 2001 to 2005. As previously discussed, historical manufacturing and specifically metal plating operations at the Subject Property between 1951 and 2007 are considered a REC.

Surrounding properties generally consisted of multiple-story residential, commercial, and industrial facilities. Below is a summary of the historical uses of adjoining and surrounding properties that are considered RECs, based on Sanborn Map review.

<u>North-surrounding properties</u>:

- An ash removal station (1907), located at 368-371 Johnson Avenue, about 150 feet to the north;
- A gasoline filling station with four buried gasoline tanks (1933-1951) located at 100-110 Morgan Avenue, about 150 feet to the northeast;
- An auto repair facility (1951-2007) located at 98 Morgan Avenue, about 150 feet to the northeast;
- A packing box manufacturer (1933-2007) located at 366-372 Johnson Avenue, about 150 feet to the north; and
- An auto body repair shop (1951-2007) located at 396-400 Johnson Avenue, about 150 feet to the north.

South-adjoining properties (across Harrison Place):

- An unspecified manufacturer (1965-1995) located at 18 Harrison Place, about 50 feet to the south; and

South-surrounding properties:

- An auto-repair facility (2001-2006) located at 276-280 Seigel Place, about 325 feet to the southwest;
- An auto repair shop (1933-1951) located at 12 Grattan Street, about 350 feet to the south; and
- An electric prods manufacturer (1951), machine shop (1965-2007) located at 45-49 Morgan Avenue, about 350 feet to the south.

West-adjoining property (across Bogart Street):

- A chemical works facility (1907) and lacquer spraying facility (1951-1990), located at 79-97 Bogart Street, about 50 to the west.

4.3.3 Historical USGS Topographic Quadrangles

Langan reviewed historical USGS Topographic Quadrangles obtained from EDR for information regarding past uses of the Subject Property. Quadrangle maps were available for the Subject Property for the years 1897, 1898, 1900, 1947, 1956, 1967, 1979, 1995, and 2013.

The Subject Property has been located in a developed area since 1897. From 1947 onwards, The Bushwick Yards are shown to the north of the Subject Property. The Subject Property and surrounding areas remained relatively unchanged through 2013. The historical topographic quadrangles did not reveal evidence of RECs. Copies of the historical topographic maps are provided in Appendix J.

4.3.4 City Directories

The City Directory Abstract obtained from EDR is a review of available business directories, including city, cross-reference, and telephone directories, for the years 1928, 1934, 1940, 1945, 1949, 1960, 1965, 1970, 1973, 1976, 1980, 1985, 1992, 1997, 2000, 2005, 2010, and 2014. The Subject Property was not identified in the 1928, 1934, 1940, 1945 or 1949 data search. The Subject Property's addresses were listed under various industrial entities including:

- Eisenburg Richd DDS Office (1960) at 74 Bogart Street;

- Prime Frama Inc (2005 to 2010), Macon Umbrella Corp factory (1960 to 2000), Alum-A-Fold Corp (1970-1976); Lawnshades Inc (1970-1976), Corner Inc Stationary (1973), Industries Inc (1973), Lawn Leisure Corp (1965), Abbott Wire Products Inc (1960), Cohen Max Co Bch Umbrellas (1960), Copa Industries Inc (1960-1970) at 2 Ingraham Street.

Former manufacturing at the Subject Property is a REC as inadvertent releases of petroleum products, solvents, and/or other hazardous substances may have impacted soil, groundwater and/or soil vapor.

Adjoining properties are also listed in the City Directories with various commercial businesses, manufacturing companies, and residencies. The following listing for surrounding properties are considered RECs:

- 18 Harrison Place (about 50 feet south and topographically up-gradient to the Subject Property) contained two metal finishing/plating companies (labeled as "All Bright Metal Finishing Corp Platers" and "Atlas Metal Polishing Co. Platers") from 1970 to 1992.

These historical uses of surrounding properties may have results in inadvertent releases of petroleum products, solvents, and/or other hazardous substances that may have impacted groundwater and/or soil vapor on the Subject Property. A copy of the City Directory Abstract is included in Appendix K.

4.3.5 Title Records, Environmental Liens, and Use Limitations

An environmental lien and AUL search was provided by EDR to confirm whether environmental liens or AULs (engineering or institutional controls) existed for the Subject Property. Environmental liens and AULs were not identified for the Subject Property. Deed records identified during the search list the current owners of the Subject Property as Bogart Holdings LLC. The listing is consistent with the deed records listed in Section 2.3.

A copy of the report is included in Appendix L.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

The site reconnaissance was conducted in a systematic manner focusing on the spatial extent of the Subject Property and progressing to the adjacent and surrounding properties. The assessment of the adjacent and surrounding properties was limited to identifying, if possible, any indications of past or current use that may involve the use, storage, disposal, or generation of hazardous substances or petroleum products, noting the general type of current use, the general topography of the surrounding area, and providing a general description of adjoining or adjacent structures.

5.1.1 Date and Time of Inspections

The site reconnaissance was performed on February 6, 2019 by Kimberly Nagotko of Langan. The weather at the time of inspection was cloudy and about 45 degrees Fahrenheit. Langan was not escorted by anyone during the site reconnaissance.

5.1.2 General Site Setting and Reconnaissance Observations

The Subject Property occupies Block 3084, Lot 1, which is an entire city block in the East Williamsburg neighborhood of Brooklyn. The Subject Property is about 80,000 square feet in area and improved with a one-story brick/concrete/steel warehouse with a partial cellar. The warehouse is currently owned by Bogart Holdings LLC and has been vacant since around April 2016. The northwest corner includes an easement for the New York City Water Tunnel No. 3. The MTA L train subway tunnel runs underneath Harrison Place, adjacent to the southern boundary of the Subject Property. Gasoline-like odors were noted coming from the subway ventilation vents on the Harrison Place sidewalk, adjoining south of the Subject Property, during the time of the site reconnaissance. This was likely due to the reported gasoline leak within the L train subway tunnel that the MTA was addressing at the time. A Langan survey team was also present at the site during the reconnaissance as part of an environmental investigation recently conducted throughout the Subject Property, which consisted of the advancement of borings, and installation of groundwater monitoring wells and soil vapor points.

The ground floor consists of open warehouse space, concrete floors, painted brick walls, exposed ceiling beams and piping, and multiple loading docks that run along the perimeter of the building. A majority of the ground floor windows were covered with either paint, wooden planks, or polyethylene sheeting. The roof is elevated in two parallel, linear locations that run east to west across majority of the building. The walls of the elevated roof sections were made up of windows panes. The roof was not accessible during the site reconnaissance. In

the center of the Subject Property, an about 50-foot-long, 20-foot-wide and 2-foot-deep area of the slab is at a lower elevation. Electrical switch units were observed on the southwestern and western portions of the building. Electric space heaters were observed mounted to the ceiling and roof-mounted interior exhaust fans were observed in the elevated roof sections. The partial cellars have two access points within the warehouse; however, both were inaccessible during the site reconnaissance due to about 2 feet of water infiltration. From what was visible, the cellar appeared to be composed of cylinder block walls and concrete flooring. Miscellaneous debris, boxes, and other obstructions were observed in the floating water.

Though the warehouse is vacant, it appeared to be used for miscellaneous storage of fencing, construction barriers, and acoustical panels. Interior demolition also appeared to be in progress as building pipes, wires, boilers, and other miscellaneous trash were observed scattered throughout the building.

Pits, Ponds, Lagoons

Pits, ponds or lagoons were not observed at the Subject Property.

Pools of Liquid

About 2 feet of pooled water, likely related to water infiltration, was observed throughout the cellar, making it inaccessible during the site reconnaissance. The concrete slabs underlying the pooled water could not be accessed for inspection.

In the northwest portion of the Subject Property, a pool of liquid with a petroleum-like sheen, likely related to equipment cleaning, was observed near a loading dock. Concrete surface slabs near the pool of liquid appeared to be in fair condition, with some cracking. Miscellaneous pools of liquid or wet slab were also observed throughout the building and are likely due to water infiltration.

Drains, Wells, and Cisterns

An apparent concrete capped drainage trench was observed in the northwestern portion of the site, leading to a sediment trap. The former drainage trench likely is discharged into the city sewer. Previous environmental reports indicate that the drain system was used during the Jayer plating occupancy in which excess plating fluids and spills were washed into the drain, diluted with water, and discharged into the city sewer.

A series of sewer cleanouts was observed running west-east along the northern and southern portions across the ground floor of the building.

Wells and cisterns were not observed during the site reconnaissance

Polychlorinated Biphenyl (PCB) Transformers and/or Hydraulic Equipment

Transformers and hydraulic equipment were not observed.

Storage Containers and Drums

The following drums, materials, products, and chemical (stored in varying sizes from 32 ounces to 55-gallon) were observed throughout the ground floor:

- One 55-gallon drum of soil cuttings;
- Four 55-gallon drums of purged groundwater;
- Latex/acrylic paints;
- Paint stripper and enamel;
- Floor adhesives;
- Window glazing; and
- Motor oil.

No staining or other indications of spills or releases of petroleum or hazardous substances were observed around storage containers. Evidence of leaks from the drums was not observed. The concrete slab, though ridden with sporadic cracks throughout, appeared to be intact in these locations.

Waste Generation, Storage, and Disposal

The owner was not available to interview; however, based on the miscellaneous trash located throughout the property, it is likely that the general waste is being stored at the Subject Property.

Air Emissions or Wastewater Discharges

Air emissions were not observed. With the exception of the aforementioned floor drains sewer cleanouts, evidence of wastewater discharges were not observed.

Sumps

Sumps were not observed; however, two sump pumps were observed during the site reconnaissance that were likely used for water infiltration in the cellar spaces.

USTs or ASTs

A fill port was observed along the Harrison Place sidewalk and a cut potential vent pipe was observed along the southern wall of the exterior building, in line with the observed fill port. The observed pipes are indicative of former petroleum storage at the Subject Property. As discussed above, there are two NYSDEC PBS listings (Nos. 2-083879 and 2-603519) and one open spill listing (No. 98-30001) associated with Subject Property. The spill listing is not related to the ASTs and there are no records of leaks or spills from them, therefore the former ASTs are not considered RECs.

Monitoring Wells or Remedial Activities

Fifteen monitoring wells within the building and 5 monitoring wells on the adjoining sidewalks of the building were observed at the Subject Property. Permanent soil vapor points and several patches of concrete consistent with borings were observed throughout the building. Exposed soil around columns and foundation footings, consistent with test pits, was observed along the southern boundary wall and several columns throughout the building. Groundwater sample collection tubing, deionized water, and buckets using for sampling were also observed. No staining or other indications of spills or releases of petroleum or hazardous substances were observed around the well or concrete-patched areas.

Stained or Discolored Surfaces (Soil, Asphalt, Concrete, etc.)

Localized yellow and dark brown staining was observed on exposed soil and cracked concrete slabs in the northwestern portion of the Subject Property surrounding the abandoned metal plating trench drain used by historical chromium and nickel plating operations. Yellow staining was also observed on the northwestern brick wall, also located in the former metal plating facility.

Circular markings, potentially indicative of former plating baths, were observed on the concrete floor, adjacent south of the exposed soil staining in the northwestern portion of the Subject Property.

Black staining was observed on the concrete slab in the southwestern portion of the Subject Property. The slab appeared to be in good condition; however, miscellaneous trash on the ground prevented a full inspection of it. Staining on the concrete slab is considered a de minimis condition.

Leachate or Seeps

Evidence of leachate or seeps was not observed, except for apparent water through the cellar wall.

Surrounding Property Uses

The Subject Property is surrounded to the north by residential and commercial buildings, to the east by construction stone company, commercial and residential spaces, to the south by residential and commercial spaces and a lot under construction, and to the west by a construction company, MTA subway entrance and school.

Site Reconnaissance Conclusions

The followings REC was identified based on the site reconnaissance:

- Yellow-brown staining was apparent on exposed soil, concrete floor, through crack and on the walls, indicative of historical releases.

- Circular markings likely formed as part of fluid storage during the chromium and nickel plating operations were observed on the concrete floor, near the exposed soil staining in the northwestern portion of the Subject Property. .

The presence of historic fill is considered a BERs. Suspect asbestos-containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB)-containing building materials were observed and are further discussed in Section 7.2

6.0 INTERVIEWS

6.1 Subject Property Owner

The Subject Property owner was not available for interview as part of this Phase I ESA. Information obtained by the User is included in the User Questionnaire provided in Appendix B.

6.2 Owners/Tenants of Adjacent Properties

Owners/tenants of adjacent properties were not available for interview as part of this Phase I ESA.

7.0 ADDITIONAL SERVICES

7.1 Radon

Radon is a colorless, odorless radioactive gas that results from the natural breakdown of uranium minerals in soil, rock, and water and subsequently, enters the atmosphere. It can concentrate in buildings by entering through cracks and/or other penetrations of a building foundation. Some areas are more likely to have elevated concentrations of radon than others, which is reflective of subsurface lithological conditions.

The NYSDOH maintains a database of radon test results on a local and county level. According to the database (updated in October 2017), 109 and 474 radon tests were conducted on first floors and basements, respectively, in homes in Kings County. The average radon levels in basements and first floors were 2.42 pico Curies per Liter (pCi/L) and 1.10 pCi/L, respectively. A total of 88% of indoor radon tests for basement areas and 96% for first floor areas conducted in Kings County resulted in a radon concentration less than 4.0 pCi/L. Based on this information, it is unlikely that actionable levels of radon gas are present at the Subject Property.

7.2 Asbestos-Containing Material, Lead-Based Paint, and PCBs

A formal survey to identify asbestos-containing material (ACM), lead-based paint (LBP) and/or PCB-containing material was not conducted as part of this Phase I ESA. Based on the age of the building, ACM, LBP, and PCB-containing materials may be present. 9-inch by 9-inch flooring tiles were primarily observed in the eastern portion of the Subject Property and may contain ACM. Fluorescent light bulbs and ballasts (suspect PCB equipment) was observed during the site reconnaissance.

8.0 DEVIATIONS AND DATA GAPS

8.1 Deviations

Langan has performed a Phase I ESA of the Subject Property using a standard of good commercial and customary practice that is consistent with the ASTM E1527-13 and the USEPA AAI Rule. Significant deviations were not made to the above referenced standards.

8.2 Data Gaps

To address data gaps, additional sources of information may be consulted. According to AAI, Section 312.20 (g), "to the extent there are data gaps (as defined in section 312.10) in the information developed… that affect the ability of persons (including the environmental professional) conducting the all appropriate inquiries to identify conditions indicative of releases or threatened releases...such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps." According to ASTM International E1527-13, Section 8.3.2.3, "historical research is complete when either: (1) the objectives in 8.3.1 through 8.3.2.2 are achieved; or (2) data failure is encountered. Data failure occurs when all standard historical sources that are reasonably ascertainable and likely to be useful were reviewed and yet the objectives have not been met. If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, give the reasons for the exclusion."

This Phase I ESA conforms to ASTM E1527-13 with the following deviations noted:

- A completed Owner/Operator Questionnaire was not received from the Subject Property Owner;
- Responses to FOIA letters have not been received from all recipients; and
- Due to flooding, the cellar was partially inaccessible during the site reconnaissance.

It is the opinion of the reviewing Environmental Professional that the above deficiencies will not detrimentally affect the identification of potential RECs. Sufficient information has been provided from other data sources to render conclusions regarding the presence of RECs at the Subject Property. Should additional information provided at a later date alter the conclusions of this Phase I ESA, an addendum will be issued to this report.

9.0 FINDINGS AND OPINIONS

This Phase I ESA was conducted in accordance with ASTM E1527-13 and the USEPA AAI Rule. The objective of this Phase I ESA was to identify the presence or likely presence, use, or release on the Subject Property of hazardous substances or petroleum products as defined in ASTM E1527-13 as a REC.

Based on information obtained during the visual inspection of the Subject Property, review of environmental databases and historic information, and contact with federal, state, and local agencies, three RECs and two BREs, and de minimis conditions were identified. Historical and Controlled RECs were not identified.

Recognized Environmental Conditions

The Phase I ESA identified the following RECs:

REC 1 – Historical Use and Generation of Hazardous Waste at the Subject Property

The Subject Property was used as an electric equipment manufacturer (1951), metal finishing manufacturer (1965-2007), zipper manufacturer (1965-2001), and an umbrella manufacturer (1960-2005). Records of cyanide, metal sludges and solvent hazardous waste generation from 1992 are associated with Subject Property. Releases of petroleum products, solvents and/or other hazardous substances related to these former uses may have impacted soil, groundwater and/or soil vapor.

REC 2 – Historical Metal Finishing Operations

From about 1951 to 2007, the northwestern portion of the Subject Property was occupied by Jayer Plating, a metal finishing manufacturer. Based on previous reports, Jayer Plating used chromium and nickel as plating fluids and likely washed excess fluids and spills into the trench drain. Yellow and dark brown-staining and apparent chromium precipitates were observed on exposed soil, floor cracks, walls and concrete slabs in the surrounding area of the trench drain in the northwestern portion of the Subject Property and are likely remnants of the historical metal plating operation. Operations associated with the former plating facility are known to have impacted soil and groundwater at the Subject Property.

The Subject Property was enrolled in the New York State Voluntary Cleanup Program to remediate impacts associated with New York State Department of Environmental Conservation (NYSDEC) Spill No. 98-30001, which is associated with solvent and metal impacts. The spill remains open due to a prior owner's noncompliance with the Voluntary Cleanup Program.

REC 3 – Historical Use of Adjoining and Surrounding Properties

Adjoining properties are, or were historically, occupied by the following: chemical works facility (1907); lacquer spraying facility (1951 to 1990); an unspecified manufacturer (1965 to 1995); and metal finishing/plating companies (1970 to 1992). Surrounding properties are, or were historically, occupied by the following: an ash removal station (1907); two gasoline filling stations (1933 to 1951, and 1969 to 1933); three auto repair facilities (1951 to 2007); packing box manufacturer (1933-2007); and dry cleaner (2003).

Inadvertent releases of petroleum products, solvents, and other hazardous substances related to these surrounding property uses may have migrated and adversely impacted groundwater and/or soil vapor at the Subject Property.

Business Environmental Risks

A Business Environmental Risk (BER) is defined by ASTM 1527-13 as a risk, which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. The following BERs were identified for the Subject Property:

- BER 1 – Historic Fill Material: Based on previous environmental investigations, historic fill is present beneath the concrete building slab at the Subject Property. The presence of this material does not trigger a regulatory reporting requirement, but will require implementation of specific soil handling, management and off-site disposal procedures at a cost premium during any future site redevelopment.

- BER 2 – Mold Growth: About 2-feet of water infiltration was observed in the cellar of the Subject Property and may be associated with mold growth. If identified, mold growth is an indoor air quality concern and is associated with cost premiums to remediate.

De Minimis Condition

Black staining was observed on the concrete slab in the southwestern portion of the Subject Property. The staining was localized and the slab appeared competent with no cracks or signs of spalling; however, miscellaneous trash on the ground prevented a full inspection. Staining on the concrete slab is considered a de minimis condition. No further action is required at this time.

Non-ASTM Environmental Considerations

A Non-ASTM Consideration is identified by ASTM E1527-13 as an environmental issue or condition at a property that parties may wish to assess in connection with commercial real estate that is outside the scope of ASTM E1527-13.

Based on the age of the building, asbestos-containing material and lead-based paint may be present. 9-inch by 9-inch flooring tiles were observed in the eastern portion of the Subject Property and may contain asbestos-containing material (ACM). Fluorescent light bulbs and ballasts (suspect polychlorinated biphenyl [PCB] equipment) was observed during the site reconnaissance. If identified, ACM and lead-based paint (LBP) must be abated prior to renovations or redevelopment of the Subject Property. However, no further action is required at this time.

10.0 REFERENCES

The following references were reviewed as part of this Phase I ESA:

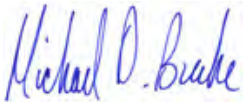
1. Environmental Data Resources, Inc., Inquiry Number: 5432081.11, February 7, 2019. Aerial Photo Decade Package.
2. Environmental Data Resources, Inc., Inquiry Number: 5432081.5, February 7, 2019. City Directory Abstract.
3. Environmental Data Resources, Inc., Inquiry Number: 5432081.4, February 7, 2019. Historical Topographic Map Report.
4. Environmental Data Resources, Inc., Inquiry Number: 5432081.2s, February 7, 2019. Radius Map with GeoCheck.
5. Environmental Data Resources, Inc., Inquiry Number: 5432081.3, February 7, 2019. Sanborn Map Report.
6. Environmental Data Resources, Inc. Inquiry Number 5432081.7, February 8, 2019. EDR Environmental Lien and Activity and Use Limitations Search.
7. Federal Emergency Management Agency Flood Insurance Rate Map, (Map Number 3604970, Panel 208, Suffix F), effective November 16, 1983 and revised September 5, 2007.
8. New York City Department of Buildings, Building Information System, http://www.nyc.gov/html/dob/html/bis/bis.shtml, reviewed February 7, 2019.
9. New York City Planning Commission. February 7, 2019. Zoning Map 13b.
10. New York City Department of Finance, Office of the City Register, Automated City Register Information System (ACRIS) website, http://a836-acris.nyc.gov/CP/, reviewed February 7, 2019.
11. NYC Oasis Maps: http://www.oasisnyc.com/map.aspx, reviewed February 7, 2019.
12. Phase I Environmental Site Assessment, prepared by ERD, dated November 1996.
13. Focused Phase II Soil Investigation Report, prepared by Excel Environmental Resources, Inc. (Excel), dated May 22, 1997.
14. Site Investigation Report, prepared by AKRF, Inc., dated December 1, 1997.
15. Remedial Investigation Work Plan, prepared by MC Environmental, dated November 2011.
16. Draft Remedial Investigation Report, prepared by ESPL, dated February 2014.

17. Supplemental Remedial Investigation Work Plan, prepared by ESPL, dated October 2014.
18. Final Interim Remedial Measures Work Plan, prepared by ESPL, dated November 2016.
19. Supplemental Remedial Investigation Work Plan (SRIWP), prepared by Langan, dated November 29, 2018.

11.0 STATEMENT OF QUALIFICATIONS AND SIGNATURES

Langan declares that, to the best of its professional knowledge and belief, the personnel who performed this Phase I ESA meet the definition of Environmental Professional as defined in Subsection 312 10 of 40 CFR 312 and that they have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. They have developed and performed the AAIs in conformance with the standards and practices set forth in 40 CFR Part 312. Résumés outlining the qualifications of the Environmental Professionals who performed this Phase I ESA are included in Appendix M.

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.



Michael Burke, P.G., CHMM, LEED^{AP}
Principal/Vice President

Appendix IV:

Remedial Action Work Plan

EXECUTIVE SUMMARY

Bogart Holdings LLC (the previous owner) entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) on November 10, 2010, to investigate and remediate the about 80,000-square-foot (1.8-acre) property located at 2 Ingraham Street in the East Williamsburg section of Brooklyn, New York ("the site"). 74 Bogart LLC (the current owner) was added to the BCA as an additional Volunteer on January 18, 2019, and will implement the measures described in this Remedial Action Work Plan (RAWP) ("the Volunteer" refers to 74 Bogart LLC hereafter). The Volunteer is enrolled in the Brownfield Cleanup Program (BCP Site No. C224036) and is proposing to remediate the property for its intended use under a Track 4 remedy with regulatory oversight and guidance by the NYSDEC. When completed, the site will contain an at-grade asphalt-paved logistics company parking lot in the western portion of the site (hereafter referred to as "parking lot development") and a seven-story storage building with an about 34,000-square-foot cellar footprint in the eastern portion of the site (hereafter referred to as "storage building development").

Implementation of an NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP), dated September 10, 2019, began in September 2019 and is ongoing. The first phase of the interim remedial measures (IRM) included demolition of the existing building and mass excavation to achieve Track 2 Restricted Use Restricted-Residential (RURR) Soil Cleanup Objectives (SCOs) in advance of construction of the storage building development. The IRMWP was amended on March 1, 2021 to add a second IRM phase, including the excavation and removal of mercury-impacted soil and excavation to remediate in advance of installation of a stormwater detention system and construction of the parking lot development. Per an NYSDEC RAWP comment letter dated October 7, 2021, the remedy proposed in this RAWP is specific to the former metal plating trench drain area (AOC 2); the IRM is excluded from the evaluation of remedial alternatives.

This RAWP summarizes the IRM and the nature and extent of contamination as determined from data gathered during the 2013 Remedial Investigation (RI), the 2014/2017 Supplemental Remedial Investigation (SRI), and the 2018/2019 SRI. It provides an evaluation of a Track 1 cleanup and a Track 4 cleanup for the former metal plating trench drain area (AOC 2), a technical discussion for implementation, estimated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in the Department of Environmental Regulation (DER)-10 and complies with all applicable standards, criteria and guidance (SCG). The remedy described in this document also complies with all applicable federal, state and local laws, regulations and requirements. The NYSDEC and New York State Department of Health (NYSDOH) have determined that this site poses a significant threat to human health and the environment. The RI and SRI for this site did not identify fish and wildlife resources.

A formal remedial design document will not be prepared.

Appendix V:

Environmental Easement

NYC DEPARTMENT OF FINANCE
OFFICE OF THE CITY REGISTER

This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument.The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.

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RECORDING AND ENDORSEMENT COVER PAGE **PAGE 1 OF 10**

Document ID: 2022120700263001 Document Date: 12-01-2022 Preparation Date: 12-07-2022
Document Type: EASEMENT
Document Page Count: 9

PRESENTER:
SIVE PAGET & RIESEL, P.C.
560 LEXINGTON AVENUE, 15TH FLOOR
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212-421-2150
NDUNCAN@SPRLAW.COM

RETURN TO:
SIVE PAGET & RIESEL, P.C.
560 LEXINGTON AVENUE, 15TH FLOOR
NEW YORK, NY 10022
212-421-2150
NDUNCAN@SPRLAW.COM

PROPERTY DATA

Borough	Block	Lot	Unit	Address
BROOKLYN	3084	1	Entire Lot	74 BOGART STREET

Property Type: OTHER Easement

CROSS REFERENCE DATA

CRFN_____ *or* DocumentID_____ *or* _____ Year_____ Reel____ Page_____ *or* File Number_____

PARTIES

GRANTOR/SELLER:
74 BOGART LLC
C/O: STORAGE DELUXE REALTY LLC, 26 WEST 17TH STREET, SUITE 801
NEW YORK, NY 10011

GRANTEE/BUYER:
PEOPLE OF STATE OF NEW YORK BY DEPT. ENVIRONMENTAL
CONSERVATION, 625 BROADWAY
ALBANY, NY 12233

FEES AND TAXES

Mortgage :

Mortgage Amount:	$	0.00
Taxable Mortgage Amount:	$	0.00
Exemption:		
TAXES: County (Basic):	$	0.00
City (Additional):	$	0.00
Spec (Additional):	$	0.00
TASF:	$	0.00
MTA:	$	0.00
NYCTA:	$	0.00
Additional MRT:	$	0.00
TOTAL:	$	0.00
Recording Fee:	$	82.00
Affidavit Fee:	$	0.00

Filing Fee: $ 100.00

NYC Real Property Transfer Tax: $ 0.00

NYS Real Estate Transfer Tax: $ 0.00

RECORDED OR FILED IN THE OFFICE OF THE CITY REGISTER OF THE CITY OF NEW YORK
Recorded/Filed 12-09-2022 13:30
City Register File No.(CRFN): **2022000447061**

City Register Official Signature

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 1st day of December, 2022 between Owner, 74 Bogart LLC, having an office at c/o Storage Deluxe, 26 West 17th Street, New York 10011 (the "Grantor"), and The People of the State of New York (the "Grantee"), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 2 Ingraham Street (a/k/a 74 Bogart Street), in the City of New York, Borough of Brooklyn, County of Kings and State of New York, known and designated on the tax map of the New York City Department of Finance as tax map parcel number: Block 3084, Lot 1, being the same as that property conveyed to Grantor by deed dated May 8, 2019 and recorded in the City Register of the City of New York at CRFN: 2019000154097. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 1.83 +/- acres and is hereinafter more fully described in the Land Title Survey dated June 21, 2022 prepared by Gregory S. Gallas (Reg. No. 50124) of Gallas Surveying Group, LLC, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation

established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index No. Number: C224036-09-10, as amended as applicable, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled

Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held

by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3);

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C224036
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

74 Bogart LLC:

By: _____

Print Name: Steve Novenstein

Title: Authorized Signatory Date: 11/11/22

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF NEW YORK)

On the 11TH day of NOVEMBER, in the year 2022, before me, the undersigned, personally appeared STEVE NOVENSTEIN, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Barbara A Dambrosia
Notary Public - State of New York

BARBARA ANN DAMBROSIA
Notary Public - State of New York
NO. 01DA6367259
Qualified in Queens County
My Commission Expires Nov 13, 2025

SEAL

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting by and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Andrew O. Guglielmi, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 1st day of December in the year 2022 before me, the undersigned, personally appeared Andrew O. Guglielmi, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

JENNIFER ANDALORO
Notary Public, State of New York
No. 02AN6098246
Qualified in Albany County
Commission Expires January 14, 2024

SEAL

SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE BOROUGH OF BROOKLYN, KINGS COUNTY, CITY AND STATE OF NEW YORK, BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF BOGART STREET WITH THE NORTHERLY SIDE OF HARRISON PLACE;

1. RUNNING THENCE NORTHERLY ALONG THE EASTERLY SIDE OF BOGART STREET, 200 FEET TO THE CORNER FORMED BY THE INTERSECTION OF THE EASTERLY SIDE OF BOGART STREET WITH THE SOUTHERLY SIDE OF INGRAHAM STREET;

2. THENCE EASTERLY ALONG THE SOUTHERLY SIDE OF INGRAHAM STREET, 400 FEET TO THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY SIDE OF INGRAHAM STREET AND THE WESTERLY SIDE OF MORGAN AVENUE;

3. THENCE SOUTHERLY ALONG THE WESTERLY SIDE OF MORGAN AVENUE, 200 FEET TO THE CORNER FORMED BY THE INTERSECTION OF THE WESTERLY SIDE OF MORGAN AVENUE WITH THE NORTHERLY SIDE OF HARRISON PLACE;

4. THENCE WESTERLY ALONG THE NORTHERLY SIDE OF HARRISON PLACE, 400 FEET TO THE POINT OR PLACE OF BEGINNING.

CONTAINING 80,000 SQUARE FEET OR 1.8365 ACRE.

Appendix VI:

Site Management Plan

EXECUTIVE SUMMARY

This Site Management Plan (SMP) was prepared for the 2 Ingraham Street site in the East Williamsburg neighborhood of Brooklyn, New York (the site). The site is identified as Brooklyn Borough Tax Block 3084, Lot 1. The site (Brownfield Cleanup Program (BCP) Site No. C224036) was remediated pursuant to the November 10, 2010 Brownfield Cleanup Agreement (BCA), Index No. C224036-09-10, between the New York State Department of Environmental Conservation (NYSDEC) and Smith Equities, LLC (i.e., a former owner and the original Volunteer). The BCA was amended on December 19, 2012, to remove and replace the original Volunteer, Smith Equities, LLC, with Bogart Holdings LLC (i.e., the subsequent owner and Volunteer). The BCA was again amended on January 18, 2019 to add 74 Bogart LLC (i.e., then-prospective purchaser of the site) to the BCA as an additional Volunteer. The BCA was amended a third time on July 17, 2019, to reflect a transfer of ownership of the site from Bogart Holdings LLC to 74 Bogart LLC (i.e., the current owner; hereinafter, "the Volunteer" refers only to 74 Bogart LLC).[1]

The following provides a brief summary of the controls implemented for the site, as well as the inspections, monitoring, maintenance and reporting activities required by this Site Management Plan (SMP):

Site Identification: Brownfield Cleanup Program (BCP) Site No. C224036
2 Ingraham Street, Brooklyn, New York

Institutional Controls:	1. The property may be used for Restricted-Residential use as defined in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial use as defined in 6 NYCRR Part 375-1.8(g)(2)(iii), and Industrial use as designed in 6 NYCRR Part 375-1.8(g)(2)(iv)
	2. All ECs must be operated and maintained as specified in this SMP
	3. All ECs must be inspected at a frequency and in a manner defined in the SMP

[1] Additionally, the BCA was amended on May 28, 2020, to transition the site from Generation 2 of the BCP to Generation 3 of the BCP, following the enactment of legislative amendments to the BCP in 2015.

Site Identification: Brownfield Cleanup Program (BCP) Site No. C224036

2 Ingraham Street, Brooklyn, New York

	4. The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the NYSDEC
	5. Groundwater and other environmental or public health monitoring must be performed as defined in this SMP
	6. Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP
	7. On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP
	8. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP
	9. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP
	10. Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP
	11. Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement
	12. The potential for vapor intrusion must be evaluated for any potential future buildings developed in the area within the IC boundaries, and any potential impacts that are identified must be monitored or mitigated
	13. Vegetable gardens and farming on the site are prohibited

Site Identification: Brownfield Cleanup Program (BCP) Site No. C224036
2 Ingraham Street, Brooklyn, New York

	14. The Volunteer must provide all persons who acquire any interest in the site a complete copy of the SMP that the NYSDEC approves for the site and all NYSDEC-approved amendments to the SMP
Engineering Controls:	1. Composite cover system
	2. In-situ stabilization/solidification (ISS) monolith and capillary break

Inspections:	**Frequency:**
1. Composite cover system	Annually
2. ISS monolith and capillary break	When exposed during excavation and/or site redevelopment.
3. Monitoring wells	Quarterly for the first year, and annually thereafter.
Monitoring:	**Frequency:**
1. Groundwater monitoring wells (PWM-02, PMW-22, PMW-27, PMW-30_R, and PMW-54)	Quarterly for the first two years, and annually thereafter. If warranted by results, a request to decrease frequency will be submitted to NYSDEC.
2. Soil vapor intrusion evaluation for potential future buildings in parking lot development	As necessitated by any future site redevelopment
Maintenance:	**Frequency:**
1. Composite cover inspection	As needed
2. ISS monolith and capillary break	As needed, if exposed and accessible during or after any future construction activities within the ISS area
Reporting:	**Frequency**
1. Groundwater monitoring	Quarterly for first year, and annually thereafter.

Site Identification: Brownfield Cleanup Program (BCP) Site No. C224036
2 Ingraham Street, Brooklyn, New York

2. Periodic Review Report	Annually, unless otherwise approved by the NYSDEC.

Further descriptions of the above requirements are provided in detail in the latter sections of this SMP.

Appendix VII:

Final Engineering Report

FINAL ENGINEERING REPORT

for

2 INGRAHAM STREET
Brooklyn, New York
NYSDEC BCP Site No. C224036

Prepared For:

74 Bogart LLC
26 West 17th Street, Suite 801
New York, NY 10011

Prepared By:

Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001

January 31, 2023
170519402

LANGAN

CERTIFICATION

I, Gerald Nicholls, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Action Work Plan and Interim Remedial Measures Work Plan were implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Action Work Plan and Interim Remedial Measures Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Action Work Plan and Interim Remedial Measures Work Plan, and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by the Department.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Gerald Nicholls, of Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C., am certifying as Owner's Designated Site Representative for the site.



NYS Professional Engineer #092433	01/31/2023	Gerry Nicholls
	Date	Signature

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LIST OF ACRONYMS

Acronym	Definition
µg/L	micrograms per liter
µg/m³	micrograms per cubic meter
ACM	Asbestos-containing materials
Alpha	Alpha Analytical Labs
AOC	Area of Concern
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bfsg	Below former site grade
bgs	Below grade surface
BMP	Best Management Practices
bsg	Below site grade
BUD	Beneficial Use Determination
C&D	Construction and demolition
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
cm/s	Centimeters per second
CP	Commissioners Policy
CPP	Citizen Participation Plan
CQAP	Construction Quality Assurance Plan
CY	cubic yards
DD	Decision Document
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Reports
EC	Engineering Controls
EDD	Electronic Data Deliverable
EE	Environmental Easement
el.	elevation
ELAP	Environmental Laboratory Approval Program
EMC	Environmental Management Consultants, Inc
EPH	Extractable Petroleum Hydrocarbons
ESA	Environmental Site Assessment
eV	electron volt
Gallas	Gallas Surveying Group
FER	Final Engineering Report
GPR	Ground-penetrating Radar

Acronym	Definition
HC	Hydraulic Conductivity
IC	Institutional Controls
IRM	Interim Remedial Measures
IRMWP	Interim Remedial Measures Work Plan
ISS	In-situ Stabilization/Solidification
LDR	Land Disposal Restrictions
mg/kg	Milligrams per kilogram
MTA	Metropolitan Transportation Authority
NAVD88	North American Vertical Datum of 1988
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
NYCDOB	New York City Department of Buildings
NYCDEP	New York City Department of Environmental Protection
NYCDOT	New York City Department of Transportation
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated Biphenyls
PE	Professional Engineer
PFAS	Per- and polyfluoroalkyl Substances
PID	Photoionization detector
PM10	Particulate matter less than 10 microns in diameter
PPE	Personal Protection Equipment
ppm	Parts per million
psi	Pounds per square inch
PVC	Polyvinyl chloride
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCA	Recycled Concrete Aggregate
RCRA	Resource Conservation and Recovery Act
RE	Remedial Engineer
RI	Remedial Investigation
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan

Acronym	Definition
RURR	Restricted Use Restricted-Residential
SCO	Soil Cleanup Objectives
SDS	Safety Data Sheets
SPLP	Synthetic Precipitation Leaching Procedure
SMP	Site Management Plan
SMMP	Soil/Material Management Plan
SOE	Support of Excavation
SOP	Site Operations Plan
SRI	Supplemental Remedial Investigation
SRIWP	Supplemental Remedial Investigation Work Plan
SWPPP	Stormwater Pollution Prevention Plan
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TCLP	Toxicity Characteristic Leaching Procedure
TOX	Total Organic Halides
TPH-DRO	Total Petroleum Hydrocarbons - Diesel Range Organics
TPH-GRO	Total Petroleum Hydrocarbons - Gasoline Range Organics
UCS	Unconfined Compressive Strength
UN/DOT	United Nations/Department of Transportation
USEPA	United Stated Environmental Protection Agency
UST	Underground Storage Tank
UU	Unrestricted Use
VOC	Volatile Organic Compound
XRF	X-ray Fluorescence

1.0 BACKGROUND AND SITE DESCRIPTION

Smith Equities, LLC (a previous owner and the original Requestor) entered into a Brownfield Cleanup Agreement (BCA), Index No. C224036-09-10, on November 10, 2010 with the New York State Department of Environmental Conservation (NYSDEC) to investigate and remediate the approximately 80,000-square-foot (1.8365-acre) property located at 2 Ingraham Street, in the East Williamsburg section of Brooklyn, New York (hereinafter referred to as the "site"). The BCA was amended on December 19, 2012, to remove and replace the original Volunteer, Smith Equities, LLC, with Bogart Holdings LLC (the subsequent owner and Volunteer). The BCA was again amended on January 18, 2019, to add 74 Bogart LLC (then-prospective purchaser of the site) to the BCA as an additional Volunteer. The BCA was amended a third time on July 17, 2019, to reflect a transfer of ownership of the site from Bogart Holdings LLC to 74 Bogart LLC (the current owner).[1] 74 Bogart LLC implemented the NYSDEC-approved Interim Remedial Measures Work Plan (IRMWP) and Remedial Action Work Plan (RAWP) (hereinafter, "the Volunteer" refers only to 74 Bogart LLC).

The site was remediated in accordance with the IRMWP (dated September 10, 2019, as amended March 1, 2021) and the RAWP (dated June 2022) to support Track 2 and Track 4 restricted-residential use. The IRMWP approvals, RAWP approval, and Decision Document (DD) are included in Appendix A.

The site is located in Brooklyn, Kings County, New York and is identified as Block 3084 and Lot 1 on the Brooklyn Borough Tax Map. Alternate addresses for the site include 74-92 Bogart Street, 1-39 Harrison Place, 2-40 Ingraham Street, and 75-91 Morgan Avenue. The site is approximately 80,000 square feet (1.8365 acres) in area and is bounded by Ingraham Street to the north, Morgan Avenue to the east, Harrison Place to the south, and Bogart Street to the west.

The present site uses include an at-grade asphalt-paved logistics company parking lot in the western portion of the site (hereinafter referred to as the "parking lot development") and a seven-story storage building with an approximately 34,000-square-foot cellar in the eastern portion of the site (hereinafter referred to as "storage building development"). The parking lot and storage building developments are shown on Figure 1.

The northwest corner of the site includes an easement for New York City Water Tunnel No. 3, which is currently under construction by the New York City Department of Environmental Protection (NYCDEP) and is over 500 feet below site grade (bsg) within

[1] The BCA was also amended on May 28, 2020, to transition the site from Generation 2 of the Brownfield Cleanup Program (BCP) to Generation 3 of the BCP, following the enactment of legislative amendments to the BCP in 2015.

bedrock. The upper vertical limit of the easement is more than 100 feet below current site grade. The NYC Metropolitan Transportation Authority (MTA) L train subway tunnel runs underneath Harrison Place, adjacent to the southern site boundary. A site location map and site plan showing the property boundaries is included as Figure 1. The recorded Environmental Easement (EE), which includes a site survey and a metes and bounds description of the site boundaries, is included in Appendix B.

This Final Engineering Report (FER) documents the remedial actions implemented in accordance with the NYSDEC-approved IRMWP and RAWP for a Track 2 Restricted Use Restricted-Residential (RURR) remedy in the storage building development and a Track 4 RURR remedy in the parking lot development. Ground-intrusive activities associated with the remedy were completed in November 2022. An electronic copy of this FER with all supporting documentation is included as Appendix C.

2.0 SITE HISTORY AND REMEDY SELECTION

2.1 Site History

According to Sanborn Fire Insurance Maps, the site was located in a moderately developed urban area as early as 1888, and by 1907 was partially improved with a church, rectory, convent, orphanage, and carriage house. Additional buildings shown in the 1933 Sanborn map include a parochial school, a laundry, and a shelter. According to a Phase I Environmental Site Assessment (ESA) report prepared by ERD Environmental, Inc. (ERD), a site-wide one-story building was constructed in 1946. In the 1951 Sanborn map, the northeast quarter of the building is depicted as a machine shop and the southeast quarter is labeled as an electrical equipment manufacturing and repair business. From 1965 to 1995, historical records indicate the building was re-partitioned, with Sanborn maps indicating uses including metal finishing (northwest portion), zipper manufacturing (southwest portion), and umbrella manufacturing (eastern portion). At the time of the ERD Phase I ESA reconnaissance in 1996, the building had reportedly been vacant for approximately seven years. The two most recent tenants were listed as Jayer Plating (chromium and nickel-plating operation in northwest portion) and Macon Umbrella Corporation (south and east portions).

According to a Remedial Investigation Work Plan (RIWP) prepared by MC Environmental, LLC (MC Environmental), the site building was again occupied in 2011 by warehouse tenants and a picture frame assembly company. Uses described in a 2014 Draft Remedial Investigation Report (RIR) prepared by ESPL Environmental Consultants Corp. (ESPL) included a soda distribution warehouse (north-central portion of the site) and a party goods wholesaler (south-central portion of the site), with additional areas on the west and east sides of the site listed as vacant. According to a 2016 IRMWP prepared by ESPL, the entire building was vacated as of April 2016. The building was abated for asbestos-containing materials (ACM) and demolished during IRMWP implementation between September and December 2019.

2.2 Previous Environmental Reports

The following previous environmental reports and work plans have been prepared for the site and are listed for reference:

- November 1996 Phase I ESA, prepared by ERD
- May 22, 1997 Focused Phase II Soil Investigation Report, prepared by Excel Environmental Resources, Inc. (Excel)
- December 1, 1997 Site Investigation Report, prepared by AKRF, Inc.
- November 2011 RIWP, prepared by MC Environmental

- February 2014 Draft RIR, prepared by ESPL
- October 2014 Supplemental Remedial Investigation Work Plan (SRIWP), prepared by ESPL
- November 2016 Final IRMWP, prepared by ESPL
- November 29, 2018 SRIWP, prepared by Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology, D.P.C. (Langan)
- April 17, 2019 Phase I ESA, prepared by Langan
- August 8, 2019 RIR, prepared by Langan
- September 10, 2019 IRMWP (amended March 1, 2021), prepared by Langan
- November 11, 2019 Off-site Investigation Work Plan, prepared by Langan
- January 24, 2020 Waste Characterization Sampling Report, prepared by Impact Environmental (Impact)
- September 10, 2020 Treatability Study and Hazardous Lead Delineation Work Plan, prepared by Langan
- December 2, 2020 Mercury Excavation Letter, prepared by Langan
- March 12, 2021 Draft Supplemental Investigation Report, prepared by Langan
- May 19, 2021 Waste Characterization Sampling Report, prepared by Impact Environmental
- June 2022 Remedial Action Work Plan, prepared by Langan
- October 7, 2022 Billboard Foundation Installation Work Plan, prepared by Langan
- January 20, 2023 Site Management Plan, prepared by Langan

Subsurface investigations performed from 1997 to the present included sampling of soil, groundwater, sub-slab vapor, and soil vapor, with some investigations focusing on the metal plating trench area and others intending to characterize the entire site or to delineate or characterize other contamination (e.g., solvent-impacted groundwater, mercury-impacted fill, hazardous lead soil).

Remedial investigations are further described in the following section.

2.3 Remedial Investigation Findings

The site was investigated in accordance with the scope of work presented in the NYSDEC-approved November 2011 RIWP, October 2014 SRIWP, and November 2018 SRIWP. The remedial investigation (RI) was conducted between April and July 2013, a

supplemental remedial investigation (SRI) was conducted in December 2014 and July 2017, and a second SRI was conducted between December 2018 and February 2019. The RIR, prepared by Langan, was approved by NYSDEC on August 8, 2019.

The tasks completed during the RI and SRIs are described below:

RI – April to July 2013 (completed by ESPL)

- Advanced 21 soil borings (identified as B-5 through B-15 and SB-1 through SB-10) and collected 48 soil samples, including quality assurance/quality control (QA/QC) duplicate samples
- Installed six permanent monitoring wells (identified as MW-05 through MW-10) and collected 10 groundwater samples, including QA/QC duplicate samples
- Installed four sub-slab vapor sampling points (identified as SVP-1 through SVP-4) and collected four sub-slab vapor samples

SRI – December 2014 and July 2017 (completed by ESPL)

- Advanced 16 soil borings (identified as SSB-02N, SSB-02W, SSB-02S, SSB-02E, SSB-07N, SSB-07S, SSB-10A through SSB-10D, SSB-15E, SSB-17, SSB-18, SSB-19, SSB-20 and SSB-22), and collected 43 soil samples, including QA/QC duplicate samples
- Installed one permanent monitoring well (identified as MW-11) and collected 12 groundwater samples, including a QA/QC duplicate sample, from the new well and existing wells.
- Installed three soil vapor sampling points (identified as SSVP-3/SSVP-3I, SSVP-4/SSVP-4I, and SSVP-7/SSVP-7I), and collected 3 soil vapor samples, 3 indoor air samples, and one ambient air sample.

SRI – December 2018 to February 2019 (completed by Langan)

- Completed a geophysical survey, using ground-penetrating radar (GPR) and electromagnetic and utility line locator instruments, to identify and delineate potential underground storage tanks (USTs), concrete discontinuities, drains, underground utilities, and other subsurface anomalies across the site
- Advanced 44 soil borings (identified as SSB-23 through SSB-66) and collected 296 soil samples, including 18 QA/QC duplicate samples
- Installed nine permanent monitoring wells (identified as MW-12 through MW-20) and collected 21 groundwater samples, including one QA/QC duplicate sample

- Installed 13 sub-slab vapor sampling points, including nine new points and reinstallation of four pre-existing points, and collected 14 sub-slab vapor samples, including one QA/QC duplicate sample

Recovered soil from each investigation was screened for visual, olfactory, and photoionization detector (PID) evidence of environmental impacts, and visually classified for soil type, grain size, texture and moisture content. A handheld X-ray fluorescence (XRF) analyzer was also used at select locations to screen for mercury, chromium, and nickel impacts.

A total of 387 soil samples (including QA/QC samples) were collected for laboratory analysis during the RI and SRIs. For each soil boring, a soil sample was collected from:

- 4-foot intervals from grade to termination depth during the RI;
- 5-foot intervals from grade to termination depth during the 2014/2017 SRI; and
- Every 2 linear feet (or 1 foot, depending on recovery) during the 2018/2019 SRI.

No apparent environmental impacts (i.e., solvent or petroleum impacts) were observed based on visual/olfactory and PID soil screening during the RI or SRIs. XRF screening values were compared to analytical results for soil samples that were both XRF-screened and lab-analyzed for chromium, mercury, and/or nickel; efficacy of XRF screening varied, as the observed screening values were often higher than the corresponding lab-reported concentrations.

Groundwater samples were collected from permanent monitoring wells MW-01 through MW-10 during the RI, from permanent monitoring wells MW-01 through MW-11 during the 2014/2017 SRI, and from MW-01 through MW-20 during the 2018/2019 SRI.

Sub-slab vapor samples were collected from four soil vapor points (SVP-1 through SVP-4) during the RI, from three soil vapor points/indoor air locations (SVP-3/SSVP-3I, SSVP-4/SSVP-4I, and SSVP-7/SSVP-7I) during the 2014/2017 SRI, and from 13 sub-slab vapor points (SSVP-2 through SSVP-4, and SSVP-7 through SSVP-16) during the 2018/2019 SRI. The sub-slab vapor points were sampled in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (New York State Department of Health [NYSDOH] October 2006, revised May 2017) (NYSDOH Guidance). Sub-slab vapor samples were collected into laboratory-supplied, batch-certified clean, 2.7-liter Summa canisters with flow controllers calibrated for 2-hour sample intervals.

Soil, groundwater, sub-slab vapor, and soil vapor samples collected during the RI and SRIs were analyzed by NYSDOH Environmental Laboratory Approval Program (ELAP)-certified laboratories as follows:

- Soil samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C, semivolatile organic compounds (SVOCs) by USEPA Method 8270D, pesticides by USEPA Method 8081B, polychlorinated biphenyls (PCBs) by USEPA Method 8082A, metals by USEPA Method 6010C or Method 6010D/7000 series (including hexavalent and trivalent chromium), total cyanide by USEPA Method 9010C/9012B, and toxicity characteristic leaching procedure (TCLP) chromium, lead, and/or mercury.
- Groundwater samples were analyzed for VOCs by USEPA Method 8260C, SVOCs by USEPA Method 8270D (including SIM), pesticides by USEPA Method 8081B, PCBs by USEPA Method 8082A, and total and dissolved (field filtered) Target Analyte List (TAL) metals, including hexavalent and total chromium, by USEPA Method 6010/6020/7000 series.
- Groundwater samples collected during the 2018/2019 SRI were also analyzed for 1,4-dioxane by USEPA Method 8270-SIM and per- and polyfluoroalkyl substances (PFAS) by USEPA Method 537M.
- Sub-slab vapor, soil vapor, and ambient air samples were analyzed for VOCs via USEPA Method TO-15 and for helium (during the RI only).

The NYSDEC and NYSDOH determined that the site poses a significant threat to human health and the environment.

2.4 Remedial Action Objectives

Objectives for the remedial program were established through the remedy selection process stated in 6 New York Codes, Rules and Regulations (NYCRR) Part 375. The Remedial Action Objectives (RAO) for the site as listed in the June 29, 2022 DD are as follows:

Table 2.4 Remedial Action Objectives

RAOs	RAOs for Public Protection	RAOs for Environmental Protection
Groundwater	• Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards • Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater	• Restore the groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable • Remove the source of ground or surface water contamination
Soil	• Prevent ingestion/direct contact with contaminated soil • Prevent inhalation of, or exposure from contaminants volatilizing from contaminants in soil	• Prevent migration of contaminants that would result in groundwater or surface water contamination
Soil Vapor	• Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into the building at the site	

2.5 Description of Selected Remedy

The site was remediated in accordance with the NYSDEC-approved IRMWP (dated September 10, 2019 and amended on March 1, 2021), RAWP (June 2022), and DD (June 29, 2022). A Track 2 RURR remedy was selected for the storage building development and a Track 4 RURR remedy was selected for the parking lot development to address soil, groundwater, and soil vapor impacts. The IRMWP approvals, RAWP approval, and DD are included in Appendix A. The factors considered during the selection of the remedy are those listed in 6 NYCRR 375-1.8.

Implementation of the remedy, in accordance with the IRMWP, RAWP, and DD, included the elements listed below.

1. Development and implementation of a Construction Health and Safety Plan (CHASP) and Community Air Monitoring Plan (CAMP) for the protection of on-site workers, the community, and the environment during the remediation phase of development.

2. Demolition and off-site disposal of the former building, including chromium-impacted concrete building slab and footings.
3. Supplemental sampling of site media for mercury (in the parking lot development) and emerging contaminants (throughout the site).
4. Installation of support of excavation (SOE) soldier piles and timber lagging for the storage building development.
5. Localized dewatering, treatment via settling, and discharge of dewatering fluids in accordance with an NYCDEP sewer discharge permit.
6. Excavation of soil/fill from the following areas to a maximum depth of approximately:
    - 15.6 feet below former site grade (bfsg)[2] (elevation [el.] 5.4[3]) in the storage building development for the building foundation, with localized excavations to:
        - 18 feet bfsg (el. 3) for elevator pit excavations.
        - 15 to 16 feet bfsg (el. 6 to 5) for over-excavation based on documentation sample results.
    - 12 feet bfsg (el. 9) in the parking lot development for the stormwater detention system.
    - 8 feet bfsg (el. 13) in the parking lot development for the mercury source area removals.
    - 3 feet bfsg (el. 18) in the parking lot development for hazardous lead-impacted and hazardous chromium-impacted soil/fill removal.
    - 4 feet bfsg (el. 14) in the parking lot development for hazardous chromium-impacted soil/fill removal.
    - 5.5 feet below grade surface (el. 15) in the northwest part of the site for pre-excavation of non-hazardous fill and hazardous chromium-impacted soil (F006/D007 and D007 waste) within the approximately 6,500-square-foot in-situ stabilization/solidification (ISS) area, with localized over-excavation in the ISS area to 10.5 feet bfsg (el. 10.5).

[2] Feet bfsg refers to the former building foundation slab elevation (el. 21), whereas feet below grade surface (bgs) refers to the general site elevation (el. 20.5) after the former building foundation slab was removed.
[3] Elevations are stated in North American Vertical Datum of 1988 (NAVD88).

7. Off-site disposal of all material removed from the site in accordance with all federal, state, and local rules and regulations for handling, transport and disposal, including:
    - Non-hazardous soil/fill, concrete debris, polyethylene sheeting, and decontamination water.
    - Hazardous chromium-impacted soil/fill (F006/D007 and D007 waste), hazardous chromium-impacted concrete (F006/D007 waste), hazardous lead-impacted soil/fill (D008 waste), hazardous mercury-impacted soil/fill (D009), and hazardous chromium-impacted sweeping compound (F006/D007 waste).
    - Development and purged groundwater generated from the performance monitoring well installation and baseline groundwater sampling.
    - Bench-scale treatability study soil samples generated during IRMWP implementation and soil cuttings generated from the reinstallation and/or repair of performance monitoring wells PMW-27 and PMW- 30_R.
    - Development and purged groundwater generated from the re-installation and repair of performance monitoring wells PMW-27 and PMW-30_R.
8. Collection and analysis of:
    - 82 documentation base and sidewall samples (including QA/QC samples) from the storage building excavation to show that Track 2 RURR Soil Cleanup Objectives (SCOs) were met.
    - 10 documentation base samples (including QA/QC samples) from the stormwater detention system excavations.
    - 24 documentation base and sidewall samples (including QA/QC samples) from the mercury source area excavations.
9. Screening of excavated soil/concrete debris for indication of contamination by visual and/or olfactory observations and monitoring with a PID and/or Jerome J405 mercury vapor analyzer (or equivalent) during ground-intrusive site work.
10. Backfill of the subgrade for the storage building development foundation, outside the foundation walls of the storage building, mercury source removal

excavations, stormwater detention system excavations, and ISS area with native soil and/or imported material.

11. Installation of groundwater monitoring wells down-gradient of mercury source area excavations and the ISS area, and collection of baseline performance monitoring groundwater samples.
12. Use of an excavator bucket to mix grout (Portland cement and water), Blastox 215, and ferrous sulfate with soil in the ISS area. ISS mixing began at approximately 5 feet below grade surface (el. 15) and extended to depths varying between approximately 14.5 and 24.5 feet below grade surface (el. 6 to -4) across an area of approximately 6,500 square feet, for a total treatment volume of approximately 2,700 cubic yards of soil. ISS implementation involved the addition of approximately:
    - 226 tons of Portland cement,
    - 56,790 gallons of water,
    - 93 tons of Blastox 215, and
    - 46.5 tons of ferrous sulfate.
13. Collection of unconfined compressive strength (UCS), hydraulic conductivity (HC), and synthetic precipitation leaching procedure (SPLP) QC samples once ISS mixing was complete.
14. Advancement of six cores through the ISS monolith using a Geoprobe 7800 truck-mounted drill rig.
15. Installation of a vapor barrier as a construction measure beneath the cellar slab and along the foundation walls of the storage building.
16. Construction and maintenance of the following ECs to prevent human exposure to remaining contaminated soil/fill and potential soil vapor from off-site sources:
    - An approximately 8-inch-thick composite cover system consisting of approximately 4 inches of recycled concrete aggregate (RCA) subbase and 4 inches of asphalt pavement underlain by a demarcation barrier, throughout the parking lot development.
    - An ISS monolith (soil-cement matrix) extending from approximately el. 15 to a maximum of approximately el. -4 across an approximately 6,500-square-foot area in the northwest part of the site.

- A composite cover system installed above the ISS monolith and composed of a demarcation barrier (i.e., Geotex DND Demarcation Fabric [a geotextile fabric]) placed on top of the ISS area followed by geotextile fabric, approximately 3 feet of clean 3/4-inch stone (as a capillary break), geotextile fabric, clean backfill, geotextile fabric, a 4-inch-thick RCA subbase to approximately 4 inches below grade, and an approximately 4-inch-thick asphalt cap.
- An approximately 12-inch-thick concrete mat slab installed as part of a billboard foundation in an approximately 384-square-foot area in the northwest corner of the site.

17. Reinstallation of performance monitoring well PMW-30 and repair of performance monitoring well PMW-27, which were damaged during sidewalk construction on Ingraham Street.
18. Execution and recording of an EE to restrict land use and prevent future exposure to any contamination remaining at the site
19. Development and implementation of a Site Management Plan (SMP), included as Appendix D, for long term management of remaining contamination as required by the EE, which includes plans for: (1) Institutional Controls (IC) and Engineering Controls (EC), (2) monitoring, (3) operation and maintenance and (4) reporting.

The RURR SCOs for the remedy are provided in Table 1. Remedial excavation extents for the IRM and RAWP implementation are shown on Figures 2A and 2B. As-built drawings for the remedy, signed and sealed by a professional engineer (PE) who is licensed and registered in New York State, are included in Appendix E.

3.0 INTERIM REMEDIAL MEASURES

The NYSDEC approved the September 10, 2019 IRMWP to implement site-wide remedial excavation in parallel with development of a final remedy and RAWP. The IRMWP was amended on March 1, 2021.

In e-mail correspondence on January 31, 2022, the NYSDEC approved the documentation of IRMWP implementation in this FER; therefore, a Construction Completion Report (CCR) was not prepared. NYSDEC correspondence is included as Appendix F.

The remedy described in Section 2.5 includes the remedial activities completed as per the IRMWP and the RAWP. Tasks specific to the interim remedial measures (IRM) are described in this section.

IRM Phase 1:

An IRMWP was approved by NYSDEC on September 10, 2019 and implemented as IRM Phase 1 from September 2019 to April 2021. IRM Phase 1 included:

- Decommissioning of groundwater monitoring wells installed during previous investigations;
- Demolition and off-site disposal of the former building, including the chromium-impacted concrete building slabs and footings;
- Advancement of eight soil borings, installation of three soil vapor points, and collection of eight soil and three soil vapor samples to investigate known mercury impacts in the western portion of the site;
- Advancement of shallow excavations and collection of eight soil samples throughout the site for emerging contaminants analysis;
- Installation of SOE soldier piles to a minimum of approximately 36 feet bfsg (approximately el. -15) along the eastern site perimeter and the eastern portion of the north and south site perimeters, and installation of timber lagging;
- Localized dewatering, treatment via settling, and discharge of dewatering fluids in accordance with an NYCDEP sewer discharge permit;
- Excavation and off-site disposal of non-native fill material impacted with SVOCs and metals and native soil to depths generally ranging from approximately 13 to 15.6 feet bfsg (approximately el. 8 to 5.4) in the eastern portion of the site to achieve Track 2 RURR SCOs; and
- Collection of documentation base and sidewall samples from the storage building excavation to demonstrate that Track 2 RURR SCOs were achieved.

IRM Phase 2:

An amended version of the IRMWP, proposing additional remedial work for the parking lot development and associated stormwater detention system, was approved by NYSDEC on March 1, 2021, and implemented as IRM Phase 2 from April 2021 to May 2022. IRM Phase 2 included:

- Excavation and off-site disposal of non-native fill impacted with metals and native soil to depths ranging from approximately 4 to 12 feet bfsg (el. 17 to 9) for installation of a stormwater detention system in the western portion of the site;
- Excavation to a maximum depth of 8 feet bfsg (el. 13) and off-site disposal of mercury-impacted fill within five mercury source areas;
- Excavation to approximately 3 feet bfsg (el. 18) and off-site disposal of hazardous lead-impacted soil/fill at RI soil boring SSB-40;
- Collection of documentation base samples from the stormwater detention system excavations;
- Collection of documentation base and sidewall samples from the mercury source area excavations;
- Backfill of the subgrade for the storage building development foundation, outside the foundation walls of the storage building, mercury source removal excavations, stormwater detention system excavations, and ISS area with native soil and/or imported material;
- Temporary capping of the proposed ISS area with asphalt pavement, pending RAWP approval and implementation;
- Installation of groundwater monitoring wells down-gradient of mercury source area excavations and the proposed ISS area, and collection of baseline performance monitoring groundwater samples;
- Installation of a vapor barrier as a construction measure beneath the cellar slab and along the foundation walls of the storage building; and
- Installation of a composite cover engineering control comprising an approximately 8-inch-thick composite cover system consisting of approximately 4 inches of RCA subbase and 4 inches of asphalt pavement underlain by a demarcation barrier, throughout the parking lot development.

3.1 Contractors and Consultants

Langan was the remedial engineer responsible for submittal review, field documentation and community air monitoring, collection of remedial documentation samples, and analytical data validation. The IRM activities were implemented in accordance with the CHASP included in the IRMWP. Contractors adhered to their own health and safety plans that, at a minimum, met the requirements of Langan's CHASP.

The following contractors implemented the IRMWP under Langan's oversight:

Table 3.1 Contractors during IRMWP Implementation

Contractor	Responsibilities
ADMO and Chewequipment	Monitoring Well Decommissioning Contractor Decommissioning of RI groundwater monitoring wells
Capital Wrecking	Demolition Contractor Demolition and off-site disposal of concrete slabs, including hazardous chromium-impacted concrete
Environmental Management Consultants, Inc. (EMC)	General Excavation and SOE Contractor SOE installation, mass excavation, demolition of former concrete cellars, stockpiling, backfilling, and final grading for the storage building development
NOVA Concrete Contractors	Foundation Contractor Final grading and installation of the storage building foundation and vapor barrier system
AARCO Environmental Services Corp.	Drilling Contractor Drilling of soil borings, installation of soil vapor probes, and installation of groundwater monitoring wells
Impact	Waste Characterization Consultant Advancing soil borings and collection of soil samples across the site to help inform soil disposal
Opal Construction Corp	Stormwater System and Paving Contractor Excavation for the installation of the stormwater detention system, backfill, final grading, and asphalt pavement placement
Major General Construction Corp	General Construction Contractor Excavation for utility installation, backfilling, and installation of the demarcation layer in the parking lot development
Gallas Surveying Group	Surveyor Surveying for as-built excavations, site cover, and monitoring wells

3.2 Site Preparation

Site preparation was completed by Capital Wrecking prior to the IRM Phase 1 implementation and included the establishment of work zones, mobilization of support

facilities, construction of decontamination facilities, and implementation of site security measures (i.e., erection of security fencing around work zones and staging areas).

Prior to intrusive activities, Dig Safely New York (811) was contacted a minimum of three business days in advance of the work. Dig Safely New York was informed of the nature of the work and the intent to excavate at the site. Additional permits were obtained, as required, including but not limited to NYC MTA approval of SOE plans.

3.3 Groundwater Monitoring Well Decommissioning

On November 4, 2019, ADMO and Chewequipment decommissioned RI groundwater monitoring wells (MW-01 through MW-05, and MW-07 through MW-20) in accordance with NYSDEC Commissioners Policy CP-43. Decommissioning was documented by Langan field personnel. Groundwater monitoring well decommissioning logs are included in Appendix G.

3.4 Community Air Monitoring

Langan conducted continuous air monitoring for organic vapors and dust at two perimeter locations (one upwind and one downwind) during ground-intrusive activities in accordance with the CAMP. A separate work area station was used during IRM Phase 2 and monitored for mercury vapor only. VOCs were monitored with a PID, particulate matter less than 10 microns in diameter (PM10) was monitored with TSI DustTrak aerosol monitors, and mercury was monitored with a Jerome J405 (or equivalent) mercury vapor analyzer.

After 19 days of remedial excavation for the storage building development, a proposal was issued to the NYSDEC requesting a pause in mercury monitoring during the remainder of IRM Phase 1 because the geographic extent of the intrusive work had progressed beyond the part of the site known to contain mercury-impacted soil/fill. The NYSDEC approved this request, provided that mercury monitoring would resume during ground-intrusive activities in the parking lot development. Mercury monitoring resumed at the start of IRM Phase 2 implementation on April 16, 2021. A copy of the NYSDEC approval is included in Appendix F.

The results of IRM community air monitoring are summarized in Section 4.2.5 and included in Appendix H.

3.5 Chromium Residue Removal

Between November 19 and 22, 2019, Capital Wrecking used a non-petroleum based sweeping compound to collect loose chromium-impacted residue from the slab surface in the metal plating trench area. Capital then applied waterproofing (WR Meadows Hydralastic 836) to stabilize the slab and prevent commingling of chromium-impacted

concrete with other debris during impending building demolition. Capital placed the sweeping compound into six United Nations/Department of Transportation (UN/DOT) 55-gallon steel drums for off-site disposal. Sweeping compound disposal is described in Section 4.4.6, and waste disposal documentation is included as Appendix I. The chromium residue removal was a deviation from the methodology proposed in the IRMWP (i.e., the demolition and removal of the chromium-impacted concrete during the demolition of the building); NYSDEC approval of the deviation is included in Appendix F.

3.6 Building Demolition and Cellar Backfill

Between November 2019 and April 2020, Capital Wrecking demolished the site-wide one-story building. The chromium-impacted concrete slab and footings in the former metal plating trench area were demolished in-place, characterized, and disposed of off-site as hazardous waste (D007 waste), as described in Sections 4.4.5 and 4.4.7. Polyethylene sheeting was used to cover chromium-impacted concrete while staged on site, and was disposed of as described in Sections 4.4.6 and 4.4.7. Waste disposal documentation is included as Appendix I.

Capital Wrecking placed approximately 2,000 cubic yards (CY) of uncontaminated concrete and brick demolition debris into the two former cellars to comply with New York City Department of Buildings (NYCDOB) demolition permit sign-off requirements. Two waste characterization grab and composite sample sets were collected from the uncontaminated concrete and brick demolition debris on December 8, 2020 to characterize the demolition debris for off-site disposal. After obtaining NYSDEC approval, approximately 500 CY of the concrete and brick demolition debris was disposed of off-site, as described in Section 4.4.4. Langan then prepared and submitted a May 18, 2021 Beneficial Use Determination (BUD) request to leave the remaining 1,500 CY of uncontaminated concrete and brick demolition debris in place as permanent backfill material within the cellars. The NYSDEC approved the BUD request on May 28, 2021.

Waste disposal documentation is included as Appendix I. A copy of the BUD is included in Appendix F, and the concrete and brick debris laboratory report is included in Appendix J.

3.7 Waste Characterization

Waste characterization sampling was performed by Impact and Langan during the IRM, as described below.

- On January 9 and January 10, 2020, Impact used a Geoprobe 6712 DT direct-push drill rig to collect waste characterization samples from 12 soil borings throughout the proposed storage building development. Impact submitted the waste

characterization samples to York Analytical Laboratories (York), a NYSDOH ELAP-approved laboratory, for: VOC; total petroleum hydrocarbons – diesel-range organics (TPH-DRO); SVOC; Resource Conservation and Recovery Act (RCRA) metals; PCB; pesticide; TAL metals; ignitability; corrosivity; reactivity; and paint filter analysis.

- Between March 29 and March 30, 2021, Impact used a Geoprobe 6712 DT to collect waste characterization samples from 16 soil borings throughout the proposed parking lot development. Impact submitted the waste characterization samples to York for: VOC; SVOC; pesticide; herbicide; PCB; TAL metal (plus cyanide, hexavalent chromium, trivalent chromium, boron, molybdenum, tin, and titanium); total organic halide (TOX); TPH-DRO; TPH-gasoline range organics (GRO); TCLP RCRA 8 Metals (plus beryllium, copper, nickel and zinc); ignitability; corrosivity; reactivity; paint filter; and Category 2 extractable petroleum hydrocarbon (EPH) analysis.
- Prior to a second mobilization, a contained-in sampling plan was prepared and is included in Appendix F. Between April 16 and April 27, 2021, Impact used a Geoprobe 6712 DT to collect waste characterization samples from 15 soil borings around the former sealed floor trench in the northwestern part of the site. Additional waste characterization samples were collected from 8 soil borings to delineate a hazardous chromium hot spot identified at waste characterization boring TA-B9. Impact submitted the waste characterization samples to York for total chromium, hexavalent chromium, TCLP chromium, and TCLP nickel analysis. During drilling, decontamination water was used on equipment between boring locations to prevent cross contamination. The decontamination water was containerized and disposed of off-site, as described in Sections 4.4.6 and 4.4.7.
- On August 8, 2021, Langan used hand tools to collect waste characterization soil samples from graded soil exhibiting yellow and green staining near the former plating trench in the northwest part of the site. Langan submitted the samples to: Phoenix Environmental Laboratories (Phoenix), a NYSDOH ELAP-approved laboratory, for total and amenable cyanide analysis; and to York for TCLP cadmium, chromium, lead, nickel, and silver.
- On October 8, 2021, Langan collected waste characterization groundwater samples generated from well development and the baseline performance monitoring sampling event. Langan submitted the samples to York for VOC and RCRA 8 metals analysis.

Following the March and April 2021 and October 2021 waste characterization sampling, contained-in determination requests were sent to the NYSDEC to determine if the sampled material could be managed as non-hazardous waste. The NYSDEC contained-in determination letters indicated that:

- soil excavated from the area around waste characterization soil boring TA-B9 must be managed as chromium-impacted hazardous waste;
- three 55-gallon drums of groundwater generated from well development and the baseline sampling were found to meet "contained-in" groundwater action levels and land disposal restriction (LDR) universal treatment standards and can be transported off-site as non-hazardous waste; and
- two 55-gallon drums of groundwater generated from well development and the baseline sampling did not meet the LDR universal treatment standards for chromium and must be managed as hazardous waste.

Copies of the contained-in determinations are provided in Appendix F. Laboratory analytical reports for all waste characterization sampling are included in Appendix J.

3.8 SOE Installation

On June 30, 2020, EMC began installation of SOE consisting of a continuous soldier pile and timber lagging wall along the northern, eastern, and southern perimeters of the storage building development. The SOE walls were constructed using driven and drilled steel soldier piles from surface grade to a minimum of approximately 36 feet bfsg (approximately el. -15), followed by installation of timber lagging between the piles. The soldier pile and lagging wall remained in place upon completion of remedial excavation and storage building construction.

3.9 Supplemental Investigations

During IRM Phase 1, supplemental investigations were performed to further investigate areas of concern (AOC) and environmental conditions as needed to develop a remedy for the site. The supplemental investigations were documented under separate cover. The investigations and significant findings are summarized below.

- <u>Supplemental Emerging Contaminant Sampling</u>

  On July 23, 2020, Langan collected nine soil samples (including one duplicate sample) from eight locations across the site, in accordance with the January 2020 Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs. Samples were collected from approximately 1-foot bfsg and analyzed

for emerging contaminants (PFAS and 1,4-dioxane) via USEPA Methods 537M and 8270D.

Soil results from the emerging contaminants sampling were consistent with the site's environmental history, and detected PFAS concentrations were below the Guidance Values for Unrestricted Site Use as defined in NYSDEC Sampling, Analysis, and Assessment of PFAS under NYSDEC's Part 375 Remedial Programs, January 2021. 1,4-dioxane was not detected. These results indicate that PFAS detected in groundwater during the SRI is not attributable to an on-site source.

- Supplemental Mercury Sampling

  Between September 16 and 17, 2020, eight soil borings (SSB-02A, SSB-02EA, SSB-22A, SSB-30A, SSB-33A, SSB-42A, SSB-46A, and SSB-54A) were advanced to depths varying from 3 to 9 feet bfsg in the western portion of the site to further investigate the highest mercury concentrations observed during previous investigations. Nine soil samples (including one duplicate sample) were collected and analyzed for total mercury via USEPA Method 7471B and mercury selective sequential extraction ("mercury speciation") via USEPA Method 1631.

  During the same mobilization, three temporary soil vapor points (SMS_SV-02, SMS_SV-02E, and SMS_SV-30) were installed within 5 feet of paired supplemental mercury soil borings at the same depth as the corresponding soil sample. To collect the soil vapor samples, mercury sorbent tubes were opened and connected to a pre-calibrated SKC air sampling pump using Teflon-lined tubing. Samples were collected for a duration of 2 hours at a constant flow rate of approximately 0.2 liters per minute. NYSDEC approval of the use of sorbent tubes instead of Summa canisters, which were initially proposed for sample collection in the IRMWP, is included in Appendix F. Four soil vapor samples (including one duplicate) were collected and analyzed for mercury vapor via Modified National Institute for Occupational Safety and Health (NIOSH) Method 6009.

  Mercury was detected in soil at concentrations consistent with previous investigations. Mercury speciation results indicate that the majority (90.7%, on average) of mercury in soil exists as water-soluble mercury salts, low-pH soluble mercury salts, organic-bound mercury compounds, and non-sulfide and non-silicate bound mercury compound species. Elemental mercury typically made up less than 1% of total mercury. Mercury was not detected in soil vapor.

- Off-Site Investigation

  An off-site investigation was required by the NYSDEC to further evaluate chlorinated VOC (CVOC) impacts to soil and groundwater identified in the eastern part of the site (along the eastern sidewalk of Morgan Avenue, between Ingraham Street and Harrison Place) during the RI. Between September 15 and 16, 2020, three sidewalk soil borings were advanced to a maximum of 20 feet below sidewalk grade. Two samples were collected from each boring: one from 0-to-2 feet bgs and a second from the groundwater interface. Seven samples (including one duplicate) were collected and analyzed for Part 375 VOCs via USEPA Method 8260C.

  Soil borings were converted into temporary groundwater monitoring wells. Four groundwater samples were collected (including one duplicate) and analyzed for the Part 375 VOCs via USEPA Method 8260C. Following sample collection, wells were removed, and borings were backfilled and capped at grade with cement.

  Concentrations of VOCs in off-site soil were detected below the applicable Unrestricted Use (UU) SCOs, consistent with the results of previous on-site investigations and documentation samples collected as part of IRM Phase 1. The maximum CVOC concentrations (including trichloroethene at a concentration of 85 micrograms per liter [µg/L]) in site groundwater during the 2019 SRI were detected in monitoring well (MW-19) along the eastern site perimeter; CVOC concentrations were comparable in monitoring well MW-06, located on the Morgan Avenue sidewalk to the east of the site. CVOC concentrations did not exceed the NYSDEC Technical and Operational Guidance Series (TOGS) Class GA Standards and Guidance Values (NYSDEC SGVs) in on-site monitoring well MW-18, 25 feet to the west (down- or cross- gradient) of the eastern site perimeter. Based on the distribution of CVOC concentrations in groundwater, the source of CVOC impacts is likely located off-site within the Morgan Avenue right-of-way between Ingraham Street and Harrison Place.

- Hazardous Lead Hotspot Delineation

  Hazardous lead delineation was performed in September 2020 to delineate the hazardous lead-impacted area identified by the detection of hazardous lead in soil boring SSB-40 from 0 to 2 feet bfsg during the 2019 SRI. Seven delineation soil borings were advanced to approximately 3 feet bfsg; one at the original hazardous location and six delineation borings in 5- to 10-foot step outs from the original boring. Two grab samples were collected from each delineation boring from 0 to 2 feet and 2 to 3 feet. Based on the analytical results, the hazardous lead soil was

delineated and localized to an approximately 15-foot-long by 10-foot-wide by 3-foot-deep area around SSB-40. Hazardous soil was excavated and removed as part of IRM Phase 2, as described in Section 3.9.2.

- Treatability Study Investigation

  This investigation was completed to characterize and collect soil samples to be used in a treatability study for the design of an ISS remedy. Four treatability study soil borings (TS-01 through TS-04) were advanced near the former metal plating trench drain to approximately 30 feet bgs. Treatability study soil samples were collected from the depth intervals that exhibited the greatest degree of hexavalent chromium and/or nickel impacts in nearby soil borings during the RI and SRI. The four soil samples were proposed to consist of varying soil types, to represent and approximate the varying stratigraphy that would be encountered during ISS remediation.

  Treatability soil samples were collected into 5-gallon plastic buckets and submitted to Geo-Solutions Inc. (Geo-Solutions), a testing laboratory and geotechnical consultancy in New Kensington, Pennsylvania. Geo-Solutions used the soil samples to perform a bench scale treatability study to inform the design of the ISS remedy, as discussed in Section 4.3.1. Residual treatability soil sample volume was returned to the site and disposed of as described in Sections 4.4.6 and 4.4.7.

3.10 Remedial Excavation

3.10.1 IRM Phase 1

The approximately 34,000-square-foot storage building development was excavated to a depth of approximately 13 to 15.6 feet bfsg (approximately el. 8 to 5.4). A 1:1 slope was also completed as a SOE measure along the western perimeter of the excavation. A subgrade depth of 14 feet bfsg (el. 7) was originally proposed in the IRMWP; however, it was modified during construction to accommodate a development design change. The NYSDEC approved this deviation on September 8, 2020; a copy of the approval is included in Appendix F.

In addition to soil/fill, native boulders and creosote-impacted timbers were identified within the storage building development excavation. The disposal of these materials is further described in Sections 4.4.6 and 4.4.7.

IRM Phase 1 documentation soil samples were collected across the base of the remedial excavation and along the western sidewall (i.e., the SOE slope). Over-excavation to a maximum depth of 16 feet bfsg (approximately el. 5) was required at three documentation

sample locations (SW-06, DS-18, and DS-34) to remove soil containing manganese, PCBs, or mercury at concentrations above the RURR SCOs.

A copy of NYSDEC's confirmation of the over-excavation approach is included in Appendix F. Documentation soil sample results are further described in Sections 4.5.1 and 4.8.1. IRM Phase 1 remedial excavation extents are shown on Figure 2A. IRM Phase 1 documentation soil sample results are summarized on Table 2A and Figure 3.

3.10.2 IRM Phase 2

The parking lot development was excavated to varying depths, as described below:

- Localized areas were excavated to depths ranging from approximately 4 to 12.5 feet bfsg for the installation of stormwater piping and detention structures. Excavation sidewalls were sloped at 1:1.
    - Additional construction and brick demolition debris removal and off-site disposal were required to complete the stormwater detention system installation.
- Mercury source area removals centered on RI soil borings SB-02, SSB-02E, SSB-22, SSB-30, and SSB-54 required 10-foot-long by 10-foot-wide excavations to varying depths; source removal at SB-02 and SB-02E required only a single approximately 25-foot-long by 15-foot-wide excavation due to the proximity of those two RI soil boring locations. Mercury source area excavation depths varied between 2 and 5 feet bfsg (el. 19 to 16).
    - Based on documentation sample results, the geographic extent of the SB-02 and SB-02E mercury source area excavation was extended approximately 2 feet to the north. Over-excavated soil comprised hazardous mercury-impacted soil/fill (D009 waste).
- Hazardous lead-impacted soil/fill (D008 waste) was excavated in an approximately 15-foot-long by 10-foot-wide excavation centered around Langan boring SSB-40, and extended to a maximum depth of approximately 3 feet bfsg (el. 18).
- Hazardous chromium-impacted soil/fill (F006/D007 and D007 waste) was excavated in an approximately 24-foot-long by 20-foot-wide excavation to 3 feet bfsg (el. 18) and in an approximately 20-foot-long by 15-foot-wide excavation to 2 feet bfsg (el. 19).

Documentation soil sample results are further described in Sections 4.5.2 and 4.8.1.

Excavated soil was screened with a PID equipped with a 10.6 electron volt (eV) lamp and/or a Jerome J405 (or equivalent) mercury analyzer.

IRM Phase 2 remedial excavation extents are shown on Figure 2A. IRM Phase 2 documentation soil sample results are summarized on Tables 2B through 2C, and Figure 3.

3.11 Off-site Removal

Non-hazardous and hazardous soil was excavated and transported off-site for disposal during IRMWP implementation. Excavated soil and fill was handled, transported, and disposed of in accordance with applicable Part 360 and Part 364 regulations and other applicable local, state, and federal regulations. The waste removal contractors provided the appropriate permits, certifications, and written commitments from disposal facilities accepting the soil and fill.

The remedial engineer (RE) reviewed the contractor's proposed disposal facilities to document permit compliance to accept the soil and fill. Non-hazardous and hazardous contaminated soil was disposed of at facilities licensed to handle the soil. Approval letters were provided on facility letterhead, included the site as the originating location, referenced the analytical data provided to and reviewed by the facility, and noted any restrictions on delivery schedules or other non-analytical conditions that may have caused rejection of transported soil and fill.

A Langan field engineer, geologist, or scientist observed and documented the load-out of excavated soil and fill. Loaded vehicles leaving the site were appropriately lined, securely covered, manifested, and placarded in accordance with appropriate federal, state, and local requirements. Non-hazardous and hazardous soil and fill was transported by waste removal contractors who possessed a valid New York State Part 364 Waste Transporter Permit, where applicable. A manifest system was used to document and track off-site movement of nonhazardous wastes and contaminated soil. A federal manifesting system was used for tracking and auditing hazardous wastes in accordance with federal (including 40 Code of Federal Regulation [CFR] Part 260), state (including 6 NYCRR Part 372), and local regulations.

Soil and fill was transported to the appropriate disposal destination using trucking routes outlined in the approved RAWP, which were selected by considering the following:

- Limiting transport through residential areas and past sensitive sites;
- Use of defined truck routes;
- Minimizing to the extent possible off-site queuing of trucks entering the facility;
- Limiting the total distance to the major thoroughfares; and

- Overall safety in transport.

Soil was removed from the exterior of outbound trucks before leaving the site. Locations where vehicles entered or exited the site were inspected daily for evidence of off-site soil tracking. Truck tires were washed with hydrant water on the truck tracking pad prior to exiting the site.

Egress points for truck and equipment transport from the site were routinely cleaned. Incidental soil that was tracked off-site into the adjoining roadway was placed back onto the site as needed. Waste disposal documentation is included in Appendix I. Disposal waste types, dates, quantities, and disposal facility for each load are summarized in Tables 3A through 5. Further discussion on off-site removal of contaminated materials is provided in Section 4.4.

3.12 Dewatering and Fluids Management

During SOE installation as part of the IRM Phase 1 excavation, excess drilling fluids were generated and pooled in the northeast part of the site along with ponded rainwater. EMC used a pump to relocate the excess fluids to smaller pit excavations within the storage building development. A copy of NYSDEC's concurrence with this approach is included in Appendix F.

On September 15, 2020, Langan collected a groundwater discharge sample from a test pit in the northeastern part of the site. The sample was relinquished to Alpha Analytical Labs (Alpha), a NYSDOH ELAP-approved laboratory, and analyzed for parameters listed in the NYCDEP table of Limitation for Effluent to Sanitary or Combined Sewers. A NYCDEP discharge permit to discharge less than 10,000 gallons of groundwater per day to the NYC combined sewer system was obtained on October 21, 2020. Groundwater was pumped into an 8,000-gallon settling tank prior to discharge. A total of approximately 252,000 gallons of groundwater was discharged to the combined sewer between October 26, 2020 and May 13, 2021. A copy of the NYCDEP permit is included in Appendix K.

Dewatering was not required during IRM Phase 2.

3.13 Documentation Soil Sampling

In accordance with the IRMWP and NYSDEC Division of Environmental Remediation (DER)-10, documentation soil samples from the excavations were collected at a frequency of one base excavation sample for every 900 square feet of excavation area, and one sidewall sample for every 30 linear feet. Sidewall samples were not collected from the northern, eastern and southern perimeters of the IRM Phase 1 excavation due to SOE constraints. Based on these criteria:

- 82 documentation soil samples (including QA/QC samples) were collected from the base and the western sidewall of the IRM Phase 1 excavation. At locations where the final subgrade was less than 15 feet bfsg (el. 6), two samples were collected: one sample collected from the final subgrade, and another sample collected from approximately 15 feet bfsg via test pit.
- 10 documentation soil samples (including QA/QC samples) were collected from the IRM Phase 2 stormwater detention system excavation.
- 24 documentation soil samples (including QA/QC samples) were collected from the base and sidewalls of the IRM Phase 2 mercury source area excavations.

Documentation soil samples collected from IRM Phase 1 mass excavation and IRM Phase 2 stormwater detention system excavation were analyzed for NYSDEC Part 375 VOCs, SVOCs, PCBs, pesticides, and TAL metals (including hexavalent and trivalent chromium, and cyanide). Documentation soil samples collected from the mercury source area removal excavations were analyzed for total mercury. Documentation sampling and results compared to the Track 2 and 4 RURR SCOs are discussed in Sections 4.5 and 4.8.1. IRM documentation soil sample analytical results are provided in Tables 2A through 2C, and shown on Figure 3. Analytical laboratory reports are included in Appendix J.

3.14 Material Import and Backfill

Backfill material was imported as part of the IRM. Material import documentation, including sieve profile analyses, was reviewed by Langan prior to import. Upon delivery, imported material was screened by Langan field personnel and determined to be acceptable for use as backfill based on visual, olfactory, and instrumental (i.e., PID) observations.

The following material was imported to the site:

- 3/4-inch RCA was imported from the Evergreen Recycling of Corona (EROC) facility in Corona, NY and was used as subgrade backfill for the storage building development foundation during IRM Phase 1, and as backfill for the stormwater detention system trench, mercury source area and hazardous lead remedial excavations during IRM Phase 2.
- ASTM #3 stone was imported from the Tilcon – Mount Hope Quarry via the Tilcon New York facility in West Nyack, NY and was used as a trucking pad at the site entrance and exit during IRM Phase 1.
- RCA blend was imported from EROC and was used as the subgrade for the composite cover system in the parking lot development during IRM Phase 2.

Material import and backfill are discussed further in Section 4.6. Imported material documentation is provided in Appendix L. Imported backfill types, dates, quantities, and source facility for each load are summarized in Table 6. Backfill locations are presented in Figure 4.

3.15 Native Soil Reuse

Native soil excavated from within the IRM Phase 1 mass excavation was reused as on-site backfill in accordance with September 10 and November 2, 2020 approvals from NYSDEC (provided in Appendix F). Reusable native soil was stockpiled on a minimum 6-mil polyethylene sheeting and geotextile filter fabric in the western part of the site, and silt fencing was installed around the stockpile. The stockpile was covered with plastic sheeting when not in use. Approximately 4,000 CY of native soil was used to backfill the sloped SOE excavation west of the storage building foundation wall, and within the stormwater detention system excavation. Backfilled areas were capped with the composite cover system described in Sections 3.15.2 and 4.9.1.

3.16 Engineering Controls Installation

Exposure to remaining contamination after IRMWP implementation is prevented by the engineering control, as described in the subsequent section.

3.16.1 Composite Cover System

Exposure to remaining contamination in the parking lot development is prevented by a composite cover system comprising approximately 4 inches of RCA sub-base and 4 inches of asphalt pavement underlain by a demarcation barrier. An approximately 20- to 40-foot-wide area immediately west of the above-grade storage building footprint is also capped with asphalt pavement, but is underlain by the storage building cellar and therefore not considered part of the composite cover system.

A temporary asphalt cap was also installed over the proposed ISS area during IRMWP implementation. The temporary asphalt cap was removed and then replaced with a permanent engineering control during RAWP implementation, as described in Sections 4.3.4 and 4.9.1.

3.17 Performance Groundwater Monitoring Well Installation and Sampling

Between September 28 and October 1, 2021, AARCO used a Geoprobe 8140 LC Sonic drill rig to advance 6-inch-diameter soil borings to a maximum depth of approximately 26 feet bfsg (10 feet below the groundwater table) to install permanent groundwater monitoring wells in the southwestern part of the site (PMW-02 and PMW-54) and on the Ingraham Street sidewalk (PMW-22, PMW-27, and PMW-30). Performance monitoring wells PMW-02, PMW-22, PMW-30, and PMW-54 are down-gradient of former mercury

source areas, and performance monitoring wells PMW-27 and PMW-30 are down-gradient of the ISS area.

A 10-foot-long well screen was set to straddle the water table with approximately 3 feet of screen above and 7 feet of screen below the groundwater surface. The wells were constructed with 2-inch-diameter, threaded, flush-joint polyvinyl chloride (PVC) casing and 0.01-inch slotted screens. Morie #01 clean sand was used as the filter pack and to fill the annulus around the screen up to approximately 2 feet above the screened interval. A 2-foot bentonite seal was installed above the sand, and the borehole annulus was grouted to the surface with bentonite/cement slurry. The well installations were completed with H-20 traffic load-tested 5-inch diameter galvanized steel flush-mount manholes.

After installation, the wells were developed by surging a submersible pump across the well screen/casing to agitate and remove fines. The pump was surged across the well screen in two- to three-foot increments for two minutes at a time until the water became clear (having turbidity less than 50 Nephelometric Turbidity Units [NTU]). The wells were allowed to stabilize for a minimum of one week. Monitoring well construction and development logs are attached in Appendix M. A monitoring well location and protection plan is shown on Figure 5.

On October 8, 2021 (before RAWP implementation), one baseline groundwater sample was collected from each well to serve as a post-remediation baseline for future sampling events. Prior to sampling, the monitoring wells were gauged for static water levels and purged. Purging consisted of pumping, at a minimum, the stabilized drawdown volume plus the pump tubing volume and waiting until the physical and chemical parameters (e.g., temperature, dissolved oxygen, oxygen reduction potential, turbidity) stabilized within the ranges specified in the USEPA's Low Stress Purging and Sampling Procedure for the Collection of Groundwater Samples From Monitoring Wells, dated July 30, 1996 and 4th revision September 19, 2017. Groundwater samples from PMW-22 and PMW-30 were analyzed for dissolved mercury, and groundwater samples from PMW-22, PMW-27 and PMW-30 were analyzed for dissolved nickel, dissolved chromium, and dissolved mercury. Low-flow purging sampling logs are attached in Appendix M.

The results of the baseline sampling results are summarized on Table 7 and Figure 6, and are further described in Section 4.8.2. A groundwater contour map is provided as Figure 7.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the site were conducted in accordance with the NYSDEC-approved September 10, 2019 (amended March 1, 2021) IRMWP, June 2022 RAWP, and June 29, 2022 DD. Remedial activities are listed in Sections 2.5 and 3.0. The remedial work commenced with contractor mobilization on September 4, 2019 and was completed in November 2022. Daily and monthly reports were provided to the NYSDEC throughout remediation and are provided in Appendix H.

Deviations from the IRMWP and RAWP are described in Section 4.11.

4.1 Governing Documents

4.1.1 Site-Specific Construction Health & Safety Plan

Remedial work performed under the IRMWP and RAWP was in full compliance with governmental requirements, including site and worker safety requirements mandated by Federal Occupational Safety and Health Administration (OSHA). Documented remedial and invasive work complied with the provisions of the site-specific CHASP, which met the requirements of 29 CFR 1910 and 29 CFR 1926 (which include 29 CFR 1910.120 and 29 CFR 1926.65, respectively). The CHASP included, but was not limited to, the following components:

- Organization and identification of key personnel;
- Training requirements;
- Medical surveillance requirements;
- List of site hazards;
- Excavation safety;
- Drill rig safety;
- Work zone descriptions and monitoring procedures;
- Personal safety equipment and personal protective equipment (PPE) requirements;
- Decontamination requirements;
- Site operation plans;
- Contingency plan;
- CAMP; and
- Safety data sheets (SDS).

4.1.2 Quality Assurance Project Plan

Quality Assurance Project Plans (QAPP) were included as Appendix C of the IRMWP, and Appendix E of the RAWP. The QAPPs describe the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives.

4.1.3 Construction Quality Assurance Plan

The Construction Quality Assurance Plan (CQAP), included in Section 4.1.4 of the RAWP describes the quality control components to ensure that the proposed remedy accomplished the remedial goals and RAOs in accordance with the design specifications.

4.1.4 Soil/Materials Management Plan (SMMP)

The soil/materials management plan (SMMP) was included in Section 5.4 of the RAWP and provided detailed plans for managing soil, fill and liquids that were disturbed during the implementation of the remedy, including excavation, handling, storage, transport and disposal, and nuisance mitigation measures. Remediation and construction were conducted using conventional hydraulic equipment and hand tools.

Soil Screening

Excavated soil/fill was screened for visual, olfactory, and instrumental evidence of a chemical or petroleum release by a field engineer, geologist, or scientist under the direction of the RE. Instrumental soil screening was performed with a PID equipped with a 10.6 eV lamp and/or a Jerome J405 mercury vapor analyzer (or equivalent).

Stockpiles

Excavated soil and fill designated for off-site disposal was directly live-loaded into trucks or stockpiled during IRMWP and RAWP implementation. Separate stockpile areas were constructed to avoid commingling differing waste streams, as needed. Stockpiles were inspected daily, and inspections were recorded in a logbook maintained at the site. Stockpile areas met the following minimum requirements:

- Stockpiles were kept covered at the designated times (see below) with minimum 6-mil plastic sheeting or tarps, which were securely anchored to the ground. Stockpiles were routinely inspected and damaged tarp covers were promptly replaced.
- Equipment and procedures were used to place and remove the soil that will minimize the potential to jeopardize the integrity of the liner.

- Stockpiles were covered upon reaching their capacity (i.e., approximately 1,000 CY) until ready for loading. Stockpiles that did not reach their capacity, whether active or inactive, were covered at the end of each workday.
- Each stockpile was encircled with silt fences and/or hay bales, as needed, to contain and filter particulates from rainwater that has drained off the soils and to mitigate the potential for surface water run-off.
- Water was available on-site at suitable supply and pressure for use in dust control.

Load Out, Transport and Off-Site Disposal Plan

Types and quantities of removed waste are described in Section 4.4. Non-hazardous and hazardous soil/fill were removed and transported off-site for disposal. Excavated soil and fill was handled, transported, and disposed of in accordance with applicable Part 360 and Part 364 regulations and other applicable local, state, and federal regulations. The waste removal contractor provided the appropriate permits, certifications, and written commitments from disposal facilities accepting the soil and fill.

The RE reviewed the contractors' proposed disposal facilities to document permit compliance to accept the soil and fill. Non-hazardous and hazardous contaminated soil were disposed of at facilities licensed to handle the soil. Approval letters were provided on facility letterhead, included the site as the originating location, referenced the analytical data provided to and reviewed by the facility, and noted any restrictions on delivery schedules or other non-analytical conditions that may have caused rejection of transported soil and fill.

A Langan field engineer, geologist, or scientist observed and documented the load-out of excavated soil and fill. Loaded vehicles leaving the site were appropriately lined, securely covered, manifested, and placarded in accordance with appropriate federal, state, and local requirements. Non-hazardous and hazardous soil and fill was transported by waste removal contractors who possessed a valid New York State Part 364 Waste Transporter Permit, where applicable. A manifest system was used to document and track off-site movement of non-hazardous wastes and contaminated soil. A manifesting system was used for tracking and auditing hazardous wastes in accordance with federal (including 40 CFR Part 260), state (including 6 NYCRR Part 372), and local regulations. Waste disposal facility approval documentation and counter-signed manifests are provided in Appendix I.

Truck Traffic Control

Soil and fill was transported to the appropriate disposal destination using trucking routes outlined in the NYSDEC-approved IRMWP and RAWP, which were selected by considering the following:

- Limiting transport through residential areas and past sensitive sites
- Use of defined truck routes
- Prohibiting off-site queuing of idling trucks entering the facility
- Limiting total distance to major highways
- Promoting safety in access to highways
- Overall safety in transport
- Community input (where necessary)

Soil was removed from the exterior of outbound trucks before leaving the site. Locations where vehicles entered or exited the site were inspected daily for evidence of off-site soil tracking. Truck tires were washed with hydrant water on the truck tracking pad prior to exiting the site.

Egress points for truck and equipment transport from the site were routinely cleaned. Incidental soil that was tracked off-site into the adjoining roadway was placed back onto the site as needed.

4.1.5 Stormwater Pollution Prevention Plan (SWPPP)

Remedial construction was performed in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control. A Stormwater Pollution Prevention Plan (SWPPP) was not required for this site because the design and permitting had occurred prior to the February 2022 NYCDEP Unified Stormwater Rule. The site was subject to the NYSDEC regulations, which indicate sites within a combined sewer district are exempt from preparing a SWPPP.

4.1.6 Community Air Monitoring Plan

Community air monitoring was conducted in accordance with the site-specific CAMP, the requirements of NYSDEC DER-10 – Technical Guidance for Site Investigation and Remediation, and the provisions of the NYSDOH Generic CAMP. The CAMP was developed to protect off-site receptors, including residences and businesses, from potential airborne contaminant releases during intrusive field activities.

The CAMP included real-time continuous monitoring for VOCs, mercury vapor (parking lot development only), and particulates at the downwind and upwind site perimeter stations of each designated work area when certain activities were in progress. A downwind work zone station (within 25 feet of the work zone) continuously monitored for mercury vapor during soil-intrusive work in the parking lot development.

Upwind and downwind station locations were selected daily based on a local weather station and site observations, to reflect the dominant wind direction. Each monitoring station included a TSI DustTrak II aerosol monitor (for PM10), and a MiniRAE 3000 PID for measuring total VOCs. During ground-intrusive work in the parking lot development, a Jerome J405 mercury vapor analyzer (or equivalent) was also included in the upwind, downwind, and work zone stations. A portable PID was used to monitor the work zone. The CAMP was not implemented during inclement weather events or non-intrusive work activities. The work zone and site perimeters were visually monitored for fugitive dust emissions.

CAMP results are discussed in Section 4.2.5.

4.1.7 Contractors Site Operations Plans (SOPs)

Site Operations Plans (SOP) for this remedial project consisted of the construction specifications and submittals including but not limited to: material specifications; facility documentation; import documentation; vapor barrier product information; ISS products and equipment; health and safety plan; and ISS implementation plan. The RE reviewed relevant plans and submittals to confirm their compliance with the NYSDEC-approved IRMWP and RAWP. Relevant remedial documents were submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

4.1.8 Community Participation Plan

The Citizen Participation Plan (CPP) is designed to increase transparency of remediation projects by providing the public with information on the proposed plans and with an outlet to raise concerns associated with the project's impact on the surrounding community. The CPP established a protocol for citizen participation, including creating a document repository that contains a copy of all applicable project documents for public review. A certification of mailing was sent by the Volunteer to the NYSDEC project manager following the distribution of fact sheets and notices that included: (1) certification that the Fact Sheets were mailed, (2) the date they were mailed; (3) a copy of the Fact Sheet, (4) a list of recipients (contact list); and (5) a statement that the repository was inspected on a specific date and that it contained all applicable project documents. Furthermore, no changes were made to the Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, were

included with the Fact Sheet mailings. The CPP for the project was attached as Appendix H in the RAWP.

A document repository was established at the following location for the duration of the project and contains all applicable project documents:

Brooklyn Public Library – Central Branch

100 Grand Army Plaza
Brooklyn, NY 11238
Phone: (718) 230-2100

Hours:

Monday through Thursday:	9 AM – 8 PM
Friday and Saturday:	9 AM – 6 PM
Sunday:	1 PM – 5 PM

Brooklyn Community Board 1

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4.2 Remedial Program Elements

4.2.1 Contractors and Consultants

Langan was the remedial engineer responsible for submittal review, field documentation and community air monitoring, collection of remedial performance samples and analytical data validation.

Contractors working under the IRMWP are detailed in Section 3.1. The following contractors implemented the work under the RAWP:

Table 4.2.1 Contractors during RAWP Implementation

Contractor	Responsibilities
Renova Environmental Services (Renova)	Remedial Contractor ISS implementation
Soil Mechanics Drilling Corp.	Drilling Contractor ISS core drilling and reinstallation/repair of performance monitoring wells
Gallas	Surveyor ISS monolith, capillary break, site cover and monitoring well surveyor
Grey Ruso Construction	Paving Contractor Paving contractor
FSR Drilling	Billboard Foundation Installation Contractor Installing helical piles

4.2.2 Site Preparation

A RAWP kickoff meeting was held with NYSDEC and Renova (of Ocean Township, New Jersey) on August 3, 2022. This meeting was held to introduce the remediation team, discuss roles and responsibilities, discuss NYSDEC expectations, and identify the expected construction schedule for RAWP implementation.

Site preparation was completed by Capital Wrecking prior to IRMWP implementation and by Renova prior to RAWP implementation. Mobilization and site preparation activities included the following:

- Identified the location of all aboveground and underground utilities (e.g., power, gas, water, sewer, telephone), equipment, and structures as necessary to implement the remediation;
- Mobilized necessary remediation personnel, equipment, and materials to the site;
- Constructed one or more stabilized construction entrances consisting of virgin crushed stone at the site exit;
- Constructed a decontamination pad for trucks, equipment, and personnel that come into contact with impacted materials during remedial activities;
- Installed erosion and sedimentation control measures, as necessary; and
- Installed temporary fencing or other temporary barriers to limit unauthorized access to areas where remediation activities will be conducted.

Documentation of agency approvals required to implement remediation is included in Appendix F.

4.2.3 General Site Controls

Site Security

The site perimeter was secured with the existing gates, locked storage building, and plywood fencing with points of entry in accordance with NYCDOB and New York City Department of Transportation (NYCDOT) permits and requirements. Access to the remediation areas was limited to authorized personnel, to protect pedestrians from site activities and maintain site security.

Job Site Record Keeping

Daily site observations were recorded in a project field book, spreadsheets, sketches/maps and field photographs, and documented in daily field reports, which are provided as Appendix H. Daily field reports and monthly reports summarizing remediation activity and progress were submitted to the NYSDEC and NYSDOH project managers. Daily and monthly reports are provided in Appendix H.

Langan personnel and its subcontractors reviewed and signed the CHASP when visiting the site for the first time. The contractor was responsible for maintaining the health and safety of its workers and subcontractors.

Erosion and Sedimentation Controls

Based on the size of the site and the excavation, certain common erosion and sedimentation control practices were necessary. BMPs for soil erosion were selected to minimize erosion and sedimentation off-site from the start to the completion of the remedy. Erosion and sedimentation controls were further described in the SWPPP found at Section 4.1.6 of the RAWP.

Stockpile Methods

Stockpiles were constructed as necessary when excavated soil, fill and/or construction and demolition (C&D) debris was unable to be directly loaded into trucks for off-site transport. Detailed stockpiling procedures are presented in Section 4.1.4.

Equipment Decontamination and Residual Construction Waste Management

The Contractor was responsible for managing the disposal of scrap construction materials (wood, plastics, and metal) and general refuse/municipal solid waste. Machinery, equipment and materials were decontaminated as necessary before removal from the site.

Problems Encountered

No problems related to site controls were encountered during implementation of the remedy.

4.2.4 Nuisance Controls

Dust, Odor, and Vapor Control

The contractors employed dust suppression techniques while excavating, drilling, cutting, grading, stockpiling, and during other construction activities. The Remediation Contractors applied water to work zones and excavation areas and covered stockpiles with 6-mil polyethylene sheeting, as needed, to minimize releases of airborne particulates.

Nuisance odors and vapors from site soil were not generated during the remedial action. While odor and vapor controls were available, they were not needed to control site conditions.

Trucks traversing the site traveled on top of the existing asphalt pavement wherever possible, to limit contact with contaminated site materials. During soil transport for off-site disposal, truck tires and exteriors were cleaned prior to leaving the site as needed. Sidewalks and roadways surrounding the site were cleaned as necessary.

No problems were recorded with regards to dust, stockpile management, or truck traffic.

Responding to Complaints

No community complaints related to remedial activities were received by the RE.

4.2.5 CAMP Results

Community air monitoring for particulates and VOCs was performed during ground-intrusive activities between November 19, 2019 and November 3, 2022. The CAMP was performed at one upwind and one downwind air monitoring station using TSI Model 8530 DustTraks to monitor particulates and MiniRAE 3000 PIDs to monitor VOCs. During ground-intrusive activities in the parking lot development, Jerome J405 mercury vapor analyzers (or equivalent) were also included in the upwind and downwind stations, and within a work zone station (within 25 feet of the work zone). Fifteen-minute time-weighted averages were calculated from the data recorded at each station, and averages were compared to the action levels established in the CAMP.

Concentrations detected above the CAMP action levels were reported to the NYSDEC and NYSDOH project managers and included in daily reports. In addition, a map showing the location of the downwind, upwind, and work zone (if present) air monitoring stations was included in each daily report. VOC and mercury vapor concentrations did not exceed

the CAMP action levels during implementation of the remedy. Particulate matter exceeded the action levels on isolated occasions. Incident details, including reasons for the exceeding concentrations of particulate matter and corrective measures implemented, are summarized in the following table. Copies of CAMP data were appended to their respective daily field report, and are provided in Appendix H.

Table 4.2.5 CAMP Results: PM10 Summary

Date of Exceedance	Time Range	Maximum 15-Minute Average Concentration Observed	Reason for Exceedance	Actions to Mitigate Exceedance
July 28, 2020	07:49 to 08:02	290 µg/m^3	Concrete drilling and removal	Dust suppression measures (i.e., spraying water on the work area) were implemented. No fugitive dust was observed migrating off-site during this period.
November 16, 2020	10:58 to 11:24	490 µg/m^3	Drill rig advancing through concrete	
January 8, 2021	14:06 to 14:28	301 µg/m^3	Welding adjacent to the downwind station	Welding activities were paused near the downwind station until concentrations returned below the action levels. No fugitive dust was observed migrating off-site during this period.
January 27, 2021	11:10 to 11:21	171 µg/m^3		
June 23, 2021	08:34 to 08:48	341 µg/m^3		
September 13, 2021	14:40 to 14:55	237 µg/m^3	Dust generated from backfill placement adjacent to downwind station	Work activities ended for the day. No fugitive dust was observed migrating off-site during this period.

µg/m^3 = micrograms per cubic meter

4.2.6 Reporting

Field staff recorded personnel on-site, a summary of work completed, a CAMP data summary, and the anticipated schedule of upcoming work in field books and daily reports.

This data was used to track remediation progress, monitor compliance with the IRMWP and RAWP, and summarize completed remedial actions in monthly BCP reports for submission to the NYSDEC. Daily and monthly reports were sent to the NYSDEC via email. The daily and monthly reports and CAMP data are included in Appendix H. A remediation photograph log is included in Appendix N.

4.3 In Situ Stabilization

4.3.1 ISS Approach and Bench Scale Treatability Summary

ISS treatment technology was implemented in the former metal plating trench drain area to permanently immobilize residual chromium- and nickel-impacted soil in a soil-cement matrix. A treatability study was performed by Geo-Solutions between September 2020 and May 2021 to develop a blend of grout reagents that were field tested and determined to be suitable for full-scale treatment. Site soil from the treatability study investigation was used as the aggregate and various mixtures of Portland cement and Blastox were tested for compliance with the following performance criteria:

- UCS of approximately 100 pounds per square inch (psi) or more, to achieve an approximate safety factor of 2 compared to the proposed field UCS criterion of greater than 50 psi;
- HC of approximately 5×10^{-7} centimeter per second (cm/s) or less, to achieve a safety factor of approximately half an order of magnitude compared to the proposed field hydraulic conductivity criterion of less than 1×10^{-6} cm/s

Using results of the treatability study, a blend of 5% Portland cement and 3% Blastox mix was chosen. The blend is based on the total weight of the sample (i.e., soil aggregate, Portland cement, Blastox, and water). This mixture yielded treatability study results that met or exceeded the performance criteria within the first seven days of curing.

Blastox 125 was proposed for use in the RAWP; however, due to supply chain issues, Renova used a mixture of Blastox 215 and ferrous sulfate as an alternative. The product manufacturer (The TDJ Group, Inc.) issued a letter indicating that a mix consisting of 67% of Blastox 215 combined with 33% ferrous sulfate by weight would stabilize chromium equivalently to Blastox 125. A copy of the letter provided by the manufacturer is included in Appendix O.

4.3.2 Field Implementation

Renova, was the remedial contractor selected to complete the ISS. Prior to implementing the ISS remedy, Renova removed the temporary asphalt cap and excavated non-hazardous fill and hazardous chromium-impacted soil (F006/D007 and D007 waste) within the approximately 6,500-square-foot ISS area to approximately 5.5 feet below grade surface (el. 15). Excavated non-hazardous soil and concrete, hazardous chromium-impacted soil (F006/D007 and D007 waste) and chromium-impacted concrete debris discovered within the excavation (F006/D007 waste) were directly loaded into permitted tri-axle trucks for off-site disposal, as described in Section 4.4. The stormwater detention

piping running east-west through the ISS area was removed and reinstalled after ISS completion.

Following the pre-excavation, Renova used an excavator bucket to mix grout (Portland cement and water), Blastox 215, and ferrous sulfate with soil in the ISS area to depths varying between approximately 14.5 and 24.5 feet below grade surface (el. 6 to -4) across an area of approximately 6,500 square feet, for a total treatment volume of approximately 2,700 CY of soil. ISS implementation involved the addition of approximately:

- 226 tons of Portland cement,
- 56,790 gallons of water,
- 93 tons of Blastox 215, and
- 46.5 tons of ferrous sulfate.

A series of 13 overlapping cells were homogenized, creating a relatively impermeable grout monolith. Cells were grouped into treatment areas to generalize the treatment depth over a given area. The table below summarizes the six treatment areas and their respective treatment depths.

Table 4.3.2 ISS Treatment Summary

Treatment Area No.	No. of Cells	Treatment Depth (feet below base of the pre-excavation [el. 15])	Treatment Depth (el. NAVD88)	Approx. Cell Volume (CY)
1	2	14	1	401
2	1	19	-4	68
3	3	9	6	607
4	2	9	6	172
5	2	14	1	360
6	3	19	-4	1,102

Once mixing was complete, Renova collected SPLP, UCS, and HC QC samples from each of the six treatment areas. QC sampling results are further described in Section 4.3.5.

4.3.3 ISS Coring

After ISS implementation and within the first 72 hours of monolith curing, Soil Mechanics used a Geoprobe 7800 truck-mounted drill rig to advance one core in each of the six treatment areas of the ISS monolith (six cores total). Two of the cores were advanced in the vicinity of RI soil boring B-12 and SRI soil boring SSB-30, per NYSDEC request. The remaining four cores were advanced in different treatment areas at varying depth sections. Visual inspection of the cores confirmed the field observation and sampling-based QA/QC programs. Copies of available NYSDEC approvals of core results is included

in Appendix F; remaining cores were approved by NYSDEC verbally on site on September 14, 15, and 22.

4.3.4 ISS Restoration

After completion of ISS and QC sample collection, Renova graded the surface of the ISS monolith. Renova then installed a composite cover with a capillary break to prevent residual chromium (if any) from migrating upward with moisture. The composite cover is composed of a demarcation barrier (i.e., Geotex DND Demarcation Fabric [a geotextile fabric]) placed on top of the ISS area followed by geotextile fabric, approximately 3 feet of clean 3/4-inch stone (as a capillary break), geotextile fabric, clean backfill, geotextile fabric, a 4-inch-thick RCA subbase to approximately 4 inches below grade, and an approximately 4-inch-thick asphalt cap. A letter from the civil engineer supporting the clean backfill material and installation method is included in Appendix O.

Gallas, a New York State licensed land surveyor, surveyed the ISS monolith, capillary break, and compacted backfill in the ISS area.

Protocols for protection of the ISS monolith are outlined in the SMP, which is included as Appendix D.

4.3.5 QC Sampling Results

Renova collected ISS QC samples from varying depths and submitted them to JLT Laboratories, Inc. for 7-day, 14-day, 21-day, and 28-day UCS analysis, and 28-day HC analysis. ISS QC samples demonstrated that after 28 days of curing, the treatment area UCS ranged from 79.6 to 496.6 psi, and the weighted-average UCS of the ISS monolith (weighted by cell volume) was 270.1 psi. The treatment area HCs ranged from 7.63×10^{-8} to 6.04×10^{-6} cm/sec, and the weighted-average HC of the ISS monolith (weighted by cell volume) was 1.20×10^{-6} cm/sec. A summary of the QC results is provided in the table below.

Table 4.3.5 ISS UCS and HC Results

Treatment Areas	7-day	14-day		21-day	28-day	
	UCS (psi)	UCS (psi)	HC (cm/sec)	UCS (psi)	UCS (psi)	HC (cm/sec)
1	121.6	183.7	*NT*	189.4	196.4	6.04×10^{-6}
2	65.3	146.4		205.6	203.7	1.28×10^{-6}
3	200.9	286.5	3.130×10^{-7}	316.1	438.6	7.63×10^{-8}
4	210.7	307.8	*NT*	328.2	496.6	4.20×10^{-7}
5A	*NT*	*NT*		*NT*	212.6	1.17×10^{-7}
5B	67.5	80.9		80.5	79.6	1.16×10^{-6}
6	156	167.1		204.4	213.3	3.65×10^{-7}

NT = Not Tested

The QC sample results indicate that the UCS of the monolith complies with the performance criterion outlined in the RAWP. Although the weighted-average HC of the monolith (1.20×10^{-6} cm/sec) slightly exceeds the HC performance criterion presented in the RAWP, the QC data indicate that the HC of the monolith is over two orders of magnitude less than that of the soil prior to ISS (approximately 4×10^{-4} cm/sec, as estimated based on typical hydraulic properties for soil types identified within the ISS area during the SRI). The ISS monolith therefore satisfies the design intent and achieved the soil RAO by preventing migration of contaminants that would result in groundwater contamination.

Though not a performance requirement outlined in the RAWP, one SPLP sample was collected from each of the six ISS treatment areas, with exception to treatment area 5 where two SPLP samples were collected. The samples were analyzed for SPLP VOCs, SPLP SVOCs, SPLP pesticides, SPLP PCBs, SPLP metals, SPLP mercury, and SPLP cyanide by Eurofins Edison Laboratory of Edison, New Jersey. SPLP results indicate chromium was detected at concentrations ranging from 18.7 to 483 µg/L, and SPLP nickel was detected at concentrations ranging from 10.9 to 32.1 µg/L. These results are generally consistent with the treatability study, further indicating that the ISS implementation was performed as designed.

Copies of the ISS QC laboratory results are included in Appendix O.

4.4 Contaminated Materials Removal

The following excavations were performed during the remedy:

- 15.6 feet bfsg (el. 5.4) in the storage building development for the building foundation, with localized excavations to:
    - 18 feet bfsg (el. 3) for elevator pit excavations.

    - 15 to 16 feet bfsg (el. 6 to 5) for over-excavation based on documentation sample results.

- 12 feet bfsg (el. 9) in the parking lot development for the stormwater detention system.
- 8 feet bfsg (el. 13) in the parking lot development for the mercury source area removals.
- 3 feet bfsg (el. 18) in the parking lot development for hazardous lead-impacted and hazardous chromium-impacted soil/fill removal.
- 4 feet bfsg (el. 17) in the parking lot development for hazardous chromium-impacted soil/fill removal.
- 5.5 feet below grade surface (el. 15) in the northwest part of the site for pre-excavation of non-hazardous fill and hazardous chromium-impacted soil (F006/D007 and D007 waste) within the approximately 6,500-square-foot ISS area.
- 10.5 feet bfsg (el. 10.5) in the northwest part of the site for over-excavation in the ISS area.

Excavated soil/fill was continuously screened by Langan for visual, olfactory, or instrumental indications of contamination.

In addition to soil/fill removal and off-site disposal, other miscellaneous site media including timber, concrete, boulders, asphalt and RCA were removed and disposed of off-site during the remedy. A Track 2 RURR remediation was achieved for the storage building development, and a Track 4 RURR remediation was achieved for the parking lot development. A list of the RURR SCOs for the contaminants of concern for this project is provided in Table 1. Remedial excavation extents are presented on Figures 2A and 2B.

4.4.1 Waste Characterization Soil Sampling

In addition to the waste characterization investigations described in Section 3.6, waste characterization test pits were completed in the ISS area in August 2022 to further delineate hazardous chromium hotspots before ISS. Six test pits were completed to a maximum depth of 4 feet below grade surface (i.e., the depth of the ISS pre-excavation) near the chromium hotspots identified during IRMWP implementation. A composite and grab sample were collected from each of the test pits and submitted to Alpha for the following analyses: total chromium (both hexavalent and trivalent) and TCLP chromium for the composite samples; and total cyanide for the grab samples.

The waste characterization delineated the extents of both hazardous chromium hotspots (F006/D007 waste and D007 waste). An amended contained-in determination request

was prepared and submitted to the NYSDEC; the resulting NYSDEC determination allowed the remainder of the ISS pre-excavation wastes to be managed as non-hazardous waste. A copy of the amended NYSDEC contained-in determination is provided in Appendix F. A copy of the waste characterization lab report is included in Appendix J.

4.4.2 Non-Hazardous Soil/Fill

Contaminated non-hazardous soil removed from the site included non-hazardous historic fill impacted by VOCs, SVOCs, PCBs, and metals, including soil containing PCBs, mercury, and manganese at concentrations above the applicable RURR SCOs encountered during the IRM Phase 1 documentation sampling.

The contractor transported a total of 32,768.40 tons of non-hazardous soil/fill off-site for disposal. Section 4.4.7 details the soil disposal quantities and disposal facilities. A tabulated summary of non-hazardous soil disposal is provided in Table 3A. Waste disposal documentation is included as Appendix I.

4.4.3 Hazardous Lead-, Chromium-, and Mercury-Impacted Soil/Fill

Hazardous lead-, mercury-, and chromium-impacted soil/fill were identified and delineated by Langan during the remedy. Hazardous lead-impacted soil/fill was identified in the northwestern part of the site surrounding RI soil boring SSB-40, hazardous mercury-impacted soil/fill was identified north of the SB-02/SSB02E mercury source removal excavation, and hazardous chromium-impacted soil/fill was identified in the northwestern part of the site near the former metal plating trench drain. The quantities of hazardous soil removed are summarized below and in the embedded Table 4.4.7:

- 53.82 tons of hazardous lead-impacted soil/fill (D008 waste) were excavated from surface grade to a maximum depth of 3 feet bfsg (el. 18) in the western part of the site.
- 143.22 tons of hazardous chromium-impacted soil/fill (F006/D007 waste) were excavated from surface grade to a maximum depth of 5.5 feet bfsg (el. 15.5) in the northwestern part of the site.
- 284.49 tons of hazardous chromium-impacted soil/fill (F006 waste) were excavated from surface grade to a maximum depth of 5.5 feet bfsg (el. 15.5) in the northwestern part of the site.
- 37.22 tons of hazardous mercury-impacted soil/fill (D009 waste) were excavated from surface grade to a maximum depth of 5 feet bfsg (el. 16) in the southwestern part of the site.

A tabulated summary of hazardous soil/fill disposal is provided in Table 3B. Waste disposal documentation is included as Appendix I.

4.4.4 Non-Hazardous C&D Debris

Concrete foundation components were encountered during excavation, demolished, and segregated from soil for off-site disposal. Concrete and brick debris generated during building demolition and used to backfill the former building cellars was removed and transported off-site during stormwater detention system excavation and site grading. The approximate quantities of non-hazardous C&D debris removed are summarized below:

- 1,360 CY of non-hazardous concrete.
- 1,000 CY of non-hazardous concrete and brick demolition debris.

A tabulated summary of non-hazardous C&D debris disposal is provided in Table 4A. Waste disposal documentation is included as Appendix I.

4.4.5 Hazardous Concrete Debris

Green and yellow discoloration (apparent chromium contamination) was observed in concrete debris encountered near the former metal plating trench drain. Approximately 428.65 tons of hazardous chromium-impacted concrete were demolished in-place, segregated, and disposed of off-site.

A tabulated summary of the hazardous concrete debris is provided in Table 4B and in the embedded Table 4.4.7. Waste disposal documentation is included as Appendix I.

4.4.6 Miscellaneous Waste Disposal

The following miscellaneous waste was disposed of off-site during IRMWP and RAWP implementation:

- Approximately 20 CY of creosote-impacted timber piles from the former building foundation from the storage building development excavation. The timber piles exhibited a creosote-like odor and PID readings up to 109 parts per million (ppm).
- Approximately 340 CY of native boulders from the storage building development excavation.
- Approximately 1,050 pounds of non-hazardous purged groundwater generated from the performance monitoring well installation and baseline groundwater sampling event.
- Approximately 400 pounds of hazardous (D007 waste) purged groundwater generated from the performance monitoring well installation and baseline groundwater sampling event.

- Approximately 140 CY of asphalt and 160 CY of RCA from the northwest part of the site overlaying the ISS area prior to the remedy.
- Approximately 1,500 pounds of hazardous sweeping compound (D007 and F006 waste) generated during IRM chromium residue removal, as described in Section 3.4.
- Approximately 400 pounds of non-hazardous polyethylene sheeting generated during IRM building demolition, as described in Section 3.5.
- Approximately 100 pounds of non-hazardous decontamination water generated during IRM waste characterization drilling, as described in Section 3.6.
- Approximately 300 pounds of hazardous purged groundwater generated from the repair/reinstallation of performance monitoring wells PMW-27 and PMW-30_R.
- Approximately 500 pounds of hazardous soil, comprising soil cuttings generated from the repair/reinstallation of performance monitoring wells PMW-27 and PMW-30_R and residual soil samples that were collected for use during the treatability study but returned to the site.

4.4.7 Disposal Quantities

Waste types, removed quantities, and disposal locations during IRMWP and RAWP implementation are summarized in the following table.

Table 4.4.7 Disposal Facilities and Quantities Summary

Material Category	Material Type	Disposal Facility	Quantity
Non-Hazardous Soil	Soil/fill	Kingsland Landfill Closure Project in Lyndhurst, NJ	15,558.58 tons
		Impact Reuse and Recycling Center in Lyndhurst, NJ	8,083.73 tons
		Posillico Wash Plant in Farmingdale, NY	8,758.28 tons
	Manganese-impacted soil/fill	Impact Reuse and Recycling Center in Lyndhurst, NJ	219.50 tons
	PCB and mercury-impacted soil/fill	Clean Earth of North Jersey in Kearny, NJ	148.31 tons
Hazardous Soil	Lead-Impacted Soil (D008 waste)	Clean Earth of North Jersey in Kearny, NJ	53.82 tons
	Chromium-Impacted Soil (F006/D007 waste)		143.22 tons
	Chromium-Impacted Soil (F006 waste)		284.49 tons
	Mercury-Impacted Soil (D009 waste)		37.22 tons
Non-Hazardous C&D Debris	Concrete	PPark NJ, LLC in Prospect Park, NJ	1,260 CY
		Impact Reuse and Recycling Center in Lyndhurst, NJ	60 CY
		Clean Earth of North Jersey in Kearny, NJ	40 CY
	Concrete and Brick Demolition Debris	Gloucester County Solid Waste Complex in Swedesboro, NJ	1,000 CY
Hazardous Concrete Debris	Chromium-Impacted Concrete Debris	Clean Earth of North Jersey in Kearny, NJ	428.65 tons
Misc. Non-Hazardous Waste	Native Boulders	PPark NJ, LLC in Prospect Park, NJ	340 CY
	Creosote-Impacted Timbers	Westside Transload LLC in North Bergen, NJ	20 CY
	Purged Groundwater	Dale Transfer Corporation in West Babylon, NY	1,050 pounds
	Asphalt	Green Asphalt in Long Island City, NY.	140 CY
	RCA	PPark NJ, LLC in Prospect Park, NJ	160 CY
	Polyethylene sheeting	Clean Earth of North Jersey in Kearny, NJ	400 pounds
	Decontamination water	Clean Earth of North Jersey in Kearny, NJ	100 pounds

Material Category	Material Type	Disposal Facility	Quantity
Misc. Hazardous Waste	Purged Groundwater	Republic Environmental Systems in Hatfield, PA	400 pounds
	Sweeping Compound	Clean Earth of North Jersey in Kearny, NJ	1,500 pounds
	Purged Groundwater		300 pounds
	Performance Monitoring Well Installation Soil Cuttings and Residual Treatability Soil Samples		500 pounds

Misc. = Miscellaneous

Material disposal documentation, including soil disposal facility permits and approval letters, was reviewed by Langan prior to off-site transport. Hazardous and non-hazardous waste was handled, transported and disposed of by licensed haulers in accordance with the applicable 6 NYCRR Part 360, Part 364, and Part 372 regulations, New York State Department of Transportation (NYSDOT) placarding requirements, and all other applicable federal, state and local regulations. Tabulated summaries of waste disposal are provided in Tables 3A through 5. Waste disposal documentation is included as Appendix I.

4.5 Remedial Performance/Documentation Sampling

Documentation endpoint soil samples were collected from the base and the western sidewall of the storage building excavation (in accordance with the IRMWP), the base of the stormwater system detention excavation, and the base and sidewalls of the mercury source excavations (in accordance with the IRMWP) to document subsurface conditions following remedial excavations and to evaluate the performance of the remedy relative to the RAOs.

4.5.1 IRM Phase 1 Documentation Sampling

In accordance with the IRMWP and NYSDEC DER-10, documentation soil samples were collected at a frequency of one base excavation sample for every 900 square feet, and one sidewall sample for every 30 linear feet within the storage building development excavation. Sidewall samples were only collected from the western sidewall due to SOE constraints. Based on these criteria, 82 documentation endpoint samples (including the required QA/QC samples) were collected from the base of the storage building development excavation. At locations where the final subgrade was less than 15 feet bfsg (el. 6.0), two samples were collected: one sample from the final subgrade, and another sample from approximately 15 feet bfsg via test pit.

Documentation endpoint samples were analyzed for NYSDEC Part 375-list VOCs, SVOCs, PCBs, metals, and pesticides by an NYSDOH ELAP-certified laboratory. Based on the documentation sample results, over-excavation was required in three areas (SW-06, DS-

18, and DS-34) to a maximum depth of 16 feet bfsg (approximately el. 5) to remove manganese-, PCB-, and mercury-impacted soil, as noted below:

- Two base samples (DS-18_EL8.0 and DS-18_EL6.0) contained manganese at a concentration exceeding the Track 2 RURR SCO. After over-excavation, an additional documentation sample was collected at approximately el. 7, which met the Track 2 RURR SCO.
- One base sample (DS-34_EL8.0) contained total PCBs at a concentration above the Track 2 RURR SCO. After over-excavation, an additional documentation sample collected at approximately el. 6, which met the Track 2 RURR SCO.
- One sidewall sample (SW-06_EL8.0) contained mercury at a concentration exceeding the Track 2 RURR SCO. An additional documentation soil sample was collected at approximately el. 7 to delineate the mercury-impacted soil, which met the Track 2 RURR SCO. Over-excavation was then performed to el. 7.

NYSDEC correspondence regarding the above-described over-excavations is included in Appendix F.

Results were compared to the Track 2 RURR SCOs and are further discussed in Section 4.8.1. IRM Phase 1 documentation endpoint analytical results are provided in Table 2A, and shown on Figure 3. Analytical laboratory reports are included in Appendix J.

4.5.2 IRM Phase 2 Documentation Sampling

In accordance with the IRMWP, documentation soil samples were collected from the base of the stormwater detention system and the base and sidewalls of the mercury source area excavations. Based on these criteria, 10 documentation soil samples (including QA/QC samples) were collected from the stormwater detention system excavation and 22 documentation soil samples (including QA/QC samples) were collected from the mercury source area excavations.

Documentation samples from the stormwater detention system were analyzed for NYSDEC Part 375-list VOCs, SVOCs, PCBs, metals, and pesticides, and documentation soil samples from the mercury source excavations were analyzed for total mercury. Results were compared to the Track 4 RURR SCOs and are discussed in Section 4.8.1. IRM Phase 2 documentation endpoint analytical results are provided in Tables 2B and 2C, and shown on Figure 3. Analytical laboratory reports are included in Appendix J.

4.5.3 Data Usability Summary Reports

Data Usability Summary Reports (DUSRs) were prepared for the documentation soil samples (and related QA/QC samples) collected as part of the remedy. The data usability

review confirmed that the data presented in the laboratory analytical reports are of an appropriate quality for the intended usage. The DUSRs are included in Appendix P.

On December 17, 2021, documentation soil samples were submitted as an electronic data deliverable (EDD) to the NYSDEC. A confirmation of the submission was received from the NYSDEC on February 2, 2022; a copy of this confirmation is included in Appendix F.

4.6 Imported Backfill

Backfill material was imported to the site in accordance with the IRMWP and RAWP between October 14, 2020 and October 3, 2022. Material import documentation, including sieve profile analyses, was reviewed by Langan prior to import. Upon delivery, imported material was screened by Langan field personnel and determined to be acceptable for use as backfill based on visual, olfactory, and instrumental (i.e., PID) observations.

A total of 8,196.4 tons of material were imported to the site as follows:

- 78.5 tons of 3/4-inch clean blue stone were imported from the Impact Reuse and Recycling Center facility in Lyndhurst, NJ and used as a tracking pad at the site entrance and exit.
- 100.9 tons of ASTM #3 stone were imported from the Tilcon – Mount Hope Quarry via the Tilcon New York facility in West Nyack, NY and used as a tracking pad at the site entrance and exit.
- 1,025 tons of ASTM #57 stone were imported from the Tilcon – Mount Hope Quarry via the Tilcon New York facility in West Nyack, NY and used as part of the ISS capillary break and clean backfill.
- 5,145 tons of RCA were imported from the EROC facility in Corona, NY and used to backfill areas of the IRM Phase 1 excavation, storage building development subgrade, the stormwater detention system excavation, and mercury source area excavations on the western part of the site. RCA was also used to create access ramps to the self-storage building throughout the central part of the site.
- 1,787 tons of RCA blend were imported from the EROC facility in Corona, NY and was used as the subgrade for the composite cover system on the western part of the site.

- 60 tons of 3/4-inch RCA blend were imported from the EROC facility in Corona, NY and used as clean backfill on top of the ISS monolith in the northwestern part of the site.

Imported backfill facility documentation, approvals and import backfill tickets are provided in Appendix L. Imported backfill types, dates, quantities, and source facility for each load is summarized in Table 6. Backfill locations are presented on Figure 4.

4.7 Performance Groundwater Monitoring Well Reinstallation and Repair

Performance groundwater monitoring wells were installed during IRMWP installation, as described in Section 3.16. During RAWP implementation, performance monitoring wells PMW-27 and PMW-30 were observed to be damaged by sidewalk construction on Ingraham Street. To repair performance monitoring well PMW-27, Soil Mechanics used hand tools to excavate the top 2 feet of soil surrounding the damaged monitoring well and spliced a new 2-foot section of Schedule 40 PVC onto the existing riser. Soil Mechanics backfilled around the monitoring well and completed the monitoring well with a 5-inch-diameter flush-mounted manhole and concrete patch.

Soil Mechanics used a CME 4500 truck-mounted drill rig to reinstall monitoring well PMW-30, now identified as PMW-30R, on the Ingraham Street sidewalk north of the site. The replacement well was constructed with 2-inch-diameter, Schedule 40 PVC with a 10-foot screened interval. The borehole annulus was backfilled with clean sand to about 2 feet above the well screen, sealed with a 2-foot bentonite seal, and grouted to grade. The replacement well was capped with a 5-inch-diameter flush-mounted manhole set within concrete. Soil cuttings were placed into two 55-gallon steel drums and disposed of off-site, as described in Section 4.4.6.

Following repair and installation, the wells were developed by surging a submersible pump across the well screen/casing to agitate and remove fines. Purged groundwater was pumped into a 55-gallon steel drum and disposed of off-site, as described in Section 4.4.6.

Monitoring well construction and development logs are attached in Appendix M. A monitoring well location and protection plan is shown on Figure 5.

4.8 Contamination Remaining At The Site

Residual soil, groundwater, and soil vapor exist beneath the site. Therefore, EC/ICs are required to protect human health and the environment.

4.8.1 Soil

Documentation soil samples from IRM Phase 1 indicate that soil remaining beneath the storage building development meets the Track 2 RURR SCOs, which are shown in Table 1. IRM Phase 1 documentation soil samples were also compared against UU SCOs for reference. VOCs, SVOCs and herbicides were not detected at concentrations above the UU SCOs. One pesticide (4,4'-DDT), total PCBs, and 10 metals (barium, hexavalent chromium, trivalent chromium, lead, manganese, mercury, nickel, selenium, silver, and zinc were detected at concentrations above the UU SCOs, but below the Track 2 RURR SCOs, across 24 soil samples (including 2 QA/QC samples).

Documentation soil samples from IRM Phase 2 indicate that remaining soil contamination beneath the demarcation barrier within the parking lot development includes SVOCs and metals (lead and mercury) exceeding the Track 2 RURR SCOs. Of the 10 documentation soil samples (including QA/QC samples) collected in the stormwater detention system excavation, 5 samples contained at least one compound at a concentration exceeding the RURR SCO. Of the 24 documentation samples (including a QA/QC sample) collected in the mercury source area removals excavations, 20 samples contained mercury at a concentration above the RURR SCO. Over-excavation in response to two of the documentation sample results is described in the following paragraph.

Two of the documentation samples (SWN_SB-02_SSB02E and SWN_SB-02_SSB02E_A) collected from the northern sidewall of the SB-02/SSB02E mercury source excavation contained mercury at concentrations above 1,000 mg/kg. Based on these results, the geographic extent of the SB-02/SSB02E mercury source excavation was extended 2 feet to the north.

IRM Phase 2 documentation soil samples were also compared against UU SCOs, for reference. VOCs were not detected at concentrations above the UU SCOs. Seven SVOCs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene), three pesticides (4,4'-DDD, 4,4'-DDE and 4,4'-DDT), totals PCBs, and four metals (copper, lead, mercury and zinc) were detected at concentrations above the UU SCOs across 8 soil samples (including one QA/QC sample). Pesticides and total PCBs were detected at concentrations below Track 2 RURR SCOs.

After RAWP implementation, residual chromium- and nickel-impacted soil stabilized via ISS remains in place in the northwest part of the site, within the parking lot development and near the former metal plating trench drain. ISS is the process of mixing contaminated soils with cement (and other additives, as needed) to permanently immobilize the contaminants in a soil-cement monolith. The ISS monolith extends to a maximum depth

of approximately el. -4 across an approximately 6,500-square-foot area, and is further described in Section 4.9.2.

Remedial excavation extents for the IRM and RAWP implementation are shown in Figures 2A and 2B, respectively. The documentation soil sample analytical results from the IRM are presented on Tables 2A through 2C and summarized on Figure 3.

4.8.2 Groundwater

During IRMWP implementation, permanent groundwater monitoring wells were installed in the southwestern part of the site (PMW-02 and PMW-54) and on the Ingraham Street sidewalk (PMW-22, PMW-27, and PMW-30). One baseline groundwater sample was collected from each well in October 2021, before RAWP implementation. Dissolved mercury, chromium, and nickel concentrations were compared to the applicable SGVs. Concentrations detected above the applicable NYSDEC SGVs are listed below (TOGS Class GA standards in parentheses):

- PMW-30_100821
    - Dissolved Chromium – 23,530 µg/L (50 µg/L)
    - Dissolved Nickel – 1,764 µg/L (100 µg/L)
    - Dissolved Mercury – 1.93 µg/L (0.7 µg/L)

Groundwater monitoring to assess the performance of the remedy, or natural attenuation following the removal of contaminant sources, will continue until residual groundwater concentrations are found to be below the applicable NYSDEC standards or have become asymptotic over an extended period, as determined by NYSDOH and NYSDEC. It is anticipated that, following remediation, a minimum of eight quarterly groundwater monitoring events will be performed. If warranted by the groundwater monitoring results, a request to decrease monitoring frequency will be submitted to the NYSDEC.

Table 7 and Figure 6 summarize the results of the baseline groundwater sampling, performed before RAWP implementation. Groundwater elevation contours are provided on Figure 7.

4.8.3 Soil Vapor

Any potential future buildings in the parking lot development will be evaluated for soil vapor intrusion and the possible routes of exposure will be avoided or mitigated through soil vapor mitigation measures if necessary.

4.8.4 Associated Controls

Since contaminated soil, groundwater, and soil vapor remains beneath the site after completion of the Remedial Action, ECs/ICs are required to protect human health and the environment. These ECs/ICs are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the SMP approved by the NYSDEC.

4.9 Engineering Controls

4.9.1 Composite Cover System

Exposure to remaining contamination in the parking lot development is prevented by a composite cover system comprising:

- Approximately 4 inches of RCA sub-base and 4 inches of asphalt pavement underlain by a demarcation barrier in the parking lot development.
- A capillary break composed of a demarcation barrier (i.e., Geotex DND Demarcation Fabric [geotextile fabric]) placed on top of the ISS area followed by geotextile fabric, about 3 feet of clean 3/4-inch stone, geotextile fabric, clean backfill, geotextile fabric, a 4-inch-thick RCA subbase to about 4 inches below grade, and an about 4-inch-thick asphalt cap.
- An approximately 384-square-foot, 12-inch-thick reinforced concrete mat slab in the northwest corner of the site.

Composite cover system locations and details are presented on Figure 8A. ISS sections are shown on Figures 8B and 8C.

An Excavation Work Plan (EWP), which outlines the procedures required in the event the cover system and/or underlying residual contamination are disturbed, is provided in Appendix D of the SMP. Procedures for the inspection of this cover are provided in the SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in the CHASP and CAMP prepared for the site, which are provided as appendices to the SMP. Any disturbance of the site's cover system must be overseen by a Qualified Environmental Professional as defined in 6 NYCRR Part 375, a PE who is licensed and registered in New York State, or a qualified person who directly reports to a PE who is licensed and registered in New York State.

The composite cover system will be maintained to allow for restricted residential use of the site. Any future site redevelopment must maintain, repair, or replace the existing cover system pursuant to the SMP and EWP.

4.9.2 ISS Monolith and Capillary Break

ISS and installation of a capillary break were completed in the northwest part of the site during RAWP implementation. ISS is the process of mixing contaminated soil with cement (and other additives, as needed) to permanently immobilize the contaminants in a soil-cement monolith. The ISS monolith extends to a maximum depth of approximately el. -4 across an approximately 6,500-square-foot area, and the top of the monolith is about 5.5 feet below grade surface (el. 15). Implementation of the ISS involved the addition of approximately:

- 226 tons of Portland cement,
- 56,790 gallons of water,
- 93 tons of Blastox 215, and
- 46.5 tons of ferrous sulfate.

ISS QC samples showed that after 28 days of curing, the treatment area UCS ranged from 79.6 to 496.6 psi, and the weighted-average UCS of the ISS monolith (weighted by cell volume) was 270.1 psi. The treatment area HCs ranged from 7.63×10^{-8} to 6.04×10^{-6} cm/sec, and the weighted-average HC of the ISS monolith (weighted by cell volume) was 1.20×10^{-6} cm/sec. If future development is planned in the ISS area, it should be completed pursuant to Section 3.3.3.1 of the SMP (Protection of ISS Monolith).

The composite cover with a capillary break is composed of a demarcation barrier (i.e., Geotex DND Demarcation Fabric [geotextile fabric]) placed on top of the ISS area followed by geotextile fabric, about 3 feet of clean ¾-inch stone (as a capillary break), geotextile fabric, clean backfill, geotextile fabric, a 4-inch-thick RCA subbase to approximately 4 inches below grade, and an approximately 4-inch-thick asphalt cap. The composite cover with capillary break effectively mitigates the potential for upward migration of chromium contamination (if any) in water vapor.

4.10 Institutional Controls

The site remedy requires that an EE be placed on the property to (1) implement, maintain and monitor the ECs; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to restricted residential use only.

The EE for the site was executed by the Department on December 1, 2022, and recorded in the Office of the City Register of the City of New York on December 9, 2022. The City Register File Number (CRFN) for this filing is 2022000447061. A copy of the easement and proof of recording is provided in Appendix B.

A series of ICs is required by the DD to:

1. Implement, maintain and monitor EC systems;
2. Prevent future exposure to remaining contamination; and,
3. Limit the use and development of the site to only restricted-residential use, commercial use, and industrial use, as allowed by current local zoning.

Adherence to these ICs on the site is required by the EE and will be implemented under the NYSDEC-approved SMP, which is provided as Appendix D. ICs identified in the EE may not be discontinued without an amendment to or extinguishment of the EE, as approved by the NYSDEC. The ICs, as defined by the RAWP and DD, include recording of an EE and SMP. The IC boundaries are shown on the environmental easement survey included in Appendix B. These ICs are:

- The property may be used for Restricted-Residential use as defined in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial use as defined in 6 NYCRR Part 375-1.8(g)(2)(iii), and Industrial use as designed in 6 NYCRR Part 375-1.8(g)(2)(iv)
- All ECs must be operated and maintained as specified in the SMP
- All ECs must be inspected at a frequency and in a manner defined in the SMP
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the NYSDEC
- Groundwater and other environmental or public health monitoring must be performed as defined in the SMP
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP
- All future activities that will disturb remaining contaminated material, including the ISS monolith, must be conducted in accordance with the SMP
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP

- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the EE
- The potential for vapor intrusion must be evaluated for any potential future buildings developed in the area within the IC boundaries noted in Appendix B, and any potential impacts that are identified must be monitored or mitigated
- Vegetable gardens and farming on the site are prohibited
- The Volunteer must provide all persons who acquire any interest in the site a complete copy of the SMP that the NYSDEC approves for the site and all NYSDEC-approved amendments to the SMP.

4.11 Deviations from the IRMWP and RAWP

The following deviations from the NYSDEC-approved IRMWP and RAWP were noted:

- A storage building foundation subgrade depth of 14 feet bfsg (el. 7) was originally proposed in the IRMWP; however, it was modified during construction to accommodate a development design change. The NYSDEC approved this deviation on September 8, 2020.
- During the supplementation investigation conducted during IRM Phase 1, sorbent tubes were used to collect mercury vapor samples. The IRMWP had proposed the use of Summa canisters for sample collection. The NYSDEC approved the use of sorbent tubes instead of Summa canisters on September 17, 2020.
- During SOE installation as part of the IRM Phase 1 excavation, excess drilling fluids were generated and pooled in the northeast part of the site along with ponded rainwater. A pump was used to relocate the excess fluids to smaller pit excavations within the storage building development. The NYSDEC approved this approach on September 30, 2020.
- After 19 days of remedial excavation for the storage building development, a proposal was issued to the NYSDEC requesting a pause in mercury monitoring during the remainder of IRM Phase 1 because the geographic extent of the intrusive work had progressed beyond the part of the site known to contain mercury-impacted soil/fill. The NYSDEC approved this request on July 7, 2020, provided that mercury monitoring would resume during ground-intrusive activities within the parking lot development. Mercury monitoring resumed at the start of IRM Phase 2 implementation.

- Blastox 125 was proposed for use in the RAWP; however, due to supply chain issues, Renova used a mixture of Blastox 215 and ferrous sulfate as an alternative. The product manufacturer (The TDJ Group, Inc.) issued a letter indicating that a mix consisting of 67% of Blastox 215 combined with 33% ferrous sulfate would stabilize chromium equivalently to Blastox 125.
- The use of a non-petroleum sweeping compound to manually sweep all loose chromium-impacted residue from the concrete surface of the slab at the former metal plating trench area was not outlined in the IRMWP. The method was proposed prior to demolition, and the NYSDEC approved this approach on November 15, 2019. The chromium-impacted slab was temporarily capped with an epoxy coating while the demolition of the remainder of the above-grade building components commenced. After the above-grade building demolition was complete, the contractor demolished and disposed of the chromium-impacted concrete.

The above-listed deviations did not affect compliance with the remedial action objectives established in the IRMWP and RAWP. NYSDEC correspondence regarding the above-listed deviations is provided in Appendix F.

NEW YORK STATE | Department of Environmental Conservation

FACT SHEET

Brownfield Cleanup Program

2 Ingraham Street
2 Ingraham Street
East Williamsburg, NY 11206

SITE No. C224036
NYSDEC REGION 2

January 2023

Cleanup Action Completed at Brownfield Site

Action has been completed to address the contamination related to the 2 Ingraham Street site ("site") located at 2 Ingraham Street, East Williamsburg, NY under New York State's Brownfield Cleanup Program (BCP). Please see the map for the site location.

Cleanup activities were performed by 74 Bogart LLC and Bogart Holdings LLC ("applicants") with oversight provided by the New York State Department of Environmental Conservation (NYSDEC). The applicants have submitted a draft Final Engineering Report (FER) for NYSDEC review which states that cleanup requirements have been achieved to fully protect public health and the environment for the proposed site use.

- Access project documents online through the DECinfo Locator: https://www.dec.ny.gov/data/DecDocs/C224036/.
- The documents also are available at the locations identified at left under "Where to Find Information."

Highlights of the Site Cleanup: The following activities have been or will shortly be completed to achieve the remedial action objectives:

- Demolition and off-site disposal of the former building, including impacted building materials.
- Excavation - Excavation and off-site disposal of 2,789 tons of concrete, 519 tons of hazardous soils, and 32,768 tons of contaminated soil exceeding the Restricted Residential Use soil cleanup objectives (RRUSCOs), the site-specific cleanup criteria. Clean fill was brought in to replace the excavated soil and to establish the design grades at the site.
- In-situ Solidification (ISS) - Solidification of metal-impacted soils to depths of up to twenty-five (25) feet below ground surface in the former metal plating drain area. The contaminated soil was mixed in-place together with a solidifying agent (Portland cement) and other binding agents using an excavator. This mixture of soil, cement, and binding agents will slow groundwater flow and inhibit the movement of contaminants.
- Site Cover System - Placement of a cover system, including a demarcation layer over areas without hardscape (buildings, asphalt, or concrete) to address contamination remaining above RRUSCOs.

Where to Find Information:

Access project documents through the DECinfo Locator https://www.dec.ny.gov/data/DecDocs/C224036/ and at these location(s):

Brooklyn Public Library
Central Branch
10 Grand Army Plaza
Brooklyn, NY 11238
(718) 230-2100

Brooklyn Community Board 1
435 Graham Avenue
Brooklyn, NY 11211
(718) 389-0009
bk01@cb.nyc.gov

Who to Contact:

Comments and questions are welcome and should be directed as follows:

Project-Related Questions
Javier Perez-Maldonado, Project Manager
NYSDEC
625 Broadway
Albany, NY 12233-7016
(518) 402-9768
javier.perez-maldonado@dec.ny.gov

Project-Related Health Questions
Stephen Lawrence
NYSDOH
Bureau of Environmental Exposure Investigation
Corning Tower, Rm 1787
Albany, NY 12237
(518) 402-0450
beei@health.ny.gov

For more information about New York's Brownfield Cleanup Program, visit:
www.dec.ny.gov/chemical/8450.html

BROWNFIELD CLEANUP PROGRAM

- Development of a Site Management Plan (SMP) for long-term management of residual contamination as required by the Environmental Easement, including plans for: (1) Institutional and Engineering Controls (IC/ECs); (2) monitoring; (3) operation and maintenance; and (4) reporting.
- An Environmental Easement was recorded to prevent future exposure to any contamination remaining at the site and to ensure implementation of the SMP.

Next Steps: When NYSDEC approves the FER, it will be made available to the public (see "Where to Find Information"). NYSDEC then will issue a Certificate of Completion (COC) that will be announced in a fact sheet. The applicants would be able to redevelop the site after receiving a COC. In addition, the applicants will be eligible for tax credits to offset a portion of the costs of performing cleanup activities and for redevelopment of the site.

Site Description: The site is located at 2 Ingraham Street in the East Williamsburg Area of Brooklyn, NY, and is identified as Block 3084, Lot 1 on the New York City Tax Map. The site is a rectangular parcel about 1.8 acres in size and is located on the city block bordered by Ingraham Street to the north, Morgan Avenue to the east, Harrison Place to the south, and Bogart Street to the west. Historic uses included an orphanage, an umbrella manufacturing plant, and a metal plating operation. The site is being redeveloped into a seven-story storage building and a parking lot.

Additional site details, including environmental and health assessment summaries, are available on NYSDEC's Environmental Site Remediation Database (by entering the site ID, C224036) at:
https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3

Brownfield Cleanup Program: New York's Brownfield Cleanup Program (BCP) encourages the voluntary cleanup of contaminated properties known as "brownfields" so that they can be reused and redeveloped. These uses may include recreation, housing, business, or other uses. A brownfield site is any real property where a contaminant is present at levels exceeding the SCOs or other health-based or environmental standards, criteria or guidance adopted by NYSDEC that are applicable based on the reasonably anticipated use of the property, in accordance with applicable regulations.

For more information about the BCP, visit:
https://www.dec.ny.gov/chemical/8450.html

We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.

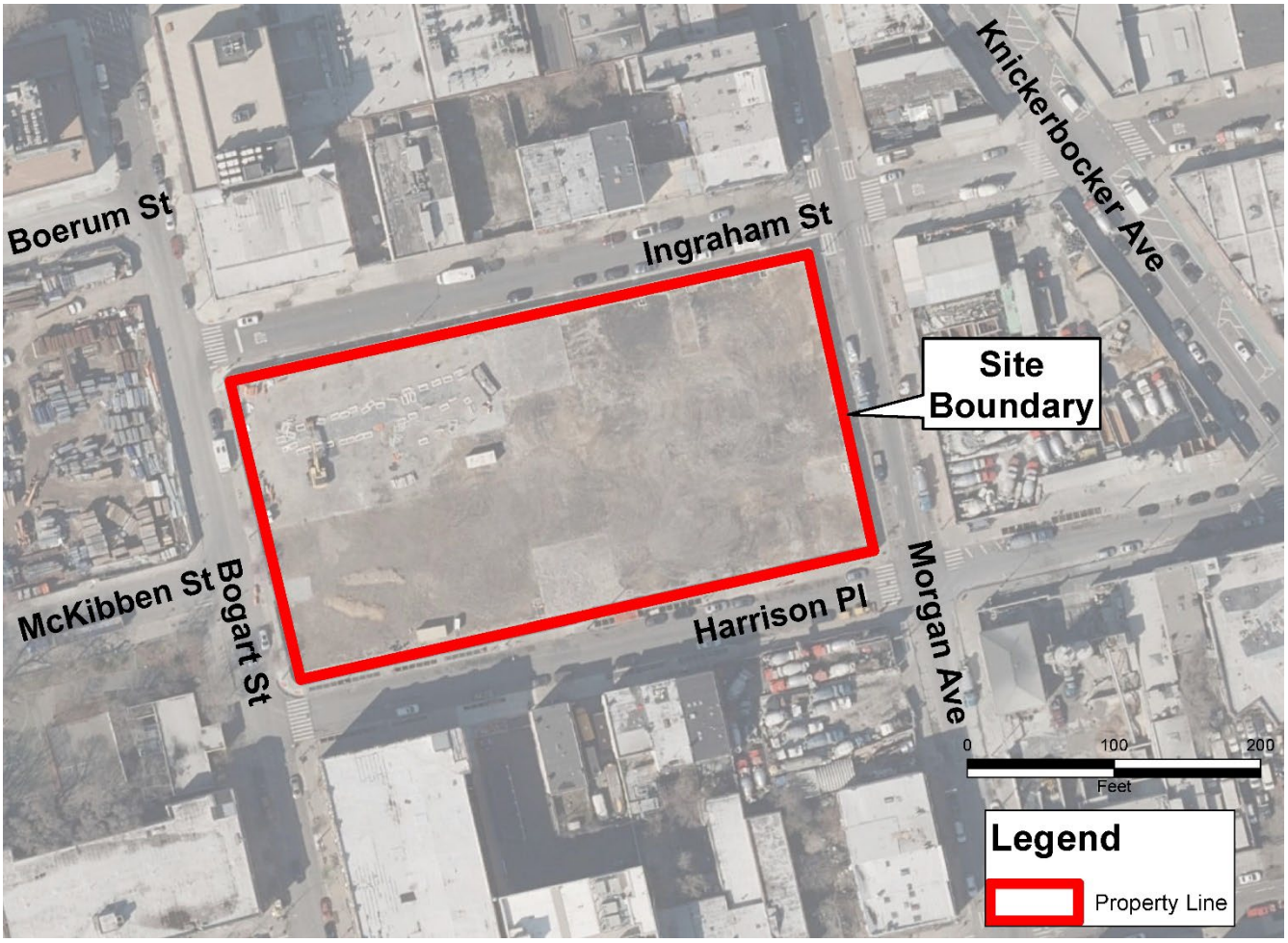
Stay Informed With DEC Delivers
Sign up to receive site updates by email:
www.dec.ny.gov/chemical/61092.html

Note: Please disregard if you already have signed up and received this fact sheet electronically.

DECinfo Locator
Interactive map to access DEC documents and public data about the environmental quality of specific sites:
https://www.dec.ny.gov/pubs/109457.html

BROWNFIELD CLEANUP PROGRAM

Site Location



Appendix VIII:

Travel Demand Factors Memorandum

Philip Habib & Associates
Engineers and Planners • 432 Park Avenue South • New York, NY 10016 • 212 929 5656 • 212 929 5605 (fax)

TECHNICAL MEMORANDUM

TO: **NYCDCP**

FROM: **Philip Habib & Associates**

DATE: **June 27, 2024**

PROJECT: **74 Bogart Street Rezoning EAS (PHA No. 2405)**

RE: **Transportation Planning Factors and Travel Demand Forecast**

This memorandum summarizes the transportation planning factors to be used for the analysis of traffic, parking, transit, and pedestrian conditions for the *74 Bogart Street Rezoning EAS*. Estimates of the peak travel demand for the Proposed Actions' Reasonable Worst Case Development Scenario (RWCDS) are provided, along with a discussion of trip assignment methodologies and study area definitions.

THE PROPOSED ACTIONS

The Applicant, 74 Bogart LLC, is seeking a zoning map amendment to rezone 74 Bogart Street (Block 3084, Lot 1; the "Project Site") in Brooklyn Community District 1 (refer to **Figure 1**) from a M1-2 district to a M1-4A district (the "Proposed Action"). The zoning map amendment would facilitate the development of an approximately 247,000-gross-square-foot (gsf) building to be used for warehouse and storage space for art (the "Proposed Development"). The Proposed Action would allow for an increase of permitted floor area on the Project Site by approximately 240,000 zoning square feet (zsf) to allow for the development of the proposed facility.

DEVELOPMENT SCENARIOS

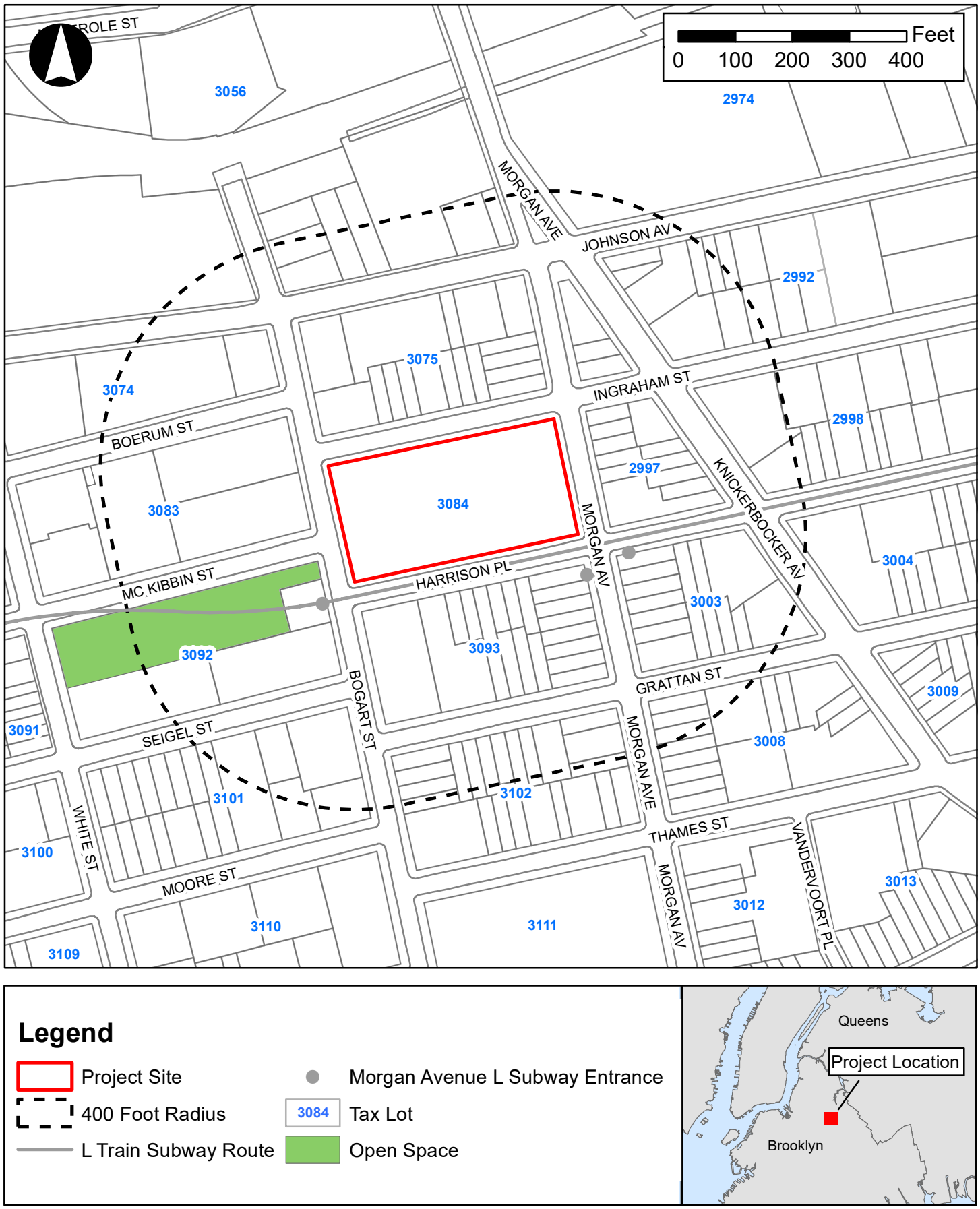
In order to assess the potential effects of the Proposed Actions, a RWCDS for both "future without the proposed actions" (No-Action) and "future with the proposed actions" (With-Action) conditions are analyzed for an analysis year of 2027. I'll continue reviewing from here

Future without the Proposed Actions (No-Action Condition)

In the future without the Proposed Actions, the Project Area's existing M1-2 zoning district would remain. Under the No-Action condition the 247,0000-gsf building would not be developed. The site would stay as current with the eastern portion of the Project Site occupying approximately 193,785-gsf commercial building, with approximately 177,000 gsf of existing self-storage space and 16,000 gsf of empty space on the ground floor. The Applicant plans to rent the 16,000 gsf of unused ground floor space within the facility to a tenant for local retail space. The remainder of the site will be used for vehicle storage lot.

Figure 1

Project Location



Future with the Proposed Actions (With-Action Condition)

In the With-Action Scenario, 74 Bogart Street would be rezoned from M1-2 to M1-4A. The allowable commercial and manufacturing FAR for commercial and manufacturing uses would increase from 2.0 to 5.0 and for community facility uses from 4.8 to 6.5. The Applicant would develop an approximately 247,000-gsf building as-of-right to be used as a warehouse and storage for art on the western portion of the Project Site, replacing the current parking lot. The existing self-storage facility on the eastern portion of the Project Site would continue to operate with or without the adoption of the Proposed Action.

RWCDS Increment

As presented in **Table 1**, compared to the No-Action condition, the With-Action condition for the Proposed Actions' RWCDS would result in the positive incremental development of approximately 247,000-gsf of warehouse space (for art warehousing and storage) as well as a negative incremental development of approximately 40,000-gsf of outdoor vehicle storage space. However, for conservative analysis and travel demand forecasting purposes, no credit will be taken for the existing outdoor vehicle storage space on the Project Site that would remain under the No-Action scenario.

Table 1: 2027 RWCDS Comparison of No-Action and With-Action Development Scenarios

Use (gsf)	No-Action	With-Action	Increment
Self-Storage	177,785	177,785	+0
Retail	16,000	16,000	+0
Outdoor Vehicle Storage[1]	40,000	0	-40,000
Art Storage	0	247,000	+247,000

Notes:

[1] For conservative analysis and travel demand forecasting purposes, no credit will be taken for the existing outdoor vehicle storage space to remain under No-Action

TRANSPORTATION PLANNING FACTORS

The transportation planning factors used to forecast the travel demand that would be generated by the No-Action and With-Action land uses on Project Site are summarized in **Table 2** and discussed below.

The trip generation rates, temporal distributions, modal splits, vehicle occupancies, and truck trip factors for each projected land use were primarily based on data provided by DOT, factors developed for recent environmental reviews in the area, and American Association of State Highway Transportation Officials (AASHTO) Census Transportation Planning Products (CTPP) reverse journey-to-work data in the area.

Warehouse

The trip generation rates, temporal distributions, modal splits and directional in/out splits used to forecast warehouse travel demand were based on data provided by DOT. The auto vehicle occupancy was based on 2012-2016 AASHTO CTPP reverse journey-to-work data for Kings County census tracts 453 and 485. The taxi vehicle occupancy was based on data cited in the 2021 *Gowanus Neighborhood Rezoning and Related Actions FEIS*. The truck trip generation, temporal distribution, and directional distribution were based on data provided by DOT.

TABLE 2: Transportation Planning Factors

Land Use:	**Warehouse**	
Trip Generation:	(1)	
Weekday	2.36	
Saturday	0.2	
	per 1,000 sf	
Temporal Distribution:	(1)	
AM	10.0%	
MD	9.0%	
PM	11.0%	
Saturday	33.0%	
Modal Splits:	(1)	
	All Periods	
Auto	34.2%	
Taxi	0.5%	
Subway/Railroad	24.1%	
Bus	7.3%	
Walk/Other	33.9%	
	100.0%	
In/Out Splits:	(1)	
	In	Out
AM	77%	23%
MD	53%	47%
PM	27%	73%
Saturday	64%	36%
Vehicle Occupancy:	(2,3)	
	All Periods	
Auto	1.2	
Taxi	1.3	
School Bus		
Truck Trip Generation:	(1)	
Weekday	0.91	
Saturday	0.08	
	per 1,000 sf	
Truck Temporal Distribution:	(1)	
AM	9.9%	
MD	8.0%	
PM	7.0%	
Saturday	28.0%	
Truck Directional Distribution:	In	Out
All Periods/ AM	67.0%	33.0%
MD	57.0%	43.0%
PM	60.0%	40.0%
SAT	42.0%	58.0%

Notes:

(1) Based on data provided by DOT

(2) Based on AASHTO CTTP reverse journey to work 5-Year (2012-2016) data for Kings County Census Tract 453 and 485.

(3) Gowanus Neighborhood Rezoning and Related Actions FEIS, 2021.

TRIP GENERATION

The net incremental change in person and vehicle trips expected to result from the Proposed Actions by the 2027 analysis year was derived based on the net change in land uses shown in **Table 1** and the transportation planning factors shown in **Table 2**. **Table 3** shows an estimate of the net incremental change in peak hour person trips and vehicle trips, (versus the No-Action condition) that would occur in 2027 with implementation of the Proposed Actions. As shown in **Table 3**, under the RWCDS, the Proposed Actions would generate a net increase of approximately 58 person trips in the weekday AM peak hour, 52 in the weekday midday peak hour, 64 in the weekday PM peak hour, and 16 in the Saturday peak hour.

Peak hour vehicle trips (including auto, truck, and taxi trips balanced to reflect that some taxis arrive or depart empty) would increase by a net total of approximately 39, 33, 33, and 10 (in and out combined) in the weekday AM, midday, and PM, and Saturday peak hours, respectively.

Peak hour subway trips would increase by a net total of approximately 14, 13, 15, and three during the weekday AM, midday, and PM, and Saturday peak hours, respectively. Peak hour bus trips would increase by a net total of approximately four trips in the weekday AM, midday, and PM peak hours and a net increase of one trip in the Saturday peak hour.

There would be no net change in the peak hour bike trips. Trips made entirely on foot (walk-only trips) or by other non-motorized modes would increase by 20, 18, 23, and 6 trips during the weekday AM, midday, and PM, and Saturday peak hours, respectively. As such, total pedestrian trips (including walk-only trips, pedestrians walking to/from subway stations and bus stops, and those travelling on bikes) would increase by a net total of approximately 38, 35, 42, and 10 trips during these periods.

LEVEL 1 SCREENING ASSESSMENT

The 2021 *CEQR Technical Manual* describes a two-level screening procedure for the preparation of a "preliminary analysis" to determine if quantified operational analyses of transportation conditions are warranted. As discussed in the following sections, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the numbers of person and vehicle trips attributable to the proposed action. According to the 2021 *CEQR Technical Manual*, if a proposed action is expected to result in fewer than 50 vehicle or ferry trips in each peak hour, and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (a Level 2 screening assessment) are to be performed to estimate the incremental trips that could occur at specific transportation elements and to identify potential locations for further analysis. If the trip assignments show that the proposed action would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, 25 or more peak hour trips by Citywide Ferry Service ("CWFS") in a single direction on a single route, 50 or more at a ferry landing, or 200 or more peak hour pedestrian trips traversing a sidewalk, corner area or crosswalk, then further quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, ferry, pedestrians, vehicular and pedestrian safety, and parking.

TABLE 3: RWCDS Travel Demand Forecast

Land Use:	Warehouse			
Size/Units:	247,000 gsf			
Peak Hour Trips:			Total Trips	
AM	58		58	
MD	52		52	
PM	64		64	
Saturday	16		16	
Person Trips:				
AM	In	Out	In	Out
Auto	15	5	15	5
Taxi	0	0	0	0
Subway	11	3	11	3
Bus	3	1	3	1
Bicycle	0	0	0	0
Walk/Other	15	5	15	5
Total	44	14	44	14
MD	In	Out	In	Out
Auto	9	8	9	8
Taxi	0	0	0	0
Subway/Railroad	7	6	7	6
Bus	2	2	2	2
Bicycle	0	0	0	0
Walk/Other	10	8	10	8
Total	28	24	28	24
PM	In	Out	In	Out
Auto	6	16	6	16
Taxi	0	0	0	0
Subway	4	11	4	11
Bus	1	3	1	3
Bicycle	0	0	0	0
Walk/Other	6	17	6	17
Total	17	47	17	47
Saturday	In	Out	In	Out
Auto	4	2	4	2
Taxi	0	0	0	0
Subway/Railroad	2	1	2	1
Bus	1	0	1	0
Bicycle	0	0	0	0
Walk/Other	4	2	4	2
Total	11	5	11	5
Vehicle Trips :				
AM	In	Out	In	Out
Auto	13	4	13	4
Taxi	0	0	0	0
Taxi (Balanced)	0	0	0	0
School Bus	0	0	0	0
Truck	15	7	15	7
Total	28	11	28	11
MD	In	Out	In	Out
Auto	8	7	8	7
Taxi	0	0	0	0
Taxi (Balanced)	0	0	0	0
School Bus	0	0	0	0
Truck	10	8	10	8
Total	18	15	18	15
PM	In	Out	In	Out
Auto	5	13	5	13
Taxi	0	0	0	0
Taxi (Balanced)	0	0	0	0
School Bus	0	0	0	0
Truck	9	6	9	6
Total	14	19	14	19
Saturday	In	Out	In	Out
Auto	3	2	3	2
Taxi	0	0	0	0
Taxi (Balanced)	0	0	0	0
School Bus	0	0	0	0
Truck	2	3	2	3
Total	5	5	5	5

Traffic

Based on 2021 *CEQR Technical Manual* guidance, a quantified traffic analysis is typically required if the proposed action would result in 50 or more vehicle trip ends in a peak hour at one or more intersections. As shown in **Table 3**, under the Proposed Actions there would be a net increase of 39, 33, 33, and 10 vehicle trips in the weekday AM, midday, and PM peak hours, and Saturday peak hours, respectively. As the numbers of trips would not exceed the 50-trip threshold in any of the analysis periods, a Level 2 screening assessment is not warranted. Therefore, significant adverse impacts for vehicles are not expected to occur under the Proposed Actions, and a detailed vehicular analysis is not warranted based on 2021 *CEQR Technical Manual* guidance.

Transit

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) and specified in the 2021 *CEQR Technical Manual*, detailed transit analyses are generally not required if the proposed action is projected to result in fewer than 200 peak hour rail or bus transit riders. If the proposed action would result in 50 or more bus passengers being assigned to a single bus route in one direction, or if it would result in an increase of 200 or more passengers at a single subway station or on a single subway line, a detailed bus and/or subway analysis would be warranted. Transit analyses typically focus on the weekday AM and PM commuter peak hours, as it is during these periods that overall demand on the subway and bus systems is usually highest.

As shown in **Table 3**, the Proposed Actions are expected to generate a net total of approximately 14 and 15 incremental subway trips in the weekday AM and PM peak hours, respectively. As these numbers of trips would not exceed the 200-trip 2021 *CEQR Technical Manual* analysis threshold, further analysis is not warranted. As also shown in **Table 3,** there is expected to be a net increase of approximately four incremental bus trips for both the weekday AM and PM peak hours, respectively. As these numbers of trips would not exceed the 50-trip 2021 *CEQR Technical Manual* analysis threshold, further analysis is not warranted. Therefore, significant adverse impacts to transit subway and bus services are not expected to occur under the Proposed Actions, and a detailed analysis of subway and bus conditions is not warranted based on 2021 *CEQR Technical Manual* guidance.

CWFS

According to *CEQR Technical Manual* guidance, detailed analyses of the CWFS are not typically required if a proposed action would result in 50 or fewer peak hour CWFS peak hour ferry riders to a ferry landing within a half-mile of the Project Site. As the Project Site is not located within a half-mile of a CWFS ferry landing, a Level 2 screening assessment is not warranted per the 2021 *CEQR Technical Manual*.

Pedestrians

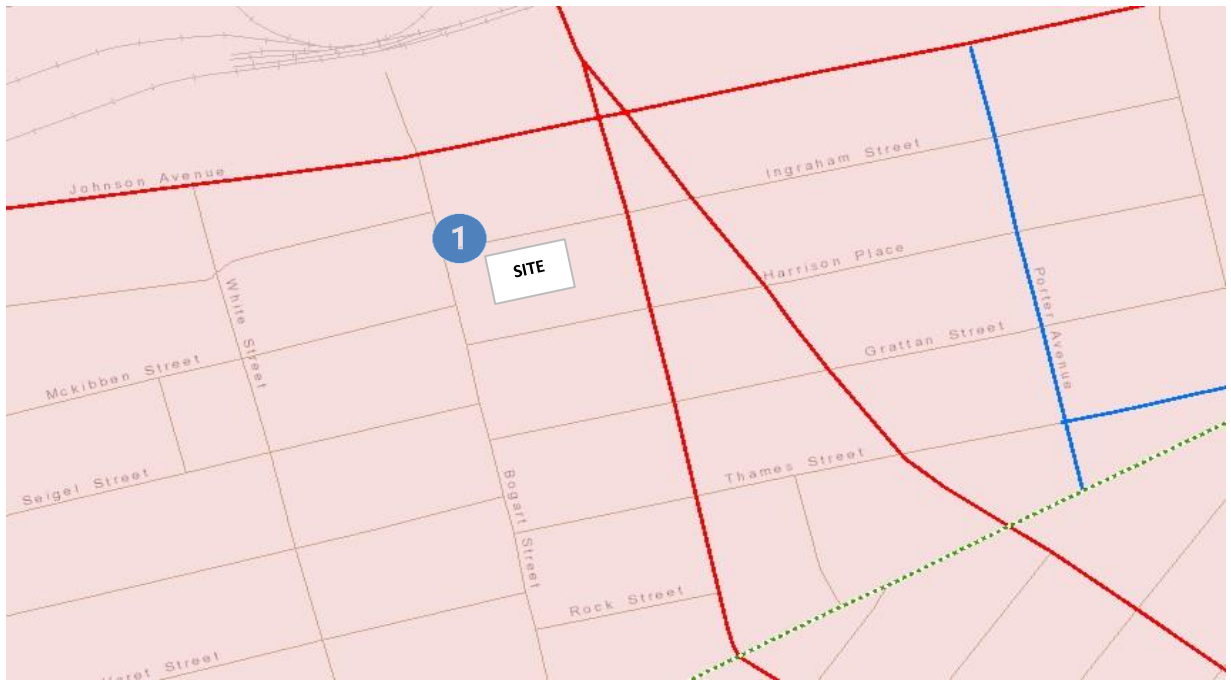
According to 2021 *CEQR Technical Manual* guidance, a quantified analysis of pedestrian conditions is typically required if the proposed action would result in 200 or more peak hour pedestrian trips at any pedestrian element (sidewalk, corner area or crosswalk). As shown in **Table 3**, the Proposed Actions would generate a net incremental increase of approximately 38, 35, 42, and 10 total pedestrian trips in the weekday AM, midday, and PM peak hours, and Saturday peak hour, respectively. These would include walk-only trips and pedestrians walking to and from subway stations and bus stops. As the numbers of trips would not exceed the 200-trip threshold, further analysis is not warranted. Therefore, significant adverse impacts to pedestrian conditions are not anticipated.

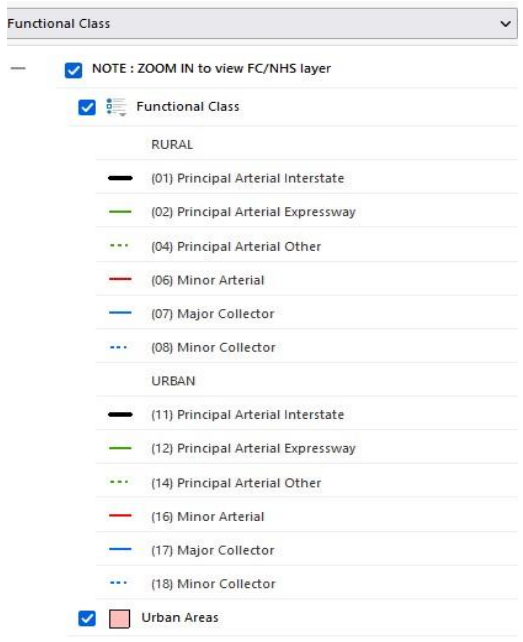
Appendix IX:

Air Quality Mobile Source Screening

74 Bogart Street EAS, Air Quality Mobile Source Screening Backup

Classification Map



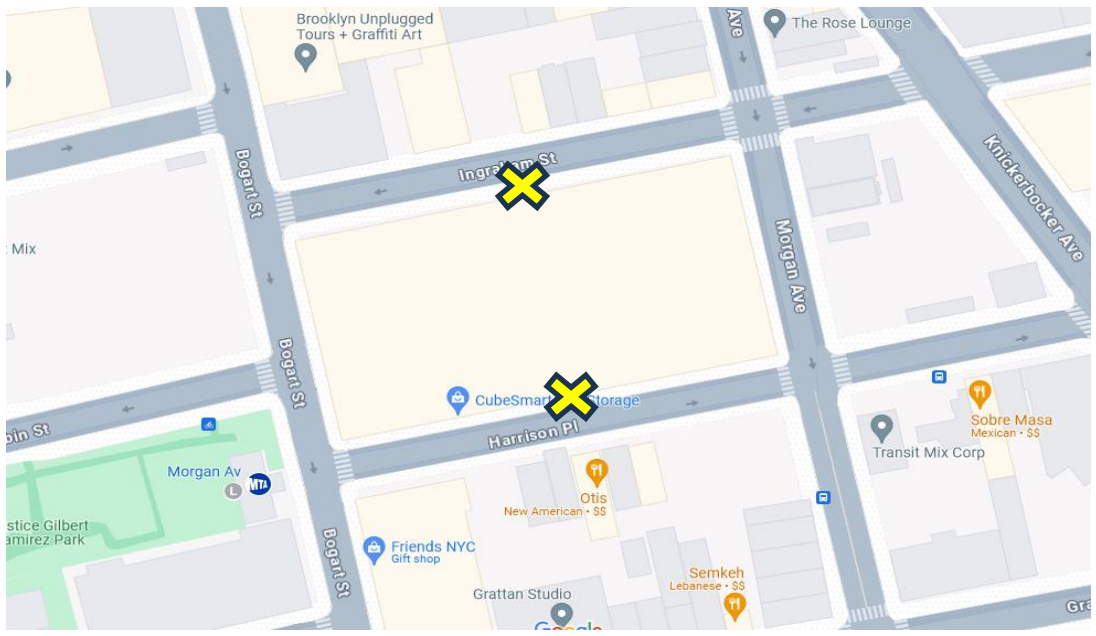


Site Analyzed

#	Location	Classification
1	Ingraham Street and Bogart Street	paved roads with avg daily traffic < 5,000 vehicles

Note: this intersection would receive the greatest number of incremental traffic. There are two entrances to the Project Site, one on Ingraham and one on Harrison Place. Due to the one-way street orientation, all vehicles must pass through this intersection to access the site (if going for the Harrison Pl entrance) or exit the site (if leaving the Ingraham St entrance).

See below- the yellow x's represent the approximate locations of the sites entrances



PM2.5 Preliminary Screening

Intersection	Signal Control	PM 2.5 Screening HDDV	Intersection Increment HDDV	Intersection Increment Traffic
			Highest hr	Highest hr
Ingraham Street and Bogart Street	**SS**	Pass Screen	9	16

Total Volume Increment - CO screening

Intersection	Signal Control	Intersection Incremental Traffic veh/hr					CEQR Manual CO Screening Volume Increment ≥ 170
		Highest Hr	AM	MD	PM	SAT	
Ingraham Street and Bogart Street	SS	16	16	10	7	10	Passed

Screen for this area of NYC 170

Equivalent Truck Calculation

Instructions:

1. Input the hourly vehicles trips in the 2nd column (yellow column) in Table 1.
2. The equavalent to heavy duty trucks are shown in Table 2

Table 1: Vehicle trips	
Vehcile types	**Hourly vehicles**
LDGT1	13
LDGT2	
LDGT3	
LDGT4	
LDDT12	
LDDT34	
HDGV2B	
HDGV3	
HDGV4	
HDGV5	
HDGV6	1
HDGV7	
HDGV8A	
HDGV8B	
HDDV2B	
HDDV3	
HDDV4	
HDDV5	
HDDV6	1
HDDV7	
HDDV8A	
HDDV8B	1
Total	16

Table 2: Equivalent Truck Calculation			
Road Types	**Equ. truck**	**Screen value**	**PM2.5 Screen**
Paved road < 5000 veh/day	9	13	Pass Screen
Collector roads	5	20	Pass Screen
Principal and minor arterials	3	23	Pass Screen
Expressways and limited access roads	3	23	Pass Screen

TRAFFIC ASSIGNMENT PREPARED BY PHA. INCREMENT VOLUMES FROM TRAVEL DEMAND FORECAST MEMO

Increment Autos

AM	Appr	L	T	R	
Ingraham St & Bogart St	EB				0
	WB	13			13
	NB				0
	SB				0

13

Increment Trucks

AM	Appr	L	T	R	
Ingraham Str & Bogart St	EB				0
	WB	3			3
	NB				0
	SB				0

3 16

Increment Autos

MD	Appr	L	T	R	
Ingraham St & Bogart St	EB				0
	WB	8			8
	NB				0
	SB				0

8

Increment Trucks

MD	Appr	L	T	R	
Ingraham Str & Bogart St	EB				0
	WB	2			2
	NB				0
	SB				0

2 10

Increment Autos

PM	Appr	L	T	R	
Ingraham St & Bogart St	EB				0
	WB	5			5
	NB				0
	SB				0

5

Increment Trucks

PM	Appr	L	T	R	
Ingraham Str & Bogart St	EB				0
	WB	2			2
	NB				0
	SB				0

2 7

Increment Autos

SAT	Appr	L	T	R	
Ingraham St & Bogart St	EB				0
	WB	3			3
	NB				0
	SB				0

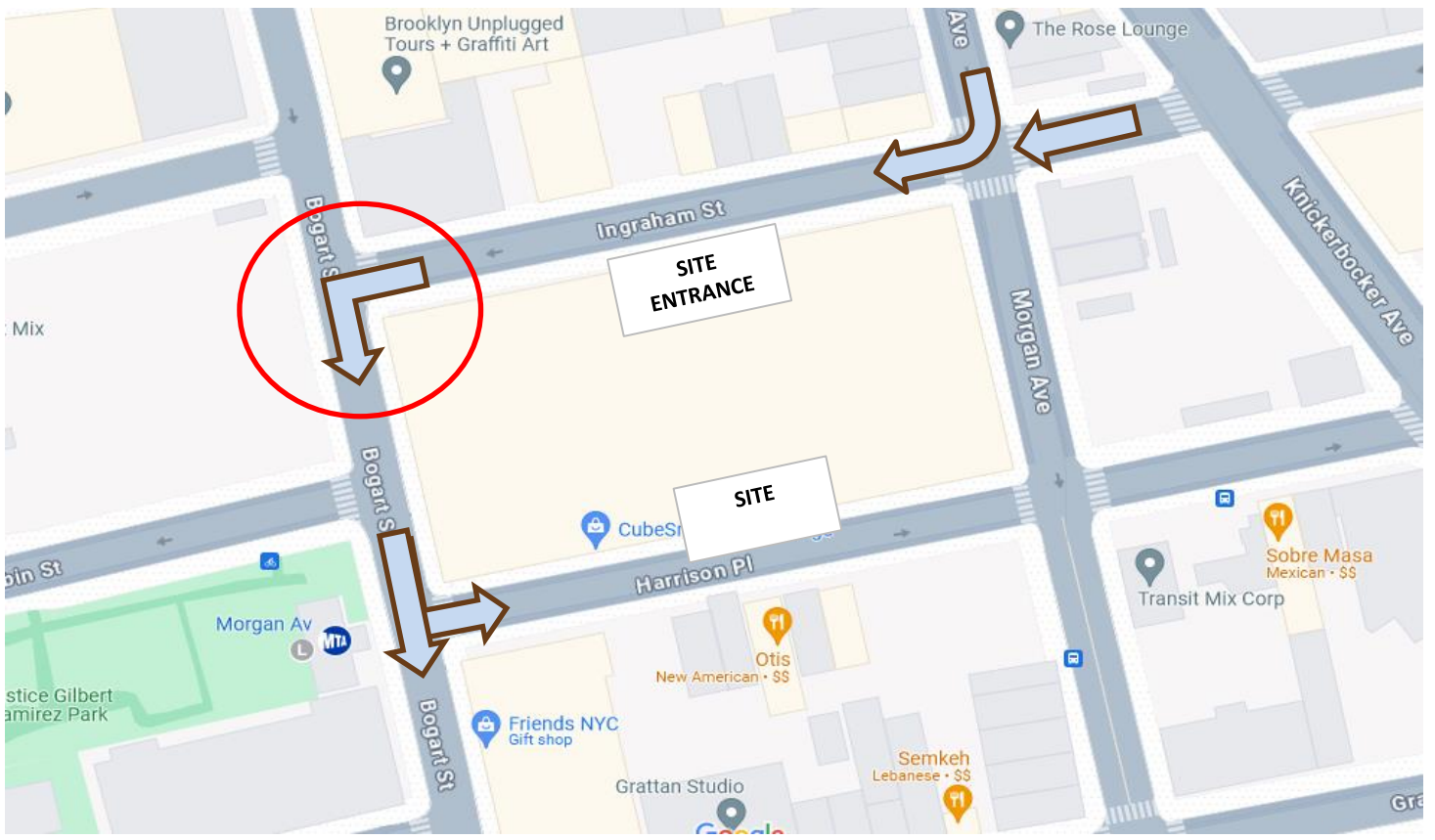
3

Increment Trucks

SAT	Appr	L	T	R	
Ingraham Str & Bogart St	EB				0
	WB	7			7
	NB				0
	SB				0

7 10

Vehicle Trips:		In	Out
AM	Auto	13	4
	Truck	3	1
	Total	16	5
MD	Auto	8	7
	Truck	2	1
	Total	10	8
PM	Auto	5	13
	Truck	2	1
	Total	7	14
SAT	Auto	3	2
	Truck	5	7
	Total	8	9



74 Bogart Street EAS Planning Factors- For Air Quality Screening Only

Land Use:	**Local Retail**		**Self Storage**		**Warehouse**	
Trip Generation:	(1)		(3)		(2)	
Weekday	329.0		1.42		2.36	
Saturday	358.0		2.34		0.2	
	per 1,000 sf		per 1,000 sf		per 1,000 sf	
Temporal Distribution:	(1)		(3)		(2)	
AM	4.8%		4.9%		10.0%	
MD	8.0%		12.3%		9.0%	
PM	10.9%		8.6%		11.0%	
Saturday	11.7%		12.4%		33.0%	
Modal Splits:	(2)		(3)		(2)	
	All Periods		All Periods		All Periods	
Auto	11.0%		100.0%		34.2%	
Taxi	0.0%		0.0%		0.5%	
Subway/Railroad	3.0%		0.0%		24.1%	
Bus	2.0%		0.0%		7.3%	
School Bus	0.0%		0.0%		0.0%	
Bicycle	0.0%		0.0%		0.0%	
Walk/Other	84.0%		0.0%		33.9%	
	100.0%		100.0%		100.0%	
In/Out Splits:	(1)		(3)		(2)	
	In	Out	In	Out	In	Out
AM	52%	48%	50%	50%	77%	23%
MD	50%	50%	55%	45%	53%	47%
PM	50%	50%	50%	50%	27%	73%
Saturday	50%	50%	52%	48%	64%	36%
Vehicle Occupancy:	(2)		(3)		(4,5)	
	All Periods		All Periods		All Periods	
Auto	1.2		1.2		1.2	
Taxi	1.2		1.2		1.3	
School Bus						
Truck Trip Generation:	(1)		(3)		(6)	
Weekday	0.35		0		0.17	
Saturday	0.04		0		0.17	
	per 1,000 sf		per 1,000 sf		per 1,000 sf	
Truck Temporal Distribution:	(1)		(3)		(2)	
AM	8.0%		0.0%		9.9%	
MD	11.0%		0.0%		8.0%	
PM	2.0%		0.0%		7.0%	
Saturday	11.0%		0.0%		28.0%	
Truck Directional Distribution:	In	Out	In	Out	In	Out
All Periods/ AM	50.0%	50.0%	50.0%	50.0%	67.0%	33.0%
MD					57.0%	43.0%
PM					60.0%	40.0%
SAT					42.0%	58.0%

Notes :

(1) 2021 City Environmental Quality Review (CEQR) Technical Manual.

(2) Based on data provided by DOT.

(3) Based on data from 59-02 Borden Ave Self-Storage Special Permit EAS (2019).

(4) Based on AASHTO CTTP reverse journey to work 5-Year (2012-2016) data for Kings County Census Tract 453 and 485.

(5) Gowanus Neighborhood Rezoning and Related Actions FEIS, 2021.

(6) Truck Generation Rates for the Air Quality analysis are based on truck delivery rates at the client's current facility in Brooklyn, approximately 0.5 mile south of the Project Site.

74 Bogart Street EAS - Travel Demand Forecast: Air Quality Analysis

Land Use:		**Warehouse**			
Size/Units:		247,000 gsf			
Peak Hour Trips:				**Total Trips**	
	AM	58		58	
	MD	52		52	
	PM	64		64	
	Saturday	16		16	
Person Trips:					
AM		In	Out	In	Out
	Auto	15	5	15	5
	Taxi	0	0	0	0
	Subway	11	3	11	3
	Bus	3	1	3	1
	School Bus	0	0	0	0
	Bicycle	0	0	0	0
	Walk/Other	15	5	15	5
	Total	44	14	44	14
MD		In	Out	In	Out
	Auto	9	8	9	8
	Taxi	0	0	0	0
	Subway/Railroad	7	6	7	6
	Bus	2	2	2	2
	School Bus	0	0	0	0
	Bicycle	0	0	0	0
	Walk/Other	10	8	10	8
	Total	28	24	28	24
PM		In	Out	In	Out
	Auto	6	16	6	16
	Taxi	0	0	0	0
	Subway	4	11	4	11
	Bus	1	3	1	3
	School Bus	0	0	0	0
	Bicycle	0	0	0	0
	Walk/Other	6	17	6	17
	Total	17	47	17	47
Saturday		In	Out	In	Out
	Auto	4	2	4	2
	Taxi	0	0	0	0
	Subway/Railroad	2	1	2	1
	Bus	1	0	1	0
	School Bus	0	0	0	0
	Bicycle	0	0	0	0
	Walk/Other	4	2	4	2
	Total	11	5	11	5
Vehicle Trips :					
AM		In	Out	In	Out
	Auto	13	4	13	4
	Taxi	0	0	0	0
	Taxi (Balanced)	0	0	0	0
	School Bus	0	0	0	0
	Truck	3	1	3	1
	Total	16	5	16	5
MD		In	Out	In	Out
	Auto	8	7	8	7
	Taxi	0	0	0	0
	Taxi (Balanced)	0	0	0	0
	School Bus	0	0	0	0
	Truck	2	1	2	1
	Total	10	8	10	8
PM		In	Out	In	Out
	Auto	5	13	5	13
	Taxi	0	0	0	0
	Taxi (Balanced)	0	0	0	0
	School Bus	0	0	0	0
	Truck	2	1	2	1
	Total	7	14	7	14
Saturday		In	Out	In	Out
	Auto	3	2	3	2
	Taxi	0	0	0	0
	Taxi (Balanced)	0	0	0	0
	School Bus	0	0	0	0
	Truck	5	7	5	7
	Total	8	9	8	9
	Total	13	16	13	16

Existing

Parking SF	Parking Spaces		
	Residential	Commercial	Community Facility
900	0	3	0
900	0	3	0

No Action

Parking SF	Parking Spaces		
	Residential	Commercial	Community Facility
900	0	3	0
900	0	3	0

With Action

Parking SF	Parking Spaces		
	Residential	Commercial	Community Facility
900	0	3	0
900	0	3	0

Incremental

Parking SF	Parking Spaces		
	Residential	Commercial	Community Facility
0	0	0	0

Appendix B

MOBILE6 Input Data Format Reference Tables

Table 3: Complete MOBILE6 Vehicle Classifications

Number	Abbreviation	Description
1	LDGV	Light-Duty Gasoline Vehicles (Passenger Cars)
2	LDGT1	Light-Duty Gasoline Trucks 1 (0-6,000 lbs. GVWR, 0-3750 lbs. LVW)
3	LDGT2	Light-Duty Gasoline Trucks 2 (0-6,000 lbs. GVWR, 3751-5750 lbs. LVW)
4	LDGT3	Light-Duty Gasoline Trucks 3 (6,001-8,500 lbs. GVWR, 0-5750 lbs. ALVW)
5	LDGT4	Light-Duty Gasoline Trucks 4 (6,001-8,500 lbs. GVWR, 5751 lbs. and greater ALVW)
6	HDGV2B	Class 2b Heavy-Duty Gasoline Vehicles (8501-10,000 lbs. GVWR)
7	HDGV3	Class 3 Heavy-Duty Gasoline Vehicles (10,001-14,000 lbs. GVWR)
8	HDGV4	Class 4 Heavy-Duty Gasoline Vehicles (14,001-16,000 lbs. GVWR)
9	HDGV5	Class 5 Heavy-Duty Gasoline Vehicles (16,001-19,500 lbs. GVWR)
10	HDGV6	Class 6 Heavy-Duty Gasoline Vehicles (19,501-26,000 lbs. GVWR)
11	HDGV7	Class 7 Heavy-Duty Gasoline Vehicles (26,001-33,000 lbs. GVWR)
12	HDGV8A	Class 8a Heavy-Duty Gasoline Vehicles (33,001-60,000 lbs. GVWR)
13	HDGV8B	Class 8b Heavy-Duty Gasoline Vehicles (>60,000 lbs. GVWR)
14	LDDV	Light-Duty Diesel Vehicles (Passenger Cars)
15	LDDT12	Light-Duty Diesel Trucks 1 and 2 (0-6,000 lbs. GVWR)
16	HDDV2B	Class 2b Heavy-Duty Diesel Vehicles (8501-10,000 lbs. GVWR)
17	HDDV3	Class 3 Heavy-Duty Diesel Vehicles (10,001-14,000 lbs. GVWR)
18	HDDV4	Class 4 Heavy-Duty Diesel Vehicles (14,001-16,000 lbs. GVWR)
19	HDDV5	Class 5 Heavy-Duty Diesel Vehicles (16,001-19,500 lbs. GVWR)
20	HDDV6	Class 6 Heavy-Duty Diesel Vehicles (19,501-26,000 lbs. GVWR)
21	HDDV7	Class 7 Heavy-Duty Diesel Vehicles (26,001-33,000 lbs. GVWR)
22	HDDV8A	Class 8a Heavy-Duty Diesel Vehicles (33,001-60,000 lbs. GVWR)
23	HDDV8B	Class 8b Heavy-Duty Diesel Vehicles (>60,000 lbs. GVWR)
24	MC	Motorcycles (Gasoline)
25	HDGB	Gasoline Buses (School, Transit and Urban)
26	HDDBT	Diesel Transit and Urban Buses
27	HDDBS	Diesel School Buses
28	LDDT34	Light-Duty Diesel Trucks 3 and 4 (6,001-8,500 lbs. GVWR)

Vehicle Trips:		In	Out
AM	Auto	13	4
	Truck	3	1
	Total	16	5
MD	Auto	8	7
	Truck	2	1
	Total	10	8
PM	Auto	5	13
	Truck	2	1
	Total	7	14
SAT	Auto	3	2
	Truck	5	7
	Total	8	9

Truck Delivery Calculations

Avg Daily Deliveries:	10.92086	(Queens Location: 115,029 sf)
Avg Delivery per 1000 SF:	0.086935	
Future Location:	20.8643	(240,000 sf)

AM Peak: 3 trucks
Diesel: 2
Gasoline: 1

1 Diesel WB-67 (HDDV8B)
1 Diesel SU-30 (HDDV6)
1 Gasoline SU-30 (HDGV6)

NOTES

All passenger trips are counted as LDGV
Diesel WB-67 trips are counted as HDDV8B
Diesel SU-30 trips are counted as HDDV6
Gasoline SU-30 trips are counted as HDGV6
Vehicle trips below are from the TDF Memo for Warehouse Uses.
For the air quality analysis only, truck trips have been replaced with truck delivery counts provided by the applicant at their current locations in NYC
The applicant indicated that at their current facilities, 90% of deliveries are SU-30s and 10% are WB-67s, that was assumed in this analysis
The applicant indicated that about 80% of their trucks are diesel and the remaining 20% are gasoline. That was assumed in this analysis

Appendix X:

Proposed Development Renderings


For Illustrative Purposes Only
UOVO


For Illustrative Purposes Only
LOMA
LOMA