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

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

Part I: GENERAL INFORMATION

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

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

2. *Project Name* Linden Boulevard Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
17DCP155K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
170430ZMK and N170431ZRK	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of City Planning Environmental Assessment and Review Division			NAME OF APPLICANT Canyon, Sterling & Emerald LLC and Radson Development		
NAME OF LEAD AGENCY CONTACT PERSON Robert Dobruskin			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Hiram Rothkrug, EPDSCO, Inc.		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 55 Water Mill Road		
CITY New York	STATE NY	ZIP 10271	CITY Great Neck	STATE NY	ZIP 11021
TELEPHONE 212-720-3423	EMAIL rdobrus@planning.nyc.gov		TELEPHONE 718-343-0026	EMAIL hrothkrug@epdsco.com	

5. *Project Description*

The applicant seeks a series of discretionary actions that would facilitate the development of four new buildings on an entire block (Block 4496) in the East New York section of Brooklyn Community District #5. The discretionary actions (hereafter, the "Proposed Actions") include a zoning map amendment from R4/C1-2 to R8A/C2-4 and from R4 to R6A and R7A (see attached proposed zoning map); and a zoning text amendment to make the Project Area applicable to the Mandatory Inclusionary Housing (MIH) Program (Option 2).The Proposed Actions also include potential discretionary financing from NYC Housing Preservation and Development (HPD) and NYC Housing Development Corporation (HDC), requiring a coordinated review between the Department of City Planning (DCP) and HPD/HDC. In addition to the above discretionary actions, the applicant will seek an approval related to the site from the NYC Department of Transportation (DOT), as well as a drainage plan with the NYC Department of Environmental Protection (DEP), neither of which are subject to CEQR review.

The Proposed Actions would facilitate the development of four buildings totaling 589,809 gross square feet (gsf) including 509,907 gsf of residential space (521 dwelling units), 17,214 gsf of commercial retail space (Use Group 6) and 21,539 gsf of community facility space (medical office, recreation center and daycare, Use Group 4). 100 accessory parking spaces would be provided at grade within 41,149 gsf. The buildings heights would range from 8- to 12-stories. The four new buildings would be within four new tax and zoning lots (Block 4496, Lots 1, 15, 29 & 48).

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 5	STREET ADDRESS 1427-1449 Loring Avenue
TAX BLOCK(S) AND LOT(S) Block 4496, Lots 1, 3, 5, 8, 9, 11, 12, 14, 15, 16, 17, 18, 24, 27, 29, 32, 33, 35, 39, 42, 43, 44, 45, 47, 48, 50, 51, 52 and 56.		ZIP CODE 11208
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS An entire block bound by Linden Boulevard, Emerald Street, Loring Avenue and Amber Street.		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R4/C1-		ZONING SECTIONAL MAP NUMBER 18b

2 and R4

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION Appenfix F

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

☐ LEGISLATION	☐ FUNDING OF CONSTRUCTION, specify:
☐ RULEMAKING	☐ POLICY OR PLAN, specify:
☐ CONSTRUCTION OF PUBLIC FACILITIES	☒ FUNDING OF PROGRAMS, specify: Potential HPD/HDC discretionary financing
☐ 384(b)(4) APPROVAL	☐ PERMITS, specify:
☐ OTHER, explain:	

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: Potential legal grade waiver from NYC DOT

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

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

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

☒ SITE LOCATION MAP ☒ ZONING MAP ☒ SANBORN OR OTHER LAND USE MAP

☒ TAX MAP ☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)

☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 100,000 (vacant) Waterbody area (sq. ft) and type:

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

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 580,679

NUMBER OF BUILDINGS: 4

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 254,203 (1); 124,998 (2); 95,876 (3); and 114,732 (4)

HEIGHT OF EACH BUILDING (ft.): 80-131'

NUMBER OF STORIES OF EACH BUILDING: 8-12

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:

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

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

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

AREA OF TEMPORARY DISTURBANCE: n/a sq. ft. (width x length)

VOLUME OF DISTURBANCE: 100,000 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 10,000 (100' x 100' space in Building 1 only)
sq. ft. (width x length)

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

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	509,907	17,214	21,539	
Type (*e.g.,* retail, office, school)	521 units	Retail	Medical office, Recreation Center & Daycare	

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO
If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 1,437 NUMBER OF ADDITIONAL WORKERS: 71
Provide a brief explanation of how these numbers were determined: 2.76 Residents per dwelling unit (Average unit size in Brooklyn Community District 5/Queens Community District 11; One worker per 425 square feet of commerrcial space; and one worker per 1,000 square feet of community facility space. 2 workers are assumed for each residential building (8 total).

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

Has a No-Action scenario been defined for this project that differs from the existing condition? ☐ YES ☒ NO
If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly:

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2020

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 27

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☒ NO IF MULTIPLE PHASES, HOW MANY? 2.5

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: . Buildings 1 and 2 are anticipated to begin construction in January of 2018 and would be occupied in late 2019, while Buildings 3 and 4 would begin construction in the middle of 2018 to be occupied in the beginning of 2020.

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

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

Part II: TECHNICAL ANALYSIS

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

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

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☒	☐
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☐	☒
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach.		
(e) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☒	☐
○ If "yes," complete the Consistency Assessment Form. See attached		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 200 or more residential units?	☒	☐
○ Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
○ Directly displace more than 500 residents?	☐	☒
○ Directly displace more than 100 employees?	☐	☒
○ Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
○ **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☒	☐
○ **Libraries:** Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☒	☐
○ **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
○ If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☐	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
○ If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		

	YES	NO
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☐	☒
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Section 6.		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☒	☐
○ If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions. See Appendix F		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☐	☒
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☐	☒
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☐	☒
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: (1)The presence of fill material/debris on the Development Sites from an unknown origin; (2) The potential for site impacts from a former contactor's storage yard located on the Development Sites; and The possible presence of one or more underground storage tanks (USTs), which have not been properly closed or removed in accordance with NYSDEC and FDNY regulations.	☐	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13?	☒	☐

	YES	NO
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☒	☐
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 24,502		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 69,395,001		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☒
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☒	☐
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☒
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☒	☐
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☒
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☒	☐
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See Section 14.	☐	☒
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒

	YES	NO
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☐	☒
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
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 attached.		
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 attached.		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	DATE
Justin Jarboe, EPDSCO	June 16, 2017

SIGNATURE

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

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

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

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

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

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

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

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

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

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

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

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

TITLE	LEAD AGENCY
Deputy Director, EARD	NYC Department of City Planning
NAME	**DATE**
Olga Abinader	June 16, 2017

SIGNATURE

Olga Abinader

	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			Multi-family Buildings	
No. of dwelling units			521	521
No. of low- to moderate-income units			130	130
Gross floor area (sq. ft.)			509,907	509,907
Commercial	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)			Retail (UG-6)	
Gross floor area (sq. ft.)			17,214	17,214
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			Medical Office, Recreation Center & Daycare (UG -4)	
Gross floor area (sq. ft.)			21,539	21,539
Vacant Land	☒ YES ☐ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," describe:	100,100 sf	100,100 sf	-100,100	-100,100
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				
Garages	☐ YES ☒ NO	☐ YES ☒ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces			100	100
Lots	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces				
ZONING				
Zoning classification	R4/C1-2 & R4	R4/C1-2 & R4	R8A/C2-4, R7A & R6A	
Maximum amount of floor area that can be developed	1.0 Commercial 0.75 Residential Community Facility	1.0 Commercial 0.75 Residential Community Facility	4.52 (Adjusted) for Residential/CF/Commercial	+3.41 Residential
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Residential Commercial Community Facility	Residential Commercial Community Facility	Residential Commercial Community Facility	

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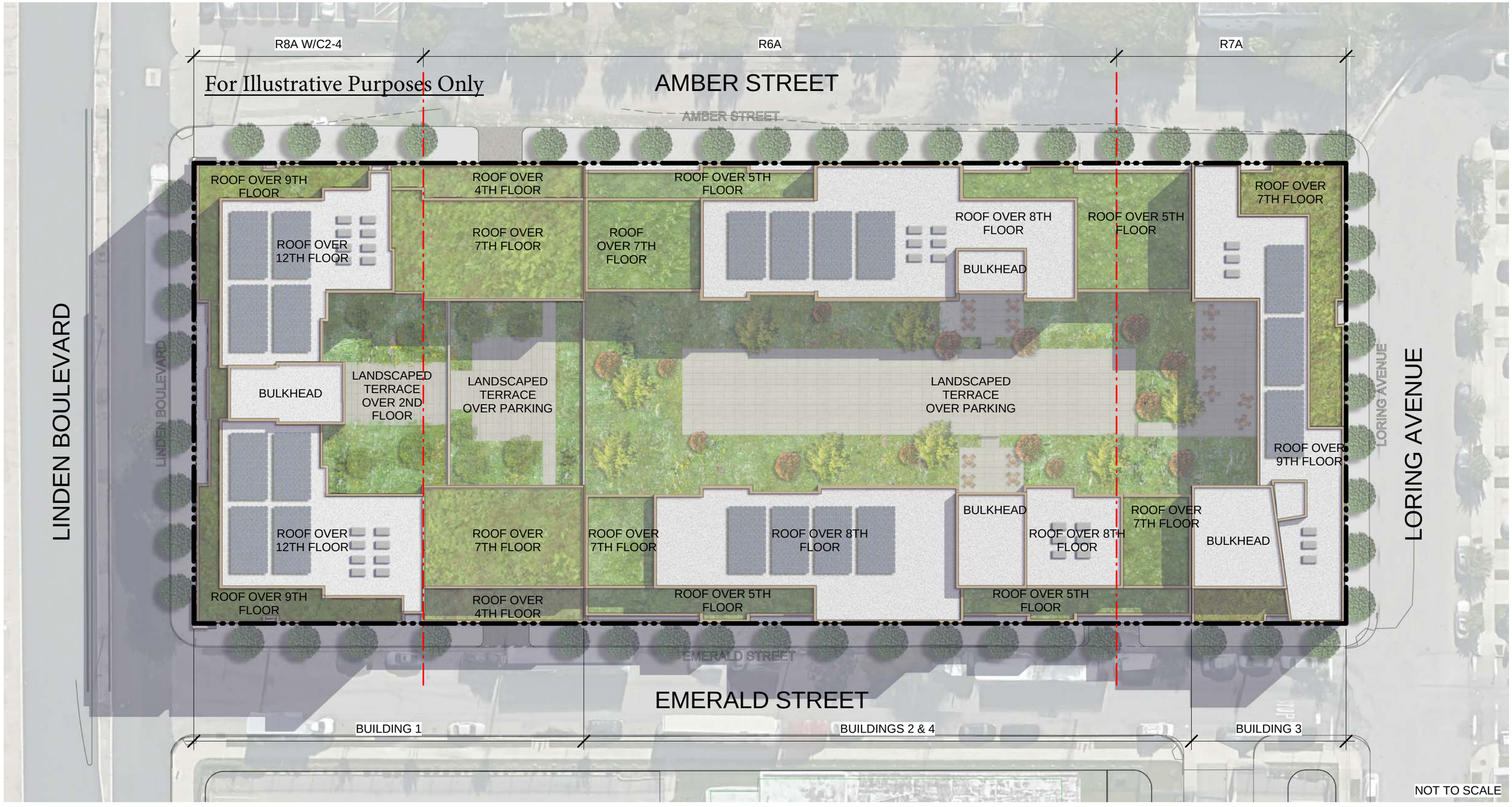
Linden Boulevard

RADSON DEVELOPMENT

COVER SHEET
DATE: 06/12/17
JOB NUMBER: 15014.00

A-00



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RADSON DEVELOPMENT

SITE PLAN

DATE: 06/12/17

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A-11

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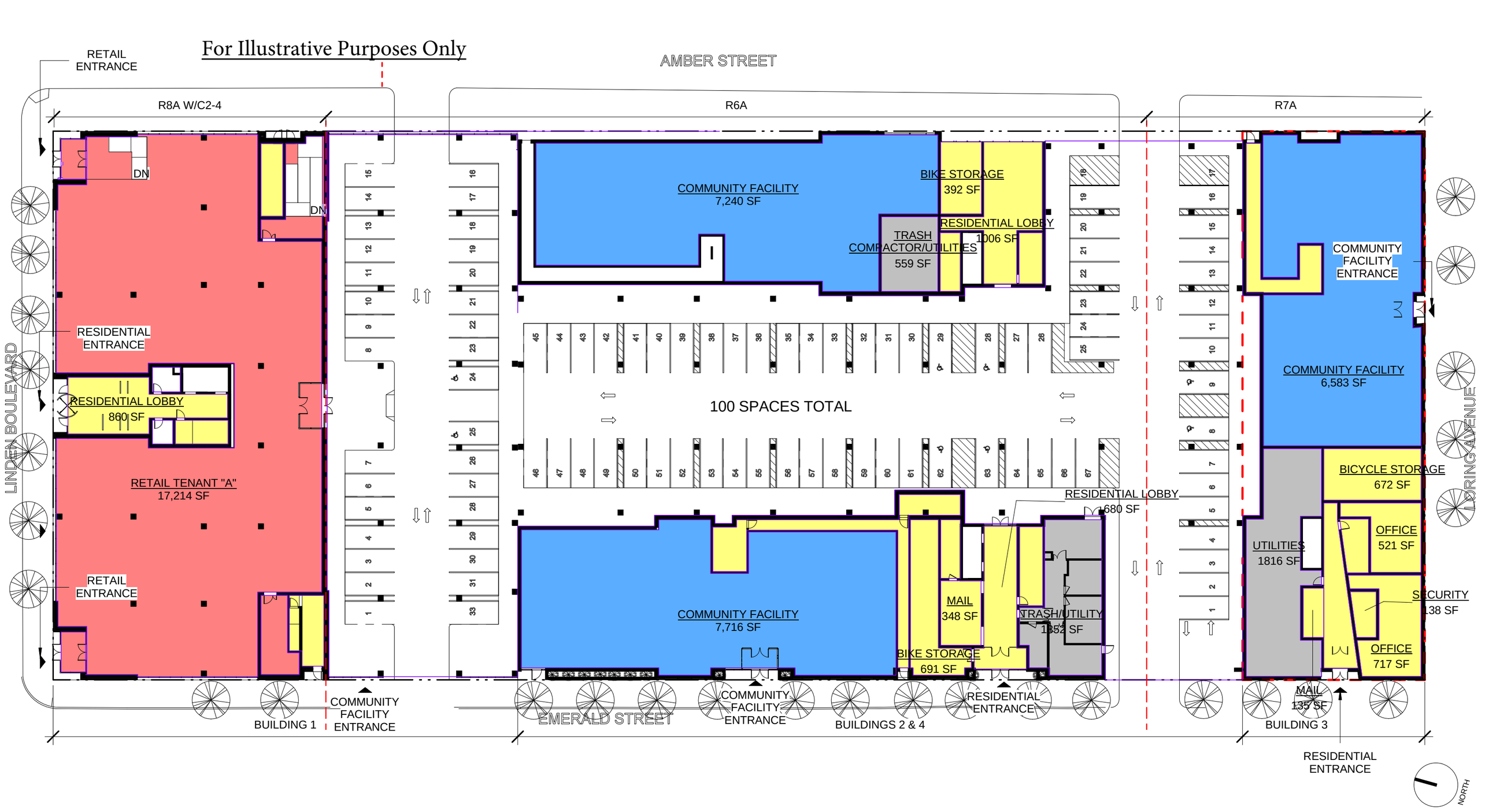

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RADSON DEVELOPMENT

GROUND LEVEL PLAN

DATE: 06/12/17

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A-13

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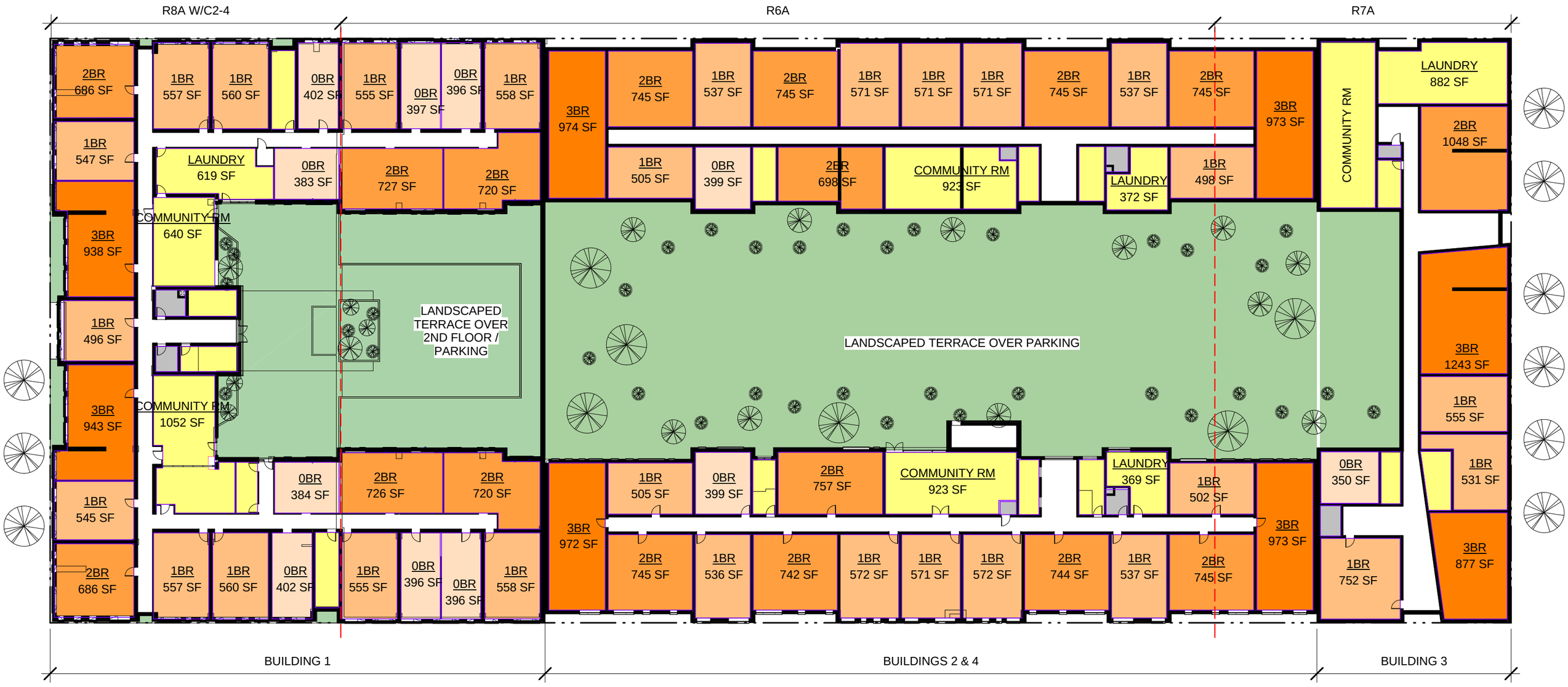

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RADSON DEVELOPMENT

2ND FLOOR PLAN
DATE: 06/12/17
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RADSON DEVELOPMENT

3RD/4TH FLOOR PLAN

DATE: 06/12/17

JOB NUMBER: 15014.00

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RADSON DEVELOPMENT

6TH/7TH FLOOR PLAN
DATE: 06/12/17
JOB NUMBER: 15014.00

A-16

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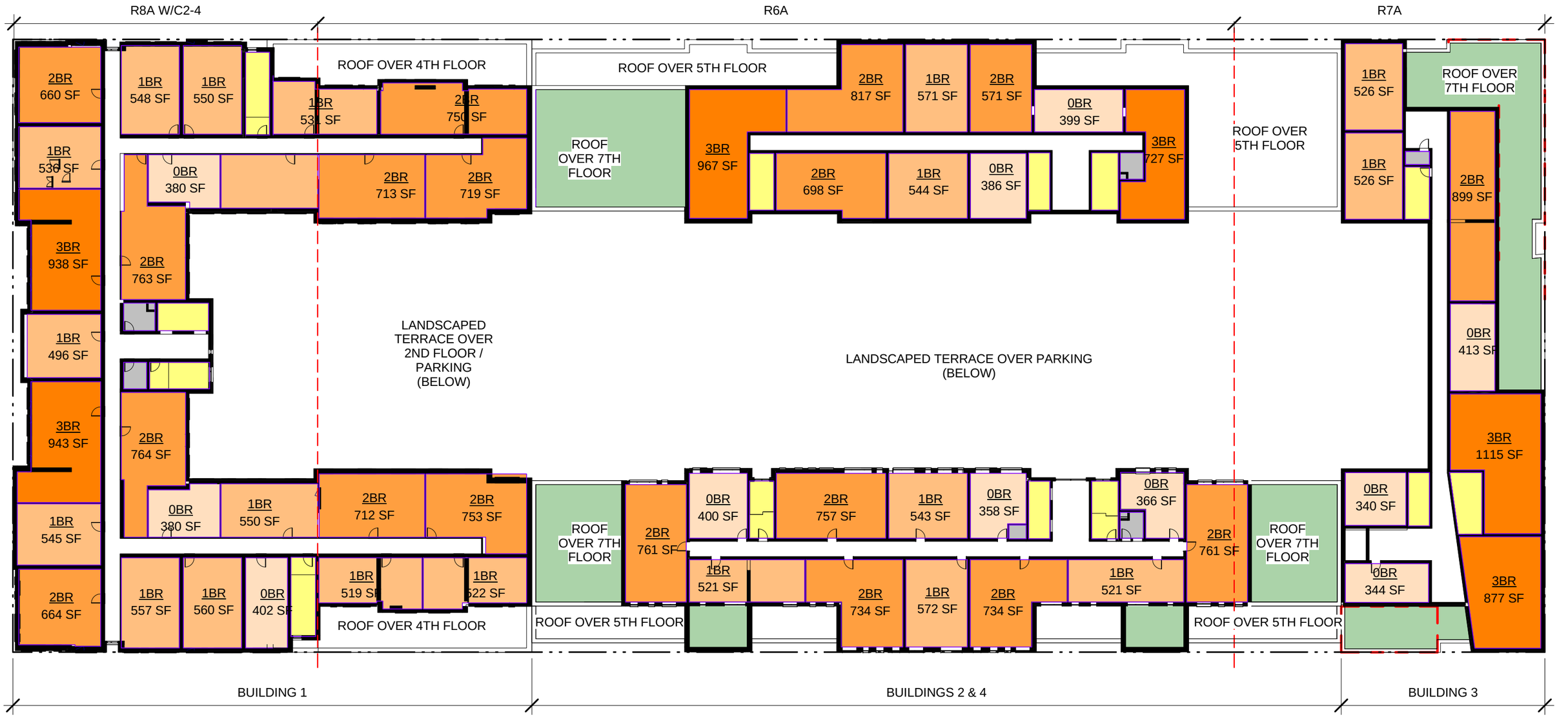

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RADSON DEVELOPMENT

8TH/9TH FLOOR PLAN

DATE: 06/12/17

JOB NUMBER: 15014.00

A-17

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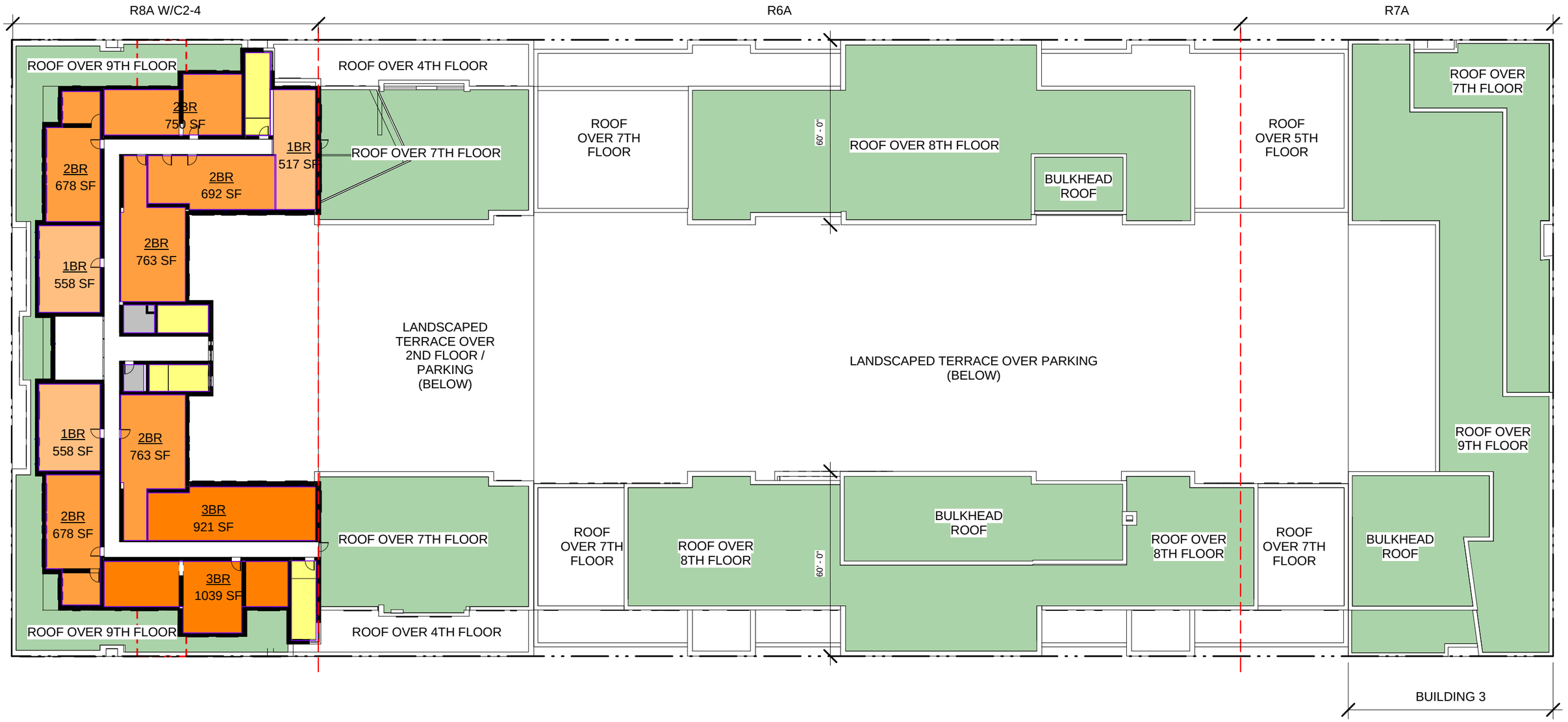

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10TH FLOOR / ROOF PLAN

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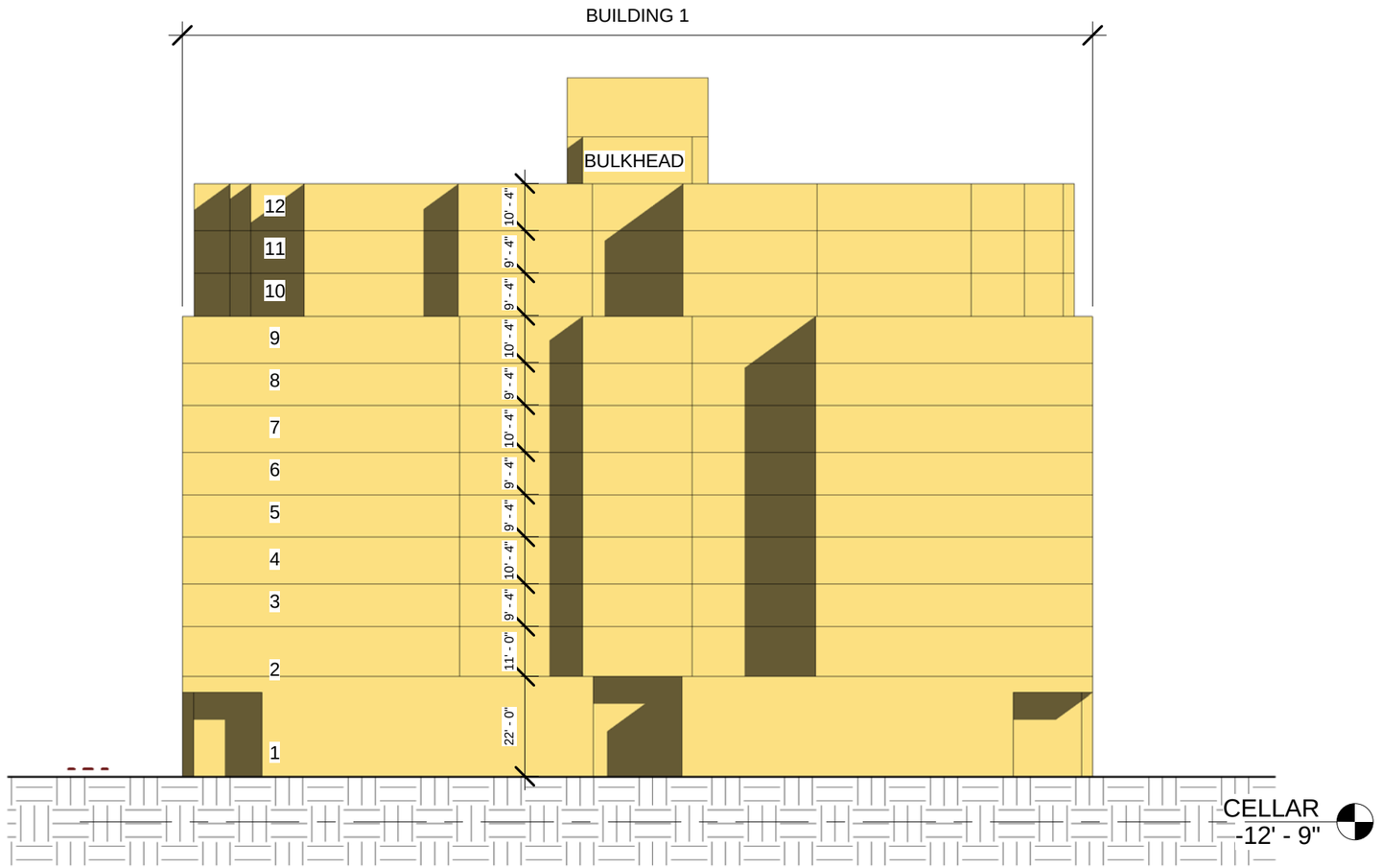

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Linden Boulevard

RADSON DEVELOPMENT

BUILDING ELEVATION-NORTH

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JOB NUMBER: 15014.00

A-19

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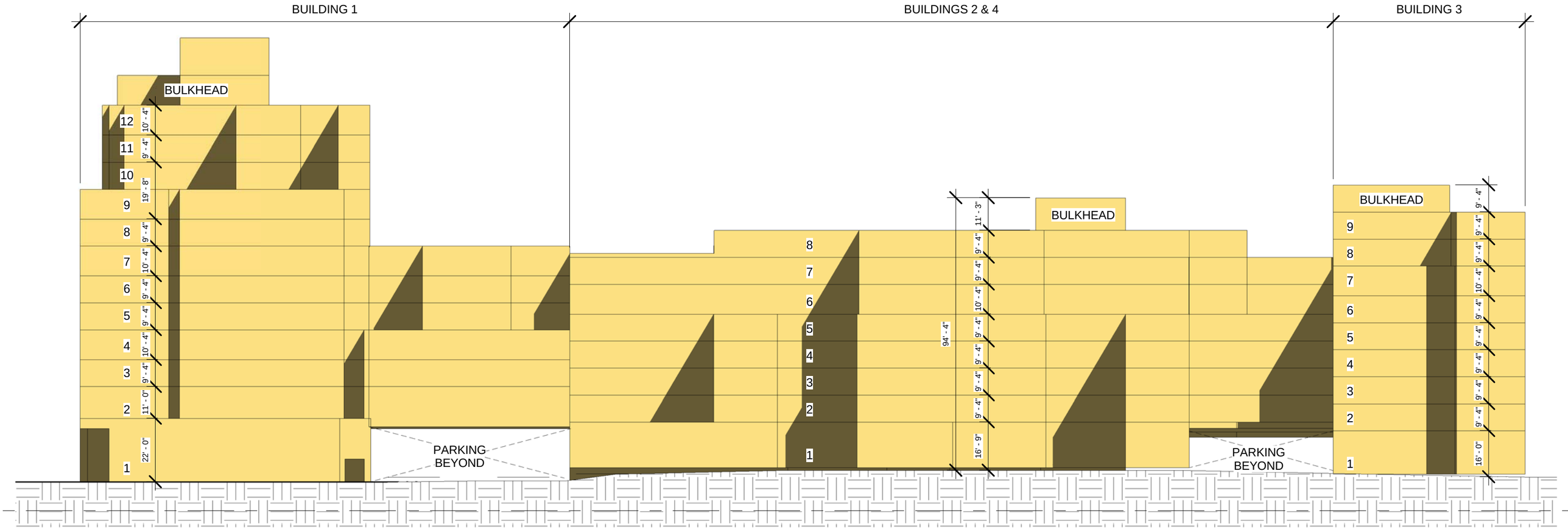

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RADSON DEVELOPMENT

BUILDING ELEVATION-WEST

DATE: 06/12/17

JOB NUMBER: 15014.00

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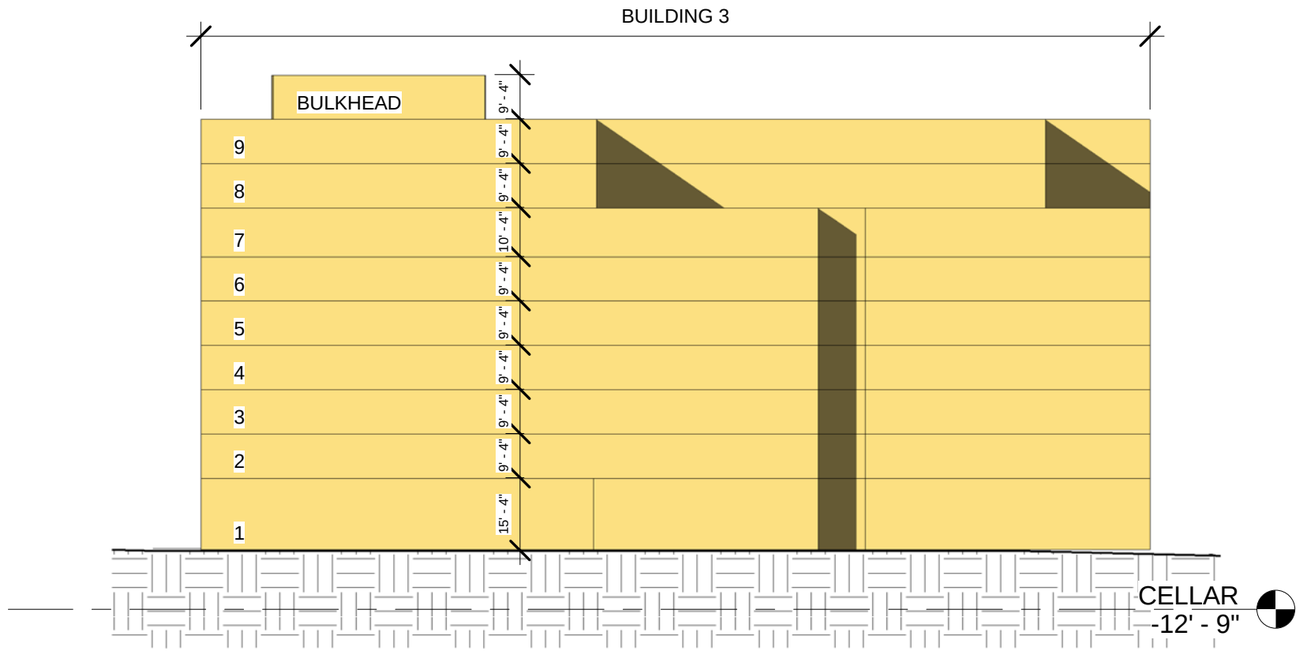

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RADSON DEVELOPMENT

BUILDING ELEVATION-SOUTH

DATE: 06/12/17

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A-21

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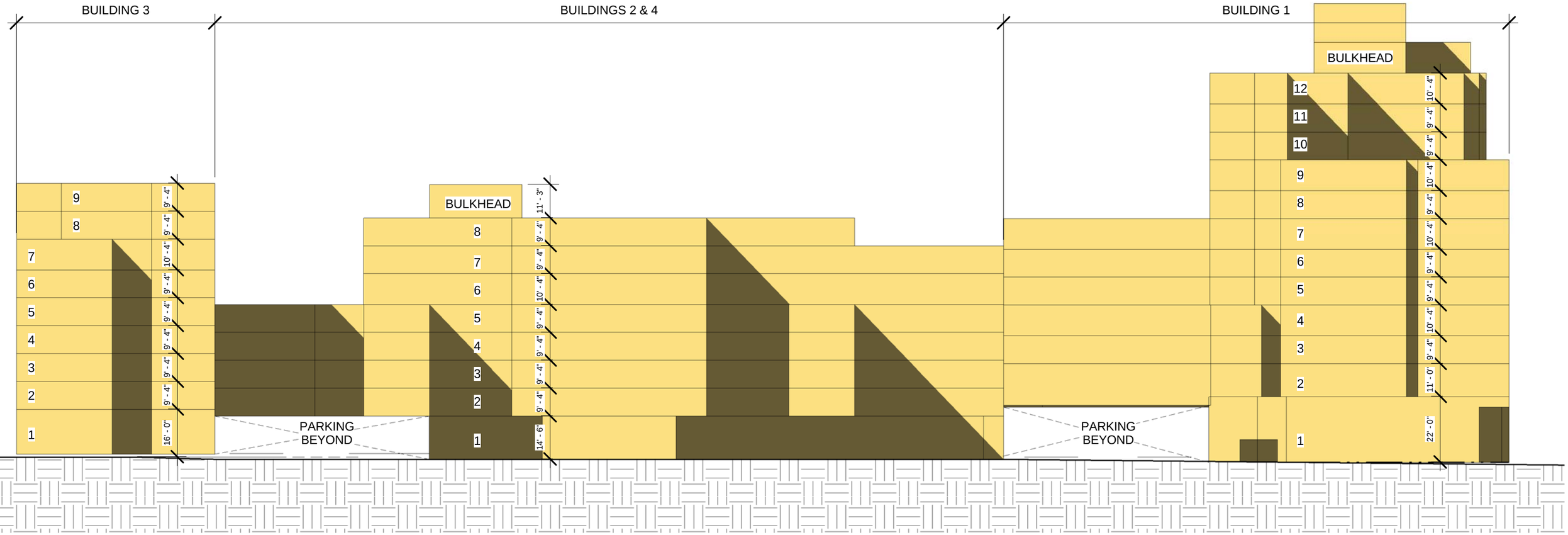

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BUILDING ELEVATION-EAST

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A-22

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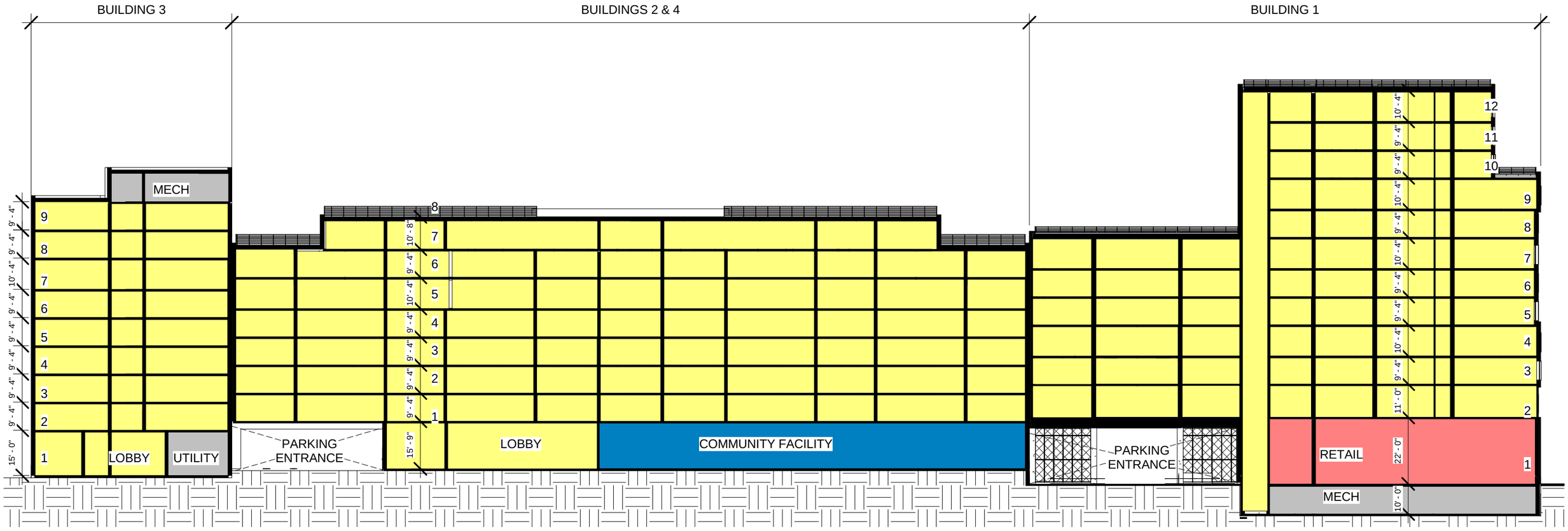

Linden Boulevard

NORTH-SOUTH SECTION

DATE: 06/12/17

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A-23

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CONCEPTUAL DESIGN
DATE: 06/12/17
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A-25



Linden Boulevard

MAP
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RADSON DEVELOPMENT

CONCEPTUAL DESIGN
DATE: 06/12/17
JOB NUMBER: 15014.00

A-26

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	Property Information	
	Address	1427-1449 Loring Avenue
	CD	Brooklyn Community District 5
	Block	4496 (entire block)
	Zoning Map	18B
	Zoning District	Proposed: R8A w/C2-4, R6A, R7A
	Transit zone?	No
	IH?	No

		R8A w/C2-4 (Wide Street)	R6A (Narrow Street)	R7A (Narrow Street)	Total
	Lot Areas	20,000 SF	60,100 SF	20,000 SF	100,100 SF
		20%	60%	20%	

	Street Tree Planting	
23-03, 26-41	Street Tree Requirement	1 every 25 feet of street frontage
23-03, 26-42	Planting Strip Requirement	N/A

	Use Regulations		
22-10, 32-10	Permitted Uses	1 to 9 & 14	1 to 4

	Maximum Floor Areas Permitted	R8A w/C2-4	R6A	R7A
23-153	Max FAR for Residential Use	6.02 FAR	3.00 FAR	4.00 FAR
23-154 (b)	Max FAR for Residential Use w/Inclusionary Housing Bonus	7.20 FAR	3.60 FAR	4.60 FAR
77-22(a)	Max FAR for Residential Use w/20% Increase on Wide Street	8.64 FAR **		
24-11	Max Permitted FAR for Community Facility Uses	6.50 FAR	3.00 FAR	4.00 FAR
24-111	Max Permitted FAR for Community Facility Uses with S.A.	6.02 FAR	2.43 FAR	3.44 FAR
33-121	Max Permitted FAR for Commercial Uses	2.00 FAR		

77-22 (a) For Quality Housing Buildings, the residential FAR of that portion of the zoning lot fronting on and within 100 feet of a wide street and permitting the greater maximum permitted residential FAR may exceed the maximum permitted residential FAR for the portion of the zoning lot by up to 20 percent, **provided that the maximum residential FAR for the zoning lot does not exceed the adjusted maximum residential FAR applicable to such zoning lot.**

PERMITTED	PROPOSED
4.52 FAR	4.52 FAR

	R8A w/C2-4	R6A	R7A	Total	PROPOSED
Max Permitted Residential Floor Area w/Inclusionary Housing	120,400 SF	180,300 SF	80,000 SF	380,700 SF	
Max Permitted Residential Floor Area w/Inclusionary Housing	144,000 SF	216,360 SF	92,000 SF	452,360 SF	413,382 SF
Max Permitted Res. Floor Area w/20% increase @ Wide Street	172,800 SF				
Max Permitted Community Facility Floor Area	130,000 SF	180,300 SF	80,000 SF	390,300 SF	21,539 SF
Max Permitted Community Facility Floor Area with S.A.	120,400 SF	146,043 SF	68,800 SF		
Max Permitted Commercial Floor Area	40,000 SF			40,000 SF	17,214 SF
Max Permitted Overall Floor Area				452,360 SF	452,135 SF

	Open Space/Lot Coverage	R8A w/C2-4 (Corner Lot)	R6A (Through Lot)	R7A (Through Lot)		
	Max Lot Coverage for Residential Use					
23-153	Interior/Thru Lot		65%			
23-153	Corner Lot	100%		100%	Total	PROPOSED
	Max Permitted Residential Building Footprint	20,000 SF	39,065 SF	20,000 SF	79,065 SF	65,174 SF
					79%	65%

	Density	R8A w/C2-4 (Corner Lot)	R6A (Through Lot)	R7A (Through Lot)		
23-22	Gross Area per Dwelling Unit	680	680	680		
	FAR for Density (Max Residential Permitted)	7.20 FAR	3.60 FAR	4.60 FAR		
	Lot Area	20,000 SF	60,100 SF	20,000 SF	Total	PROPOSED
	Permitted Dwelling Units (Lot Area x FAR for Density / Density Factor)	212	318	135	665	521

	Yard Regulation	R8A w/C2-4	R6A	R7A
34-231, 23-45	Front Yard	N/A	N/A	N/A
34-232, 23-462 (C)	Side Yard		0 or min 8'	
23-53	Rear Yard		N/A for zoning lots occupying entire blocks	

	Height Regulation	R8A w/C2-4	R6A	R7A
23-662 (b)	Maximum Base Height	105'	65'	75'
	Maximum Building Height	140'/145'	80'/85'	90'/95'
	Max Number of Stories	14	8	9
23-662 (c)	Min Required Setback	10'	15'	15'
35-24 (b), 23-633	Street Wall Locatiom	On street line	N/A	Locate not closer to the street line than the closest street wall of an existing building

	Minimum Distance Between Buildings	
23-711 (a)	Wall to wall	40
	Wall to window	50
	Window to window	60

	Parking Regulation				Required	PROPOSED
25-23	Residential Parking	15% DU	15% DU	15% DU	78	78
25-31, 36-21	Community Facility uses		varies			
36-21	Commercial Uses (general retail)	1 per 1,000 SF	0.00	N/A	17	22
36-62	Loading Berth Requirements	Floor area greater than 8,000 SF will trigger loading berth requirements				

	Bicycle Parking Regulation			
25-811	Residential Uses		1 per 2 DU	
25-811	Community Facility Uses		varies	
36-711	Commercial (General Retail or Services)	1 per 10,000 SF	N/A	N/A
36-712	For open parking areas accessory to commercial or community facility uses that contain 18 spaces or are greater than 6,000 SF in area shall be provided with 1 space per every 10 automobile spaces.			

**Amount increased will decrease the R6A zone residential FAR

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RADSON DEVELOPMENT

ZONING ANALYSIS
DATE: 06/12/17
JOB NUMBER: 15014.00



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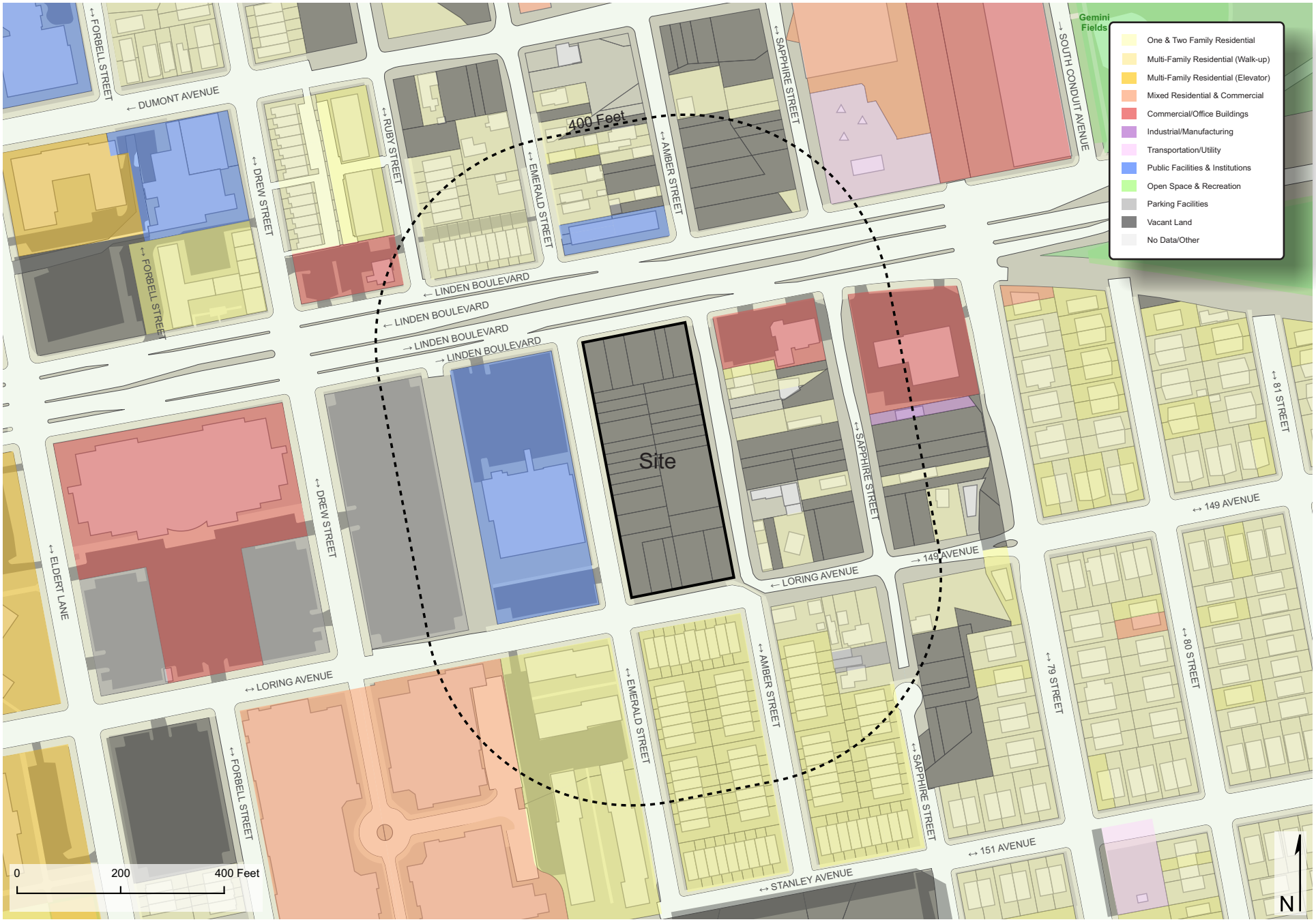

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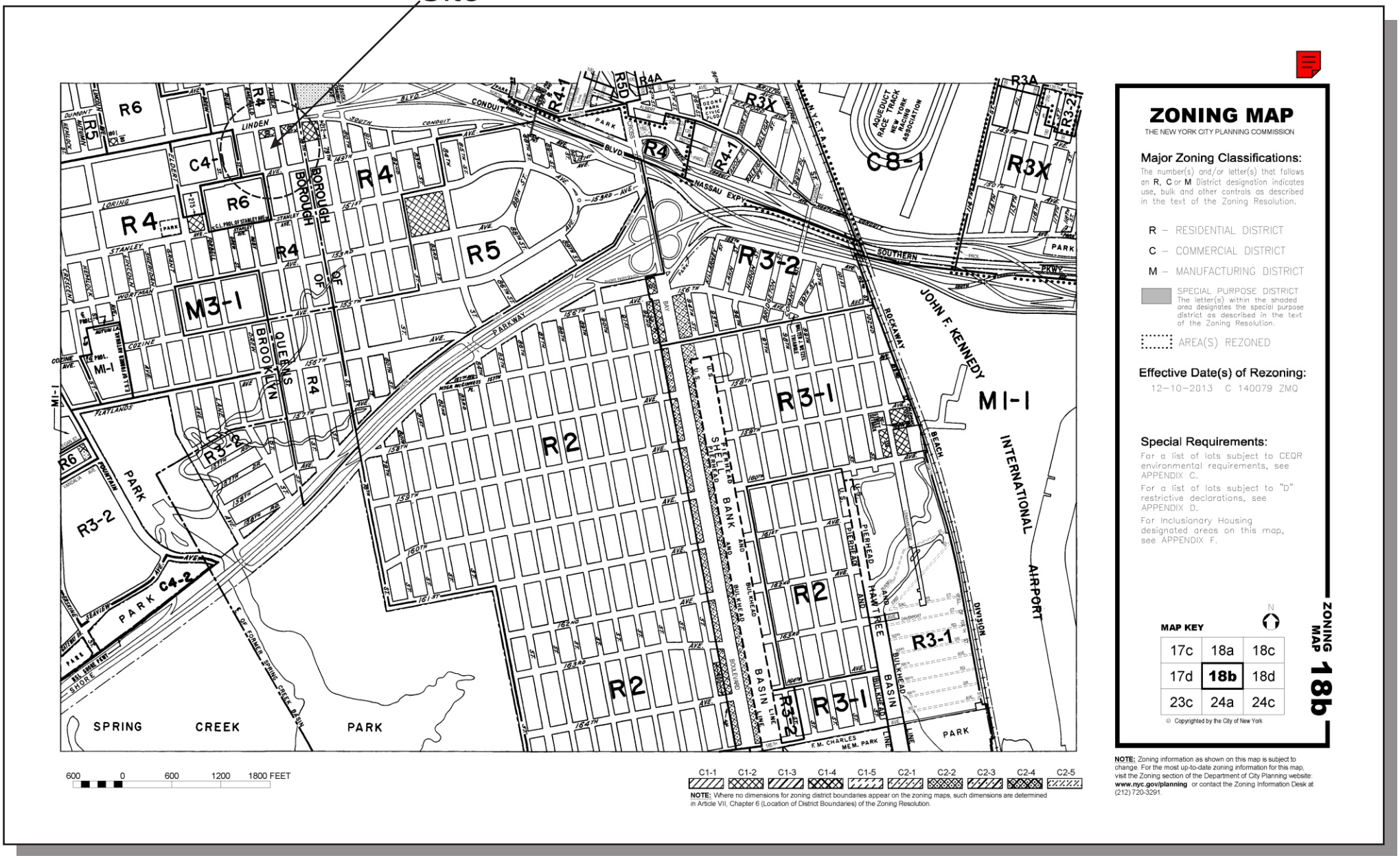
Site
ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
AREA(S) REZONED
Effective Date(s) of Rezoning:
12-10-2013 C 140079 ZMQ
Special Requirements:
For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
For Inclusionary Housing designated areas on this map, see APPENDIX F.
MAP KEY
17c 18a 18c
17d 18b 18d
23c 24a 24c
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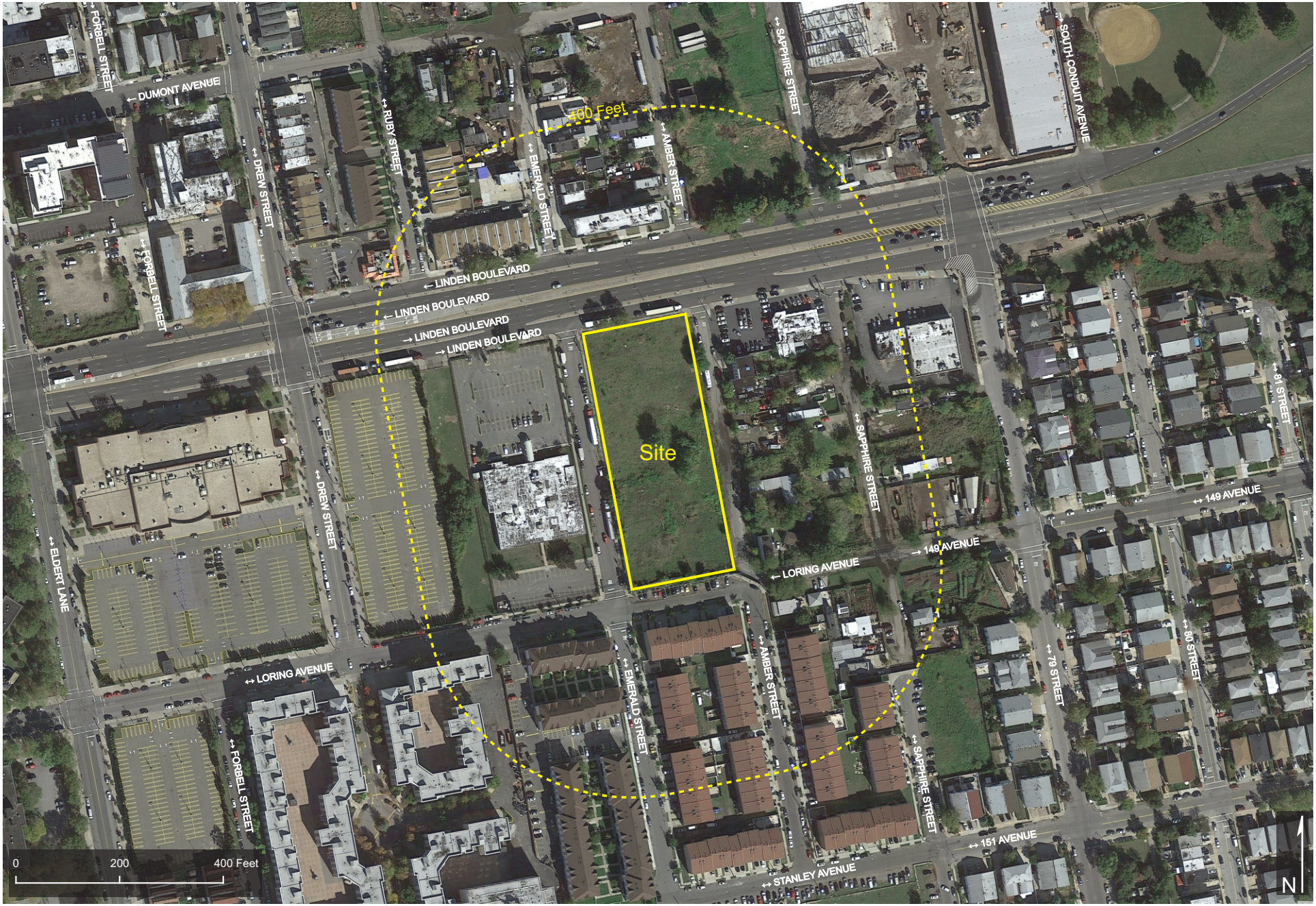
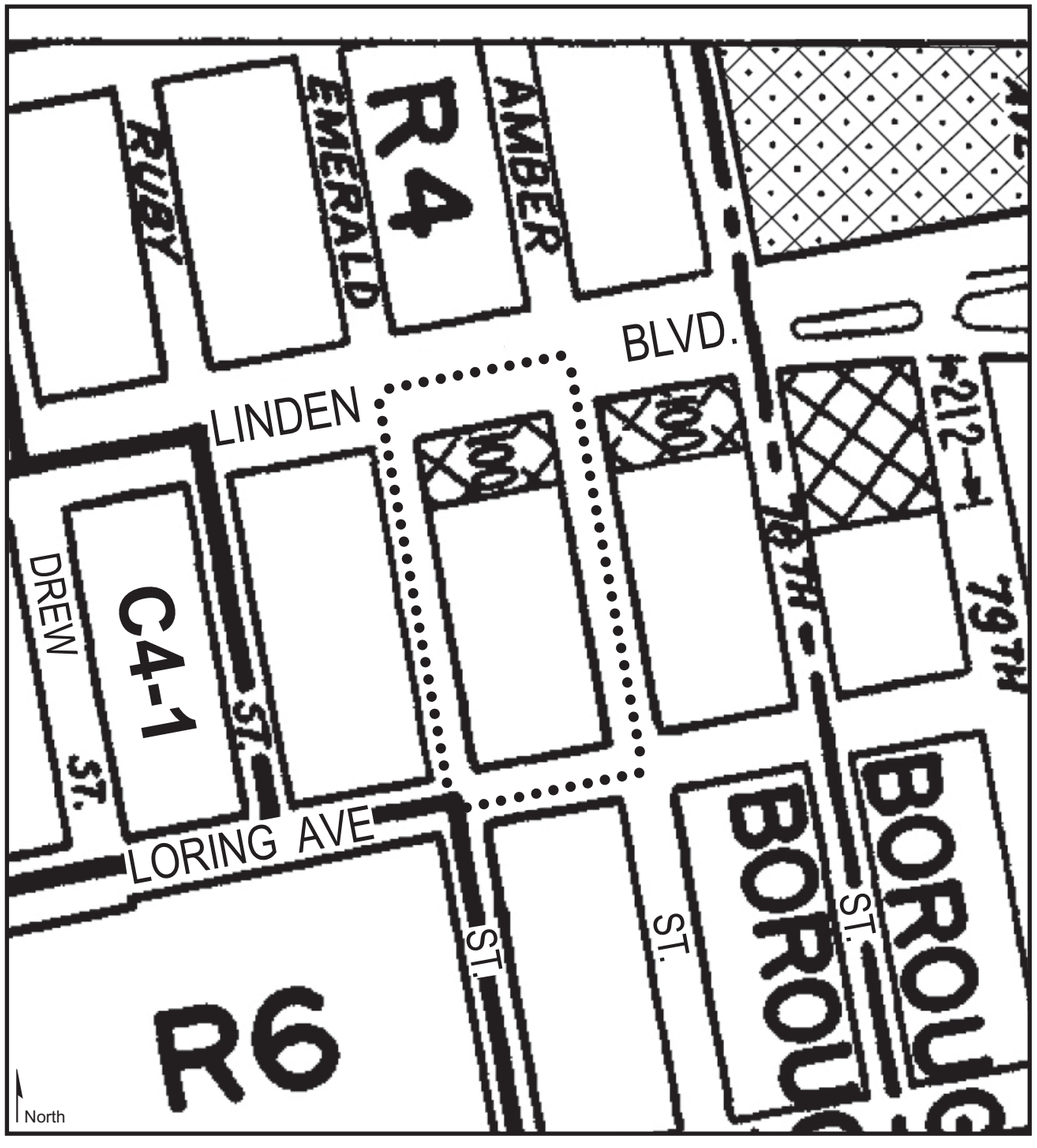
ZONING MAP 18b
NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3291.
600 0 600 1200 1800 FEET
C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5
NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.
SPRING CREEK PARK
JOHN F. KENNEDY INTERNATIONAL AIRPORT
BOROUGH OF QUEENS
BOROUGH OF BROOKLYN
NASSAU EXPY
SOUTHERN PKWY
ROCKAWAY BEACH BLVD
PARKWAY
SHERIDAN EXPWY
BELT PKWY
R6 R5 R4 R4A R4-1 R5D R3X R3A R3-2 R3-1 R2 C8-1 M3-1 M1-1 C4-1 C4-2 R3-2

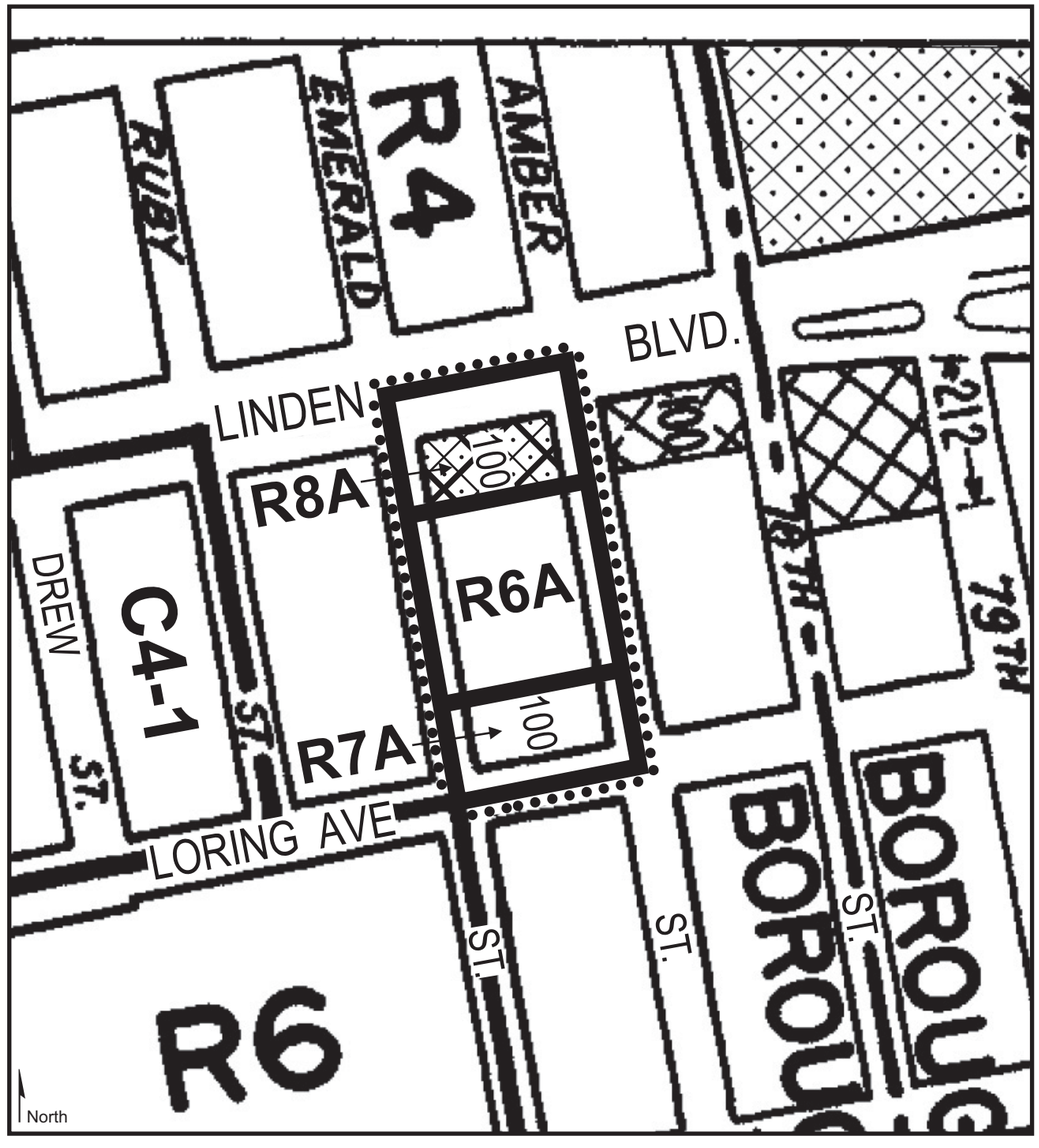


Data Source: MapPLUTO 2016v1, NYC DOF Digital Tax Map 03-16 downloaded from https://nycopendata.socrata.com
Satellite Imagery from Google via QGIS OpenLayers Plugin

Figure 6 - Zoning Change Map



Current Zoning Map (18b)



Proposed Zoning Map (18b) - Area being rezoned is outlined with dotted lines

Rezoning from R4 to R6A
Rezoning from R4 to R7A
Rezoning from R4/C1-2 to R8A/C2-4

C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5

LINDEN BOULEVARD REZONING

INTRODUCTION

Based on the analysis and the screens contained in the Environmental Assessment Statement Short Form, the analysis areas that require further explanation include land use, zoning, and public policy (and WRP); socioeconomics; community facilities; open space, shadows; historic and cultural resources; urban design and visual resources; natural resources; hazardous materials; water and sewer infrastructure; transportation; air quality; noise; neighborhood character; and construction as further detailed below. The subject heading numbers below correlate with the relevant chapters of the CEQR Technical Manual

4. LAND USE, ZONING AND PUBLIC POLICY

I. INTRODUCTION

The analysis of land use, zoning and public policy characterizes the existing conditions of the Development Sites and the surrounding study area; anticipates and evaluates those changes in land use, zoning and public policy that are expected to occur independently of the proposed project; and identifies and addresses any potential impacts related to land use, zoning and public policy resulting from the project. Various sources have been used to prepare a comprehensive analysis of land use, zoning and public policy characteristics of the area, including field surveys, studies of the neighborhood, census data, and land use and zoning maps.

Land Use Study Area

In order to assess the potential for project related impacts, the land use study area has been defined as the area located within a 400-foot radius of the site, which is an area within which the proposed project has the potential to affect land use or land use trends. The 400-foot radius study area is bounded by an area with Dumont Avenue to the north; Drew Street to the west; Stanley Avenue to the south; and 79th Street to the east (See **Figure 1** – Site Location).

II. Land Use

Site Description

The Project Area is located in the East New York neighborhood of Community District 5 in Brooklyn. The Project Area consists of all 29 tax lots that comprise Block 4496. The lots (1, 3, 5, 8, 9, 11, 12, 14, 15, 16, 17, 18, 24, 27, 29, 32, 33, 35, 39, 42, 43, 44, 45, 47, 48, 50, 51, 52, and 56) measure 100,100 sf in lot area. The block is bounded by Linden Boulevard to the north, Amber Street to the east, Loring Avenue to the south and Emerald Street to the west. The lots with frontage along Linden Boulevard (Lots 1, 3, 5, 8 and 9) are zoned R4/C1-2 at 100 feet in depth and consist of 20,000 sf of lot area. The remaining lots (11, 12, 14, 15, 16, 17, 18, 24, 27, 29, 32, 33, 35, 39, 42, 43, 44, 45, 47, 48, 50, 51, 52, 56) are zoned R4 and consist of the remaining 80,000 sf of lot area.

Block 4496 has 200 feet of frontage along Linden Boulevard, 500 feet of frontage along Emerald Street, 200 feet of frontage along Loring Avenue and 500 feet of frontage along Amber Street. There is an existing 25-feet wide curb cut on Emerald Street, approximately 100 feet from Loring Avenue.

Not all of the tax lots are assigned house numbers; however, Block 4496 Lot 1 has an address of 2846-2868 Linden Boulevard, Lot 18 has an address of 336 Amber Street, Lot 27 has an address of 1449 Loring Avenue, Lot 39 has an address of 561 Emerald Street and Lot 42 has an address of 563 Emerald Street. All 29 tax lots are currently vacant.

Surrounding Area

The Project Area is located in the East New York neighborhood of Brooklyn Community District 5, one block west of the Queens Borough border. The surrounding area includes residential, community facility and commercial uses. Businesses in the surrounding area include a McDonald's, the Lindenwood Diner and the Linden Boulevard Multiplex Cinema.

In the immediate area of the Development Site are: a 3-story medical office to the north, on Linden Boulevard; a 1-story medical office and parking lot accessory parking to the west, on the Emerald Street; 3-story residential buildings to the south, on Loring Avenue; and a parking lot accessory to the Lindenwood Diner to the east, on Amber Street.

South of the Project Area are 1- to 4-story multi-family walk-up buildings in R4 and R6 zoning districts. To the southwest is Spring Creek Gardens, an apartment complex of 5-story buildings on two blocks in an R6 zoning district. To the west are the Louis H. Pink Houses, a NYC Housing Authority development with 1,500 dwelling units in twenty-two 8-story buildings in an R4 district. The multiplex cinema and large medical facility with

accessory parking lots to the west of the Project Area are located in a C4-1 district. Northwest of the Project Area are four 17-story multiple dwellings in an R6 district. North of Linden Boulevard are low-density 1- to 3-story residences and vacant lots in an R4 district. Tudor Park, a 13.54-acre public park, is located to the northwest of the Development Sites along North Conduit Avenue between 80th and 88th Streets.

Linden Boulevard, which borders the proposed project area to the north, is a major thoroughfare measuring 170 feet wide. The remaining streets with frontage along the Project Area (Emerald Street, Loring Avenue and Amber Street) are classified as narrow streets having less than 75 feet in width.

The Project Area is over a half mile from the Grant Avenue A train, the nearest subway station. The Project Area is served by the B15 local bus and the BM5 express bus, both of which run along Linden Boulevard.

Future No-Action (No-Build) Scenario

In the future and absent the Proposed Actions, no land use changes would be made to the Development Sites and the Project Area would continue to remain vacant.

No new development is anticipated within the land use study area by the project build year of 2020. The surrounding land uses within this area are also anticipated are expected to remain unchanged by the Projected Build Year of 2020. The study area currently contains residential, commercial and community facility uses. These uses are all anticipated to remain in the future. Any vacant lots are anticipated to remain vacant.

With-Action (Build) Scenario

In the future with the Proposed Actions, four separate buildings would be constructed on four new combined tax and zoning lots. In total, the proposed development would consist of 589,809 gross square feet (gsf) including 509,907 gsf of residential space (521 dwelling units), 17,214 gsf of commercial retail space (Use Group 6) and 21,539 gsf of community facility space (medical office, recreation center space and day care, Use Group 4). 100 accessory parking spaces would be provided. The building heights would range from 8- to 12-stories.

The maximum allowable residential FAR is 3.6 in R6A districts with MIH; 4.6 in R7A districts with MIH; and 7.2 in R8A/C2-4 districts with MIH. The maximum allowable community facility FAR is 3.0 in R6A districts; 4.8 in the R7A portion of the lot; and 6.5 in the R8A/C2-4 portion of the lot.. The maximum allowable commercial FAR is 2.0 in C2-4 districts within R8A districts. The proposed zoning map amendments would allow a maximum FAR of 4.52 across the entire site (blending the proposed R6A, R7A and R8A/C2-4 districts).

In R8A/C2-4 districts, maximum base height when providing affordable housing pursuant to the Inclusionary Housing Program set forth in ZR Section 23-90 is 105 feet, maximum building height is 140 feet (without a qualifying ground floor) and 145 feet (with a qualifying ground floor), maximum number of stories is 14 and a 10 foot setback is

required between minimum and maximum base heights on wide streets. In R6A districts, when providing affordable housing pursuant to the Inclusionary Housing Program set forth in ZR Section 23-90, maximum base height is 65 feet, maximum building height is 80 or 85 feet (without or with a qualifying ground floor, respectively), maximum number of stories is 8 and a 15 foot setback is required between minimum and maximum base heights on narrow streets. In R7A districts, when providing affordable housing pursuant to the Inclusionary Housing Program set forth in ZR Section 23-90, maximum base height is 75 feet, maximum building height is 90 or 95 feet (without or with a qualifying ground floor, respectively), maximum number of stories is 9 and a 10 foot setback is required between minimum and maximum base heights.

Residential parking requirements for R6A, R7A and R8A districts requires 50% of dwelling units, with all affordable units (below 80% AMI) reduced to 15% outside the Transit Zone. Commercial and community facility parking requirements vary by use with one parking space required per 1,000 square feet for retail use.

Conclusion

The Proposed Actions are not anticipated to result in land uses that are significantly different from surrounding uses. As noted above, the study area predominantly contains residential, commercial and community facility buildings and in the future, vacant lots would be developed with residential (multi-family), commercial retail and community facility space (ambulatory medical, recreation center space and day care, Use Group 4). Since these uses are currently permitted as-of-right under the current zoning, the uses would not be incompatible with the land uses in the surrounding area.

No potentially significant adverse impacts related to land use are expected to occur as a result of the Proposed Actions. Therefore, further analysis of land use is not warranted.

III. Zoning

Existing Conditions

The Project Area measures 100,100 square feet in lot area. The lots with frontage along Linden Boulevard (Lots 1, 3, 5, 8 and 9) are zoned R4/C1-2 at 100 feet in depth and consist of 20,000 square feet of lot area. The remaining lots (11, 12, 14, 15, 16, 17, 18, 24, 27, 29, 32, 33, 35, 39, 42, 43, 44, 45, 47, 48, 50, 51, 52, 56) are zoned R4 and consist of the remaining 80,000 square feet of lot area. Single family detached residences and general residences are permitted as-of-right in the R4 district. Local retail uses are permitted within the C1-2 overlay along Linden Boulevard. The maximum residential floor area ratio (FAR) in a R4 district is .75 for residential uses and 2.0 for community facility uses. A C1-2 overlay in R4 district allows commercial uses at a maximum FAR of 1.0. In an R4 district, maximum lot coverage is 45%, minimum front yard depth is 10 feet (or 18 feet if the depth exceeds 10 feet), 2 side yards totaling 13 feet in width are required for detached residences (1 side yard of 8 feet in width is required of semi-detached residences), minimum rear yard depth is 30

feet and maximum building height is 35 feet. One off-street parking space is required per dwelling unit.

The Project Area is within the boundaries of the Food Retail Expansion to Support Health (FRESH) program and qualifies for zoning and tax incentives. The City has established the FRESH program in response to the issues raised in neighborhoods that are underserved by grocery stores. FRESH provides zoning and financial incentives to promote the establishment and retention of neighborhood grocery stores in underserved communities throughout the five boroughs. The FRESH program is open to grocery store operators renovating existing retail space or developers seeking to construct or renovate retail space that will be leased by a full-line grocery store operator.

Future No-Action (No-Build) Scenario

In the future and absent the action, development within the Project Area would continue to be governed by the provisions of the existing R4 and R4/1-2 zoning districts. The Project Area is anticipated to remain in the future without the Proposed Actions.

No changes are anticipated to the zoning districts and zoning regulations relating to the Development Sites/Project Area or the surrounding study area by the project build year of 2020.

Future With-Action (Build) Scenario

In the future with the Proposed Actions, The applicant would construct four new buildings in the Project Area. The Proposed Development will range in height from 8 to 12 stories (80 to 131 feet in height) and will contain 589,809 gsf for a total FAR of 4.52. Lot coverage is 65% (60,075 sf out of 100,100 sf). Open space is provided on a terrace for the recreation space and day care, in the form of landscaped roofs/terraces over parking at grade and totals 16,520 square feet. The Proposed Development will include 509,907 gsf of residential space (521 dwelling units), 17,214 gsf of commercial retail space, 21,539 gsf of community facility space and accessory parking for 100 cars. The tax lots will be merged into four new tax lots and a single zoning lot.

Building 1 (Proposed Development Site 1) will be located on Tax Lots 1, 3, 5, 8, 9, 50, 51, 52, 11, and 12, and on a portion of lots 48 and 14 (Block 4496, future lot 29). Building 1 will be partially located within the area to be rezoned R8A/C2-4 and partially within the area to be rezoned R6A with frontage along Linden Boulevard, Emerald Street and Amber Street. Building 1 will consist of a 12-story (130'-4" tall) building with 196,861 zsf of floor area or 254,203 gsf. The base height of Building 1 within the R8A portion is 101’4", building height is 130'-4" and setback is 15'-0" at narrow streets (Amber and Emerald Streets) and 10'-0" at the wide street (Linden Boulevard). The base height of Building 1 within the R6A portion is 52'-8", building height is 81'-8" and setback is 15'-0" at narrow streets (Amber and Emerald Streets). The building will contain 179,877 sf (213,714 gsf) of residential floor area and 235 dwelling units. The building's first floor will consist of 17,214 sf of commercial retail floor area and 13,275 gsf of floor space for parking on the first floor.

Building 2 (Proposed Development Site 2) will be located on Tax Lots 39, 42, 43, 44, 45, 56, 47, and on a portion of Lots 48, 35, 33, and 32 (Block 4496, future lot 15) will be partially located within the area to be rezoned R6A and partially within the area to be rezoned R7A with frontage along Emerald Street. Building 2 will consist of a 8-story (82'-1" tall) building with 92,041 zsf of floor area or 124,998 gsf. The base height of Building 2 within the R6A portion is 53'-1", building height is 82'-1" and setback is 15'-0" at the narrow street (Emerald Street). The base height of Building 2 within the R7A portion is 53'-1", the building height is 72'-9" and setback is 15'-0" at the narrow street (Emerald Street). The building will contain 84,325 sf (103,345 gsf) of residential floor area and 109 dwelling units. The building's ground floor will contain 7,716 gsf of community facility floor area and 13,937 gsf of floor space for parking.

Building 3 (Proposed Development Site 3) will be located on a portion of Tax Lots 35, 33, 32, 29, and 27 (Block 4496, future lot 1) will be located within the area to be rezoned R7A with frontage along Loring Avenue, Emerald Street and Amber Street. Building 3 will consist of a 9-story (90'-8" tall) building with 76,791 sf of zoning floor area (95,876 gsf) and 77 dwelling units and 6,583 gsf of community facility space (medical office). The base height of Building 3 is 72' and the building height is 90'-8" and setback is 15'-0" at narrow streets (Amber Street, Emerald Street and Loring Avenue).

Building 4 (Proposed Development Site 4) will be located on Tax Lots 24, 18, 17, 16, and 15, and on a portion of Lots 29, 27, and 14 (Block 4496, future lot 48) will be partially located within the area to be rezoned R6A and partially within the area to be rezoned R7A with frontage along Amber Street. Building 4 will consist of an 8-story (79'-10" tall) building with 86,442 sf of floor area (114,732 gsf). The base height of Building 4 within the R6A portion is 53'-1" and the building height is 82'-1" and setback is 15'-0" at the narrow street (Amber Street). The base height of Building 4 within the R7A portion is 53'-1" and the building height is 72'-9" and setback is 15'-0" at the narrow street (Amber Street). The building will contain 79,202 sf of residential floor area (93,555 gsf) and 100 dwelling units. The building's ground floor will contain 13,937 gsf of floor space for parking and the building would contain 7,240 gsf of additional community facility space.

As noted above, only a portion of the Project Area (approximately 10,000 sf) will be developed below grade due to the presence of a high water table. This area would be utilized as accessory space.

On-site parking spaces will be made accessible by four new curb cuts on Emerald and Amber Streets, available at grade on the first floor. Each curb cut would contain two-way driveways.

Conclusion

No significant impacts to zoning patterns in the area would be expected. The proposed medium-density residential zoning districts with a commercial overlay along Linden Boulevard (R6A, R7A and R8A/C2-4) will facilitate the development of a significant amount of affordable housing and community facility uses as well as local retail services along the Linden Boulevard corridor. The proposed districts are appropriate given the

range of densities and existing one-, three- and five-story buildings within the surrounding area. The proposed commercial overlay fits within the context of the commercial uses and medical offices along Linden Boulevard. The R8A/C2-4 district will allow the greatest bulk and height on the block to be located along Linden Boulevard, which is 170 feet in width and can support significant bulk. It is anticipated that new medium density residential and community facility development in the R6A district at the midblock will increase activity along Emerald and Amber Streets, each measuring 60 feet in width. The R7A district is proposed along Loring Avenue opposite recently constructed 3-story multiple dwellings. Loring Avenue measures 70 feet wide, and has a greater capacity than streets along the mid-block to accommodate slightly taller apartment buildings.

The proposed zoning text amendment would make the Project Area a Mandatory Inclusionary Housing designated area in which MIH Options 1 and 2 would be applicable. Option 1 requires that a minimum of 25% of the residential floor area be designated as affordable to households at an average of 60% of AMI. Option 2 requires that a minimum of 30% of the residential floor area be designated as affordable to households at an average of 80% of AMI. Utilization of either option will allow a needed increase in residential FAR pursuant to ZR 23-154(b) to 3.6 in R6A; 4.6 in R7A; and 7.2 in R8A/C2-4.

Therefore, the Propose Actions will not have a significant impact on the extent of conformity with the current zoning in the surrounding area, and it would not adversely affect the viability of conforming uses on nearby properties.

Potentially significant adverse impacts related to zoning are not expected to occur as a result of the Proposed Actions, and further assessment of zoning is not warranted.

IV. Public Policy

Existing Conditions

The study area encompasses the East New York area, which straddles both Brooklyn Community District #5 and Queens Community District #11. As noted above, the area includes residential, community facility and commercial uses, as well as a number of vacant lots. *Housing New York: A Five-Borough, Ten-Year Plan* is the current plan under Mayor Bill De Blasio to build or preserve 200,000 units of affordable housing in New York City within ten years of the start of his mayoralty.

The Project Area is located in a FRESH Program Area (as noted in the zoning section) and is eligible for zoning as well as tax incentives for the development of a grocery store that sells fresh fruits and vegetables. At this time, The Project Area is not located within a inclusionary housing (IH) or a Mandatory Inclusionary Housing Area (MIHA, see below). The Project Area is located within the City's Coastal Zone Boundary and is therefore subject to the New York City Waterfront Revitalization Program (WRP, see Attachment A)

No other public policies relate to the Development Sites/Project Area or to the surrounding 400-foot radius study area. The Development Sites/Project Area and the 400-foot radius

area are not located within a Historic District and do not contain any designated historic resources and are therefore not subject to any historic regulations. The Project Area is not located within a Federal Empowerment Zone, or is covered by any 197-a Community Development Plans, and is not located within a critical environmental area, a significant coastal fish and wildlife habitat, a wildlife refuge, or a special natural waterfront area.

Future No-Action (No-Build) Scenario

No new public policy initiatives or changes to existing initiatives are anticipated to affect the Project Area or to the 400-foot study area surrounding the Project Area by the project build year of 2020.

Future With-Action (Build) Scenario

The Proposed Actions include a zoning text amendment to establish a Mandatory Inclusionary Housing (MIH) Area for the entire Project Area. The applicant also seeks discretionary financing for the Proposed Development under the New York City Housing Preservation and Development's ("HPD") Our Space Initiative as well as under HPD's and New York City Housing Development Corporation's ("HDC") Extremely Low & Low-Income Affordability (ELLA) Program. Out of 521 proposed dwelling units, 130 dwelling units (25% of the residential floor area) is assumed to be designated as permanently affordable to households at an average of 60% of AMI. The 130 dwelling units will be spread equally throughout the buildings. The remaining units are sought to be 100% affordable pursuant to a regulatory agreement with HPD and HDC.

Accordingly, Development Site is located in an area suitable for new housing development, as it is currently vacant and zoned for residential use, and would contribute to Mayor Bill De Blasio's goal of building or preserving 200,000 units of affordable housing in New York City within ten years of the start of his mayoralty. The Proposed Actions would provide affordable housing for families within the Project Area, which contains a mix of residential, commercial and community facility buildings The new development would comply with the proposed R8A/C2-4, R7A and R6A district zoning regulations, the MIH program and HPD's ELLA program, if the program is granted. As noted within the land use analysis above, the proposed uses would be compatible with the existing land uses within a 400-foot radius of the Project Area.

The Proposed Actions are required in order to allow the Proposed Development to be developed on the Development Site. The Proposed Development would meet The City's public policy goals as explained above related to the provision of affordable housing.

The Proposed Actions would also be consistent (nor inconsistent) with the City's WRP, as explained in Attachment A.

No adverse impact to public policies would occur as a result of the Proposed Actions.

Conclusion

The Proposed Actions would facilitate an appropriate level of development within the

Project Area, would be a positive addition to the surrounding neighborhood, and would serve to further the goals of the existing public policies for the area as discussed above.

No potentially significant adverse impacts related to public policy are anticipated to occur as a result of the Proposed Actions, and further assessment of public policy is not warranted.

No significant adverse impacts related to land use, zoning, and public policy are anticipated to occur as a result of the action. The action is not expected to result in any of the conditions that warrant the need for further assessment of land use, zoning, or public policy.

5. SOCIOECONOMIC CONDITIONS

The Proposed Actions consist of a zoning map amendment from R4/C1-2 to R8A/C2-4 and from R4 to R6A and R7A; as well as and a zoning text amendment to make the Project Area applicable to the Mandatory Inclusionary Housing (MIH) Program (Options 1 or 2). The intent of the proposed rezoning is primarily to allow for the development of an underutilized tax block to construct a mixed-use development with 521 dwelling units. It would also contain local retail and community facility space and accessory parking in order to serve new residents and other persons in the surrounding community.

Under the worst development scenario (RWCDS), the Proposed Actions are anticipated to result in 589,809 gross square feet (gsf) including 509,907 gsf of residential space (521 dwelling units), 17,214 gsf of commercial retail space (Use Group 6) and 21,539 gsf of community facility space (ambulatory medical, recreation center space and day care, Use Group 4). The required zoning text amendment to make the area applicable to MIH would require at least 25% of the proposed residential floor area to be reserved for incomes averaging 60% AMI. As proposed, the applicant intends to comply with MIH under Option 2, which requires at least 30% of residential floor area for incomes averaging 80% AMI or 152 dwelling units. The applicant also seeks discretionary financing for the Proposed Development under the New York City Housing Preservation and Development's ("HPD") Our Space Initiative, as well as under HPD's and New York City Housing Development Corporation's ("HDC") Extremely Low & Low-Income Affordability (ELLA) Program, which generally requires apartments below an average of 60% AMI.

However, for a conservative analysis, Option 1 will be analyze assuming 25% or 130 dwelling units as affordable, the lease amount of affordable dwelling units possible under the Proposed Actions.

The Proposed Actions and resulting development would not result in the direct loss of 500 residents but would add approximately 509,907 gsf of residential space. The With-Action RWCDS would also result in approximately 17,214 square feet of commercial retail and 21,539 square feet of community facility use. This is less than the CEQR Technical Manual threshold of 200,000 square foot for consideration of indirect business displacement. Furthermore, the Proposed Action would not directly displace 100 employees, as the Development Site and Project Area are currently vacant. Therefore, no further analysis is required for direct residential, direct business or indirect business displacement.

As indicated on Part II of the EAS Form, the Proposed Action could potentially generate a net increase of 521 residential units, as compared to the No Build condition. This would exceed the 200-unit threshold established for further assessment of potential indirect residential displacement. Therefore, the following provides a preliminary assessment of the potential for the Proposed Action to result in any significant adverse impacts related to indirect residential displacement.

Indirect Residential Displacement

As indicated in the *CEQR Technical Manual,* "the objective of the indirect residential displacement analysis is to determine whether the proposed project may either introduce a trend or accelerate a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of the neighborhood would change." The risk of indirect residential displacement is typically associated with rising rents caused by new higher -income housing that may contribute to increased area housing costs to an extent that could potentially force lower-income residents out of the neighborhood. The potential for impact is generally limited to households in unprotected, private rental units.

The With-Action RWCDS includes the development of 521 dwelling units of housing. No new residential development is anticipated to occur under the No-Action RWCDS. Therefore, the Proposed Action would result in the development of a net increase of 521 dwelling units. Based on data from the Department of City Planning[2], the average household size is 2.76 persons per dwelling unit in the Census Tracts located within 1/2-mile of the Rezoning Area (tracts 1208, 1214, 1220 in Brooklyn and 62.02 in Queens, see **Figure 5-1**). The development of 521 dwelling units would therefore be expected to generate approximately 1,437 new residents in the Rezoning Area.

Table 5-1: ½ Mile Study Area Population

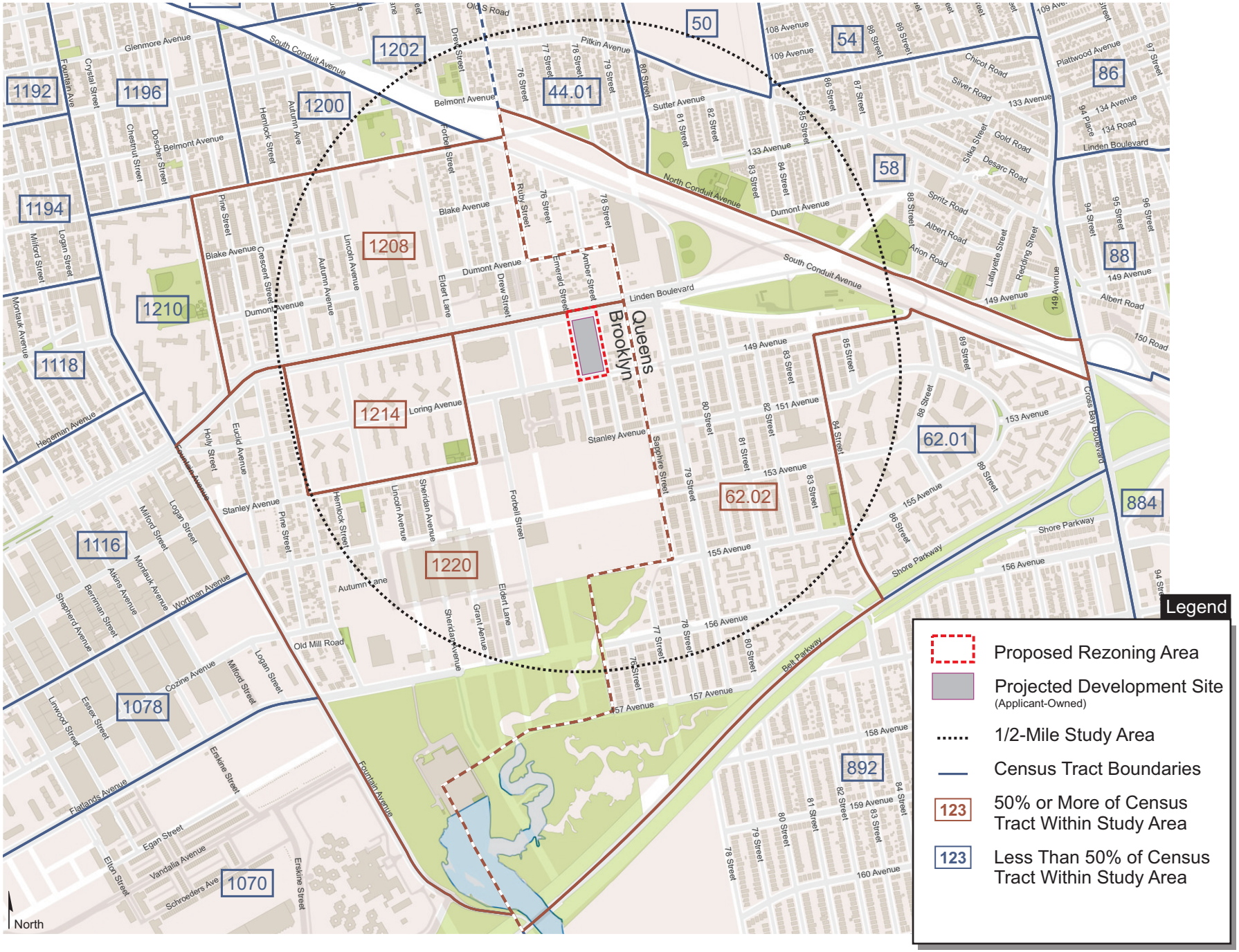
Census Tract	**Total Population (2015)**
1208 (Brooklyn)	8,566
1214 (Brooklyn)	4,465
1220 (Brooklyn)	5,573
62.02 (Queens)	7,378
Study Area Total (2015)	25,983
2015-2020 Increase (0.5 %)	656
No-Action Population	**26,639**
With-Action Population	**28,076 (+5.3%)**

Currently, the ½ mile area surrounding the Rezoning Area contains 25,983 residents (See Table 5-1), according to 2015 Census data[3]. In order to account for background growth to the 2020 project analysis year, a conservative annual growth rate of 0.5% per year was applied to the 2015 population of the ½-mile study area. This growth factor would result in the addition of 656 additional residents. Therefore, as projected to 2020, the base population is projected to be 26,639 residents. No major residential developments are anticipated to occur in the Rezoning Area under the future No-Action scenario. Therefore,

[2] Average dwelling unit size for Brooklyn Community District #5 and Queens Community District #11. Department of City Planning & ACS Demographic and Housing Estimates (2010-2014 American Community Survey 5-Year Estimates); US Census Bureau.

[3] ACS Demographic and Housing Estimates (2011-2015 American Community Survey 5-Year Estimates); US Census Bureau.

Figure 5-1: Socioeconomics Analysis Map



the socioeconomic conditions study area would have a No-Action population of 26,639 persons in 2020 and a With-Action population of 28,076 or an increase of approximately 5.3%.

Table 5-2: Study Area Income and Housing Characteristics

Census Tract	Median Family Income	Poverty Level: Families	Median Value Owner Occupied	Median Gross Rent
1208 (Brooklyn)	$38,264	24%	$446,500	$1,088
1214 (Brooklyn)	$24,120	45.5%	--*	$436
1220 (Brooklyn)	$58,328	16.2%	$564,400	$1,184
62.02 (Queens)	$62,150	9%	$374,100	$1,352
Brooklyn	$53,808	19.60%	$570,200	$1,215
Queens	$64,475	12.20%	$450,300	$1,367

Source: U.S. Census Bureau, 2010-2015 5-Year American Community Surveys.

* Data unavailable, most dwelling units consist of NYCHA rentals

Section 322.1 of Chapter 5 of the *CEQR Technical Manual* indicates that if the Proposed Action is expected to result in a study area population increase of more than 5%, further analysis is warranted to assess the potential for indirect residential displacement. While the With-Action population increase is approximately 5%, it should be noted that the primary goal of the Proposed Action is to facilitate a mixed-use development with a number of affordable dwelling units with at least 130 affordable dwelling units (or 1.25% of the 5% population increase) available for incomes averaging 60% AMI. This would include an income range between $38,100 for a single person and $54,360 for a family of four.

The primary objective of the preliminary socioeconomic assessment is to determine if the proposed project would add new population with higher average incomes compared to the average incomes of the existing populations and any new population expected to reside in the study area without the project. If the project would introduce a more costly type of housing compared to existing housing and the housing expected to be built in the No-Action condition, then the new population may be expected to have higher incomes. In some cases, the study area would already be experiencing socioeconomic change and the housing to be developed under a proposed project represents a continuation of an existing trend, and not a new trend. If the expected average incomes of the new population would be similar to the average incomes of the study area populations, no further analysis is necessary. If the expected average incomes of the new population would exceed the

average incomes of the study area populations, then a more detailed analysis should be conducted.

When the proposed development is compared to the income and housing characteristics of the existing study area, it is evident the required minimum of 130 permanently affordable dwelling units averaging 60% AMI (or $54,360 for a family of four) would be comparable with median family incomes in the study area, which average $45,716 per family (of all sizes) for the study area or the equivalent of 60% AMI for a family of two or three people in New York City.

The remaining 391 dwelling units would be anticipated to rent at the median gross rent levels present in the study area. It should also be noted that a high concentration of City-controlled housing exists in the study area, with the New York City Housing Authority (NYCHA)'s Pink Houses in Census Tract 1214, contributing to the lower median income, higher poverty level and lower gross rent for that census tract when compared to the Boroughs of Brooklyn and Queens, as well as the neighboring census tracts. The Pink Houses contain approximately 1,500 dwelling units and approximately 3,721 residents or approximately 14% of the No-Action study area population[4]. This population is not anticipated to change regardless of new housing development, as the population and dwelling units are removed from the market and under rent control.

Therefore, even under a conservative analysis assuming only 25% of the proposed dwelling units as permanently affordable (Option 1 of MIH), the Proposed Development is not anticipated to add a new population with higher average incomes compared to the average incomes of the existing population in housing not under rent control. The Proposed Action could be expected to have a stabilizing effect on the housing market within the study area by allowing for limited new housing opportunities and investment.

The Proposed Actions would not be expected to affect real estate market conditions and would not result in potential impacts related to socioeconomic character and further assessment is not warranted.

[4] MyNYCHA Development Portal: https://my.nycha.info/DevPortal/Portal/DevelopmentData

6. COMMUNITY FACILITIES AND SERVICES

Introduction

The community facilities and services considered under CEQR are public schools, public or publicly subsidized day care centers, public libraries, hospitals and other health care facilities, and police and fire protection services. Under the guidelines set forth in the *CEQR Technical Manual,* a detailed analysis is required only if a proposed action would displace or otherwise directly affect an existing community facility or if it would place significant new demands on facilities or services. Most of the demand for community facility services is generated by the introduction of new residents in an area.

Direct Effects

The Proposed Actions would not physically displace or affect any existing community facilities, and would therefore have no direct impact on any community facilities or services. Therefore, further assessment of direct impacts is not warranted.

Indirect Effects

The *CEQR Technical Manual* provides a set of thresholds to use in determining whether detailed studies of potentially significant adverse indirect impacts related to community facilities and services are warranted. The With-Action RWCDS includes the development of 521 dwelling units of housing on Projected Development Sites 1, 2, 3, and 4, all of which would be controlled by the Applicant. The No-Action RWCDS does not include any new development or any housing on the property. Therefore, the Proposed Actions would result in the development of a net increase of 521 dwelling units in the Project Area.

The required zoning text amendment to make the area applicable to MIH would require at least 25-30% of the proposed residential floor area to be reserved for incomes averaging 80% AMI. For a conservative analysis, Option 1 will be analyzed assuming 25% or 131 dwelling units as affordable for incomes averaging 60% AMI, despite the applicant seeking an agreement with HPD and HDC ensuring 100% affordability for all of the proposed 521dwelling units, as well as Option 2 being pursued for MIH compliance, which would require 157 dwelling units to be made permanently affordable (30% of the proposed residential floor area). 131 dwelling units will typically be analyzed in this EAS as permanently affordable for incomes averaging 60% AMI, which would consist of 25% of the proposed residential floor area, compared to the actual MIH requirement being sought as part of this application with 30% affordable to incomes averaging 80% AMI (Option 2) and the remaining dwelling units made affordable through a potential regulatory agreement with HPD/HDC. For the purposes of providing a conservative analysis, this section assumes that all 521 units would be affordable at or below 80% AMI.

Based on *CEQR Technical Manual* criteria (Table 6-1), the development of 521 dwelling units would exceed the minimum number of 121 dwelling units for conducting a detailed analysis of impacts to public elementary and middle schools in the Borough of Brooklyn. In order to provide a conservative analysis under CEQR, it will be assumed for the purposes of the child care analysis that all units would be at or below 80% of Area Median Income

(AMI). Under the criteria in Table 6-1, the development of 521 dwelling units at or below 80% of AMI would exceed the minimum number of 110 dwelling units for conducting a detailed analysis of impacts to publicly funded child care. An assessment of the project's potential impacts on these facilities is described below.

Public Schools

The *CEQR Technical Manual* states that, in general, if a project would introduce more than 50 school-age children (elementary and intermediate grades), significant impacts on public schools may occur and further analysis of schools may be appropriate. The RWCDS under the Proposed Actions include the development of 521 dwelling units on Projected Development Sites 1, 2, 3, and 4.

Based on the factors contained in Table 6-1a, the 521 new dwelling units resulting from the Proposed Actions would be anticipated to generate a total of 214 public school students, including 151 elementary school and 63 middle school pupils. The 521 dwelling units would be anticipated to generate a total of 73 public high school students, which would fall below the threshold of concern of 150 high school level pupils. A detailed public elementary and intermediate schools analysis is provided below.

Publicly Funded Child Care Centers

Analyses of impacts to day care facilities are generally conducted for projects that produce substantial numbers of subsidized, low- to moderate-income family housing units which may generate a significant number of children who would be eligible for subsidized child care at publicly financed day care centers. The threshold number requiring further analysis would be the generation of 20 eligible children. Based on the Brooklyn multipliers in Table 6-1b of the *CEQR Technical Manual*, 110 dwelling units at or below 80% of AMI would be expected to generate 20 children under the age of 6 who would be eligible for public child care. In order to provide a conservative analysis under CEQR, it will be assumed for the purposes of the child care analysis that all units would be at or below 80% of AMI. It is therefore assumed that the four Projected Development Sites would be developed with 521 dwelling units for low- and moderate-income tenants who would be at or below 80% of AMI and would therefore require the preparation of a child care analysis which is provided below.

With the Proposed Actions and the assumptions above, 521 dwelling units would be eligible for public child care within the Project Area. Based on the Brooklyn multipliers in Table 6-1b of the *CEQR Technical Manual*, 521 dwelling units would generate 93 children eligible for public child care. A detailed public child care analysis is provided below.

Other Community Facilities

The development of 521 dwelling units of housing on the project site would not be anticipated to exceed the thresholds of concern for any other community facilities and services. Based on the *CEQR Technical Manual*, the Proposed Actions would have no adverse impacts to libraries, health care facilities, or fire and police protection.

Public Schools

Existing Conditions

Primary Study Area (Sub-district Analysis)

The project site is located in Brooklyn Community School District (CSD) 19, Sub-district 3. CSD 19, Sub-district 3 is considered to be the primary study area for the analysis of elementary and intermediate schools. Within CSD 19, Sub-district 3, there are 5 elementary schools and 7 intermediate level schools. Figure 6-1, Public Elementary and Intermediate Schools Within CSD 19, Sub-district 3, illustrates the locations of these public elementary and intermediate schools.

Table 6-1 provides a listing of the elementary and intermediate schools within CSD 19, Sub-district 3. The table identifies the schools by school number/name, address, and grades served, and includes the latest available enrollment and school capacity numbers.
Elementary school capacity numbers are less than actual building capacities as they assume a class size reduction for Kindergarten through the third grades of 20 children per class, 28 children for grades 4-8; and 30 children for grades 9-12 ("target capacity").

Table 6-1 indicates that the elementary schools within CSD 19, Sub-district 3 are all under capacity and have an average utilization rate of approximately 63% with enrollments ranging from 48% to 83% of target capacity at individual school buildings. The elementary schools within CSD 19, Sub-district 3 have a total enrollment of 2,186 students relative to a target capacity of 3,451 seats resulting in 1,265 available seats.

Table 6-1 indicates that the intermediate level schools in CSD 19, Sub-district 3 are generally under capacity with an average utilization rate of 71% with rates ranging from 57% to 108% of target capacity at individual middle school buildings. The intermediate level schools in CSD 19, Sub-district 3 have a total enrollment of 1,524 students relative to a target capacity of 2,152 seats resulting in 628 available seats.

Table 6-1

CSD 19, Sub-district 3 (Primary Study Area) - Existing Enrollment, Capacity and Utilization 2015-2016 School Year

#	School Number (Bldg ID)	Address	Grades	School Enrollment	Target Capacity	Available Seats	% Utilized
ELEMENTARY SCHOOLS							
1	P.S. 224	757 Wortman Ave.	PK-5, SE	505	807	302	63
2	P.S. 273	923 Jerome St.	PK-5, SE	351	738	387	48
3	P.S./I.S. 306	970 Vermont St.	PK-8, SE	421	742	321	57
4	Fresh Creek School (P.S. 260)	875 Williams Ave.	PK-5, SE	256	375	119	68
5	P.S. 346	1400 Pennsylvania Ave.	PK-5, SE	653	789	136	83

	Subtotal			**2,186**	**3,451**	**1,265**	**63**
INTERMEDIATE SCHOOLS							
6	P.S./I.S. 306	970 Vermont St.	PK-8, SE	158	278	120	57
7	I.S. 364	1426 Freeport Loop	6-8, SE	153	249	96	61
8	I.S. 364 Annex	1461 Geneva Loop	6-8, SE	160	235	75	68
9	Spring Creek Comm School/ Academy for Young Writers (I.S./H.S.)	1065 Elton St.	6-10, SE	210	195	-15	108
10	Spring Creek Comm School/ I.S./H.S. 422	1065 Elton St.	6-10, SE	233	318	85	73
11	I.S. 452	1400 Pennsylvania Ave.	6-8, SE	308	405	97	76
12	Van Siclen Comm Mid School/I.S. 166	800 Van Siclen Ave.	6-8, SE	302	472	170	64
	Subtotal			**1,524**	**2,152**	**628**	**71**
Source: 2015-2016 Enrollment, Capacity and Utilization Report, NYC Department of Education. Target Capacity assumes maximum classroom capacity of 20 children per class for grades K-3; 28 children for grades 4-8; and 30 children for grades 9-12.							

Since the NYC Department of Education (DOE) is actively engaged in an ongoing process of repurposing underutilized school space, either for its own programs or for Charter Schools, a school building that is significantly underutilized in the existing condition may be programmed to include a new school organization in the near future. In this case, the available capacity may be radically altered within a few months of when the assessment is made. In the April 13, 2016 Under-Utilized Space Memorandum, P.S./I.S. 306 in CSD 19, Sub-district 3 was identified as underutilized by 300 seats or more while P.S. 224, P.S. 260, and P.S. 346 were identified as underutilized by between 150 and 299 seats. However, as utilization plans applicable to these schools have not yet been officially adopted, no adjustment has been made to available capacity within the sub-district study area.

There is one elementary level charter school within CSD 19, Sub-district 3 which is not included in the table above. Per *CEQR Technical Manual* guidelines, charter school enrollments are not included in DOE enrollment projections. The elementary level charter school in the sub-district includes the following:

- Achievement First Brooklyn Academy, 800 Van Siclen Avenue, PK-5, 249 students enrolled, 337 target capacity, 88 available seats.

Future No-Action Scenario

This section presents an analysis of public school enrollments (including Pre-Kindergarten enrollments) and capacities for the Project Build Year of 2020 without the Proposed

Figure 6-1: Public Elementary and Intermediate Schools Within CSD 19, Sub-district 3


Legend
Proposed Rezoning Area
Projected Development Site
(Applicant-Owned)
1 Elementary Schools
(see Table 6-1)
11 Intermediate Schools
(see Table 6-1)
CSD 19, Sub-district 3
Queens
Brooklyn
Linden Boulevard
Flatlands Avenue
Vandalia Avenue
Belt Parkway
Shore Parkway
Seaview Avenue
Gateway Drive
Twin Pines Drive
Louisiana Avenue
Williams Avenue
Pennsylvania Avenue
New Jersey Avenue
Sheffield Avenue
Georgia Avenue
Alabama Avenue
Malta Street
Vermont Street
Wyona Street
Bradford Street
Miller Avenue
Hendrix Street
Schenck Avenue
Barbey Street
Jerome Street
Warwick Street
Ashford Street
Cleveland Street
Elton Street
Linwood Street
Essex Street
Shepherd Avenue
Berriman Street
Alsus Avenue
Montauk Avenue
Milford Street
Logan Street
Fountain Avenue
Eucid Avenue
Pine Street
Crescent Street
Loring Avenue
Autumn Avenue
Lincoln Avenue
Sheridan Avenue
Elder Lane
Grant Avenue
Forbell Street
Ruby Street
Drew Street
Elkins Street
Erskine Street
Schroeders Ave
Sapphire Street
Amber Street
Emerald Street
Dumont Avenue
Blake Avenue
Powell Street
Christopher Avenue
Sackman Street
Watkins Street
Van Sinderen Avenue
Snediker Ave
Hinsdale Street
Williams Avenue
Alabama Avenue
Georgia Avenue
Sheffield Avenue
Pennsylvania Avenue
New Jersey Avenue
Vermont Street
Wyona Street
Bradford Street
Miller Avenue
Van Siclen Avenue
Hendrix Street
Schenck Avenue
Barbey Street
Jerome Street
Warwick Street
Ashford Street
Cleveland Street
Elton Street
Linwood Street
Essex Street
Shepherd Avenue
Berriman Street
Alsus Avenue
Montauk Avenue
Milford Street
Logan Street
Fountain Avenue
Stanley Avenue
Bank Street
Avenue D
East 108 Street
East 101 Street
Foster Avenue
East 99 Street
East 104 Street
East 105 Street
Glenwood Road
East 107 Street
East 106 Street
Flatlands 1 Street
Flatlands 2 Street
Avenue K
Flatlands 3 Street
Flatlands 4 Street
Avenue L
Flatlands 5 Street
Flatlands 6 Street
Avenue M
Flatlands 7 Street
Flatlands 8 Street
Avenue N
Flatlands 9 Street
Flatlands 10 Street
Schroeders Ave
Erskine Street
Vandalia Avenue
Seaview Avenue
Gateway Drive
Belt Parkway
Shore Parkway
Van Siclen Avenue
Twin Pines Drive
Louisiana Avenue
Williams Avenue
Pennsylvania Avenue
New Jersey Avenue
Sheffield Avenue
Georgia Avenue
Alabama Avenue
Malta Street
Vermont Street
Wyona Street
Bradford Street
Miller Avenue
Hendrix Street
Schenck Avenue
Barbey Street
Jerome Street
Warwick Street
Ashford Street
Cleveland Street
Elton Street
Linwood Street
Essex Street
Shepherd Avenue
Berriman Street
Alsus Avenue
Montauk Avenue
Milford Street
Logan Street
Fountain Avenue
Eucid Avenue
Pine Street
Crescent Street
Loring Avenue
Autumn Avenue
Lincoln Avenue
Sheridan Avenue
Elder Lane
Grant Avenue
Forbell Street
Ruby Street
Drew Street
Elkins Street
Erskine Street
Schroeders Ave
Sapphire Street
Amber Street
Emerald Street
Dumont Avenue
Blake Avenue
Powell Street
Christopher Avenue
Sackman Street
Watkins Street
Van Sinderen Avenue
Snediker Ave
Hinsdale Street
Williams Avenue
Alabama Avenue
Georgia Avenue
Sheffield Avenue
Pennsylvania Avenue
New Jersey Avenue
Vermont Street
Wyona Street
Bradford Street
Miller Avenue
Van Siclen

Actions. The analysis includes the primary study area of CSD 19, Sub-district 3 and is derived from NYC Department of Education (DOE) enrollment projections.

In the future and absent the actions, it is assumed that no new residential development would occur on the project site by the project build year of 2020. However, based on the NYC School Construction Authority's (SCA) "Projected New Housing Starts" (aka Housing Pipeline) projections, additional student enrollments would occur in CSD 19, Sub-district 3 under the No-Build condition by the project build year of 2020 as presented in Table 6-2 below.

As outlined in the *CEQR Technical Manual*, No-Action school capacity changes considered in a community facilities analysis include information on proposed and adopted "Significant Changes in School Utilization" and the DOE's Five Year Capital Plan.

DOE's Proposed FY 2015-2019 Five Year Capital Plan released in November 2016 proposes one new school for CSD 19. It identified a need for 1,000 seats in January 2016 and in November 2016 identified a funded need for 1,000 seats with 1,000 elementary/intermediate seats in scope/design. A new 1,000 seat elementary & intermediate school is planned to be built at 3269 Atlantic Avenue (Project #: DSF0000822081). Construction is scheduled to start in December 2017 with project completion anticipated in September 2020. However, as this school would not be located in Sub-district 3 and as construction of this school has not started, it would have no relevance to the Proposed Actions.

Table 6-2 indicates that there would be excess seating capacity within both the elementary and the intermediate schools within CSD 19, Sub-district 3 in 2020 without the proposed project.

Table 6-2
Estimated Public School Enrollment, Capacity, and Utilization Year 2020
Future Without the Proposed Actions

School Level	2020 Projected Enrollment (w/Pre-K)	Students Generated by Development Without Actions	Total Projected Enrollment	Program Capacity	Seats Available	Program Utilization (%)
Elementary/K-5 Schools						
Sub-district 3	1,952	1,269	3,221	3,451	230	93.3%
Intermediate/Secondary 6-8 Schools						
Sub-district 3	1,392	525	1,917	2,152	235	89.1%
Source: DOE Enrollment Projections (Projected 2015-2024)						

Sub-district Projections

	Percentages for Sub-district 3	*Projected Enrollment*
P.S.	16.72%	1,952
I.S.	30.67%	1,392

Future With-Action Scenario

As stated above, applying the household multipliers for Brooklyn from Table 6-1a of the *CEQR Technical Manual* to the RWCDS of 521 dwelling units, would result in the anticipated generation of approximately 214 public elementary and middle school children. Approximately 151 of these children would be elementary school students and the remaining 63 would be intermediate school enrollments. The development would not include the addition of any new schools or additional capacity in the District. Table 6-3 presents the anticipated student enrollments that would be generated by the Proposed Actions and the effect of these enrollments on the available capacity of the schools within Sub-district 3. The projected increase of 151 elementary and 63 middle school students resulting from the Proposed Actions in 2020 would have a minimal impact upon the utilization rates of the schools in Sub-district 3. With the addition of these new enrollments, both the elementary and middle schools in Sub-district 3 would remain below capacity. Based on *CEQR Technical Manual* criteria and as further explained below, it is not anticipated that the elementary school and middle school students that would be generated by the Proposed Actions would result in a significant impact on the elementary and intermediate schools in the area.

Table 6-3
Estimated Public School Enrollment, Capacity, and Utilization Year 2020
Future With the Proposed Actions

School Level	2020 No-Build Projected Enrollment (w/Pre-K)	Students Generated by Develop (With Action)	Total Projected Enroll	Program Capacity	Seats Avail	Program Utiliz (%)	No Action Prog Utiliz (%)	Diff betw No Action/ With Action
Elementary/K-5 Schools								
Sub-district 3	3,221	151	3,372	3,451	79	97.7%	93.3%	4.4%
Intermediate/Secondary 6-8 Schools								
Sub-district 3	1,917	63	1,980	2,152	172	92.0%	89.1%	2.9%

According to the *CEQR Technical Manual*, a significant impact on schools may occur if the following two conditions are met. A significant impact may occur if the project results in a collective utilization rate of the elementary and/or intermediate schools in the Sub-district study area that is equal to or greater than 100 percent in the With-Action Condition, and if the project results in an increase of five percent or more in the collective utilization rate between the No-Action and With-Action conditions. With the Proposed Actions, the elementary schools in Sub-district 3 would be below capacity at 97.7% utilization and the intermediate schools would also be below capacity at 92.0% utilization. The difference between the No-Action and With-Action utilization rate within Sub-district 3 of the elementary schools would be 4.4 percent while that of the middle schools would be 2.9 percent. Therefore, the Proposed Actions would not be expected to result in a significant adverse impact on elementary or intermediate schools. No further analysis of the Proposed Actions on public schools is therefore required.

Publicly Funded Child Care Centers

Existing Conditions

The *CEQR Technical Manual* states that the study area for publicly funded group child care and Head Start centers is approximately 1.5 miles around a project site. Since there are no locational requirements for enrollment in day care centers, some parents/guardians choose a day care center close to their employment rather than their residence. Nevertheless, the centers closest to the Project Area are more likely to be subject to increased demand. A listing of child care centers within 1.5 miles of the Project Area is provided in Table 6-4 below. Figure 6-2, Publicly Funded Day Care Facilities Within 1.5 miles, illustrates the locations of these day care facilities. Information regarding existing day care facilities within the study area has been obtained from DCP based on Agency for Children's Services (ACS) data.

A summary of this analysis indicates that the 1.5-mile radius around the Project Area is well serviced by existing day care facilities. There are 15 day care facilities within this radius area with an overall capacity of 1,104 slots. In June 2016, 960 of these slots were in use, resulting in an overall utilization rate of approximately 87% of the day care facility slots in the project study area.

Table 6-4

Agency for Children's Services – Early Learning Contractor Centers Enrollment
Within 1.5-Miles of Rezoning Area
June 2016

Site ID	Contractor Name	Program Address	Boro	Zip Code	Comm Dist	Total Capacity	Total Enroll	% of Cpcty
1	Boulevard Nursery School Inc.	2150 Linden Boulevard	BK	11207	5	40	38	95
2	Brightside Academy, Inc.	679 New Lots Avenue	BK	11207	5	71	45	63
3	Brooklyn Development Center ECS, Inc	888 Fountain Avenue	BK	11208	5	45	19	42
4	Christina Day Care	334 Milford Street	BK	11208	5	44	44	100
5	Colony-South Brooklyn Houses, Inc.	2700 Linden Boulevard	BK	11208	5	46	27	59
6	Colony-South Brooklyn Houses, Inc.	720 Euclid Avenue	BK	11208	5	42	16	38
7	Cypress Hills Child Care Corporation	108 Pine Street	BK	11208	5	70	70	100
8	Friends of Crown Heights Educational Ctrs, Inc	2505 Pitkin Avenue	BK	11208	5	100	91	91
9	Friends of Crown Heights Educational Ctrs, Inc	668 Logan Street	BK	11208	5	83	80	96

10	**Friends of Crown Heights Educational Ctrs, Inc**	**921 Hegeman Avenue**	**BK**	**11208**	**5**	**80**	**70**	**88**
11	**Friends of Crown Heights Educational Ctrs, Inc 94**	**851 Liberty Avenue**	**BK**	**11208**	**5**	**95**	**87**	**92**
12	**United Community Day Care Center**	**613 New Lots Avenue**	**BK**	**11207**	**5**	**94**	**93**	**99**
13	**Urban Strategies, Inc**	**1091 Sutter Avenue**	**BK**	**11208**	**5**	**139**	**128**	**92**
14	**Urban Strategies, Inc**	**1152 Elton Street**	**BK**	**11207**	**5**	**70**	**70**	**100**
15	**Urban Strategies, Inc**	**675 Lincoln Avenue**	**BK**	**11208**	**5**	**85**	**82**	**96**
					TOTAL	**1,104**	**960**	**87**

Future No-Action Scenario

Since enrollment projections for child care facilities are not available, CEQR analysis assumes that the existing enrollment and capacity would stay the same for the build year and be the baseline for the No-Action Scenario, unless affordable housing is identified. However, the *CEQR Technical Manual* recommends that ACS be contacted to obtain information on any changes planned for child care programs or facilities in the area of the proposed project, including closing or expansion of existing facilities and establishment of new facilities that would affect capacity in the build year. In discussions with DCP it was determined that it would not be necessary to contact ACS at this time as ACS is unlikely to make any changes to child care programs or facilities at the present or in the near future.

Therefore, in the future and absent the actions, it is assumed that no new affordable residential development would occur either in the Project Area or within the surrounding 400-foot radius project study area by the project build year of 2020. In addition, per DCP guidance, at this time no changes to the capacities of day care facilities in the project study area are anticipated by 2020.

Based on the above, the 1.5-mile radius around the Rezoning Area would remain well serviced by day care facilities in the future without the actions. As under the existing condition, 15 day care facilities would serve this radius area with an overall capacity of 1,104 slots. Approximately 960 of these slots would remain in use, resulting in an overall utilization rate of 87% of the day care facility slots in the project study area. Table 6-5 below presents the Future No-Action child care utilization.

Future With-Action Scenario

The household multipliers for Brooklyn from Table 6-1b of the *CEQR Technical Manual* have been applied to the 521 eligible dwelling units on the four Projected Development Sites. The 521 eligible dwelling units within the Project Area would generate 93 children who would qualify for public child care. These 93 additional children when added to the 960 existing/no-action enrollments would result in a total enrollment with the proposed

Figure 6-2: Publicly Funded Day Care Facilities Within 1.5 Miles



development of 1,053 children. Comparing this number to the capacity of 1,104 slots results in a utilization rate of 95.4%. This utilization rate is 8.4% greater than the existing/no-action condition utilization rate of 87.0%. Table 6-5 below presents the Future With-Action child care utilization and the percent change from the Future No-Action scenario.

Table 6-5

Future No-Action and Future With-Action Child Care Enrollments

Future No-Action			Future With-Action			
Total Capacity	Total Enroll	% of Cpcty	Total Capacity	Total Enroll	% of Cpcty	% Change
1,104	960	87.0	1,104	1,053	95.4	8.4

According to the *CEQR Technical Manual*, a significant impact on publicly financed child care services may occur if the following two conditions are met. A significant impact may occur if the project results in a collective utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent in the With-Action Scenario, and if the project results in an increase of 5% or more in the collective utilization rate of the child care/Head Start centers in the study area between the No-Action and With-Action Scenarios.

Only one of the above noted conditions would occur under the Proposed Actions and the project would therefore not be expected to result in a significant impact on publicly financed child care services. The project study area is now and would remain well serviced by day care facilities and would have a utilization rate of approximately 95.4% under the Proposed Actions. However, the utilization rate between the No-Action and With-Action would experience an 8.4% increase, which would exceed the 5% collective utilization rate noted in the *CEQR Technical Manual*.

The Proposed Actions would not be expected to result in a significant adverse impact on publicly financed child care services. No further analysis of the Proposed Actions on day care facilities is therefore required.

Conclusion

The proposed project would not physically displace or alter a community facility or cause a change that could affect the service delivery of a community facility. In addition, the development would not create a demand that would either overtax, or not be met by existing or proposed services or facilities. Development under the Proposed Actions would not adversely affect public schools, hospitals and other health care facilities, public libraries, publicly subsidized child care centers, and police and fire protection services. Therefore, the project would have no potentially significant adverse impacts related to community facilities and services and further assessment is not warranted.

7. OPEN SPACE

This chapter assesses the potential impacts of the proposed project on open space resources. Open space is defined by the 2014 *City Environmental Quality Review (CEQR) Technical Manual* as publicly accessible, publicly or privately owned land that operates or is available for leisure, play, or sport, or serves to protect or enhance the natural environment. The CEQR Technical Manual guidelines indicate that an open space analysis should be conducted if an action would result in a direct effect, such as the physical loss or alteration of public open space, or an indirect effect, such as when a substantial new population could place added demand on an area's open spaces. The proposed project would introduce a substantial new residential population to the Project Area that would create new demands for open space. Therefore, an open space assessment was conducted to determine if the Proposed Actions would significantly affect open space.

DIRECT EFFECTS

The proposed project would not remove or alter any existing publicly accessible open spaces. In addition, study area open spaces would not experience project-related significant adverse shadows, air quality, or operational noise impacts, as they are not within close distance to the Proposed Development.

INDIRECT EFFECTS

According to the CEQR Technical Manual, because the proposed project is anticipated to introduce more than 350 residents to the area, a detailed analysis was conducted to determine whether these new residents would result in significant adverse indirect impacts to open space. The detailed analysis determined that the proposed project would not result in a significant adverse impact to open space in the residential study area as a result of the decrease in the total and active open space ratios. The quantitative assessment of open space is based on ratios of usable open space acreage to the study area populations (the "open space ratios"). As compared to the city's planning goal open space ratios of 2.5 acres of total open space per 1,000 residents, including 0.50 acres of passive space and 2.0 acres of active open space per 1,000 residents, the study area is well served by total and active open space in existing conditions and would continue to be well served in the future without, and in the future with the proposed project.

The proposed project would decrease the total, active, and passive open space ratios in the study area by approximately 5 percent. However, the total open space ratio, as well as the active and passive open space ratios would not significantly decrease study area's open space ratio in the future with the proposed project (the Build condition). Therefore, the proposed project would not result in a significant adverse impact on passive open space.

METHODOLOGY

DIRECT EFFECTS ANALYSIS

There are no open space resources adjacent to the Development Site. Absent the Proposed Action, the Development Sites would remain in their current condition. The Proposed Actions would result in the development of four buildings on separate tax and zoning lots. In total, the proposed development would generate 521 dwelling units, 1,437 new residents and 71 new workers.

INDIRECT EFFECTS ANALYSIS

As described in the CEQR Technical Manual, open space can be indirectly affected by a proposed action if the project would add enough population, either residents or non-residents, to noticeably diminish the capacity of open space in an area to serve the future population. Typically, an indirect effects assessment is conducted when a project would introduce 200 or more residents or 500 or more workers to an area. While there are different triggers for an open space assessment of indirect effects in certain areas of the city that are considered either underserved or well served by open space, the proposed project is within a well served area. Therefore, an increased 350 resident and 750 worker threshold applies and the anticipated 1,437 new residents require a preliminary analysis. For projects that might result in indirect effects on open space, the CEQR Technical Manual suggests that a preliminary assessment can be useful in clarifying the degree to which an action would affect open space and the need for further analysis. If the preliminary assessment indicates the need for further analysis, then a detailed analysis of indirect open space effects is performed. For this project, a preliminary assessment indicated the need for further analysis and a detailed analysis was performed for indirect open space effects from the proposed 1,437 new residents with an approximate 5.3% population increase.

STUDY AREA

This analysis of potential open space impacts was conducted based on the methodology of the CEQR Technical Manual. According to CEQR guidelines, the first step in assessing potential open space impacts is to establish study areas appropriate for the new population(s) to be added as a result of the proposed project. Study areas are generally defined by a reasonable travel distance a person would walk to reach a neighborhood open space. Workers (or non-residents) typically use passive open spaces within an approximately 10-minute walking distance (about ¼-mile). Residents are more likely to travel farther to reach parks and recreational facilities. They are assumed to walk about 20 minutes (about a ½-mile distance) to reach both passive and active neighborhood open spaces. The proposed project would result in an increase of 521 dwelling units is expected to generate approximately 1,437 residents based on the average household size of 2.76 residents per dwelling units based on the average unit size in Brooklyn Community District #5 and Queens Community District #11.

As the proposed project would add a substantial new residential population, a quantitative open space assessment is necessary to examine the change in residential population in the study area relative to total, active, and passive publicly accessible open space in the area and to determine whether the increase in population would significantly impact the adequacy of open space resources in the study area. Since the proposed project is expected to result in new, largely residential development; therefore, a study area was established to assess the proposed project's potential open space effects on residential users based on the methodology in the CEQR Technical Manual.

The proposed project would introduce new employees associated with the retail uses, community facility space, and residential building maintenance, but it is not anticipated that it would result in a total of 750 or more workers. Therefore, an assessment of the adequacy of open space for the nonresidential (worker) population was not required.

As recommended in the CEQR Technical Manual, the open space study area comprises all census tracts that have at least 50 percent of their area located within a ½-mile of the project site, as shown in Figure 6-1. The study area extends approximately from Fountain Avenue in the west (Brooklyn), North Conduit in the North, 84th Street in the east and the Belt Parkway in the south. All publicly accessible open spaces, as well as all residents within census tracts that fall at least 50 percent within the ½-mile perimeter, were included in the study area.

INVENTORY OF OPEN SPACE RESOURCES

Publicly accessible open spaces and recreational facilities within the study area were inventoried to determine their size, character, utilization, amenities, and condition. Open spaces that are not accessible to the general public or that do not offer usable recreational areas, such as spaces where seating is unavailable, were generally excluded from the survey. The information used for this analysis was gathered through a field survey conducted on March 13th, 2016 on a clear day, as well as data from the New York City Department of Parks and Recreation (DPR), as well as from New York City DoITT GIS data. At each open space, active and passive recreational spaces were noted. Active open space acreage is used for activities such as jogging, field sports, and children's active play. Such open space features include basketball courts, baseball fields, and play equipment. Passive open space usage includes activities such as strolling, reading, sunbathing, and people-watching. Some spaces, such as lawns and public esplanades, can be considered both active and passive recreation areas since they can be used for passive activities such as sitting or strolling and active uses, such as jogging or Frisbee. Based on the methodology in the CEQR Technical Manual, the use level at each facility was determined based on observations of the amount of space or equipment determined to be in use. Open spaces with less than 25 percent of space or equipment in use were categorized as low usage; those with 25 to 75 percent utilization were classified as moderate usage; and those with over 75 percent utilization were considered heavily used. In addition to the open spaces located within the study area, open spaces falling outside the study area were considered qualitatively. These spaces provide additional open space resources and are likely to be visited by the study area's residential user populations.

ADEQUACY OF OPEN SPACE RESOURCES - COMPARISON TO GUIDELINES

The adequacy of open space in the study area is assessed quantitatively using a ratio of usable open space acreage to the study area population—the open space ratio. The open space ratio provides a measure of open space available per 1,000 residents or workers in the study area.

As noted above, the adequacy of open space in the study area can be quantitatively assessed using a ratio of usable open space acreage to the study area population—referred to as the open space ratio. To assess the adequacy of open space resources, open space ratios are compared with planning goals set by the NYC Department of City Planning (DCP). Although these open space ratios are not meant to determine whether a proposed project might have a significant adverse impact on open space resources, they are helpful guidelines in understanding the extent to which user populations are served by open space resources. The following guidelines are used in this type of analysis:

- For non-residential populations, 0.15 acres of passive open space per 1,000 non-residents is typically considered adequate.
- For residential populations, DCP attempts to achieve a ratio of 2.5 acres per 1,000 residents for large-scale proposals. Ideally, this would consist of 0.50 acres of passive space and 2.0 acres of active open space per 1,000 residents.

However, as noted above, these goals are often not feasible for many areas of the city and they do not constitute an impact threshold. Rather, it is a benchmark that represents how well an area is served by its open space. In addition, this analysis compares to the city's median community district open space ratio of 1.5 acres per 1,000 residents.

IMPACT ASSESSMENT

Impact assessment is both quantitative and qualitative. The quantitative assessment considers how a project would change the open space ratios in the study area. The CEQR Technical Manual indicates that a significant adverse impact may result if a project would reduce the open space ratio by more than 5 percent in areas that are currently below the city's median community district open space ratio of 1.5 acres per 1,000 residents, or where there would be a direct displacement/alteration of existing open space within the study area that has a significant adverse effect on existing users. In areas that are extremely lacking in open space, a reduction as small as 1 percent may be considered significant, depending on the area of the city. Furthermore, in areas that are well served by open space, a greater change in the open space ratio may be tolerated. The qualitative assessment supplements the quantitative assessment and considers nearby destination resources, the connectivity of open space, the effects of new open space provided by the project, the comparison of projected open space ratios with established city guidelines, and open spaces created by the proposed project not available to the general public. It is recognized

that DCP goals are not feasible for many areas of the city, and they are not considered impact thresholds on their own. Rather, these are benchmarks indicating how well an area is served by open space.

EXISTING CONDITIONS

Study Area Population

The study area population was estimated utilizing information from the 2015 U. S. Census ACS Data (2011-2015)[5] for the census tracts located fully or at least 50 percent within the ½ mile study area. As shown in Table 7-1, in 2015 the study area contained a total of 25,983 residents within the 4 relevant census tracts in Brooklyn and Queens.

Table 7-1: Study Area Population

Census Tract	**Total Population (2015)**
1208 (Brooklyn)	8,566
1214 (Brooklyn)	4,465
1220 (Brooklyn)	5,573
62.02 (Queens)	7,378
Study Area Total (2015)	25,983
2015-2020 Increase (0.5 %)	656
No-Action Population	**26,639**
With-Action Population	**28,076 (+5.3%)**

Table 7-2 summarizes the age distribution of the study area population and compares it to Queens, Brooklyn and New York City as a whole. As shown, adults between the ages of 16 44 years represented the largest proportion of the study area's population. The 65-and-over age group accounted for approximately 10 percent of the study area population, with children 17 and younger making up 20%.

Table 7-2: Study Area Age Characteristics

SELECTED AGE CATEGORIES	Study Area	Brooklyn	Queens	New York City
5 to 14 years	16%	12.3%	10.9%	11%
15 to 17 years	4%	3.7%	3.4%	3%
18 to 24 years	10%	9.7%	9.2%	10%
15 to 44 years	41%	45.0%	43.1%	45%
65 years and over	10%	11.9%	13.4%	13%

[5] DP05, ACS Demographic and Housing Data, American Community Survey 2011-2015

Given the range of age groups present in the study area population, the study area has need for various kinds of active and passive recreation facilities, including those with amenities that can be used by children and adults. Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children 4 years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages 5 through 9 typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for such activities as ball playing, running, and skipping rope. Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 18 and 44 continue to use court game facilities and fields for sports, along with more individualized recreation such as rollerblading, biking, and jogging that require bike paths, promenades, and vehicle-free roadways. Adults also gather with families for picnicking, ad hoc active sports such as Frisbee, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

STUDY AREA OPEN SPACES

The study area contains 6 publicly accessible open spaces, which total approximately 152.2 total acres. This includes approximately 140.35 acres of active and 11.76 acres of passive open space (see Table 7-4 and Figure 7-1). In terms of publicly accessible open space, the study area includes mainly active open space in playgrounds and ball fields. The passive open space primarily consists of open areas in Spring Creek and its addition, which contains a mix of wetlands and undeveloped area, which is accessible at certain points but of limited utility compared to other facilities. All of the properties in the study area are managed by the Department of Parks and Recreation. The largest of the study area's open space resources is Spring Creek Park (North) and Spring Creek, which combined are at least 138 acres, for the portion within the study area.

Table 7-4: Inventory of Open Space Resources

Map Key	Open Space Resource Name	Block(s)	Lot(s)	Total Size (Acres)	Agency	Features	Passive Acres	Active Acres	Condition	Utilization
1	Gemini Fields	11361, 11368	1, 65	10.76	DPR	Baseball Fields	1.076	9.684	Good	Low
2	Pink Playground	4510	1	1	DPR	Bathooms, Handball Courts, Playgrounds, Spray Showers	0.2	0.8	Good	Moderate
3	Woodruff Playground	4530	1	0.54	DPR	Basketball Courts, Playground, Handball Courts	0.054	0.486	Good	Moderate
4	Harold Schneiderman Playground	11445	1	0.88	DPR	Bathooms, Handball Courts, Playgrounds, Spray Showers	0.088	0.792	Good	Moderate
5 & 6	Spring Creek Park (North) & Spring Creek Addition*	4572, 4573, 11455	1 – 113*	138.94*	DPR	Undeveloped Open Space, Wetlands	n/a	n/a	Fair	Low
TOTAL				**152.12**			**1.418**	**11.762**		

Sources: EPDSCO Field Survey, March, 2017; DPR website, March 2017; NYC DoITT GIS data; DPR, 2017.
*138.94 acres are measured inside Census Tracts 1220 and 62.02 as part of a larger park area that spans Jamaica Bay. This area is not included in the quantitative analysis as the area is relatively inaccessible

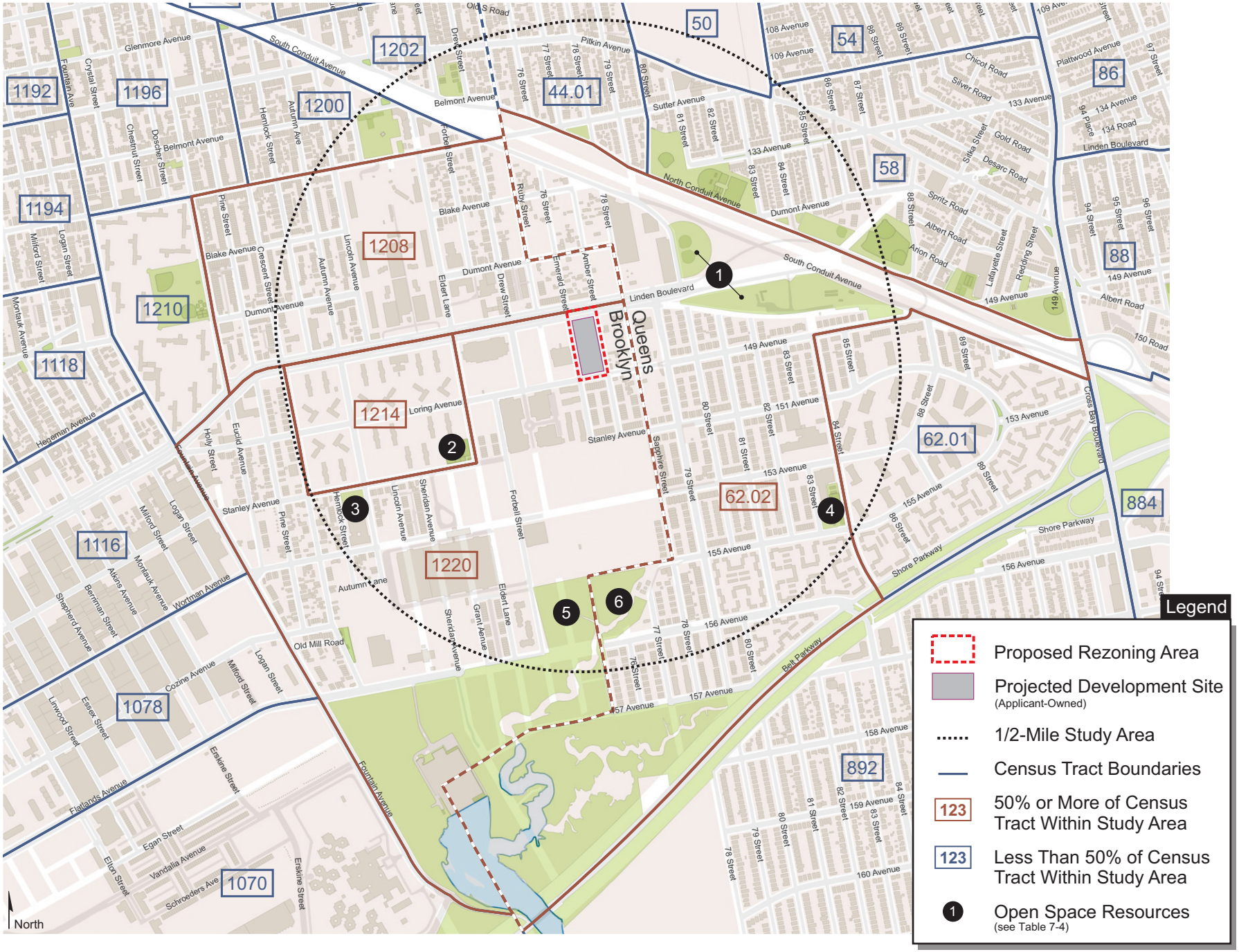
1. Gemini Fields is primarily a large baseball field located at North Conduit Avenue, 80th Street and Dumont Avenue. The facility is spread between two areas, with four fields. The facility totals 10.76 acres. The park is mostly active space (9.684 acres) with some passive space for spectating (1.076 acres). A field visit in in March of 2017 indicated low utilization with no users on the fields.

2. Pink Playground is located between Stanley Avenue and Eldert lane and contains bathrooms, handball Courts, playgrounds and spray showers. The facility consists of one acre with a bulk of the facility counting towards active space (0.8 acres) and the remaining space (0.2 acres) for passive space, such as sitting on benches. A field visit in in March of 2017 indicated moderate utilization with several users sitting on benches.

3. Woodruff Playground is located at Stanley Avenue between Autumn Avenue and Hemlock Street. The facility has basketball courts, a playground and handball Courts. The facility consists of 0.54 acres with a bulk of the facility counting towards active space (0.486 acres) and the remaining space (0.05 acres) for passive space, such as sitting on benches. A field visit in in March of 2017 indicated moderate utilization, with several users sitting on benches and playing basketball.

4. Harold Schneiderman Playground is located at 155th Avenue between 84th and 85th Streets. The facility contains bathrooms, handball courts, playgrounds and spray showers. The playground consists of 0.88 acres with a bulk of the facility counting towards active

Figure 7-1: Open Space Facilities and Census Tracts



space (0.792 acres) and the remaining space (0.08 acres) for passive space, such as sitting on benches. A field visit in in March of 2017 indicated moderate utilization, with a several individuals utilizing the handball area.

5 & 6. Spring Creek Park and Spring Creek Addition is located in Northern Jamaica Bay and contains the largest amount of undeveloped land in the northern Jamaica Bay area. The area within the study area encompasses approximately 138 acres. The Spring Creek Park portion of this resource contains wetlands and other undeveloped area. For the purpose of this analysis, these 138 acres will not be considered as publically accessible due to the relative inaccessibility of the area.

Additional Open Space Resources

Several public parks and open spaces are located a short distance from the Proposed Development but outside the census tract boundaries and, as a result, are not included in the quantitative analyses. However, these public parks and open spaces also serve as a resource to the area's residential (and worker) population. In particular, below Belt Parkway, is a large portion of Spring Creek Park, which is managed by National Park Service (NPS) and contains a number trails for active and passive recreation.

Belmont Playground is within a ½-mile of the project site but is outside the open space study area (i.e., it is located in a census tract that includes a residential population and that is not at least 50 percent within ½ mile of the Project Area). This 0.68-acre playground facility is similar to the playgrounds described above, and likely serves the study area population being located nearby the study area at Belmont Avenue between Forbell Street and Drew Street. Cypress Hills Playground is a larger park facility with 4.95 acres and primarily serves nearby NYCHA housing development. The facility contains baseball fields, bathrooms, playgrounds, basketball courts, handball courts and spray showers. The facility is located at Euclid Avenue between Dumont Avenue and Blake Avenue. Robert E. Venable Park, a 2.94-acre facility, is bound by Belmont Avenue, Sutter Avenue, Sheridan Avenue and Grant Avenue, contains fitness equipment for older residents, a skate park and playgrounds. Tudor Park is a larger facility is located immediately outside the study area across the North Conduit at 133 Ave. between 80 Street and 88 Street. The facility contains baseball fields, handball courts, basketball courts and playgrounds. It should be noted this facility is in close proximity to Gemini Fields and likely is utilized by the study area population.

These areas provide an additional approximately 22.11 acres of publicly accessible open space within ½ mile of the project site, including approximately 6.63 acres of passive open space and 15.44 acres of active open space. Furthermore, the area to the south of Belt Parkway, which is part of Spring Creek, contains over 50 acres of publically accessible open space.

ADEQUACY OF OPEN SPACE RESOURCES

The analysis of open space resources takes into consideration the ratios of active, passive, and total open space resources per 1,000 residents.

With a total of 13.18 acres of publically accessible open space (of which 11.76 are for active use and 1.48 are for passive use) and a total residential population of 25,983, the study area has a total open space ratio of 0.50 acres per 1,000 residents (see Table 7-5). This is less than DCP's planning guideline of 2.5 acres of open space per 1,000 residents and is also below the citywide average of 1.5 acres of open space per 1,000 residents.

The area's residential active open space ratio is 0.45 acres per 1,000 residents, which is below DCP's planning guideline of 2.0 acres per 1,000 residents. The study area's current residential passive open space ratio is 0.05 acres of passive open space per 1,000 residents, which is less than DCP's goal of 0.5 acres per 1,000 residents.

Table 7-5: Open Space Ratios (Existing Condition)

	Existing Conditions	**DCP Guideline**
Publicly Accessible Open Space (Acreage)	13.18	-
Study Area Population	25,983	-
Open Space Ratio (Acres/1,000 Residents)	0.50	2.5
Active Open Space Ratio (Acres/1,000 Residents)	0.45	2
Passive Open Space Ratio (Acres/1,000 Residents)	0.05	0.5

THE FUTURE WITHOUT THE PROPOSED PROJECT

The assessment of the future without the proposed project (the No Build condition) examines conditions that are expected to occur in the study area by the 2020 build year, absent the proposed project. The capacity of open space resources to serve future populations in the study area is examined using quantitative and qualitative factors.

Table 7-6: Open Space Ratios (No Action Condition)

	Existing Conditions	Future No-Action	DCP Guideline
Publicly Accessible Open Space (Acreage)	13.18	13.18	-
Study Area Population	25,983	26,639	-
Open Space Ratio (Acres/1,000 Residents)	0.50	0.49	2.5
Active Open Space Ratio (Acres/1,000	0.45	0.44	2
Passive Open Space Ratio (Acres/1,000 Residents)	0.056	0.055	0.5

Currently, the ½ mile area surrounding the Rezoning Area contains 25,983 residents (See Table 7-1), according to 2015 Census data. In order to account for background growth to the 2020 project analysis year, a conservative annual growth rate of 0.5% per year was applied to the 2015 population of the ½-mile study area. This growth factor would result in the addition of 656 additional residents. Therefore, as projected to 2020, the base population is projected to be 26,639 residents. No new residential development would occur in the Rezoning Area under the future No-Action scenario.

No new publicly accessible open space and recreational resources are planned to be added to the study area by 2020 in the future without the Proposed Action. Therefore, in 2020 with the Proposed Action, the project study area would contain to contain approximately 13.18 acres of open space resources, the same as under the Existing Condition, and an open space ratio of 0.49 acres per 1,000 residents (based on 13.18 acres of open space and a projected study area population of 26,639 persons) compared to the radio of 0.50 acres in the study area under the Existing Conditions. The active open space ratio would decrease from 0.45 acres to 0.44 acres, while the passive open space ratio would decrease from 0.056 acres to 0.055 acres. Like the Existing Condition, the radios would continue to be below the DCP guidelines of 2.5 acres of open space, as well as the guideline of 2 acres of active open space and 0.5 acres of passive open space per 1,000 residents.

THE FUTURE WITH THE PROPOSED PROJECT

The assessment of the future with the proposed project (the With-Action Scenario) examines conditions that are expected to occur in the study area by the 2020 build year, with the proposed project. The capacity of open space resources to serve future populations in the study area is examined using quantitative and qualitative factors.

Table 7-6: Open Space Ratios (With Action Condition)

	Future No-Action	Future With-Action	DCP Guideline	Percent Change
Publicly Accessible Open Space (Acreage)	13.18	13.18	-	
Study Area Population	26,639	28,076	-	
Open Space Ratio (Acres/1,000 Residents)	0.49	0.469	2.5	-4.19
Active Open Space Ratio (Acres/1,000) Residents	0.44	0.418	2	-4.7
Passive Open Space Ratio (Acres/1,000 Residents)	0.055	0.050	0.5	-8%

In the future with the Proposed Action, based on the addition of 1,437 residents, there would be 0.469 acres per 1,000 residents (based on 13.18 acres of open space and a projected With-Action study area population of 28,076 persons) compared with the ratio of 0.49 acres in the study area under the future No-Action scenario. This represents a decrease of approximately 0.03 acres/1,000 residents or 4.19 percent in the open space ratio. Therefore, the study area's open space ratio would continue to be well below the City's planning guideline goal of 2.5 acres per 1,000 residents and would continue to not meet DCP's open space planning goal of 2.5 acres per 1,000 residents.

The active open space ratio would decrease from 0.44 acres to 0.418 acres, while the passive open space ratio would decrease from 0.055 acres to 0.050 acres. Like the Future No-Action scenario, the radios would continue to be below DCP guidelines of 2.5 acres of open space, as well as the guideline of 2 acres of active open space and 0.5 acres of passive open space per 1000 residents. Table 7-7 shows the calculation of open space ratios for the Existing, Future No-Action and Future With-Action conditions.

Table 7-7: Existing, Future No-Action and Future With-Action Open Space Ratios

	Existing Conditions	Future No-Action	Future With-Action
Publicly Accessible Open Space	13.18	13.18	13.18
Study Area Population	25,983	26,639	28,076
Open Space Ratio (Acres/1,000	0.50	0.49	0.469

QUALITATIVE ASSESSMENT

In the future with the proposed project, there would continue to be numerous open spaces, including portions of Spring Creek and Spring Creek Addition, located just outside the open space study area, which contains a number of trails.

The proposed project would provide active recreational resources for its residents, which would also partially alleviate the any potential increase in demand for active or passive open space as a result of the project. This includes 3,884 space feet of indoor recreation space with gyms, as well as 15,062 square feet of outdoor passive space or 0.34 acres.

While the quantitative analysis indicates that there would be less total and active open space in the study area with the proposed project, as in the future without the proposed project, as noted above, this analysis does not include the private open space that would be developed on the project site as a result of the proposed project, or the open spaces that are located just beyond the study area boundaries, such as Belmont Playground, which is within a ½-mile of the project site but is outside the open space study area, as well as the Cypress Hills Playground as part of a larger NYCHA development, with a park facility including 4.95 acres of space. Robert E. Venable Park is also not part of the quantitative analysis, which is a 2.94-acre facility that contains fitness equipment for older residents, a skate park and playgrounds. Lastly, Tudor Park is not quantitatively included, which is just across North Conduit at 133 Avenue between 80 Street and 88 Street. The facility contains baseball fields, handball courts, basketball courts and playgrounds and is in close proximity to Gemini Fields and likely is utilized by the study area population

In addition, none of the 138 acres of Spring Creek Park and Spring Creek Addition, which are within ½ mile of the Development Site, are considered for the analysis. The portion of this park outside the ½-mile perimeter, which is managed by the National Park Service, contains numerous trails and waterfront access, which would account as passive open space. Because of the size of this open space and the type of facilities it provides, and its close proximity to the study area boundary, it is likely that this resource serves a substantial portion of the study area population and would help alleviate any potential future open space shortages in the study area in the future with the proposed project, but has not been accounted for quantitatively due to the constraints of the analysis methodology and relative inaccessibility of the northern portion of the resource. This resource, in addition to the four other resources outlined above provide a significant amount of both passive and active open space that could be utilized by the study area residents.

Moreover, the proposed project would include 3,884 square feet of indoor recreation space (to serve as gym areas), as well as 16,520 square feet (0.38 acres) of outdoor passive space for future building residents. Although these facilities would not be publicly accessible, they would offset the open space demand generated by building residents and would help to alleviate a potential shortfall of passive and active open space created by the Proposed Actions.

IMPACT SIGNIFICANCE

According to the CEQR Technical Manual, the significance of a project's effects on open space is assessed using both qualitative and quantitative factors. These effects are compared with those that would occur in the No-Action condition to determine the effects attributable to the proposed project. According to the CEQR Technical Manual, if the decrease in the open space ratio approaches or exceeds 5 percent, it is generally considered a substantial change. However, the change in the open space ratio should be balanced against how well the greater area is served by open space, as well as any potential recreational amenities or private open space generated by the Proposed Development. If the study area exhibits a low open space ratio, even a small decrease may be quantitatively substantial. Likewise, if the study area exhibits an open space ratio that approaches or exceeds the planning goal of 2.5 acres, a greater percentage of change in the ratio may be acceptable.

INDIRECT EFFECTS

Under the existing and future conditions without or with the proposed project, the total and active and passive open space ratios are below DCP's optimal planning goals. The CEQR Technical Manual indicates that a significant adverse impact may result if a project would reduce the open space ratio by more than 5 percent in areas that are currently below the city's median community district open space ratio of 1.5 acres per 1,000 residents. However as noted above, the large number of amenities in close proximity to the Project Area, as well as the private open space and recreational space created as a result of the Proposed Development would preclude a significant adverse impact by providing 3,884 space feet of indoor recreation space (active open space), as well as 16,520 square feet of landscaped open area (passive open space). This would offset any potential impact related to open space created by the Proposed Actions by alleviating any shortfall in the quantitative analysis that is considered significant. In particular, the only substantial decrease in the open space ratio would occur in the future with-action scenario for the passive open space ratio, which would decrease by eight percent. However, when accounting for the 0.34 acres of private passive open space created by the proposed development, the ratio would actually increase by approximately 14 percent.

CONCLUSION

The proposed project includes private open space benefits and recreational amenities for new residents generated as a result of the Proposed Actions and the study area will continue to be underserved with open space under the Proposed Development. There are also numerous open space resources located in close proximity to the study area boundary, including Spring Creek Park, which offers hundreds of acres of trails and waterfront access, which would be available to offset potential adverse effects on open space, in addition to the private resources created through the Proposed Development.

Therefore, the proposed project would not result in a significant adverse impact with respect to open space in the residential study area due the relatively high level of resources in the greater area, as well as the private recreational and open space within the Proposed Development, including indoor and outdoor amenity space and recreational facilities for future building residents. The provided private recreation space would offset the open space demand generated by building residents and would help to alleviate a potential shortfall of active open space. Therefore, based on CEQR Technical Manual criteria, the proposed project would not result in a significant adverse impact on open space resources and further analysis is not warranted.

8. SHADOWS

Introduction

Under CEQR, a shadow is defined as the circumstance in which a building or other built structure blocks the sun from the land. An adverse shadow impact is considered to occur when the shadow from a proposed project falls upon a publicly accessible open space, a historic landscape, or other historic resource if the features that make the resource significant depend on sunlight, or if the shadow falls on an important natural feature and adversely affects its uses or threatens the survival of important vegetation. An adverse impact would occur only if the shadow would fall on a location that would otherwise be in sunlight; the assessment therefore distinguishes between existing shadows and new shadows resulting from a proposed project. Finally, the determination of whether the impact of new shadows on an open space or a natural or historic resource would be significant is dependent on their extent and duration. In general, shadows on City streets and sidewalks or on other buildings are not considered significant under CEQR. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are not considered significant under CEQR.

According to the 2014 CEQR Technical Manual, a shadows assessment is not required unless the project would include a structure at least 50 feet tall or if it would contain shorter structures that might cast substantial new shadows on an adjacent park, historic resource, or an important natural resource. A shadow analysis is required for this project since the RWCDS would result in buildings over 50 feet in height and the Project Area is located a short distance from several open space resources.

The RWCDS assumed the Project Area would be redeveloped with four buildings, each comprising of a Development Site and each with an incremental height over 50 feet. Projected Development Site 1 (Building 1; Block 4496, future lot 29) would consist of a 12-story building within the R8A/C2-4 portion with a maximum permitted height of 145 feet and proposed as 130 feet tall. Projected Development Site 2 (Building 2; Block 4496, future lot 15) would be within the area to be rezoned R6A and would consist of an 8-story mixed-use building with a maximum permitted height of 85 feet and proposed as 82 feet tall. Projected Development Site 3 (Building 3; Block 4496, future lot 1) would be within the area to be rezoned R7A and would consist of a 9-story building with a maximum permitted height of 95 feet and proposed as 90 feet tall. Projected Development Site 4 (Building 4; Block 4496, future lot 48) would be within the area to be rezoned R6A would consist of an 8-story building with a maximum height of 82 feet.

Based on CEQR Technical Manual criteria, the longest shadow that any building would cast during the year (except within an hour and a half of sunrise or sunset which is not deemed to be of concern) is 4.3 times its height. Applying the 4.3 factor to the proposed

Figure 8-1: Tier 1 Screening Assessment



maximum building heights outlined above would result in a maximum shadow distance of 623.5 feet.

Preliminary Screening Assessment

Tier 1 Screening Assessment

A tier 1 assessment was performed assuming a maximum study area boundary of approximately 623 feet around the Project Area. The closest sunlight-sensitive open space resource is Gemini Fields, located greater than 623 feet to the east of the Project Area along Linden Boulevard (see attached **Figure 8-1: Tier 1 Screening Assessment**). Furthermore, there are no sunlight sensitive historic resources located within the maximum shadows radius of the Project Area.

Conclusion

Based on CEQR Technical Manual criteria, shadows from the RWCDS buildings would not result in significant adverse shadow impacts, as the Proposed Development will not result in any buildings tall enough or located close enough to cast incremental shadows on any sunlight sensitive resources within the surrounding area.

Therefore, the RWCDS would not result in significant adverse shadows impacts on any open space resources, historic resources, or important natural resources and further assessment is not required.

9. HISTORIC AND CULTURAL RESOURCES

Architecture

The proposed development is within 100,100 square feet of undeveloped and vegetated land. There were no paved areas, building foundations or other indications of past on-site development observed at the Site. Therefore, there is no potential for impacts related to architectural historic resources, as the Project Area is currently vacant. Furthermore, there are no historic architectural resources within 400 feet of the Project Area according to correspondence with the NYC Landmarks Preservation Commission on 4/12/17 (**See Attachment G**)

Archaeology

As noted below in the Hazardous Materials section, there are visible indications of a history of on-site storage, use or disposal of hazardous materials or petroleum products observed, such as chemical/oil stained surfaces, discarded drums or chemical containers, dead or dying vegetation, debris piles, etc.

Research into the history of the property indicates that the property was undeveloped in 1908, as noted below in the hazardous materials analysis. From at least the 1920s to the 1990s, the site contained several single-family residential dwellings with associated detached structures (i.e., sheds or garages). From circa 1965 to the 1990s there was also a contractor's storage yard and office located on the southeast portion of the site (Lot 24-340 Amber Street). Contractor's storage yards are types of operations, which may have involved the storage or use of hazardous materials and/or petroleum products. Any past spills, leaks or discharges of such materials would be a potential source of contamination to the Project Area. In addition, visible indications of on-site dumping and/or filling activities were observed at the Project Area during the site visit. These include numerous soil mounds, depressions and debris piles throughout the site. The origin of the debris/fill material is not known. Debris and fill material of an unknown origin is a potential source of contamination to the property. During the site visit, an aboveground steel storage tank was found on the southwest portion of the Project Area.

According to correspondence with the NYC Landmarks Preservation Commission on 4/12/17 (**See Attachment G**), the affected properties are not known to contain any archaeological resources. Therefore, there is no potential for significant adverse impacts related to archaeological resources in the Project Area and further assessment is not warranted.

10. URBAN DESIGN AND VISUAL RESOURCES

A preliminary urban design screening assessment for the Proposed Actions is required because the Proposed Development and RWCDS would introduce new buildings that would not be allowed under the existing zoning of the property. As noted in the CEQR Technical Manual:

A preliminary assessment is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning, including the following:

1. Projects that permit the modification of yard, height, and setback requirements;

2. Projects that result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the proposed project.

Currently, the Project Area is zoned R4/C1-2 and R4. Single family detached residences and general residences are permitted as-of-right in the R4 district. Local retail uses are permitted within the C1-2 overlay along Linden Boulevard. The maximum residential floor area ratio (FAR) in a R4 district is 0.75 for residential uses and 2.0 for community facility uses. A C1-2 overlay in R4 district allows commercial uses at a maximum FAR of 1.0. In an R4 district, maximum lot coverage is 45%, minimum front yard depth is 10 feet (or 18 feet if the depth exceeds 10 feet), 2 side yards totaling 13 feet in width are required for detached residences (1 side yard of 8 feet in width is required of semi-detached residences), minimum rear yard depth is 30 feet and maximum building height is 35 feet. One off-street parking space is required per dwelling unit.

The proposed zoning map amendment would change the zoning district on the northern portion of the block, at a depth of 100 feet from Linden Boulevard, from R4/C1-2 to R8A/C2-4; a southern portion of the block, at a 100 foot depth from Loring Avenue, from R4 to R7A; and the remaining portion at the midblock from R4 to R6A. The proposed residential districts permit residential and community facility uses. The maximum allowable residential FAR is 3.6 in R6A districts with inclusionary housing; 4.6 in R7A districts with inclusionary housing; and 7.2 in R8A/C2-4 districts with inclusionary housing. The maximum allowable community facility FAR is 3.0 in R6A districts; 4.8 in the R7A portion of the lot; and 6.5 in the R8A/C2-4 portion of the lot. Commercial uses are not permitted in residential districts. The maximum allowable commercial FAR is 2.0 in C2-4 districts within R8A districts. The proposed zoning map amendments would allow a maximum FAR of 4.52 across the entire site (blending the proposed R6A, R7A and R8A/C2-4 districts). Front yard, side yard and rear yard regulations are not applicable to zoning lots occupying entire blocks. Maximum lot coverage is 100% in R8A/C2-4 and R7A districts on corner lots and 65% in R6A districts.

In R8A/C2-4 districts, maximum base height when providing affordable housing pursuant to the Inclusionary Housing Program set forth in ZR Section 23-90 is 105 feet, maximum



1. View of Linden Boulevard facing west from Amber Street (Site at left).



2. View of the Site facing southwest from the intersection of Linden Boulevard and Amber Street.



3. View of Amber Street facing south from Linden Boulevard (Site at right).





4. View of the Site facing southeast from the intersection of Linden Boulevard and Emerald Street.



5. View of Linden Boulevard facing east from Emerald Street (Site at right).



6. View of Emerald Street facing south from Linden Boulevard (Site at left).



building height is 140 feet (without a qualifying ground floor) and 145 feet (with a qualifying ground floor), maximum number of stories is 14 and a 10 foot setback is required between minimum and maximum base heights on wide streets. In R6A districts, when providing affordable housing pursuant to the Inclusionary Housing Program set forth in ZR Section 23-90, maximum base height is 65 feet, maximum building height is 80 or 85 feet (without or with a qualifying ground floor, respectively), maximum number of stories is 8 and a 15 foot setback is required between minimum and maximum base heights on narrow streets. In R7A districts, when providing affordable housing pursuant to the Inclusionary Housing Program set forth in ZR Section 23-90, maximum base height is 75 feet, maximum building height is 90 or 95 feet (without or with a qualifying ground floor, respectively), maximum number of stories is 9 and a 10 foot setback is required between minimum and maximum base heights.

Since development assumed in the RWCDS is anticipated to result in a different built-form at the street level, an assessment of urban design and visual resources is warranted. See **Table 10-1 – Zoning Comparison Table**, for a side-by-side comparison of the varying bulk, use and height regulations between the existing and proposed zoning districts.

Urban Design

The Urban design characteristics of a neighborhood are composed of various components that define the character of the area: building bulk, use, type and arrangement, block form and street pattern, streetscape elements, street hierarchy, and natural features. These components are discussed below.

Building Bulk, Use, Type, and Arrangement

The RWCDS assumed the Project Area would be redeveloped with four buildings, each comprising of a Development Site and each with an incremental height over 50 feet. Projected Development Site 1 (Building 1; Block 4496, future lot 29) would consist of a 12-story building within the R8A/C2-4 portion with a maximum permitted height of 145 feet and proposed as 130 feet tall. Projected Development Site 2 (Building 2; Block 4496, future lot 15) would be within the area to be rezoned R6A and would consist of an 8-story mixed-use building with a maximum permitted height of 85 feet and proposed as 82 feet tall. Projected Development Site 3 (Building 3; Block 4496, future lot 1) would be within the area to be rezoned R7A and would consist of a 9-story building with a maximum permitted height of 95 feet and proposed as 90 feet tall. Projected Development Site 4 (Building 4; Block 4496, future lot 48) would be within the area to be rezoned R6A would consist of an 8-story building with a maximum permitted height of 82 feet.

In addition to the RWCDS buildings anticipated above, the maximum building envelopes of the proposed zoning districts are assessed in addition to the Proposed Development, as the building heights are not maximized in the RWCDS due to floor area constraints.

Linden Boulevard, which fronts the Proposed Development to the north, is a major thoroughfare measuring 170 feet wide. The remaining streets with frontage along the



7. View of the Site facing southeast from Emerald Street.



8. View of the Site facing northeast from Emerald Street.



9. View of the Site facing southeast from Emerald Street.





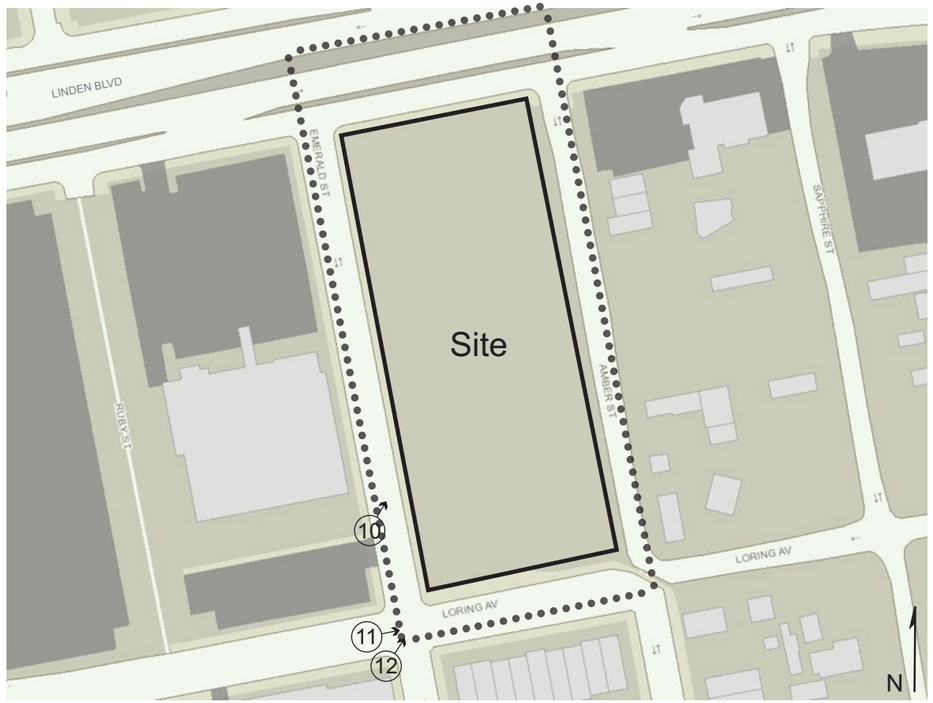
10. View of the Site facing northeast from Emerald Street.



11. View of Loring Avenue facing east from Emerald Street (Site at left).



12. View of the Site facing northeast from the intersection of Emerald Street and Loring Avenue.





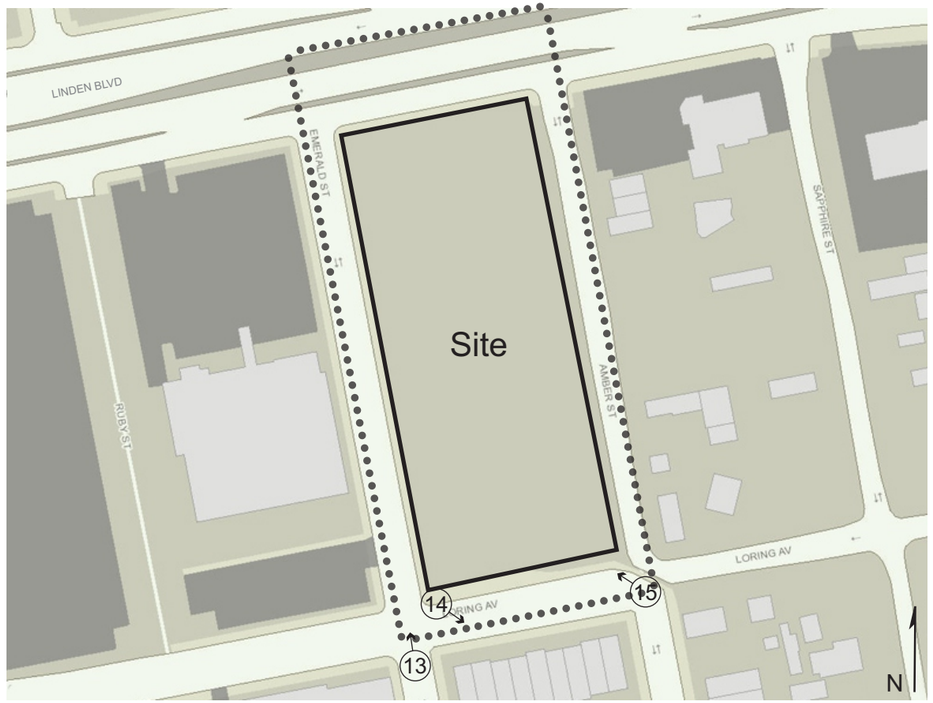
13. View of Emerald Street facing north from Loring Avenue (Site at right).



14. View of the side of Loring Avenue facing southeast from the Site.



15. View of the Site facing northwest from the intersection of Loring Avenue and Amber Street.



Proposed Development (Emerald Street, Loring Avenue and Amber Street) are classified as narrow streets having less than 75 feet in width (see **Figure 10-1** through **Figure 10-13**). Linden Boulevard contains commercial overlays. In the immediate area of the Proposed Development are a 3-story medical office to the north, on Linden Boulevard (see **Figure 10-10);** a 1-story medical office and parking lot accessory parking to the west on Emerald Street (see **Figure 10-11**); 3-story residential buildings to the south (see **Figure 10-4**), on Loring Avenue; and a parking lot accessory to the Lindenwood Diner to the east, on Amber Street (see **Figure 10-13**). It should be noted that the elevation grade changes across the Project Area, with the Development Site sloping downward moving south, particularly along Amber Street, before reading grade again towards the rear of the Site.

The Proposed Actions would facilitate four new buildings, one of which would be mixed-use along Linden Boulevard and would be consistent with the mixed-use arterial nature of Linden Boulevard. The remaining developments along Emerald Street, Loring Avenue and Amber Street would be residential and would be consistent with developments along these more narrow roads, which now contain a medical office, residences and an accessory parking lot.

South of the Proposed Development are 1- to 4-story multi-family walk-up buildings in pre-existing R4 and R6 zoning districts. To the southwest is Spring Creek Gardens, an apartment complex of 5-story buildings on two blocks in an R6 zoning district. To the west are the Louis H. Pink Houses, a NYC Housing Authority development with 1,500 dwelling units in twenty-two 8-story buildings in an R4 district.

The multiplex cinema and large medical facility with accessory parking lots to the west of the Proposed Development are located in a C4-1 district. Northwest of the Proposed Development are four 17-story multiple dwellings in an R6 district (see **Figure 10-11**). North of Linden Boulevard are low-density 1- to 3-story residences and vacant lots in an R4 district. Tudor Park, a 13.54 acre public park, is located to the northwest of the Proposed Development along North Conduit Avenue between 80th and 88th Streets.

Therefore, the Proposed Action would produce a series of buildings that would be similar in height to existing development in the surrounding area, with a more consistent street-wall, with required setbacks, compared to existing height factor towers with no such regulations.

Block Form, Street Pattern, and Street Hierarchy

The immediate area surrounding the Project Area is comprised of a typical New York street grid pattern, which leads to rectangular shaped blocks of similar size. However, to the west of the subject block are the Pink Houses (as noted above), which contains a campus-like environment for a series of towers with meandering paths throughout. Furthermore, to the east is the border of Queens and Linden Boulevard terminates into North and South Conduit Avenue, which is separated parkway that runs diagonally throughout Queens and Brooklyn and is lined with greenspace. To the southwest is Spring Creek Gardens, an apartment complex of 5-story buildings on two blocks in an R6 zoning district. As also



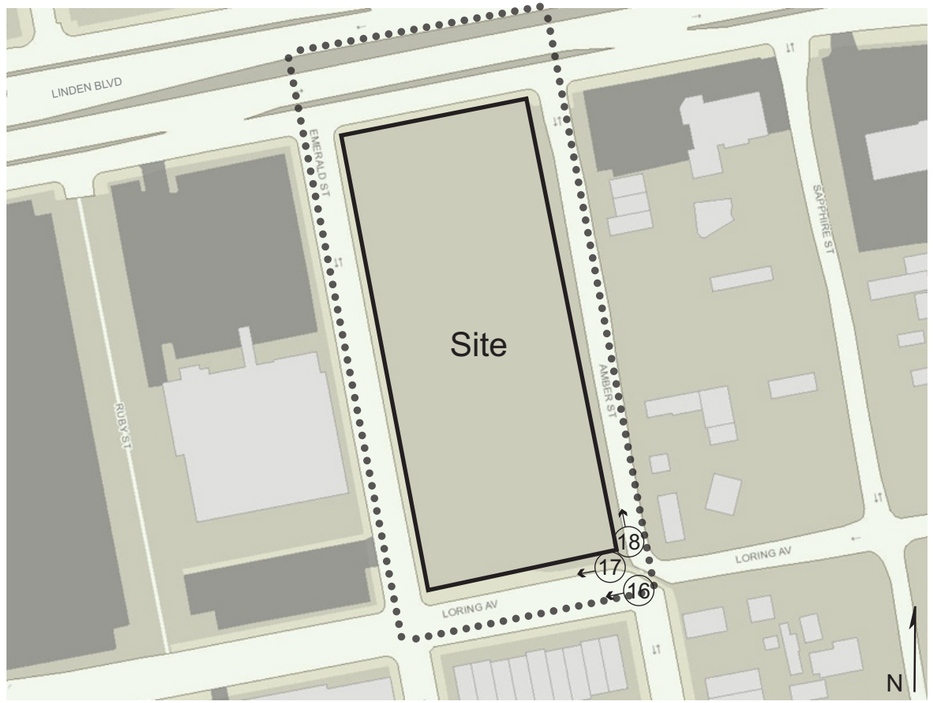
16. View of Loring Avenue facing west from Amber Street (Site at right).



17. View of the sidewalk along the north side of Loring Avenue facing west from Amber Street (Site at right).



18. View of the sidewalk along the west side of Amber Street facing north from Loring Avenue (Site at left).





19. View of Amber Street facing north from Loring Avenue (Site at left).



20. View of the Site facing west from the intersection of Loring Avenue and Amber Street.



21. View of the Site facing northwest from Amber Street.



noted above, Linden Boulevard is a major thoroughfare measuring 170 feet wide and contains service lanes in each direction. The remaining streets with frontage along the Proposed Development (Emerald Street, Loring Avenue and Amber Street) are classified as narrow streets having less than 75 feet in width. Linden Boulevard is the major arterial street for the surrounding area and the remaining numbered streets and avenues are approximately the same width as Emerald Street, Loring Avenue and Amber Street. Most streets in the surrounding area are two-way, except certain 149th Avenue (a portion of Loring Avenue) and 79th Street, to the south of the Proposed Development. To the southwest, the street-grid is interrupted again at Spring Creek Gardens, which contains a mid-block access road with a turnaround area in the interior of the complex.

Streetscape Elements

The area surrounding the Project Area includes street trees, particularly along Linden Boulevard and along Linden Boulevard's frontage of the Development Site. The area otherwise does not contain an abundance of street trees compared older more established neighborhoods of the city. However any recent development in the surrounding area has provided required new street trees and other plantings.

Linden Boulevard also contains NYCT bus shelters for the B15 line, with one located on the immediate blocks to the east and west along the south-side service roads of Linden Boulevard. The service roads and main street bed area of Linden Boulevard are separated by concrete medians. Within the immediate study area, there are no crosswalks across Linden Boulevard. The community facility/health complex to the immediate west of the Proposed Development (see Figure 10-11) contains fencing around the perimeter of the property. As noted above, the roadway declines in elevation along Amber Street (see **Figure 10-8**), which has created some standing water/drainage issues.

Natural Features

The only natural feature in close proximity to the Project Area is Tudor Park and Gemini Fields, a 13.54-acre public park, which is located to the northwest of the Proposed Development along North Conduit Avenue between 80th and 88th Streets. These natural features are not visible from the Project Area or Proposed Development due to intervening buildings and the distance to Conduit Avenue (see **Figure 10-2**).

Assessment

The density and scale of Proposed Development is consistent with existing development in the surrounding area, which contains a mix of low and medium-density buildings with some high-density towers in close proximity. South of the Proposed Development are 1- to 4-story multi-family walk-up buildings in pre-existing R4 and R6 zoning districts. To the southwest is Spring Creek Gardens, an apartment complex of 5-story buildings on two blocks in an R6 zoning district. To the west are the Louis H. Pink Houses, a NYC Housing Authority development with 1,500 dwelling units in twenty-two 8-story buildings in an R4 district. The multiplex cinema and large medical facility with accessory parking lots to the



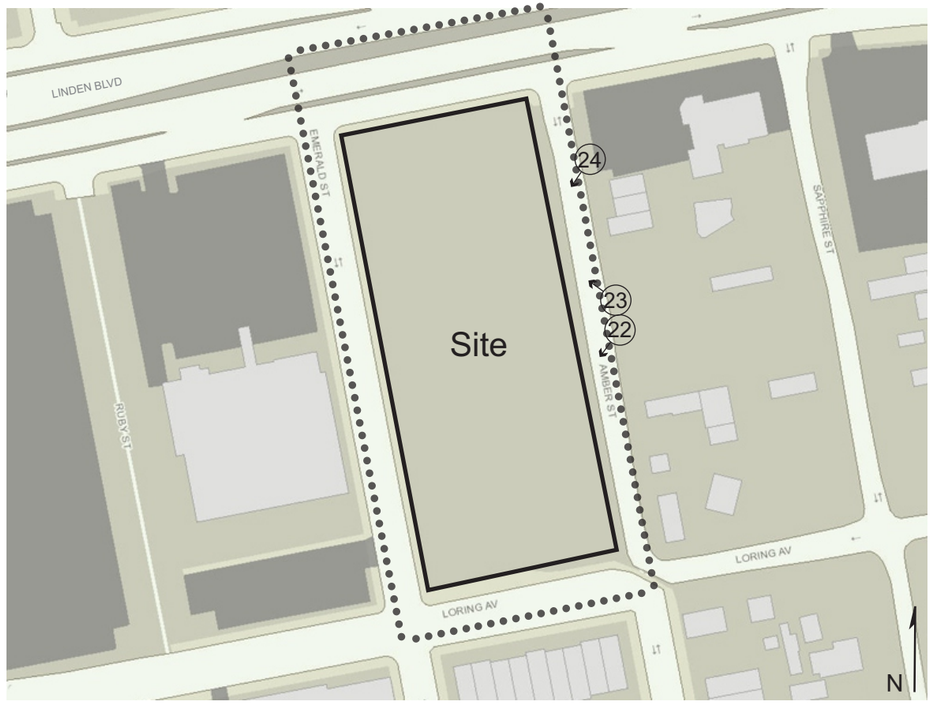
22. View of the Site facing southwest from Amber Street.



23. View of the Site facing northwest from Amber Street.



24. View of the Site facing southwest from Amber Street.



west of the Proposed Development are located in a C4-1 district. Northwest of the Proposed Development are four 17-story multiple dwellings in an R6 district (see **Figure 10-11**).

For an illustrative display of the Proposed Development as well as the maximum permitted building envelopes under the Proposed Actions, see **Figure 10-14 & Figure 10-15 Urban Design Diagrams**. A majority of the proposed or permitted bulk would be concentrated along Linden Boulevard along the R8A/C2-4 portion, which is the area's vibrant mixed-use and arterial thoroughfare and can accommodate additional density. This portion of the Project Area would permit a maximum height of 145 feet after a required setback of 10 feet on a wide street. The remaining three facades of the Project Area (Emerald Street, Loring Avenue and Amber Street) would be contain six and seven-story buildings or permit maximum heights of 85 and 95 feet after 10 or 15-foot setbacks under the proposed R6A and R7A zoning districts under MIH. While these new buildings would be taller than adjacent properties, numerous similar-sized and taller buildings are found in the surrounding area, as noted above.

Overall, the Proposed Development would not result in a building with substantially different bulk, size and scale than existing buildings in the area, as taller buildings are present to the north of the Proposed Development, with numerous towers ranging in height between 8 and 17-stories. In addition, the proposed uses are consistent with the patterns and recent developments of the surrounding neighborhood. The Proposed Development would contribute to range of mixed-use (commercial retail-residential-community facility) towers and lower-rise developments in the area. In addition, the Proposed Development would improve the area's visual quality by developed underutilized and vacant lots and would provide near continuous commercial retail at the ground level, improving the vibrancy of Linden Boulevard.

The Proposed Development would be taller than what is permitted as-of-right now but would otherwise comply with the regulations of the proposed R8A/C2-4, R7A and R6A zoning districts. Therefore, no significant adverse impacts to the urban design character of the study area are anticipated as a result of the Proposed Action.

Visual Resources

The Proposed Development would be located on a lot that is surrounded by structures and accessory parking. As such, the only natural resource in proximity to the Project Area is not visible from Linden Boulevard under the existing conditions and will continue to not be visible with the Proposed Actions and resulting RWCDS buildings. Furthermore, there are no notable features or buildings in the immediate vicinity of the Project Area. Therefore, based on the criteria in the *CEQR Technical Manual,* the RWCDS and Proposed Development would not block a view corridor or views of a natural or built visual resource. In this context, the RWCDS and Proposed Development would not significantly alter views from streets. Therefore, no significant impacts related to visual resources are expected.

Linden Boulevard facing southeast (Site ahead)



Existing Site and Context

Linden Boulevard facing southeast (Site ahead)



Proposed Project
1 Projected Development Site

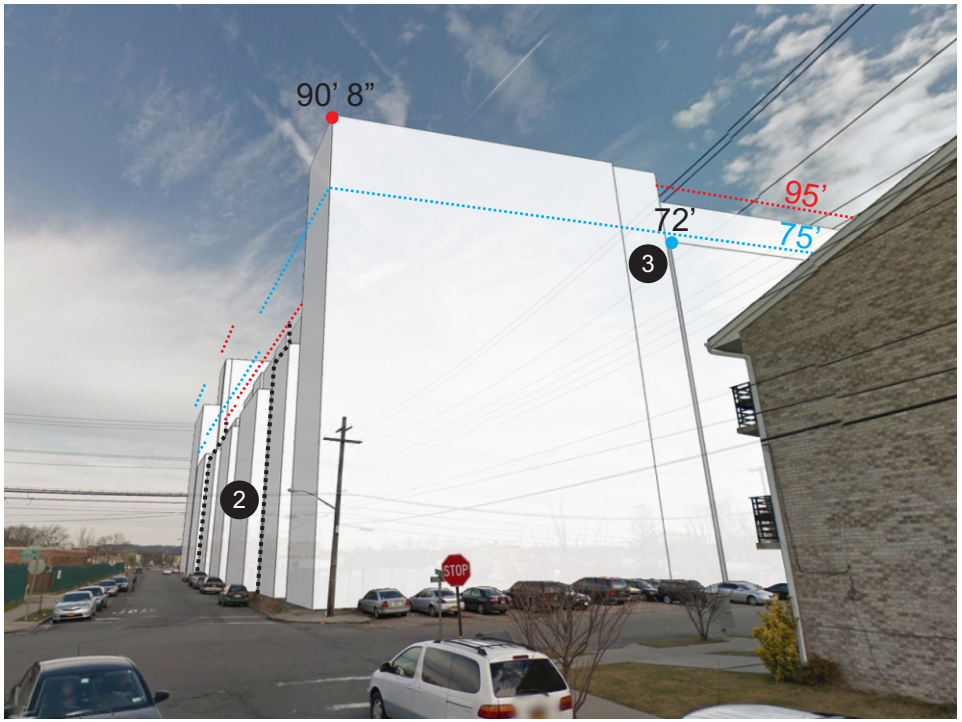
- Development Site Boundary
- Maximum Permitted Base Height
- Proposed Base Height
- Maximum Permitted Building Height
- Proposed Building Height

Emerald Street facing north (Site ahead)



Existing Site and Context

Emerald Street facing north (Site ahead)



Proposed Project
3 Projected Development Site

- Development Site Boundary
- Maximum Permitted Base Height
- Proposed Base Height
- Maximum Permitted Building Height
- Proposed Building Height



25. View of the side of Amber Street facing east from the Site.



26. View of the sidewalk along the west side of Amber Street facing south from Linden Boulevard (Site at right).



27. View of the sidewalk along the south side of Linden Boulevard facing west from Amber Street (Site at left).





28. View of the side of Linden Boulevard facing northeast from the Site.



29. View of the side of Linden Boulevard facing northwest from the Site.



30. View of the sidewalk along the south side of Linden Boulevard facing east from Emerald Street (Site at right).



Table 10-1: Zoning Comparison Table

Linden Boulevard Rezoning, Brooklyn

Zoning Comparison Table

	Permitted/Required									
	Existing Zoning (R4/C1-2)		Existing Zoning (R4)		Proposed Zoning R6A (Under MIH Zoning)		Proposed Zoning R7A (Under MIH Zoning)		Proposed Zoning R8A/C2-4 (Under MIH Zoning)	
	ZR Section #	R4/C1-2	ZR Section #	R4	ZR Section #	R6A	ZR Section #	R7A	ZR Section #	R8A/C2-4
USE GROUPS	22-10	1, 2, 3, 4, 5, 6	22-10	1, 2, 3, 4	22-10	1, 2, 3, 4	22-10	1, 2, 3, 4	22-10, 32-10	1-9, 14
Maximum FAR	33-121	2	24-11	2	23-155	3.9	23-155	5.01	23-154*	7.2
Residential	23-142	0.75	23-142	0.75	23-154*	3.6	23-154*	4.6	23-154*	7.2
Affordable Independent Residences for Seniors	23-144	1.29	23-144	1.29	23-155	3.9	23-155	5.01	23-155	7.2
Community Facility	33-121	2	24-11	2	24-10/23-153	3	24-10/23-153	4	33-121	6.5
Commercial	33-121	1	n/a	n/a	n/a	n/a	n/a	n/a	33-121	2
Commercial and Community Facility	33-121	2	n/a	n/a	n/a	n/a	n/a	n/a	33-121	6.5
Manufacturing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
YARDS										
Minimum Front Yard	23-45	10'	23-45	10'	n/a	n/a	n/a	n/a	n/a	n/a
Minimum Side Yard	23-461/462	8' (2), 20' (Corner), 5' (2)**	23-461/462	8' (2), 20' (Corner), 5' (2)**	23-462	None or 8 feet	23-462	None or 8 feet	34-232, 23-462	None or 8 feet
Minimum Rear Yard	33-26/23-47	30', 20' (Commercial)	23-47	30'	23-47	30'	23-47	30'	33-26/23-47	30', 20' (Commercial)
HEIGHT AND SETBACKS										
Minimum Base Height	n/a	n/a	n/a	n/a	23-662	40'	23-662	40'	34-22/35-65/35-652/23-662	60'
Maximum Base Height	23-631	25'	23-631	25'	23-664*	65'	23-664*	75'	34-22/35-65/35-652/23-664*	105'
Maximum Building Height	23-631	35'	23-631	35'	23-664*	85'/8-Stories	23-664*	95'/9-Stories	34-22/35-65/35-652/23-664*	145'/14-Stories
Maximum Height of Front Wall	23-631	25'	23-631	25'	23-664*	65'	23-664*	75'	34-22/35-65/35-652/23-664*	105'
Sky Exposure Plane	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Setbacks from Narrow Streets	n/a	n/a	n/a	n/a	23-662	15'	23-662	15'	34-22/35-65/35-652/23-662	15'
Setbacks from Wide Streets	n/a	n/a	n/a	n/a	23-662	10'	23-662	10'	34-22/35-65/35-652/23-662	10'
OPEN SPACE										
Minimum Open Space Ratio/Maximum Lot Coverage	23-142	55%/45%	23-142	55%/45%	n/a	n/a	n/a	n/a	n/a	n/a
LOT COVERAGE										
Interior/Through Lot	n/a	n/a	n/a	n/a	23-153	65%	23-153	65%	23-153/35-22	70%
Corner Lot	n/a	n/a	n/a	n/a	23-153	100%	23-153	100%	23-153	100%
DENSITY										
Maximum Number of Dwelling Units	23-22	900 sf/DU***	23-22	900 sf/DU***	23-22	680 sf/DU	23-22	680 sf/DU	23-22/35/22	680 sf/DU
PARKING										
Residential	25-23/36-33	100%	25-23	100%	25-23	50%	25-23	50%	25-23/36-33	40%
Commercial	36-21	By Use	n/a	n/a	n/a	n/a	n/a	n/a	36-21	By Use
Income-Restricted Housing Units	n/a	n/a	n/a	n/a	12-10/25-251	None (Transit Zone)	12-10/25-251	None (Transit Zone)	12-10/25-251/36-33	None (Transit Zone)
Affordable Independent Residences for Seniors	n/a	n/a	n/a	n/a	12-10/25-252	None (Transit Zone)	12-10/25-252	None (Transit Zone)	12-10/25-252/36-33	None (Transit Zone)
Government Assisted Dwelling Units	n/a	n/a	n/a	n/a	12-10/25-253	35%	12-10/25-253	25%	12-10/25-253/36-33	25%
LOADING										
Commercial	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	36-62	By Use
Bicycle Parking (Residential)	25-80	1 per 2 dwelling units (UG-2)	25-80	1 per 2 dwelling units (UG-2)	25-80	1 per 2 dwelling units (UG-2)	25-80	1 per 2 dwelling units (UG-2)	25-811/36-70	1 per 2 dwelling units (UG-2)
Bicycle Parking (Affordable Independent Residences for Seniors)	25-80	1 per 10,000 sf	25-80	1 per 10,000 sf	25-80	1 per 10,000 sf	25-80	1 per 10,000 sf	25-811/36-70	1 per 10,000 sf
Bicycle Parking (Commercial)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	36-711	By Use

*When providing affordable housing pursuant to the Inclusionary Housing Program set forth in ZR Section 23-90

**For detached and zero lot line buildings

***For residences in predominantly built-up areas

Conclusion

The Proposed Actions would create additional density and allow a greater maximum height for an area along a heavily trafficked thoroughfare. The location and size of the affected area is appropriate, given the range of medium and high density towers in the surrounding area, and would not impact the mixed-use character of the surrounding area. Furthermore, the Proposed Actions would not affect any natural resources or public view corridors to notable features or buildings in the immediate vicinity of the Project Area. Accordingly, no impacts to the urban design and/or visual resources of the area are expected.



31. View of the sidewalk along the east side of Emerald Street facing south from Linden Boulevard (Site at left).



32. View of the side of Emerald Street facing northwest from the Site.



33. View of the side of Emerald Street facing southwest from the Site.





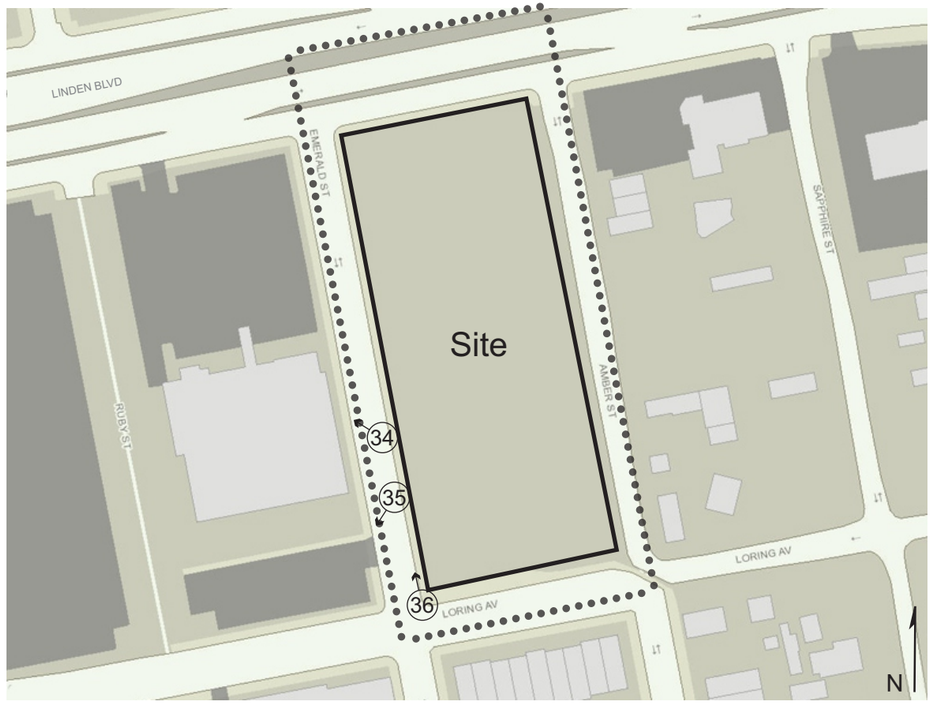
34. View of the side of Emerald Street facing northwest from the Site.



35. View of the side of Emerald Street facing southwest from the Site.



36. View of the sidewalk along the east side of Emerald Street facing north from Loring Avenue (Site at right).





37. View of the sidewalk along the north side of Loring Avenue facing east from Emerald Street (Site at left).



38. View of the side of Amber Street facing southeast from the Site.



39. View of the side of Amber Street facing northeast from the Site.



11. HAZARDOUS MATERIALS

EPDSCO, Inc. has performed a Phase I Environmental Site Assessment (ESA) in May of 2015 for the Development Site located at 2846-2868 Linden Boulevard, in the Borough of Brooklyn, New York City, New York. This ESA was prepared in accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E 1527-13).

The Development Sites and Project Area (which are the same area) encompass the entire city block bounded by Linden Boulevard to the north, Loring Avenue to the south, Amber Street to the east and Emerald Street to the west. The Project Area is the entirety of a rectangular shaped tax block (Block 4496) approximately 100,100 square feet, or 2.3 acres, in area. At the time of the site visit, the Project Area was undeveloped with chain link fencing around the perimeter. There were access gates in the fence along Amber Street and Emerald Street, all of which were locked. The surface was covered with grass, weeds and other vegetation and several mature trees were located around the perimeter and in the center of the site. No buildings or other structures were present at the site. In addition, no concrete slabs, paved areas, building foundations or other visible indications of former structures were observed.

In the future with the Proposed Action, four separate buildings would be constructed on four new combined tax and zoning lots in the Project Area (Block 4496, future lots 1, 15, 29 & 48). In total, the proposed development would consist of 589,809 gross square feet (gsf) including 509,907 gsf of residential space (521 dwelling units), 17,214 gsf of commercial retail space (Use Group 6) and 21,539 gsf of community facility space (ambulatory medical, recreation center space and day care, Use Group 4). Accessory space would be provided below grade for residential accessory space and parking. Since the project would involve in-ground disturbance, which could affect a majority of the Project Area, an assessment of potential hazardous materials impacts is discussed below, along with a history of the Project Area.

Research into the history of the property indicates that the property was undeveloped in 1908, as shown on the Sanborn map for that year. From at least the 1920s to the 1990s, the site contained several single-family residential dwellings with associated detached structures (i.e., sheds or garages). From circa 1965 to the 1990s there was also a contractor's storage yard and office located on the southeast portion of the site (Lot 24-340 Amber Street). Residential uses are not types of operations, which typically involve the storage or use of significant quantities of hazardous materials. Contractor's storage yards are types of operations, which may have involved the storage or use of hazardous materials and/or petroleum products. Any past spills, leaks or discharges of such materials would be a potential source of contamination to the project site. In addition, visible indications of on-site dumping and/or filling activities were observed at the property during the site visit.

These include numerous soil mounds, depressions and debris piles throughout the site. The origin of the debris/fill material is not known. Debris and fill material of an unknown origin is a potential source of contamination to the property.

No suspected asbestos-containing materials, suspected lead-based paints or equipment suspected of containing PCBs were observed at the property during the site visit. During the site visit, an aboveground steel storage tank was found on the southwest portion of the site. The tank had an approximate capacity of 1,000 gallons and appeared to have been discarded. The tank access ports were not visible and it was not possible to determine if the tank contained any product at the time, however, no indications of spills or leaks from the tank were observed in the area, such as staining, petroleum/chemical odors, dead or dying vegetation, etc. It is recommended that any product in this tank be removed and properly disposed, and that the tank be removed from the site. No additional aboveground tanks, or indications of the presence of underground tanks (tank fillports, vent lines, etc.) were found on the property or in the sidewalks adjacent to the site.

According to New York City Department of Buildings (NYCDOB) records, an Oil Burner Application was filed for Lot 42 (563-565 Emerald Street) in 1961 (Application #FO 2215-61). This indicates that the residential dwelling formerly located on this lot was at one time heated by oil, and subsequently contained an oil storage tank. It is not known if this tank was located underground or aboveground, or if it was removed from the site at the time the dwelling was demolished. In addition, it is not known how the other former dwellings at the site were heated (e.g., gas, oil, coal, etc.). Any tanks, which were not removed from the site when the buildings were demolished (i.e., underground tanks or aboveground tanks in basements), may remain at the site. In addition, any past spills or leaks from former petroleum storage tanks would be a potential source of contamination to the property.

The Project Area does not appear in the Federal or State environmental databases reviewed including the United States Environmental Protection Agency (USEPA's) Superfund, CERCLIS or ERNS databases, the RCRA Hazardous Waste Generators list or hazardous waste Treatment/Storage/Disposal Facilities list, or the New York State Department of Environmental Conservation (NYSDEC's) Spill Logs or Petroleum Bulk Storage (PBS) database, Solid Waste Facilities database, or the Registry of Inactive Hazardous Waste Disposal Sites.

There were not any potential off-site sources of contamination, which are considered likely to have impacted the environmental condition of the property, identified in the regulatory agency database information reviewed.

Conclusions

This assessment has revealed the following recognized environmental conditions (RECs) in connection with the Project Area:

- The presence of fill material/debris at the Development Sites from an unknown origin.
- The potential for site impacts from a former contactor's storage yard located on the Development Sites.
- The possible presence of one or more underground storage tanks (USTs), which have not been properly closed or removed in accordance with NYSDEC and FDNY regulations.

To avoid any potential impacts associated with hazardous materials, the Proposed Actions would map an (E) designation (**E-432**) for hazardous materials on the Projected Development Sites as follows:

Block 4496, Lots 1, 15, 29 & 48

The text of the (E) designation is as follows:

Due to the possible presence of hazardous materials on the aforementioned designated site, there is potential for contamination of the soil and groundwater. To determine if contamination exists and perform the appropriate remediation, the following tasks must be undertaken by the fee owners of the lot restricted by this (E) designation prior to any demolition or disturbance of soil on the lot.

Task 1

The fee owners of the lot restricted by this (E) designation will be required to prepare a scope of work for any soil, gas, or groundwater sampling and testing needed to determine if contamination exists, the extent of the contamination, and to what extent remediation may be required. The scope of work will include all relevant supporting documentation, including site plans and sampling locations. This scope of work will be submitted to the OER for review and approval prior to implementation. It will be reviewed to ensure that an adequate number of samples will be collected and that appropriate parameters are selected for laboratory analysis.

No sampling program may begin until written approval of a work plan and sampling protocol is received from the OER. The number and location of sample sites should be selected to adequately characterize the type and extent of the contamination, and the condition of the remainder of the site. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for choosing sampling sites and performing sampling will be provided by OER upon request.

Task 2

A written report with findings and a summary of the data must be presented to OER after completion of the testing phase and laboratory analysis for review and approval. After

receiving such test results, a determination will be provided 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 necessary according to test results, a proposed remediation plan must be submitted to OER for review and approval. The fee owners of the lot restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owners of the lot restricted by this (E) designation should provide proof that the work has been satisfactorily completed.

An OER-approved construction-related health and safety plan would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This Plan would be submitted to OER for review and approval prior to implementation.

With the implementation of the above (E) designation, no significant adverse impacts related to hazardous materials would result from the Proposed Actions.

13. WATER AND SEWER INFRASTRUCTURE

Introduction

A waste water and storm water infrastructure analysis is required for the proposed project because the Project Area is located in a combined sewer area and the development would exceed the *CEQR Technical Manual* threshold of 400 residential units in Brooklyn. The Proposed Actions would result in the development of approximately 521 dwelling units on the four Projected Development Sites within the Project Area.

Infrastructure Analysis

Water Supply

The proposed project does not require an analysis of impacts to water supply as it would not result in an exceptionally large demand for water (i.e., more than one million gallons per day) and the Project Area is not located in an area that experiences low water pressure (such as areas at the end of the water supply distribution system). As noted below, the proposed project would generate 150,085 gallons per day (gpd) based on Table 13-2 of the Water and Sewer Infrastructure chapter of the *CEQR Technical Manual.*

Sanitary Sewage and Storm Water

The proposed project would result in the development in the Project Area of a net increase of 521 residential dwelling units, 17,214 gsf of commercial retail space (Use Group 6), and 21,539 gsf of community facility space. The Project Area is currently vacant and undeveloped. Based on the sewage generation rate factors shown in Table 13-2 of the Water and Sewer Infrastructure chapter of the *CEQR Technical Manual,* the project would generate 150,085 gallons per day (gpd) of sanitary sewage as shown in Table 13-1 below.

Table 13-1

Project Sanitary Sewage Generation

Use	Rate Factor	Sewage Generation Amount
Residential	100 gpd/person x 1,437 persons*	143,800 gpd
Retail Stores	0.24 gpd/sf (17,214 sf)	4,131 gpd
Community Facility (office)	0.10 gpd/sf (21,539 sf)	2,154 gpd
TOTAL		**150,085 gpd**

* Based on average household size of 2.76 persons

Based on DEP's March 31, 2017 memorandum (See **Attachment H**), the proposed rezoning will result in an increase of 266% for the sanitary flow in the adjacent sewers. As part of the development approval process, an amendment to the City Drainage Plan will be required. A hydraulic analysis of the existing sewer system will be required to determine whether the existing sewer system is capable of supporting higher density development and the related increase in wastewater flow.

In consideration of storm water runoff projected to be generated in the Project Area, Tables 13-2 and 13-3 below present a summary of the existing and proposed surface area conditions on the four Projected Development Sites.

Table 13-2

Existing Surface Area Conditions

Projected Development Site	Lot Area (SF)	Roof Area (SF)	Open Area (SF)	Open Area Material
1	33,900	0	33,900	Vegetated
2	26,400	0	26,400	Vegetated
3	13,300	0	13,300	Vegetated
4	26,400	0	26,400	Vegetated
TOTAL	**100,000**	**0**	**100,000**	**Vegetated**

Table 13-3

Proposed Surface Area Conditions

Projected Development Site	Lot Area (SF)	Roof Area (SF)	Roof Area Material (SF)	Open Area (SF)	Open Area Material (SF)
1	33,900	24,835	11,415-green roof; 13,420- hard roof	9,065	5,950 Concrete 3,115 SF Grass
2	26,400	15,605	5,800-green roof; 9,805- hard roof	10,795	4,245 Concrete 6,550 SF Grass
3	13,300	10,920	2,690-green roof; 8,230- hard roof	2,380	1,215 SF Concrete 1,165 SF Grass
4	26,400	15,605	5,800-green roof; 9,805- hard roof	10,795	4,245 Concrete 6,550 SF Grass
TOTAL	**100,000**	**66,965**	**25,705-green roof; 41,260- hard roof**	**33,035**	**15,655 concrete 17,380 grass**

The Project Area is located in a combined sanitary and storm sewer area. The attached matrix table presents the sanitary and storm water drainage generation characteristics of the existing and proposed developments on the combined four Projected Development Sites.

There is a 36" combined storm and sanitary sewer in Linden Boulevard, a 36" combined sewer in Loring Avenue, a 36" combined sewer in Amber Street, and a 16" combined sewer in Emerald Street. It is contemplated that all four proposed buildings would tie into the 36" combined storm and sanitary sewer in Linden Boulevard. The combined sanitary and storm sewer flows would flow to the 26th Ward Wastewater Treatment Plant (WWTP) which has a capacity of 85 million gallons per day.

Storm water flows generated by the proposed project would be significantly different from current flows. The Project Area is currently undeveloped and completed covered with vegetation and under the Proposed Actions would largely be developed with impervious surfaces for buildings, pavement, etc. However, it should be noted that the matrix table overestimates the storm water flows from the proposed development as 25,705 square feet or 38.4% of the total 66,965 square feet of roof area in the development would be green roof area. Green roofs absorb storm water and hold it where it evaporates through evapotranspiration versus creating runoff. The green roof vegetation will decrease the storm runoff considerably. It is likely that the development would capture storm water and recycle it for the irrigation system to keep the green roof vegetation healthy.

Under existing conditions, the portion of Amber Street in between Linden Boulevard and Loring Avenue fronting the Linden Boulevard project is unimproved. The street is not equipped with curb or sidewalk. The profile at the northern portion of Amber Street at the intersection is approximately 7% down gradient away from Linden Boulevard for a distance of approximately 50 feet. The remaining profile of the street ranges from 0.1% to 1.5% with a low point located mid-block. Ponding occurs at the low point when it rains, due to the lack of drainage infrastructure. There are four driveways and four residential entrances along this portion of Amber Street. An 8-inch water main and overhead wires traverse along the street.

The legal grade is approximately six feet higher than the existing grade with a wall separating the elevations at the intersection of Amber Street and Loring Avenue. Raising the Amber Street profile to meet the legal grade will affect the accessibility to the existing buildings and driveways across from the development.

As part of the Linden Boulevard project, Amber Street is subject to improvements to eliminate the ponding issue by means of revising the street profile and proposing drainage infrastructures and the NYC Department of Transportation (DOT) has been notified (see Attachment H).

The Amber Street profile will be raised to its maximum extent to achieve the legal grade while maintaining access to the existing buildings and driveways. As an effect to the improvement, ramps will be proposed to allow access from the street to the existing building and the existing driveway will have to be regraded.

Per DEP's March 31, 2017 memorandum (see Attachment H) some additional measures are required. The storm flow is required to be restricted as per the new stormwater requirements:

- The storm water Release Rate must be no more than the greater of 0.25 cfs or 10% of the Allowable Flow or, if the Allowable Flow is less than 0.25 cfs, no more than the Allowable Flow. Allowable Flow is defined as the storm water flow from a development that can be released into an existing storm or combined sewer based on existing sewer design criteria.

- A method to restrict the site generated storm flow must be provided and must adhere to the storm water Release Rate requirements stated above.

Therefore, the Proposed Development will be required to provide stormwater detention facilities and Best Management Practices (BMPs) as a part of the DEP site connection approval process, which would allow the development to discharge at a rate that would not exacerbate the surcharged condition of the downstream storm sewers, in accordance with DEP regulations. The incorporation of the appropriate sanitary flow and stormwater source control BMPs that would be required as part of the site connection approval process would restrict the stormwater flow rate from the site to meet the allowable flow. The allowable flow is defined as the stormwater flow from a development that can be released into an existing storm or combined sewer based on existing sewer design criteria.

With the review and approval of the site connection proposal by DEP, the BMPs would reduce the peak stormwater runoff rate from the development site. Sewer conveyance near the development site and the treatment capacity at the Jamaica WWTP should be able to handle wastewater flow resulting from the proposed project; therefore, there would be no significant adverse impacts on wastewater treatment or stormwater conveyance infrastructure.

Conclusion

The Proposed Actions would not result in significant impacts on water supply since the projected developments are not anticipated to yield an exceptionally large demand in water. Additionally, the Project Area is not within an area that experiences low water pressure. Based on the sewage generation factors provided in the *CEQR Technical Manual*, future development in the rezoning area could result in 150,085 gpd of sanitary sewage.

While the Proposed Actions would result in an increase in sanitary and storm water flows to adjacent sewers, further measures are enforced by DEP during the Sewer Certification application process to evaluate the adequacy of the existing abutting sewer to receive site storm and sanitary discharge from new development. The Proposed Development will be required to provide stormwater detention facilities and Best Management Practices (BMPs) as a part of the DEP site connection approval process.

Additionally, due to a change in zoning, an amendment to the existing City Drainage Plan is required to ensure that the capacity of the sewer system is capable of supporting higher density development and related increase in wastewater and storm water flows. Given

these measures, it is not anticipated that the increase in sanitary sewage and storm water flows generated by the proposed rezoning would result in significant adverse impacts. No significant adverse impacts to the water and sewer infrastructure are therefore anticipated.

16. TRANSPORTATION

Introduction

In order to determine the potential for the proposed mixed-use development to result in significant adverse transportation impacts, trip generation screening analyses were performed pursuant to the methodologies identified in the *2014 CEQR Technical Manual.* Based on the proposed mixed-use development trip generation screening (Level Two) analyses results, it was determined that the proposed action would not result in significant adverse impacts as is summarized below.

Because of existing site constraints, no As-of-Right (AOR) credits was assumed and the proposed site was assumed vacant for the no-action scenario. Therefore, the following Trip generation analysis has been prepared exclusively for the proposed action.

The Proposed Actions will facilitate four new buildings on four-combined new tax and zoning lots. In total, the proposed development would consist of 589,809 gross square feet (gsf) including 509,907 gsf of residential space (521 dwelling units), 17,214 gsf of commercial local retail space (Use Group 6), 6,583 gsf of medical space, 7,716 gsf of day care space and 7,240 gsf of recreation center, for a total of 21,539 gsf of community facility space. Approximately 41,149 gsf of space would be provided for accessory parking to accommodate 100 spaces. These spaces would be made accessory via four new two-way curb cuts on Emerald and Amber Streets (all traffic tables are available in Attachment C).

Based on standard and approved trip generation rates and modal split and temporal distribution as is detailed below and summarized in **Table 1** the proposed action would generate 101 (24 inbound and 77 outbound), 88 (45 inbound and 43 outbound), 129 (83 inbound and 46 outbound) and 117 (57 inbound and 60 outbound) vehicle trip ends, during the AM, Midday, PM and Saturday Midday peak hours (lower than the proposed project between 4 to 15 percent depending on the peak hour), respectively as summarized **Table 3**.

Based on trip generation (Level One) and trip assignments (Level Two), no intersection in the study area would experience the *CEQR* 50-vehicle trip ends threshold during any peak hour time period, as illustrated in Figures 1, 2, 3 and 4 (the revised development would be lower than vehicle trips shown in Figures 1, 2, 3 and 4- no new figures is included). The revised development scenario is . Therefore, and in accordance with the *CEQR Technical Manual* criteria, the project generated vehicular trips would not result in any conditions that would typically trigger the need for a detailed assessment of traffic and parking impacts.

Existing/No-Action Conditions

Absent the proposed action, it is assumed the Project Area would remain vacant. While the Applicant can construct residential, community facility and commercial retail uses as-of-right pursuant to the underlying R4 and R4/C1-2 zoning districts, existing site constraints,

including drainage issues, hinder development on the Project Area. Therefore, it is assumed that the Project Area would remain in the existing condition, which consists of 100,000 square feet of vacant land.

Proposed Conditions

The Proposed Actions will facilitate four new buildings on four-combined new tax and zoning lots. In total, the proposed development would consist of 589,809 gross square feet (gsf) including 509,907 gsf of residential space (521 dwelling units), 17,214 gsf of commercial local retail space (Use Group 6), 6,583 gsf of medical space, 7,716 gsf of day care space and 7,240 gsf of recreation center, for a total of 21,539 gsf of community facility space. Approximately 41,149 gsf of space would be provided for accessory parking to accommodate 100 spaces. These spaces would be made accessory via four new two-way curb cuts on Emerald and Amber Streets.

Build Year

Based on an estimated 12-month approval process and approximate 27-month construction period, the build year is assumed to be 2020. The proposed four sites would be developed concurrently.

Trip generation Rates

Residential Development

2014 CEQR Technical Manual (table 16-2) were utilized for trip generation rates, including truck trips, daily temporal distribution and *2010-2014 American Community Survey (ACS) Journey-to Work (JTW) data for Census Tract #'s 1208, 1210, 1214 and 1220* in Brooklyn, NY for modal split information and vehicle occupancy rates, as is summarized in **Exhibit A, B** and **Table 1.**

The estimated modal split data for residential development found that approximately 22.6% would travel by car, zero (0%) percent would travel by taxi, 9.8% would travel by bus, 63.1% would travel by subway, 2.2 % would travel by foot, and 2.3 % would travel by other mode of travel, such as bicycle, as shown in **Exhibits A and B**.

Local Commercial Retail Space

2014 CEQR Technical Manual (table 16-2) were utilized for trip generation rates, including truck trips, daily temporal distribution and modal split information and vehicle occupancy rates were estimated, utilizing recently approved the *East New York FEIS, Feb.2016 (Table 13-8)* rates as is summarized in **Table 1.**

The estimated modal split results for local commercial retail use found that approximately 5% would travel by car, 1% would travel by taxi, 3% would travel by bus, 6% would travel

by subway and 85% would travel by foot. The above information is summarized in **Table 1**.

Medical Office

Trip generation rates, daily temporal distribution, modal split information, vehicle occupancy rates and truck trip rates were estimated, utilizing (DOT trip generation rates) recently approved *the East New York FEIS, Feb.2016 (TABLE 13-8)* rates as is summarized in **Table 1.**

The estimated modal split results for medical office use found that approximately 30% would travel by car, 2% would travel by taxi, 18% would travel by bus, 33% would travel by subway and 17% would travel by foot. The above information is summarized in **Table 1**.

Day Care

Trip generation rates, daily temporal distribution, modal split information, vehicle occupancy rates and truck trip rates were estimated, utilizing recently approved *the East New York FEIS, Feb.2016 (TABLE 13-8)* rates as is summarized in **Table 1.**

The estimated modal split results for Day care use found that approximately 5% would travel by car, 1% would travel by taxi, 3% would travel by bus, 6% would travel by subway and 85% would travel by foot. The above information is summarized in **Table 1**.

Community Center

Trip generation rates, daily temporal distribution, modal split information, vehicle occupancy rates and truck trip rates were estimated, utilizing recently approved *the East New York FEIS, Feb.2016 (TABLE 13-8)* rates as is summarized in **Table 1.**

The estimated modal split results for community center use found that approximately 5% would travel by car, 1% would travel by taxi, 3% would travel by bus, 6% would travel by subway and 85% would travel by foot. The above information is summarized in **Table 1**.

Person and Vehicle Trips

The proposed project would generate a total of 588, 848, 893 and 821 (lower than the proposed project) person trip ends during the AM, Midday, PM and Saturday Midday peak hour time periods, respectively, as summarized in **Table 2**.

Vehicle Trips

The proposed project would generate a total of 101 (24 inbound and 77 outbound), 88 (45 inbound and 43 outbound), 129 (83 inbound and 46 outbound) and 117 (57 inbound and 60

outbound vehicle trip ends during the AM, Midday, PM and Saturday Midday peak hour time periods (lower than the proposed project between 4 to 15 percent depending on the peak hour),, respectively , as summarized in **Table 3.**

Based on trip generation (Level One) and trip assignments (Level Two), no intersection in the study area would experience the *CEQR* 50-vehicle trip ends threshold during any peak hour time period, as illustrated in **Figures 1, 2, 3 and 4** (the revised development would be lower than vehicle trips shown in Figures 1, 2, 3 and 4- no new figures is included).. Therefore, and in accordance with the *CEQR Technical Manual* criteria, the project generated vehicular trips would not result in any conditions that would typically trigger the need for a detailed assessment of traffic and parking impacts.

Transit and Pedestrians

Bus Trips

The proposed action would generate a total of 51, 54, 73 and 66 bus trip ends during the AM, Midday, PM and Saturday Midday peak hour time periods, respectively, as summarized in **Table 2**. There are five (5) bus lines in the study area, B13, B14, B15, B20 and BM5, therefore no bus line would experience the *CEQR* 50-bus trip ends threshold per bus line per direction and the generated transit passenger threshold of 200 trips would not be reached.

Bus and Subway Trip Ends Combined

The proposed action would generate a grand total of 335, 250, 418 and 369 bus and bus to subway trip ends during the AM, Midday, PM and Saturday Midday peak hour time periods, respectively, as summarized in **Table 2**. There are five (5) bus lines in the study area, B13, B14, B15, B20 and BM5, serving the study area in both directions (either north/ south or east/west), therefore no bus line would experience the *CEQR* 50-bus trip ends threshold per bus line per direction (a total of 10 buses; 5 lines, each in two directions).

The proposed action would generate less than 200 bus trip ends/and 50 bus trip ends per bus per direction during each peak hour time period, and in accordance with the *CEQR Technical Manual* criteria, would not result in any conditions that would typically trigger the need for a detailed assessment of bus impacts.

Subway Trips

The proposed action would generate a total of 284, 196, 345 and 303 subway trip ends during the AM, Midday, PM and Saturday Midday peak hour time periods, respectively, as summarized in **Table 2**. There are two (2) subway stations in the study area, Grand Avenue (A train) and Euclid Avenue (A & C trains), therefore no subway station would experience the *CEQR* 200-subway trip ends threshold.

The proposed action would generate less than 200 subway trip ends per subway station during each peak hour time period, and in accordance with the *CEQR Technical Manual*

criteria, would not result in any conditions that would typically trigger the need for a detailed assessment of subway impacts.

Pedestrian Trips

The proposed action would generate a total of 473, 737, 736 and 681 pedestrian (bus, subway, walk and other) trip ends during the AM, Midday, PM and Saturday Midday peak hour time periods, respectively, as summarized in **Table 2**.

The proposed action would generate more than 200 pedestrian trip ends during Weekday AM, Midday, PM and Saturday peak hour time periods. Therefore, based on the *CEQR Technical Manual 200-pedestruian trip ends threshold*, a pedestrian levels of service (LOS) analysis is prepared for the Weekday midday peak hour time period (737 pedestrian trip ends-worst case) and summarized in Tables i, ii and iii and described in Exhibit p.

A pedestrian analysis is conducted for the worst case scenario, Weekday midday peak hour, with 737 pedestrian trip ends (See Table 2) due to the proposed retail component location in Site 1, (closest Site to Linden Boulevard with retail access points along Linden Blvd.), assuming all pedestrian trip ends would be on Linden Boulevard south sidewalk, between Amber and Emerald Streets. Existing pedestrian counts for Linden Boulevard south sidewalk, between Amber and Emerald Streets and levels of service (LOS) analysis for 2017 Existing, 2020No-Build and 2020 Build Conditions are all shown and summarized in Exhibit P and Tables B, i, ii and iii. Levels of service (LOS) analysis results for existing, no-build and build conditions are described below.

2017 Existing Conditions

As summarized in Exhibit P and Table B (see Attachment C), Linden Boulevard south sidewalk is operating at an uncongested LOS A (w/o platoon) and B (w/ platoon), with an average pedestrian space of 503 sf/ped, in the (1:00pm-2:00) Weekday midday peak hour time period.

2020 No-Build Conditions

As summarized in Exhibit P and Table B, Linden Boulevard south sidewalk would operate at an uncongested LOS A (w/o platoon) and B (w/ platoon), with an average pedestrian space of 498 sf/ped, in the (1:00pm-2:00) Weekday midday peak hour time period.

2020 Build Conditions

As summarized in Exhibit P and Table B, Linden Boulevard south sidewalk would operate at an uncongested LOS A (w/o platoon) and B (w/ platoon), with an average pedestrian space of 130 sf/ped, in the (1:00pm-2:00) Weekday midday peak hour time period.

Pedestrian Analysis

The Proposed Action would generate an increment of approximately 473 bus, subway and walk/other trips in the weekday AM peak hour, 737 in the weekday midday, 736 in the weekday PM and 681 in the Saturday midday peak hour as summarized in Table 2 (Estimated Person Trips). Peak period level of service (LOS) pedestrian condition was evaluated for the Weekday midday peak hour time period at one (1) pedestrian element, Linden Boulevard south sidewalk, between Amber and Emerald Streets where new trips generated by projected development are expected to be most concentrated because of the proposed commercial retail component, which would be located on the northern section of the proposed project site or southern side of Linden Boulevard in Site 1.

2017 Existing Conditions

EPDSCO has conducted a pedestrian count on Thursday, January 26, 2017, during the Weekday (1:00PM-2:00PM) Midday peak hour for one sidewalk. As summarized in Tables i, ii and iii for the Existing, No-Build and build peak hour conditions, the south sidewalk pedestrian volumes would increase from approximately 92 in the 2017 existing to 93 in the 2020 no-build and 830 in the 2020 build conditions.

The actual width of the existing south sidewalk is approximately 5.5 feet wide and it would increase by 10 feet for a total of 15.5 feet under the build condition scenario in 2020.

Table B shows the existing peak hour pedestrian volumes, average pedestrian space in square feet per pedestrian (sf/ped), levels of service (LOS) and LOS with platoon at analyzed sidewalk.

As shown in Table B, the analyzed Linden Boulevard south sidewalk is currently operating at an uncongested LOS A (w/o platoon) and B (w/ platoon) in the (1:00pm-2:00) Weekday midday peak hour time period.

Pedestrian Sidewalk Levels of Service (LOS) description with and without platoon is shown in Table A.

TABLE A
Pedestrian Sidewalk Levels of Service Descriptions

LOS	Crosswalk/Corner	Non-Platoon Sidewalk Criteria (sf/ped)	Platoon Sidewalk Criteria (sf/ped)
A	(Unrestricted)	> 60	> 530
B	(Slightly Restricted)	> 40 to 60	> 90 to 530
C	(Restricted but fluid)	> 24 to 40	> 40 to 90
D	(Restricted, necessary to continuously alter walking stride and	> 15 to 24	> 23 to 40

	direction)		
E	(Severely restricted)	> 8 to 15	> 11 to 23
F	(Forward progress only by shuffling; no reverse movement possible)	<8	< 11

Notes:

Based on average conditions for 15 minutes sf/ped – square feet of area per pedestrian

Source: *CEQR Technical Manual*

2020 No-Build Conditions

As described in Land Use Section, the surrounding land uses within the immediate study area are expected to remain largely unchanged by the Projected Build Year of 2020. No new development is anticipated to occur within the 400-foot study area by 2020.

To estimate 2020 no-build pedestrian volumes, a ½ percent per year for a total of 1.5 percent was added to the existing pedestrian volumes based upon the *CEQR Technical Manual, Table 16-4, "Annual Background Growth Rates" for Brooklyn (Other)*. As shown in Table ii, the no-build pedestrian volumes would increase from 92 pedestrian trip ends to 93 on Linden Boulevard (south sidewalk).

As shown in Table B (see Attachment C), the analyzed Linden Boulevard south sidewalk would operate at an uncongested LOS A (w/o platoon) and B (w/ platoon) in the (1:00pm-2:00) Weekday midday peak hour time period.

2020 Build Conditions

In the future 2020, the proposed project would add approximately 1,250 pedestrian trips during the Weekday (1:00PM- 2:00PM) midday peak hour time period. As shown in Table iii (see Attachment C), the build pedestrian volumes would increase from 93 in the 2020 no-build conditions to 830 under the 2020 build conditions on Linden Boulevard (south sidewalk).

As shown in Table B, the analyzed Linden Boulevard south sidewalk would operate at an uncongested LOS A (w/o platoon) and B (w/ platoon) in the (1:00pm-2:00) Weekday midday peak hour time period.

Conclusion

In accordance with the threshold guidelines as detailed in the *2014 CEQR Technical Manual*, the proposed action is not expected to result in significant adverse impacts related to transit or pedestrian conditions. While the detailed analsis of pedestrian conditions identifies a

deterioration in Average Pedestrian Space from 498 sq/ped to 130 (with platoon) with the same LOS B in the weekday midday peak hour, this change does not constitute a significant adverse impact. Therefore, the proposed action is unlikely to have a significant effect on traffic flow, parking and operating conditions, vehicular safety, transit provision, and pedestrian safety and no further analysis is warranted.

17. AIR QUALITY

Introduction

Under *CEQR*, two potential types of air quality impacts are examined. These are mobile and stationary source impacts. Potential mobile source impacts are those that could result from an increase in traffic in the area, resulting in greater congestion and higher levels of carbon monoxide. Potential stationary source impacts are those that could occur from stationary sources of air pollution, such as major industrial processes or heat and hot water boilers of major buildings in close proximity to the proposed project. Both the potential impacts of buildings surrounding the proposed project and potential impacts of the proposed project on surrounding buildings are considered in this assessment.

Mobile Source

Traffic

Under guidelines contained in the *CEQR Technical Manual,* and in this area of New York City, projects generating fewer than 170 additional vehicle trips in any given hour are considered as unlikely to result in significant mobile source impacts, and do not warrant a detailed mobile source study related to traffic.

Parking Garage

The proposed development would include a 100-space (41,149 gsf) at-grade parking lot, which would exceed the threshold for a parking garage analysis under Section 321.2 of Chapter 17 of the *CEQR Technical Manual.* Emissions from the vehicles using the parking lot could potentially affect pollutant levels at nearby sensitive land uses. As such, an analysis was conducted to determine whether the potential air quality impacts of these emissions would be significant (See Attachment E – Parking Garage Analysis). The analysis concluded that all the pollutants are within the NAAQS and the *de minimis* criterions. Therefore, no significant air quality impacts are expected as a result of the parking garages facilities. As such, the vehicular emissions from the proposed parking lot, together with on-street mobile source emissions would not cause a significant adverse air quality impact.

Conclusion

Based on the above, no additional detailed air quality mobile source analyses would be required per the *CEQR Technical Manual***,** and no significant mobile source air quality impacts would be generated by the Proposed Actions.

Stationary Source

Air Toxics (Industrial Sources)

According to fieldwork conducted in November of 2016, land use records and a permit search with NYC DEP, there are no significant manufacturing/industrial uses, including dry cleaners or auto-body repair shops, within 400 feet of the Development Sites (see **Attachment D - DEP Correspondence**). According to the correspondence, there are no toxic emissions sources within 400 feet of the Development Sites. Therefore, no industrial sources are present within 400 feet of the Project Area and no major large-scale emission sources are within 1,000 feet of the Project Area and further assessment of air toxics is not warranted.

Heating, Ventilation and Air Conditioning (HVAC)

A screening analysis was performed, using the methodology described in the CEQR Technical Manual, to determine if the heat and hot water systems of the proposed building would result in potential air quality impacts to another building in the area. This methodology determines the threshold of development size below which the action would not have a significant impact. The results of this analysis found that there would be no significant air quality impacts from the project's heating, ventilation, and air conditioning (HVAC) systems.

Proposed Project on Existing Development

Impacts from boiler emissions are a function of fuel type, stack height, minimum distance from the source to the nearest building of similar or greater height, and the square footage size of the building.

The Proposed Development would result in four new buildings ranging in height between 8 and 12 stories. There are no buildings of similar height within 400 feet of the Project Area (see **Figure 17-1**)

The CEQR Technical Manual Stationary Source Screen graph **Figure 17-3** was utilized for the analysis assuming a 400-foot distance and using the 100-foot stack height curve, since the proposed building would be less than 160 feet in height. As shown on the attached screen from the CEQR Technical Manual, the plotted point is below the curve and no stationary source impacts would be generated by the project.

Proposed Project-on-Project Analysis

The RWCDS is anticipated to result in multiple buildings being constructed following the construction of the Development Site. As the projected and potential sites are shorter than the Proposed Development, emissions from the heating, ventilation, and air conditioning (HVAC) systems of the buildings on these lots (individually and collectively) could impact the Proposed Development. In addition, the HVAC emissions of the shorter projected/potential buildings could impact the taller developments. A project-on-project

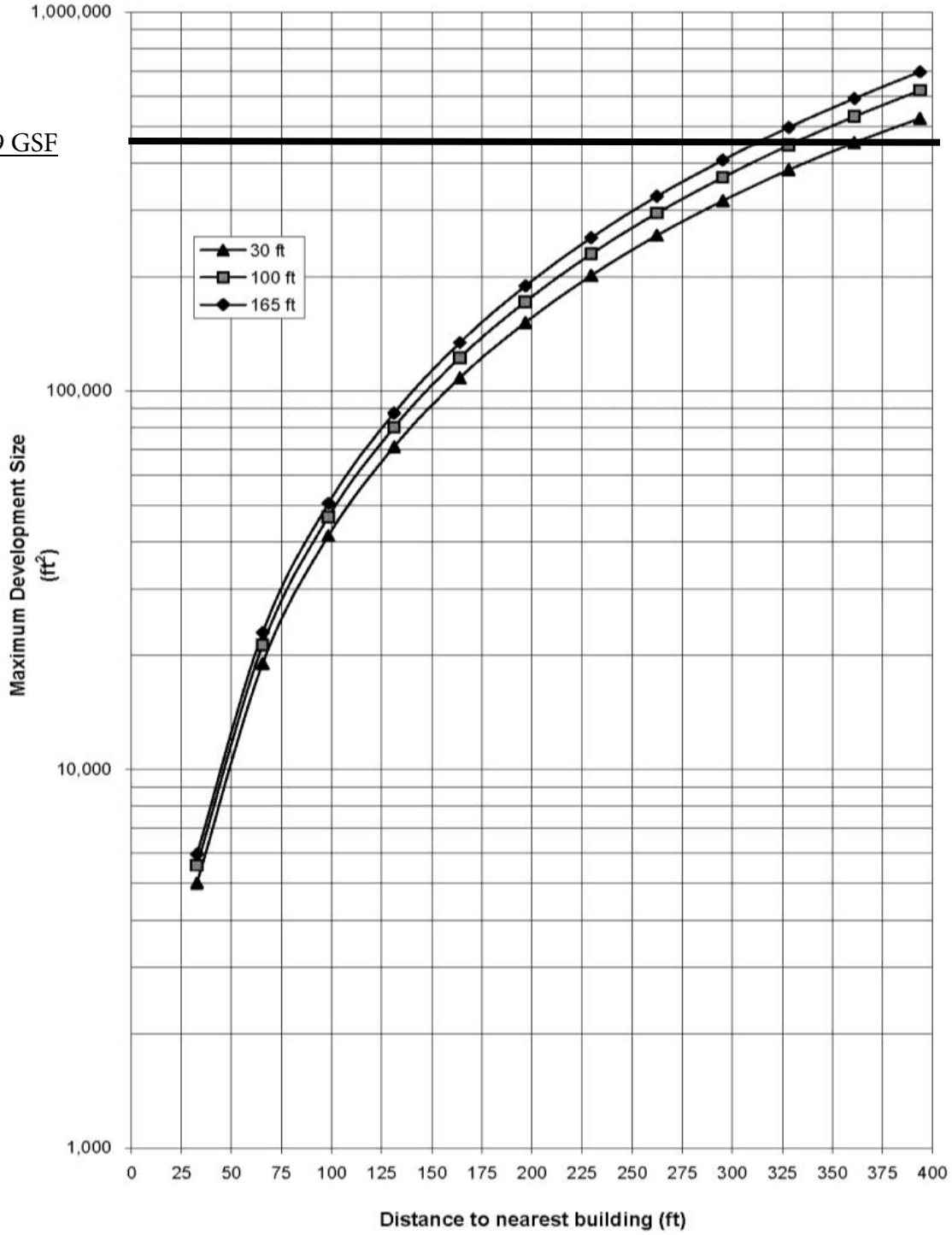
Figure 17-1 Roof Heights in the Surrounding Area (by feet)



Building heights from NYC DOF

Figure 17-3:
Stationary Source Screen

589,809 GSF



analysis and a cumulative analysis were therefore conducted to determine whether the potential impacts of the individual sites and combined emissions of all sites would be significant (see **Attachment F – Stationary Source Air Quality Analysis**).

The results of the detailed analysis concludes that (E) designations would be required to restrict stack location to the bulkheads of each building as specified on the project plans and fuel to the exclusive use of natural gas in the HVAC systems in all of the proposed development buildings.

The text of the (E) designations (E-432) would be as follows:

Building 1 (Block 4496, Lot 29)
Any new commercial or residential development on the aboe-referenced property must use natural gas for HVAC systems and ensure that the heating, ventilating and air conditioning stack is located at the highest tier to avoid any potential significant air quality impacts.

Building 2 (Block 4496, Lot 15):
Any new residential and/or commercial development on the above-referenced properties must use natural gas for HVAC systems and ensure that the heating, ventilating and air conditioning stack is located at the highest tier or 93 feet above grade to avoid any potential significant adverse air quality impacts.

Building 3 (Block 4496, Lot 1):
Any new residential and/or commercial development on the above-referenced properties must use natural gas for HVAC systems and ensure that the heating, ventilating and air conditioning stack is located at the highest tier or 100 feet above grade to avoid any potential significant adverse air quality impacts.

Building (Block 4496, Lot 48)
Any new residential and/or commercial development on the above-referenced properties must use natural gas for HVAC systems and ensure that the heating, ventilating and air conditioning stack is located at the highest tier or 91 feet above grade to avoid any potential significant adverse air quality impacts.

With above (E) designations, the Proposed Actions and resulting development assumed in the RWCDS would not result in significant adverse impacts related to heat and hot water systems.

Conclusion

There would be no significant air quality impacts from the proposed project's heat and hot water systems on surrounding uses, and the proposed development would not be adversely affected by surrounding uses or industrial emissions.

Therefore, no stationary source impacts would occur as a result of the project.

19. NOISE

Subject Site

Vehicular traffic is the predominant source of noise in the project vicinity, and therefore the proposed development warrants an assessment of the potential for adverse effects on project occupants from ambient noise. The proposed redevelopment of the property would not create a significant noise generator. Additionally, project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. This noise assessment is limited to an assessment of ambient noise that could adversely affect occupants of the development.

The subject site is bounded to the north by Linden Boulevard, the east by Amber Street, the west by Emerald Street, and the south by Loring Avenue. All intersections are controlled by stop signs. The subject site is currently a vacant lot, and is located within an area containing institutional, commercial, and residential uses.

Framework of Noise Analysis

Noise is defined as any unwanted sound, and sound is defined as any pressure variation that the human ear can detect. Humans can detect a large range of sound pressures, from 20 to 20 million micropascals, but only those air pressure variations occurring within a particular set of frequencies are experienced as sound. Air pressure changes that occur between 20 and 20,000 times a second, stated as units of Hertz (Hz), are registered as sound. Because the human ear can detect such a wide range of sound pressures, sound pressure is converted to sound pressure level (SPL), which is measured in units called decibels (dB). The decibel is a relative measure of the sound pressure with respect to a standardized reference quantity. Because the dB scale is logarithmic, a relative increase of 10 dB represents a sound pressure that is 10 times higher. However, humans do not perceive a 10-dB increase as 10 times louder. Instead, they perceive it as twice as loud. The following Table 19-1 lists some noise levels for typical daily activities.

Table 19-1 Noise Levels of Common Sources	
Sound Source	**SPL (dB(A))**
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110
On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0

Notes: A change in 3dB(A) is a just noticeable change in SPL. A change in 10 dB(A) Is perceived as a doubling or halving in SPL.

Source: 2014 CEQR Technical Manual

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

Table 19-2
Noise Exposure Guidelines For Use in City Environmental Impact Review[1]

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1. Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	$L_{dn} \leq 60$ dBA		$60 < L_{dn} \leq 65$ dBA		(I) $65 < L_{dn} \leq 70$ dBA, (II) $70 \leq L_{dn}$		$L_{dn} \leq 75$ dBA
2. Hospital, nursing home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA		$65 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
3. Residence, residential hotel, or motel	(7 AM to 10 PM)	$L_{10} \leq 65$ dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	(10 PM to 7 AM)	$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes:

(i) In addition, any new activity shall not increase the ambient noise level by 3 dB(A) or more.

[1] Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

[2] Tracts of land where serenity and quiet are extraordinarily important and serve as important public need, and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and nursing homes.

[3] One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Sources: New York City Department of Environmental Protection (adopted policy 1983).

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

- 3-dBA change is the threshold of change detectable by the human ear;

- 5-dBA change is readily noticeable; and

- 10-dBA change is perceived as a doubling or halving of the noise level.

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

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the mean energy, or intensity, level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other

descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.

- $L_{eq(24)}$ is the continuous equivalent sound level over a 24-hour time period.

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

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

Table 19-3
Required Attenuation Values To Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Noise level with proposed project	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Attenuation[A]	(I) 28 dB(A)	(II) 31 dB(A)	(III) 33 dB(A)	(IV) 35 dB(A)	$36 + (L_{10} - 80)$[B] dB(A)

Note: [A] The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.
[B] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.
Source: New York City Department of Environmental Protection

Measurement Location and Equipment

Because the predominant noise source in the area of the proposed project is vehicular traffic, noise monitoring was conducted during peak vehicular travel periods, 7:30 – 9:00 AM, 12:00 -1:30 PM, and 4:30-6:00 PM. Pursuant to CEQR Technical Manual methodology, readings at all locations of the subject site were conducted for 20-minute periods during each peak time interval to account for vehicular noise. Noise monitoring was conducted using a Larson Davis Sound Track LxT2 sound meter, with windscreen. The monitor was placed on a tripod at a height of approximately three feet above the ground, away from any other surfaces. The monitor was calibrated prior to and following each monitoring session. Vehicular traffic constitutes the primary source for noise at the project site.

Monitoring Locations:

1. Location 1: Intersection of Loring Avenue and Emerald Street
2. Location 2: Intersection of Linden Boulevard and Emerald Street
3. Location 3: Intersection of Linden Boulevard and Amber Street
4. Location 4: Intersection of Loring Avenue and Amber Street



Figure 19-1: Intersection of Emerald Street and Loring Avenue monitoring location



Figure 19-2: Intersection of Emerald Street and Linden Boulevard monitoring location

Google Maps 2868 Linden Blvd Brooklyn, NY
Monitoring Locations



Imagery ©2017 Google, Map data ©2017 Google 100 ft



Figure 19-3: Intersection of Linden Boulevard and Amber Street monitoring location



Figure 19-4: Intersection of Amber Street and Loring Avenue monitoring location

Measurement Conditions

Monitoring was conducted during typical midweek conditions, on Wednesday, February 8, 2017. The weather was sunny and dry throughout the day and wind speeds were moderate. Neighboring properties were not a significant source of ambient noise. Traffic volumes and vehicle classification were documented during the noise monitoring. The sound meter was calibrated before and after each monitoring session.

Existing Conditions

Based on the noise measurements taken at the project site, the predominant source of noise at the site is vehicular traffic. The volume of traffic, and its corresponding level of noise, is moderate at the intersection of Emerald Street and Loring Avenue, moderate at the intersection of Emerald Street and Linden Boulevard, moderate at the intersection of Linden Boulevard and Amber Street, and low at the intersection of Amber Street and Loring Avenue. Table 19-4 contains the results for the measurements taken at the subject site.

Table 19-4 (1 of 4): Noise Levels at the intersection of Emerald St. and Loring Ave. (dB)

	Wednesday, February 8, 2017		
	7:26AM - 7:46AM	11:59AM – 12:19PM	4:22PM – 4:42PM
L_{max}	78.0	82.5	79.4
L_{10}	**67.6**	**66.5**	**68.8**
L_{eq}	64.0	64.3	66.2
L_{50}	61.5	59.0	63.2
L_{90}	57.7	54.2	59.3
L_{min}	55.8	49.9	55.8

Table 19-4 (2 of 4): Noise Levels at the intersection of Emerald St. and Linden Blvd. (dB)

	Wednesday, February 8, 2017		
	7:49AM – 8:09AM	12:2PM – 12:42PM	4:44PM – 5:04PM
L_{max}	89.3	81.2	90.1
L_{10}	**76.7**	**75.0**	**73.7**
L_{eq}	74.1	71.5	71.3
L_{50}	71.2	69.5	69.4
L_{90}	65.6	63.0	61.4
L_{min}	58.6	55.7	57.7

Table Noise-4 (3 of 4): Noise Levels at the intersection of Amber St. and Linden Blvd. (dB)

	Wednesday, February 8, 2017		
	8:12AM – 8:32AM	12:46PM –1:06PM	5:06PM – 5:27PM
L_{max}	85.8	91.3	95.5
L_{10}	**75.4**	**73.1**	**75.5**
L_{eq}	72.9	71.2	75.0
L_{50}	71.3	67.6	69.5
L_{90}	66.8	61.6	61.9
L_{min}	60.6	56.3	57.8

Table Noise-4 (4 of 4): Noise Levels at the intersection of Amber St. and Loring Ave. (dB)

	Wednesday, February 8, 2017		
	8:42AM – 9:02AM	1:13PM – 1:33PM	5:35PM – 5:56PM
L_{max}	75.2	72.3	73.1
L_{10}	**62.7**	**63.0**	**63.6**
L_{eq}	60.1	61.0	61.5
L_{50}	57.8	59.8	60.3
L_{90}	55.4	59.1	59.2
L_{min}	53.5	57.0	57.6

Table 19-5 (1 of 3): Morning Traffic Volumes and Vehicle Classifications
(vehicle counts for duration of the morning monitoring session)

	Emerald St. & Loring Ave.	**Emerald St. & Linden Blvd.**	**Linden Blvd. & Amber St.**	**Loring Ave. & Amber St.**
Car/ Taxi	72	26	19	5
Van/ Light Truck/SUV	60	31	31	10
Heavy Truck	1	8	6	2
Bus	3	4	4	0
Airplane	0	0	0	4

Table 19-5 (2 of 3): Midday Traffic Volumes and Vehicle Classifications
(vehicle counts for duration of the mid-day monitoring session)

	Emerald St. & Loring Ave.	**Emerald St. & Linden Blvd.**	**Linden Blvd. & Amber St.**	**Loring Ave. & Amber St.**
Car/ Taxi	38	56	54	9
Van/ Light Truck/SUV	46	50	49	11
Heavy Truck	1	3	4	1
Bus	3	3	3	0
Airplane	0	0	0	1

Table 19-5 (3 of 3): Evening Traffic Volumes and Vehicle Classifications
(vehicle counts for duration of the evening monitoring session)

	Emerald St. & Loring Ave.	Emerald St. & Linden Blvd.	Linden Blvd. & Amber St.	Loring Ave. & Amber St.
Car/ Taxi	78	56	61	12
Van/ Light Truck/SUV	120	54	58	8
Heavy Truck	6	2	4	0
Bus	10	2	2	0
Airplane	0	0	0	0

Conclusions

The 2014 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the proposed action, an L_{10} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure, and an L_{10} of between 70 and 80 dB(A) is identified as marginally unacceptable. The highest recorded L_{10} at the intersection of Emerald Street and Loring Avenue was 68.8 dB(A) during the evening period. The highest recorded L_{10} at the intersection of Emerald Street and Linden Boulevard was 76.7 dB(A) during the morning period. The highest recorded L_{10} at the intersection of Linden Boulevard and Amber Street was 75.5 dB(A) during the evening period. The highest recorded L_{10} at the intersection of Amber Street and Loring Avenue was 63.6 dB(A) during the evening period.

Because the L_{10} values on the intersection of Emerald St and Loring Ave and the intersection of Amber St. and Loring Ave do not exceed 70 dB(A), window-wall noise attenuation would not be required at these locations. Because the L_{10} values on the intersection of Emerald St. and Linden Blvd and the intersection of Amber St. and Linden Blvd exceed 70 dB(A), window-wall noise attenuation would be required to ensure an acceptable indoor noise level. Based on Table 19-3 of the CEQR Technical Manual, the required attenuation value to achieve acceptable interior noise levels at the intersection of Emerald St. and Linden Blvd and the intersection of Amber St. and Linden Blvd are **33 dB(A)** and **31 dB(A),** respectively. Provision of this level of window-wall attenuation would ensure that no adverse impacts related to noise occur.

Table 19-6: Required Window/wall attenuation

			Maximum Noise Level at Nearest Monitoring Site		CEQR Categories	Required Attenuation (dBA)
Site/Building	**Block**	**Lot**	**Leq(dBA)**	**L10(DBA)**		
Building 1	4496	29				
Facing North			74.1	76.7	Marginally Unacceptable	33 (All Floors)
Facing East			75	75.5	Marginally Unacceptable	31 (All Floors)
Facing West			74.1	76.7	Marginally Unacceptable	33 (All Floors)
Building 2	4496	15				
Facing West			74.1	76.7	Marginally Unacceptable	33 (All Floors)
Building 3	4496	1				
Facing South			66.2	68.8	Acceptable	None
Facing East			66.2	68.8	Acceptable	None
Facing West			61.5	63.6	Acceptable	None
Building 4	4496	48				
Facing East			75	75.5	Marginally Unacceptable	31 (All Floors)

The text for the E-designation (E-432) would be as follows for Block 4496, Lot 29 (Building 1)

"To ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation for the windows along the Emerald Street and Amber Street facades and a minimum of 33 dBA window/wall attenuation for windows along the Linden Boulevard façade to maintain an interior noise level of 45 dBA. To maintain a closed-window condition, an alternate means of ventilation must also be provided.

The text for the E-designation (E-432) would be as follows for Block 4496, Lot 15 (Building 2)

"To ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 33 dBA window/wall attenuation for the windows along the Emerald Street facade to maintain an interior noise level of 45 dBA. To maintain a closed-window condition, an alternate means of ventilation must also be provided.

The text for the E-designation (E-432) would be as follows for Block 4496, Lot 48 (Building 4)

"To ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 31 dBA window/wall

attenuation for the windows along the Amber Street facade to maintain an interior noise level of 45 dBA. To maintain a closed-window condition, an alternate means of ventilation must also be provided.

With these measures included as part of the Proposed Actions, no significant adverse noise impacts would occur.

21. NEIGHBORHOOD CHARACTER

The *CEQR Technical Manual* states that a neighborhood character assessment is generally required when the Proposed Action would significantly impact land use, urban design, visual resources, historic resources, socioeconomic conditions, open space, shadows, transportation or noise within the neighborhood; or if it would have moderate effects on several of the elements that contribute to neighborhood character.

While a combination of moderate changes in several of these technical areas may potentially have a significant effect on neighborhood character, the Proposed Action would be compatible with the mixed-use character of the neighborhood and, as discussed in the relevant sections of this EAS, is not anticipated to result in any significant adverse impacts on land use, zoning and public policy; community facilities; socioeconomics; open space; shadows; historic and cultural resources; urban design and visual resources; transportation; air quality; noise; or construction within the neighborhood.

Therefore, no significant adverse impacts on neighborhood character are anticipated as a result of the Proposed Action.

22. CONSTRUCTION

Introduction

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

- Construction activities lasting longer than two years; and
- Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out.

Proposed Construction Schedule

Construction would occur on four development sites, all of which are Applicant owned, located on the same block. The project assumes a 12-month approval process to be completed at the end of 2017. The total construction period is projected to be 27 months with construction to start between January and June of 2018 and completion of construction by October to December 2019. Substantial project occupancy is expected between January and April 2020. The Project Build Year is assumed to be 2020. The construction and occupancy schedule is outlined in the table below.

Table 22-1

Building Construction/Occupancy Schedule

Projected Development Site	Begin Construction	Complete Construction	Construction Length	Occupancy
1	Beginning of January 2018	End of October 2019	22 Months	January 2020
2	Beginning of January 2018	End of October 2019	22 Months	January 2020
3	Beginning of March 2018	End of December 2019	22 Months	March 2020
4	Beginning of June 2018	End of December 2019	19 Months	April 2020

Proposed Construction Activities

Construction of Projected Development Sites 1 and 2 are expected to begin first and the buildings on these sites would be constructed simultaneously with construction starting at the beginning of January 2018 and completing by the end of October 2019. Occupancy of both buildings is expected by January 2019. Construction of Projected Development Site 3 would start at the beginning of March 2018 and be completed by the end of December 2019 while construction of Projected Development Site 4 would start at the beginning of June 2018 and be completed by the end of December 2019. Occupancy of Projected Development

Site 3 is expected by March 2020 while Occupancy of Projected Development Site 4 is anticipated by April 2020. See attached Construction Schedule.

Construction activities would include the following:

- Sheeting Shoring – 2 months
- Earthwork, Piles - 3 months
- Foundation Work – 4 (Site 4) to 5 months (Sites 1-3)
- Steel Erection & Flatwork - 4 (Site 4) to 5 months (Sites 1-3)
- Prestressed Plank & CMU - 4 (Site 4) to 5 months (Sites 1-3)
- Façade/Exterior Finishing - 3 (Site 4) to 5 months (Sites 1-3)
- Interior Work – 11 (Site 4) to 14 months (Sites 1-3)
- Site Work/Roadway/Utilities – 2 (Sites 1-3) to 5 months (Site 4)
- Punchlist/Inspections/Sign-offs – 2 (Sites 1-3) to 4 months (Site 4)
- Project Completion/Rent Up – 3 (Sites 1-3) to 4 months (Site 4)

Most construction work would take 1 to 2 months longer for Sites 1, 2, and 3 relative to Site 4 except at the end of the construction process where additional time would be needed to complete Site 4 which would be the last building constructed. Site preparation and building construction work would take approximately 14 months for Sites 1, 2, and 3 and 11 months for Site 4 while roadway and utility work would take approximately 2 months for Sites 1, 2, and 3 and 5 months for Site 4 to wrap up construction of the development. Exterior site preparation and building construction work would extend over a period of 16 months with road and utility work requiring up to an additional 5 months relative to the total construction period of up to 27 months.

As both buildings on Projected Development Sites 1 and 2 would be constructed, completed, and occupied at approximately the same time, there would be no construction impacts of either building on the residents of the other. Although there would be a slight difference in the construction schedules on Projected Development Sites 1 and 2 relative to the schedules on Projected Development Sites 3 and 4, no exterior construction activities would be occurring when any of the buildings would contain residents. All construction work would be completed by the end of December 2019 with occupants moving in starting at the beginning of January 2020.

Project construction activities are expected to be typical for larger building construction projects in New York City. Construction activities would predominantly occur Monday through Friday, although limited delivery of certain critical pieces of equipment (e.g., cranes) may be necessary on weekend days if required in order to minimize traffic disruptions. Any weekend work would be contingent upon any conditions that may be imposed by City agencies that approve and monitor construction activities such as the NYC Department of Buildings (DOB) and the NYC Department of Transportation (DOT). DOB also regulates the permitted hours of construction. In accordance with those

regulations, typical construction activities in New York City begin no earlier than 7 AM during the week, and workers typically arrive and begin to prepare work areas between 6 and 7 AM. The standard weekday construction work day ends by 3:30 PM with an occasional extended shift until 6 PM.

Potential Construction Impacts

In accordance with the 2014 *CEQR Technical Manual*, the proposed project was reviewed to determine whether further analysis of the proposed construction activities is needed for any technical area, as follows.

Transportation

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

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

The Project Area consists of an entire block bounded by Linden Boulevard, Emerald Street, Loring Avenue, and Amber Street. Emerald Street, Loring Avenue, and Amber Street are two-lane, two-way local streets with two parking lanes providing access primarily to the low- to moderate-density residential uses located along them. Many undeveloped lots are located along these streets so traffic volumes on these streets are low. Linden Boulevard is a two-way, six-lane roadway with two parking lanes connecting Conduit Avenue several blocks to the east with Kings Highway in Brooklyn to the west. As the Project Area is entirely vacant and undeveloped and all construction equipment and supplies could therefore be stored on site, it is not anticipated that construction of the project would require closing, narrowing, or otherwise impeding moving lanes, roadways, key pedestrian facilities, parking lanes and/or parking spaces, bicycle routes and facilities, bus lanes or routes, or access points to transit.

The construction of the proposed development may require the temporary closing of sidewalks adjacent to the block at times during the construction process. The sidewalks adjacent to the Project Area are likely to be reconstructed, which may temporarily impact pedestrian flow and the availability of parking spaces along these streets. However, changes to moving traffic lanes are not likely.

The roadways, sidewalks, and crosswalks surrounding the block do not have high pedestrian activity and are not near capacity. In addition, they are not near any sensitive

land uses such as a schools, hospitals, or parks. Any potential closure of the sidewalks adjacent to the Project Area would be considered a routine closure that would be addressed by a permit and pedestrian access plan issued by NYC DOT Office of Construction Mitigation and Coordination at the time of closure.

Although the project would involve construction on multiple development sites on the same block with some overlap in construction activities, construction of the proposed development would occur over a relatively short time period of approximately 27 months and only 16 of these months would involve building exterior construction activities with an additional 5 months for road and utility work.

On the basis of the above, construction of the proposed project would not be expected to result in significant adverse impacts on transportation.

Air Quality and Noise

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

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

All four Projected Development Sites are located near sensitive receptors as they are located across local streets (Emerald Street, Loring Avenue, and Amber Street) from existing residential and medical office development. The proposed development would also result in the construction of multiple buildings where there is a potential for on-site receptors on buildings to be completed before the final build-out. However, as explained above, no exterior construction activities would be occurring when any of the buildings in the Project Area would contain residents. All construction work would be completed by the end of December 2019 with occupants moving in starting at the beginning of January 2020. In addition, the construction period would be considered short term as it would be under 2 years. Construction activities with the greatest impacts relative to noise generation and air pollutant emissions include exterior site preparation and building construction work, which would extend over a period of 16 months, and road and utility work requiring up to an additional 5 months, for a total of 21 months of exterior construction activities.

The *CEQR Technical Manual* states that if a project meets one or more of the criteria above, a preliminary air quality or noise assessment is not automatically required. Instead, various factors should be considered, such as the types of construction equipment (*e.g.*, gas, diesel, electric), the nature and extent of any commitment to use the Best Available Technology (BAT) for construction equipment, the physical relationship of the Project Area to nearby sensitive receptors, the type of construction activity, and the duration of any heavy construction activity. These measures are discussed below.

Excavation and foundation activities, which often generate the highest levels of air emissions, would be temporary and limited in duration and would take approximately 10 months to complete. These activities would be spread out over four separate locations on the block and would only overlap for a period of approximately 4 months as indicated on the Construction Schedule. In addition, any heavy equipment associated with the construction of the buildings (such as a crane) would operate from at least four different locations during construction.

Other exterior building activities would occur over 11 months and overlap of the other exterior building activities between the 4 Sites would be no more than 7 months. These overlapping construction activities would generate relatively low air quality and noise impacts on the surroundings. No external air and noise impacts for the interior building work would be expected.

Site work for the construction of on-site roadways and utilities would occur over a period of 5 months. Site work would not overlap for Sites 1/2 and Site 3 but would overlap for approximately 2 months for Sites 1/2 and Site 4. However, as this work would be occurring along different street frontages of the block, no significant cumulative air and noise impacts would be expected.

Air Quality

The project would make use of the Best Available Technology to minimize impacts to the residential and medical office uses in the vicinity of the Projected Development Sites as further discussed below.

As with most construction projects in the City, the proposed project would require the operation of several pieces of diesel equipment at one time during the heavier periods of construction, such as excavation. The Applicant would implement the following measures that would minimize air quality and noise impacts on the surrounding community.

• *Diesel Equipment Reduction.* Construction of the proposed project would minimize the use of diesel engines and use electric engines, to the extent practicable. This would reduce the need for on-site generators, and require the use of electric engines in lieu of diesel where practicable.

• *Clean Fuel.* To the extent practicable, ultra-low sulfur diesel (ULSD) would be used for diesel engines on the Projected Development Sites.

• *Best Available Tailpipe Reduction Technologies.* To the extent practicable, non-road diesel engines with a power rating of 50 horsepower (hp) or greater would utilize the best available tailpipe (BAT) technology for reducing diesel particulate matter (DPM) emissions. Diesel particle filters (DPF) have been identified as being the tailpipe technology currently proven to have the highest PM reduction capability.

To the extent practicable, construction contracts would specify that all diesel non-road engines rated at 50 hp or greater would utilize DPFs, either installed on the engine by the original equipment manufacturer (OEM) or retrofit with a DPF verified by EPA or the California Air Resources Board, and may include active DPFs if necessary; or other technology proven to reduce DPM by at least 90 percent.

• *Utilization of Newer Equipment.* EPA's Tier 1 through 4 standards for non-road engines regulate the emission of criteria pollutants from new engines, including PM, CO, NOx, and hydrocarbons (HC). To the extent practicable, all non-road construction equipment in the project would meet at least the Tier 2 emissions standard, and construction equipment meeting Tier 3 and/or Tier 4 emissions standards would be used where conforming equipment is widely available, and the use of such equipment is practicable.

• *Dust Control.* Fugitive dust control plans will be implemented as part of the construction process. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction sites. Truck routes within the sites would be watered as needed to avoid the re-suspension of dust. All trucks hauling loose material will be equipped with tight fitting tailgates and their loads securely covered prior to leaving the sites. In addition to regular cleaning by the City, streets adjacent to the Project Area would be cleaned as frequently as needed by the construction contractor. Water sprays will be used for all transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.

• *Restrictions on Vehicle Idling.* In addition to adhering to local laws restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to three minutes, to the extent practicable, for all equipment and vehicles that are not using their engines to operate a loading, unloading, or a processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

Overall, these air emission control commitments would significantly reduce DPM emissions to a level otherwise achieved by applying the currently defined best available control technologies under NYC Local Law 77, which are required only for publically funded City capital projects. In addition as stated in the *CEQR Technical Manual*, all the necessary measures would be implemented to ensure compliance with the NYC Air Pollution Control Code regulating construction-related dust emissions. Based on the project size and the construction work involved, construction activities for the proposed project would not be considered out of the ordinary or exceptional in terms of intensity and would be of a relatively short duration. Therefore, based on above and with the implementation of an emissions control program, the proposed project would not result in any significant adverse impacts on air quality.

Noise

While increases in ambient noise levels due to construction exceeding the *CEQR* impact criteria for two years or less may be noisy and intrusive, they are not considered to be significant adverse noise impacts. As described above, construction of the proposed

development on Projected Development Sites 1 through 4 would occur over a relatively short time period of approximately 27 months and only 21 of these months would involve exterior construction activities. In addition, excavation and foundation activities, which are the noisiest construction activities, would be temporary and limited in duration and would take approximately 10 months to complete. These activities would be spread out over four separate locations on the block and would only overlap for a period of approximately 4 months.

As described above, other exterior building activities would occur over 11 months and the overlap of exterior building activities between the 4 Sites would be no more than 7 months. These activities would be located on four separate locations on the block. Site work for the construction of on-site roadways and utilities would occur over a period of 5 months. Site work would not overlap for Sites 1/2 and Site 3 but would overlap for approximately 2 months for Sites 1/2 and Site 4. However, as this work would be occurring along different street frontages of the block, no significant cumulative noise impacts would be expected.

Construction noise is regulated by the NYC Noise Control Code and by EPA's noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. If weekend or after hour work is necessary, permits would be required to be obtained, as specified in the NYC Noise Control Code. In addition, the Applicant would commit to a preparing a noise control plan that would be implemented during project construction. The measures to be contained in the plan would avoid noise impacts on the surrounding community. As stated above, there would be no noise impacts from construction to the residents of the project as project occupancy would not occur until all on-site construction is completed. The plan would be prepared to be compliant with the NYC Noise Control Code (which requires a "Construction Noise Mitigation Plan") and would include such measures as construction noise source controls, path controls, and receiver controls. With these measures in place, no significant noise impacts are expected to occur as a result of the project construction.

Historic and Cultural Resources

There are no known historic or archaeological resources either on the Project Area or within 400 feet of the Project Area. Therefore, no impacts to historic and cultural resources would be anticipated from construction of the proposed development.

Materials

As explained in the Hazardous Materials section above, the Phase I ESA conducted for the Project Area revealed the following recognized environmental conditions (RECs) in connection with the Project Area:

- The presence of fill material/debris at the Development Sites from an unknown origin.

- The potential for site impacts from a former contactor's storage yard located on the Development Sites.

- The possible presence of one or more underground storage tanks (USTs), which have not been properly closed or removed in accordance with NYSDEC and FDNY regulations.

To avoid any potential impacts associated with hazardous materials, the Proposed Actions would map an (E) designation for hazardous materials on the Projected Development Sites as follows:

Block 4496, (future) Lots 1, 15, 29 & 48

The text of the (E) designation is as follows:

Due to the possible presence of hazardous materials on the aforementioned designated site, there is potential for contamination of the soil and groundwater. To determine if contamination exists and perform the appropriate remediation, the following tasks must be undertaken by the fee owners of the lot restricted by this (E) designation prior to any demolition or disturbance of soil on the lot.

Task 1

The fee owners of the lot restricted by this (E) designation will be required to prepare a scope of work for any soil, gas, or groundwater sampling and testing needed to determine if contamination exists, the extent of the contamination, and to what extent remediation may be required. The scope of work will include all relevant supporting documentation, including site plans and sampling locations. This scope of work will be submitted to the OER for review and approval prior to implementation. It will be reviewed to ensure that an adequate number of samples will be collected and that appropriate parameters are selected for laboratory analysis.

No sampling program may begin until written approval of a work plan and sampling protocol is received from the OER. The number and location of sample sites should be selected to adequately characterize the type and extent of the contamination, and the condition of the remainder of the site. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for choosing sampling sites and performing sampling will be provided by OER upon request.

Task 2

A written report with findings and a summary of the data must be presented to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such test results, a determination will be provided 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 necessary according to test results, a proposed remediation plan must be submitted to OER for review and approval. The fee owners of the lot restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owners of the lot restricted by this (E) designation should provide proof that the work has been satisfactorily completed.

An OER-approved construction-related health and safety plan would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This Plan would be submitted to OER for review and approval prior to implementation.

With the implementation of the above (E) designation, no significant adverse impacts related to hazardous materials during construction of the project would occur.

Natural Resources

According to the *CEQR Technical Manual*, a construction assessment is not needed for natural resources unless the construction activities would disturb a site or be located adjacent to a site containing natural resources. The Project Area is covered with grass, weeds and other weedy second growth vegetation that established itself on the property following the demolition of previously existing development when the property was abandoned in the 1990s. The Project Area is surrounded by existing streets on all sides and therefore is not located adjacent to properties containing natural resources. Therefore, there is no potential for significant adverse construction impacts on natural resources.

Open Space, Socioeconomic Conditions, Community Facilities, Land Use and Public Policy, Neighborhood Character, and Infrastructure

According to the *CEQR Technical Manual*, a preliminary construction assessment is generally not needed for these technical areas unless the following are true:

- *The construction activities are considered "long-term" (more than 2 years);*
- *Short-term construction activities would not directly affect a technical area, such as impeding the operation of a community facility.*

As discussed above, construction activities would be considered short term as they would occur from the beginning of January 2018 to the end of December 2019, a period of less than two years. Construction on each of the four Projected Development Sites would occur over a period of 19 to 22 months. Construction of the proposed project would not have any significant direct effects on open space areas, socioeconomic conditions, community facilities, or infrastructure conditions, and would not have cumulative impacts on land use or neighborhood character. Therefore, construction of the proposed project would not be expected to result in any significant adverse construction impacts on these technical areas.

Conclusion

On the basis of the above analysis, the Proposed Actions would not have any potentially significant adverse construction impacts, and further analysis would not be warranted.

Attachment A

Waterfront Revitalization Program (WRP)

FOR INTERNAL USE ONLY	WRP No. 17-048
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

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

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

A. APPLICANT INFORMATION

Name of Applicant: Canyon, Sterling & Emerald LLC and Radson Development

Name of Applicant Representative: EPDSCO Inc.

Address: 55 Water Mill Road Great Neck, NY 11021

Telephone: 718-343-0026 **Email:** hrothkrug@epdsco.com

Project site owner (if different than above): _____

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The applicant seeks a series of discretionary actions that would facilitate the development of four new buildings on an entire block (Block 4496) in the East New York section of Brooklyn Community District #5. The discretionary actions (hereafter, the "Proposed Actions") include a zoning map amendment from R4/C1-2 to R8A/C2-4 and from R4 to R6A and R7A (see attached proposed zoning map); and a zoning text amendment to make the Project Area applicable to the Mandatory Inclusionary Housing (MIH) Program (Options 1 or 2).The Proposed Actions also include potential discretionary financing from NYC Housing Preservation and Development (HPD) and NYC Housing Development Corporation (HDC), requiring a coordinated review between the Department of City Planning (DCP) and HPD/HDC. In addition to the above discretionary actions, the applicant will seek a legal grade waiver from the NYC Department of Transportation (DOT), as well as a drainage plan with the NYC Department of Environmental Protection (DEP), neither of which are subject to CEQR review.

2. Purpose of activity

The Proposed Actions would facilitate four separate buildings to be constructed on four new combined tax and zoning lots. In total, the proposed development would consist of 589,809 gross square feet (gsf) including 509,907 gsf of residential space (521 dwelling units), 17,214 gsf of commercial retail space (Use Group 6) and 21,539 gsf of community facility space (a mix of medical office, recreation center and day care, Use Group 4). The building heights would range from 81 (8-stories) to 130 feet (12-stories). Due to a high water table, the Proposed Development would only contain space below grade for a portion of the Development along Linden Boulevard, with a 100-foot by 100-foot cellar area utilized as an accessory space for the proposed uses.

C. PROJECT LOCATION

Borough: Brooklyn Tax Block/Lot(s): Future lot 1, 15, 29 & 48

Street Address: 2846-2868 Linden Boulevard; 336 Amber Street; 1449 Loring Avenue; 561 Emerald Street

Name of water body (if located on the waterfront): _____

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

☐ City Map Amendment	☐ Zoning Certification	☐ Concession
☑ Zoning Map Amendment	☐ Zoning Authorizations	☐ 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: _____

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit

(if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

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

State Actions/Approvals/Funding

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

Federal Actions/Approvals/Funding

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

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

E. LOCATION QUESTIONS

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

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

F. WRP POLICY ASSESSMENT

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

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

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

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

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

Submission Requirements

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

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

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

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

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

New York City Department of City Planning
Waterfront and Open Space Division
120 Broadway, 31st Floor
New York, New York 10271
212-720-3525
wrp@planning.nyc.gov
www.nyc.gov/wrp

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

Applicant Checklist

- ☐ Copy of original signed NYC Consistency Assessment Form
- ☐ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☐ Environmental Review documents
- ☐ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.

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

G. CERTIFICATION

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

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

Applicant/Agent's Name: Justin Jarboe

Address: 55 Watermill Lane, Suite 200- Great Neck, NY

Telephone: 718 343-0026 Email: jjarboe@epdsco.com

Applicant/Agent's Signature: 

Date: 2/13/17

WATERFRONT REVITALIZATION PROGRAM

Policy 1: Support and Facilitate Commercial and Residential Redevelopment in Areas Well-Suited to Such Development

1.1 Encourage commercial and residential redevelopment in appropriate Coastal zone areas.

A. Criteria that should be considered to determine areas appropriate for reuse through public and private actions include: compatibility with the continued functioning of the designated Special Natural Waterfront Areas, the Arthur Kill Ecologically Sensitive Maritime and Industrial Area, or Significant Maritime and Industrial Areas, where applicable; the absence of unique or significant natural features or, if present, the potential for compatible development; the presence of substantial vacant or underused land; proximity to existing residential or commercial areas and for opening up the waterfront to the public; transportation access; the maritime and industrial jobs potentially displaced or created; and the new opportunities created by redevelopment.

The proposed development would promote Policy 1, as further detailed below. The proposed action affects an entire city block within the Coastal Zone Boundary that is currently vacant and not located neither on a waterfront parcel nor within or adjacent or any Special Natural Waterfront Areas, the Arthur Kill Ecologically Sensitive Maritime and Industrial Area, or Significant Maritime and Industrial Areas.

The proposed actions would rezone the affected area from R4/C1-2 to R8A/C2-4 and from R4 to R6A and R7A; and a zoning text amendment to make the affected area applicable to the Mandatory Inclusionary Housing (MIH) Program. The Proposed Actions are necessary to facilitate the proposed FAR, height and bulk of the proposed development and would provide a number of affordable dwelling units.

The Development Site is upland and vacant, and contains the potential for compatible residential development with supporting commercial retail and community facility space, as these uses are present within close proximity to the affected vacant area. As such, the proposed development is appropriately located and is not needed for other purposes as prescribed by the policy above. For further information regarding the proposed development's capacity with surrounding uses, see the Land Use, Zoning, and Public Policy section (**Chapter 4**)

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

A. Encourage development at a density compatible with the capacity of surrounding roadways, mass transit, and essential community services such as public schools. Lack of adequate local infrastructure need not preclude development, but it may suggest the need to upgrade or expand inadequate or deteriorated local infrastructure.

The Proposed Development would be appropriate in scale and not strain existing infrastructure. The Proposed Development consists of a medium-density mixed-use development that would be compatible with the scale existing developments in the surrounding area and would be linked to existing infrastructure services, which are adequate for the proposed development, as further discussed in the Water and Sewer Infrastructure section (Chapter 13).

Policy 6: Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.

This policy aims to reduce flooding and erosion hazards in order to protect life, structures, infrastructure, and natural resources. Much of New York City's social, economic, cultural, and natural resources are located in coastal areas that have risks from flooding and erosion. Storms such as Hurricanes Irene and Sandy have shed light on vulnerabilities facing waterfront communities that exist in the City today, and that are likely to increase due to climate change and sea level rise in the future. These risks should be identified and adaptive measures to manage these risks incorporated to the extent appropriate or practicable. In addition, new projects in coastal areas should be planned and designed to reduce risks posed by current and future coastal hazards and encourage the efficient use of public funding.

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

The Proposed Development is not a significant flood risk as the Project Area is not within the FEMA A-zone (1% flood risk, or "100-year flood" hazard), but is instead in an X-Zone (0.2% flood risk) and does not require wet-flood proofing requirements of Appendix G to comply with ASCE 24-05 for a primarily residential building (Residential Occupancy R-2). However, according to WRP and DCP's updated 2050 annual chance floodplain projections, the Proposed Development is within the 1% annual chance floodplain. Accordingly, a detailed analysis has been performed pursuant to 6.2 (see attached spreadsheet).

The building does not contain a publically accessible waterfront and is located upland from any shore. The lowest elevation of the proposed development consists of cellar area that serves as some minor mechanical space and storage. The area is below the current 1% annual chance floodplain, and will be below the 1% flood elevation by the 2050s under all sea level rise projections. Potential consequences include damage minor building mechanical equipment and storage areas. This could result in a temporary loss of building services, which could result in damage to property and temporary displacement of residents. No boilers or fuel oil would be utilized in this area, as the boilers would be located on the roof of the structure.

The next lowest point in the proposed development would consist of residential lobby space, parking and commercial retail areas. The area is above the elevation of the current 1% annual change flood elevation and would be marginally within the high projections by the 2050s and within the mid-level projections by the 2080 and 2100, beyond the anticipated lifespan of the building. If still occupied in 2050, there could be damage to cars and structural damage to the building, which could result in damage to property, loss of inventory and temporary displacement of residents. However, this area is at natural grade and would drain naturally.

The lowest residential floor of the proposed development would be at 23 feet (NAVD88) and would be above the elevation of the 1% annual chance flood level under all projections. There is no chance for flooding for any habitable space under these projections.

The only feature that would be expected to be below the elevation of Mean Higher High Water at some point over its lifespan is the cellar level. This area is currently below the elevation of Mean

Higher High Water and would continue to be below under all projections for the lifespan of the building (2050s). This could result in frequent flooding due to elevated groundwater tables if design measures are not taken into account.

Coastal storms could bring high winds in addition to the flood hazards described above. The site is not within a Coastal A or V zone.

The building is currently outside of the official FEMA 1% annual chance floodplain and is not required to meet NYC Building Code requirements for flood resistant construction. However, the building is not designed with any major below grade spaces, with a small mechanical area slightly above grade, which would adhere to construction requirements for the X-Zone (0.2% flood risk), mostly related to fuel oil. If the floodplain covers higher areas of site in the future, additional retrofits could be pursued to wet floodproof or to dry floodproof the exterior and reinforce the foundation. No dwelling units or critical areas are proposed on the ground floor or within any projections during the useful life of the building (beyond 2050). Secondary stairs could be modified to be raised and fuel oil is planned to be stored on the roof of the structure. Any at grade areas (parking, commercial retail space and lobby area) would drain naturally. If the elevation of the floodplain increases prior to the 2050s, additional protection could be provided through temporary barriers, or subsequent retrofits to extend dry floodproofed materials to higher elevations.

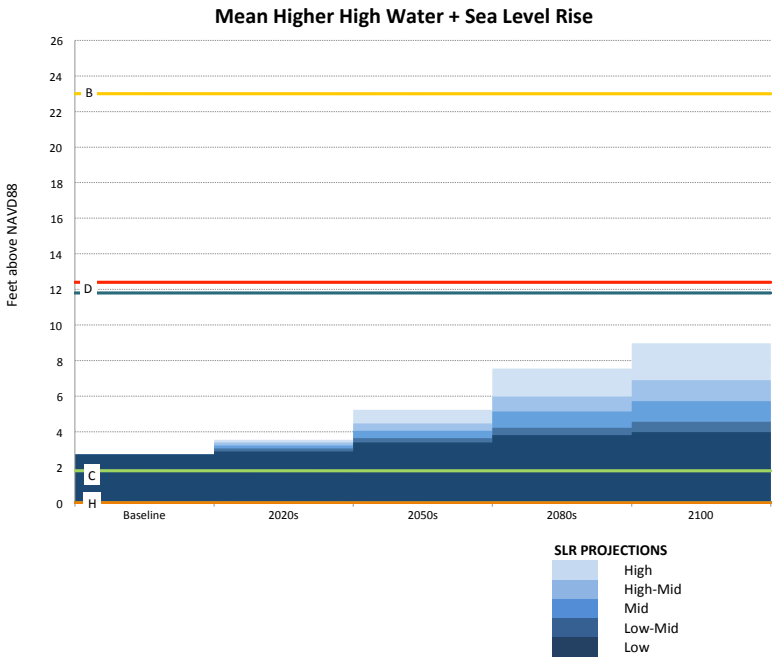
The measures described above would address the potential vulnerability of the parking area to future Mean Higher High Water.

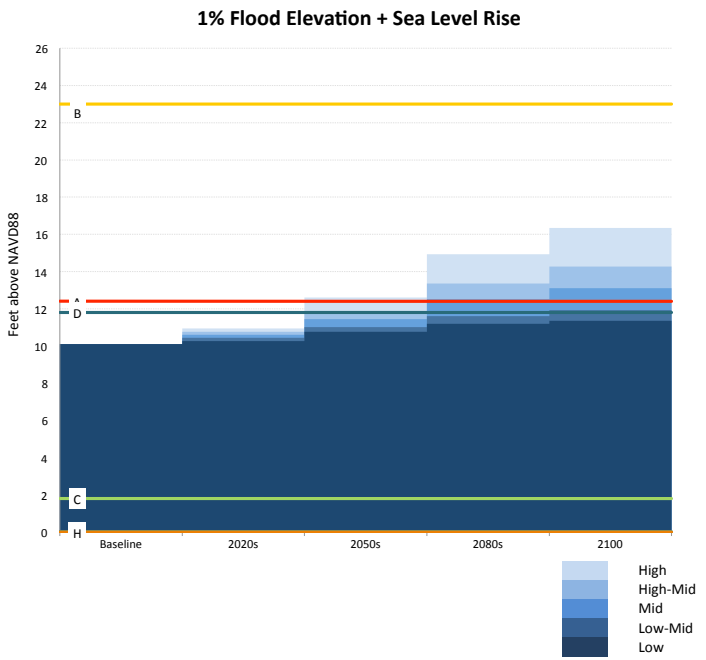
The proposed development would be required to meet NYC Building Code standards for wind loading.

The project would not make flooding on adjacent sites worse, nor would it conflict with other plans for flood protection on adjacent sites.

The proposed project advances Policy 6.2. All new vulnerable, critical, or potentially hazardous features would be protected through flood damage reduction elements or future adaptive actions.

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







Click for Map Legend

Future Floodplain 2050s

1% Annual Chance Floodplain

0.2% Annual Chance Floodplain

NYC DCP Floodplain Mapper

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was New York Long Island State Plane FIPSZONE 3104. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3182
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the Department of Information Technology and Telecommunication, City of New York (DoITT). This information was derived from digital orthophotos produced at a scale of 1:1,200 with 2-foot pixel resolution from photography dated April 2008.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**. The LiMWA represents the approximate landward limit of the 1.5- foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) LEGEND

11-16-1991 Otherwise Protected Area (OPA)

FLOOD INSURANCE NOT AVAILABLE FOR STRUCTURES NEWLY BUILT OR SUBSTANTIALLY IMPROVED ON OR AFTER NOVEMBER 16, 1991, IN DESIGNATED OPAs WITHIN THE CBRS.

Boundaries of the John H. Chafee Coastal Barrier Resources System (CBRS) shown on this FIRM were transferred from the official CBRS source map(s) for this area and are depicted on this FIRM for informational purposes only. The official CBRS maps are enacted by Congress via the Coastal Barrier Resources Act, as amended, and maintained by the U.S. Fish and Wildlife Service (FWS). The official CBRS maps used to determine whether or not an area is located within the CBRS are available for download at http://www.fws.gov. For an official determination of whether or not an area is located within the CBRS, or for any questions regarding the CBRS, please contact the FWS field office for this area at (631) 776-1401.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
	Limit of Moderate Wave Action
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced to the North American Vertical Datum of 1988	
A A	Cross section line
23 23	Transect line
	Culvert, Flume, Penstock or Aqueduct
	Road or Railroad Bridge
	Footbridge
87°07'45", 32°22'30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
2476000mN	1000-meter Universal Transverse Mercator grid values, zone 18
600000 FT	5000-foot grid values: New York State Plane coordinate system, Long Island zone (FIPSZONE 3104), Lambert Conformal Conic projection
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
M1.5	River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

INITIAL NFIP MAP DATE
June 28, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS
June 11, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE
November 16, 1983

FLOOD INSURANCE RATE MAP REVISIONS

For descriptions of revisions see Notice to Users page in the Flood Insurance Study report.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
150 0 150 300 METERS

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0236G

FIRM
FLOOD INSURANCE RATE MAP

CITY OF,
NEW YORK
NEW YORK
BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES

PANEL 236 OF 457

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
NEW YORK, CITY OF	360497	0236	G

- NOTE: -
THIS MAP INCLUDES BOUNDARIES OF THE COASTAL BARRIER RESOURCES SYSTEM ESTABLISHED UNDER THE COASTAL BARRIER RESOURCES ACT OF 1982 AND/OR SUBSEQUENT ENABLING LEGISLATION.

PRELIMINARY
DECEMBER 5, 2013

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
3604970236G

MAP REVISED

Federal Emergency Management Agency

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

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

Enter information about the project and site in highlighted cells in Tabs 1-3. HighTab 4 contains primary results. Tab 5, "Future Flood Level Projections" contains background computations. The remaining tabs contain additional results, to be used as relevant.Non-highlighted cells have been locked.

Background Information	
Project Name	Linden Boulevard
Location	Brooklyn
Type(s)	☒ Residential, Commercial, Community Facility Development ☐ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facili ☐ Industrial Uses ☐ Over-water Structures ☐ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/ Drainage ☐ Coastal Protection
Description	The Proposed Actions would facilitate the development of four buildings totaling 580,679 gross square feet (gsf) including 479,603 gsf of residential space (504 dwelling units), 35,700 gsf of commercial retail space (Use Group 6) and 24,535 gsf of community facility space (recreation center and daycare, Use Group 4). 112 accessory parking spaces would be provided at grade within 40,831 gsf. The buildings heights would range from 8- to 12-stories. The four new buildings would be within four new tax and zoning lots (Block 4496, Lots 1, 15, 29 & 48).
Planned Completion date	2020

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

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

Last update: March 16, 2017

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	2.72	**2.72**	**NAVD88**	*NOAA - North Channel NY Station ID: 8517201 (TRANSLATED TO NAVDD88)*
1% flood height	10.10	**10.10**	**NAVD88**	*FEMA FIS - 360497V00B (12/05/13) - Transect Data - K1*
As relevant:				
0.2% flood height	12.90	12.90	**NAVD88**	*FEMA FIS - 360497V00B (12/05/13) - Transect Data - K1*
MHW	2.36	2.36	**NAVD88**	*NOAA - North Channel NY Station ID: 8517201 (TRANSLATED TO NAVDD88)*
MSL	-0.39	-0.39	**NAVD88**	*NOAA - North Channel NY Station ID: 8517201 (TRANSLATED TO NAVDD88)*
MLLW	-3.42	-3.42	**Station**	*NOAA - North Channel NY Station ID: 8517201 (TRANSLATED TO NAVDD88)*

Data will be converted based on the following datums:

Datum	FT (NAVD88)	Feet	Datum	Source
NAVD88	*0.00*			
NGVD29	*-1.10*			
Manhattan Datum	*1.65*			
Bronx Datum	*1.51*			
Brooklyn Datum (Sewer)	*0.61*			
Brooklyn Datum (Highway)	*1.45*			
Queens Datum	*1.63*			
Richmond Datum	*2.09*			
Station	0.00	-21.72	**Station**	
MLLW	#N/A	-3.42	**Station**	

Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 1% flood height	Ft Above 0.2% flood height
A	☒ Vulnerable ☐ Critical ☐ Potentially Hazardous ☒ Other	2050	12.4	Feet	NAVD88	*12.4*	*12.4*	*9.7*	*2.3*	*-0.5*
Commercial areas, Parking										
B	☒ Vulnerable ☐ Critical ☐ Potentially Hazardous ☒ Other	2050	23.0	Feet	NAVD88	*23.0*	*23.0*	*20.3*	*12.9*	*10.1*
Residential Spaces										
C	☒ Vulnerable ☐ Critical ☐ Potentially Hazardous ☒ Other	2050	1.8	Feet	NAVD88	*1.8*	*1.8*	*-0.9*	*-8.3*	*-11.1*
Cellar (mechanical space, storage)										
D	☒ Vulnerable ☐ Critical ☐ Potentially Hazardous ☒ Other	2050	11.8	Feet	NAVD88	*11.8*	*11.8*	*9.1*	*1.7*	*-1.1*
Residential lobby (no living space)										
E	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
F	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
G	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										
H	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88					
Description of Planned Uses and Materials										

SLR (ft)

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

MHHW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	2.72	2.72	2.72	2.72	2.72
2020s	2.89	3.05	3.22	3.39	3.55
2050s	3.39	3.64	4.05	4.47	5.22
2080s	3.80	4.22	5.14	5.97	7.55
2100	3.97	4.55	5.72	6.89	8.97

1%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	10.10	10.10	10.10	10.10	10.10
2020s	10.27	10.43	10.60	10.77	10.93
2050s	10.77	11.02	11.43	11.85	12.60
2080s	11.18	11.60	12.52	13.35	14.93
2100	11.35	11.93	13.10	14.27	16.35

0.2%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	12.90	12.90	12.90	12.90	12.90
2020s	13.07	13.23	13.40	13.57	13.73
2050s	13.57	13.82	14.23	14.65	15.40
2080s	13.98	14.40	15.32	16.15	17.73
2100	14.15	14.73	15.90	17.07	19.15

	0	1
A	12	12.4
B	23	23
C	1.8	1.8
D	11.8	11.8
E	0	0
F	0	0
G	0	0
H	0	0

SLR (in)

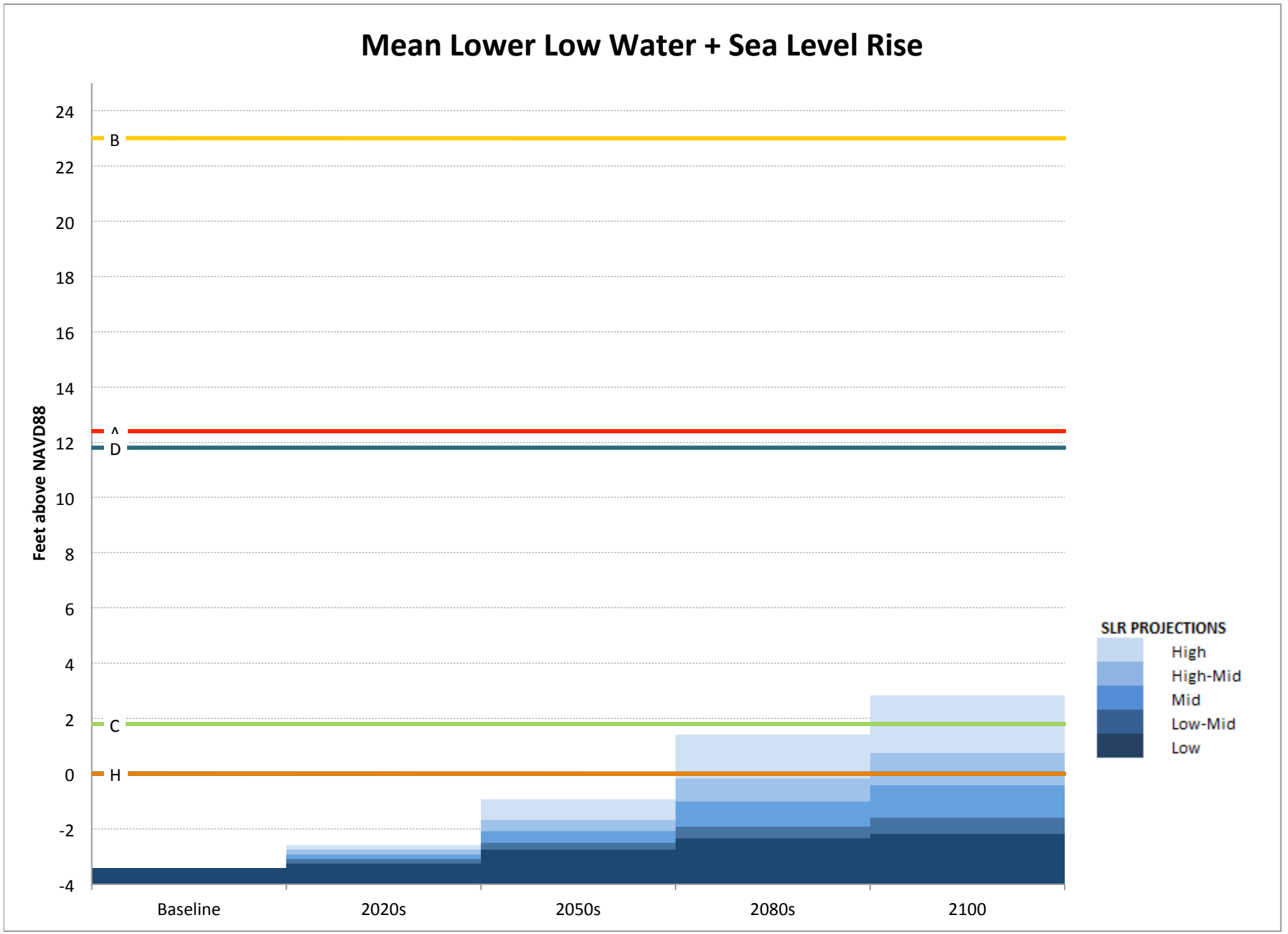
	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

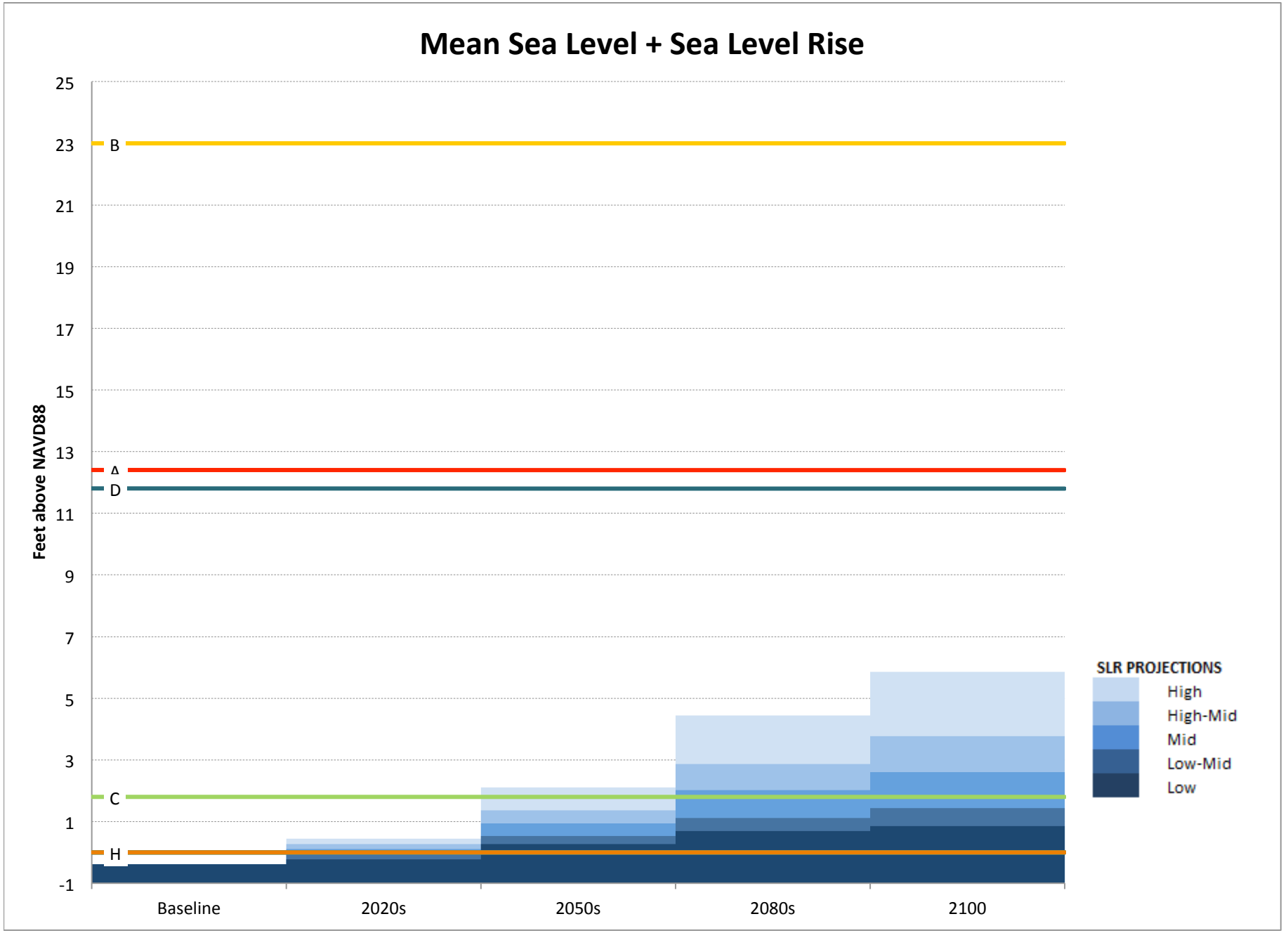
MLLW+SLR (ft above NAVD88)

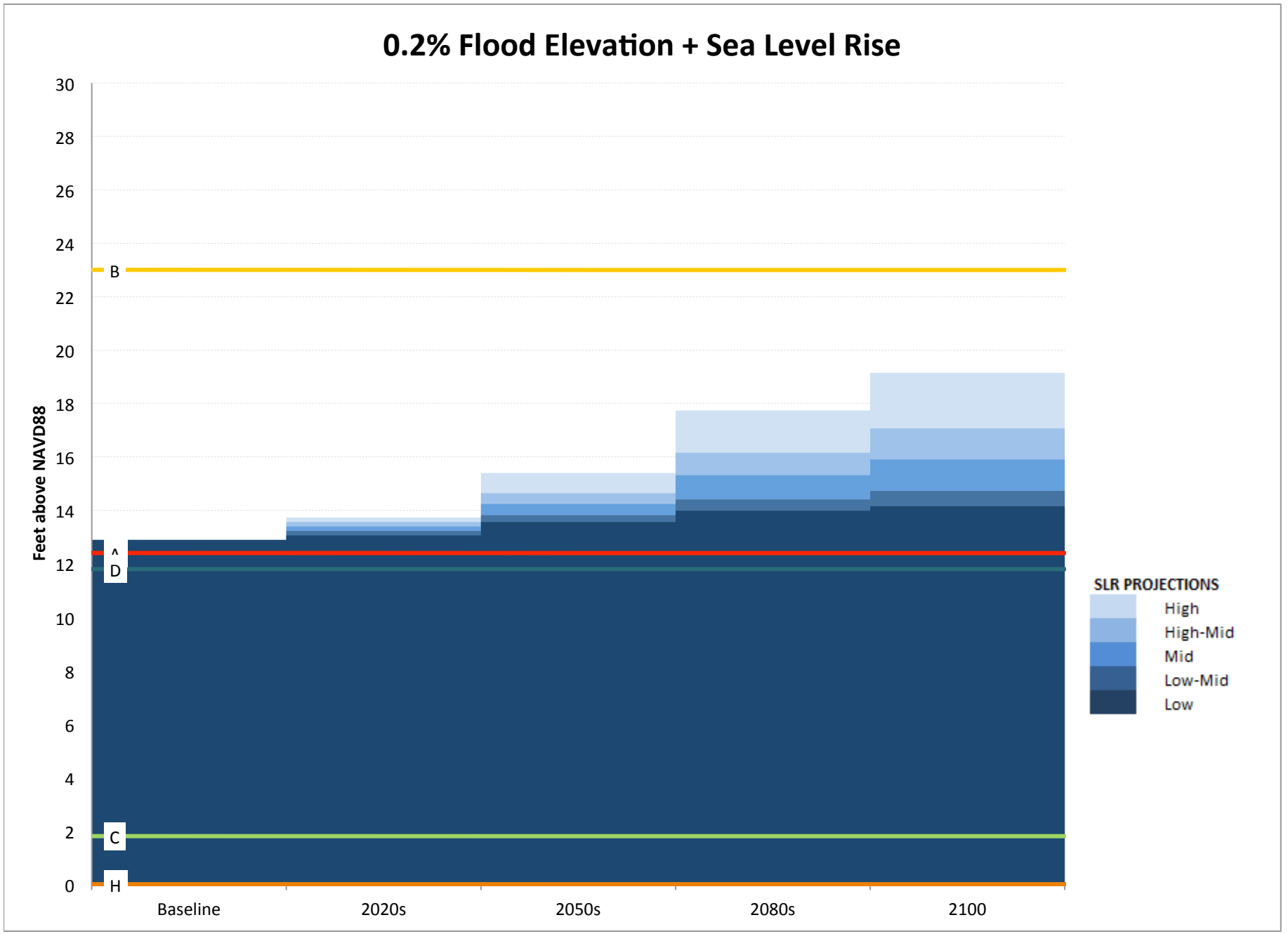
	Low	Low-Mid	Mid	High-Mid	High
Baseline	-3.42	-3.42	-3.42	-3.42	-3.42
2020s	-3.25	-3.09	-2.92	-2.75	-2.59
2050s	-2.75	-2.50	-2.09	-1.67	-0.92
2080s	-2.34	-1.92	-1.00	-0.17	1.41
2100	-2.17	-1.59	-0.42	0.75	2.83

MSL+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	-0.39	-0.39	-0.39	-0.39	-0.39
2020s	-0.22	-0.06	0.11	0.28	0.44
2050s	0.28	0.53	0.94	1.36	2.11
2080s	0.69	1.11	2.03	2.86	4.44
2100	0.86	1.44	2.61	3.78	5.86


Mean Lower Low Water + Sea Level Rise
Feet above NAVD88
24
22
20
18
16
14
12
10
8
6
4
2
0
-2
-4
B
A
D
C
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


Mean Sea Level + Sea Level Rise
Feet above NAVD88
25
23
21
19
17
15
13
11
9
7
5
3
1
-1
B
A
D
C
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low


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

Attachment B

Water and Sewers Matrix

NYC DEP Volume Calculation Matrix

These instructions are to assist in the completion of the DEP Volume Calculation Matrix. Following this tab, there are two worksheets (WS1 and WS2) and a Summary Table. The worksheets must be completed first in order to provide the information necessary to complete the Summary Table. With-Action Scenario information entered in each worksheet and the Summary Table should include the project and No-Action Scenario for that site. Additional instructions for each tab in this spreadsheet are listed below.

SUMMARY TABLE: Comparison of Existing and With-Action Volume

Using the information from worksheets (WS1 and WS2), enter the information below in the summary table as follows:

Step 1: Enter in the CSO subcatchment area info for the proposed project above the table. If the proposed project crosses over several different CSO sub-catchment areas, a summary table should be completed for each CSO sub-catchment area.

Step 2: In the **Existing** table, enter in the area of the proposed project in square feet and in acres (1 acre = 43,560 sq. ft.).

Step 3: Enter the area of the proposed project at the top of the With-Action table in square feet and in acres and complete in the same way as the **Existing** table.

Step 4: The information for columns in this table should be taken from the completed Surfaces Calculations and Volume Calculations Worksheets. RUNOFF

Step 5: The **Existing** and **With-Action** summary tables should be directly inserted into CEQR Infrastructure chapters.

Note: The applicant should only input information in the fields highlighted in yellow.

WORKSHEET 1 (WS1): Surfaces Calculations

WS1 calculates the weighted runoff coefficients to be used in WS2 based on the types of surfaces associated with the existing site and those that will be associated with the proposed site. If the existing and/or planned site is comprised of two discrete or phased sites, use the additional cells provided (labeled Site B) in WS1. In addition, if there are more than two sites, copy and paste the cells to provide for the entire proposed project.

Step 1: In the **Existing** table, enter the total areas for each surface type in the corresponding column (i.e., roof, pavement & walks, other, and grass/softscape). The total surface area and percentages of the total site those areas represent should auto-caculate. If they do not automatically calculate, click on the cell and press the F9 key. This should activate the calculation. Runoff coefficients for each surface area are provided in the worksheet and the total or weighted runoff coefficient will be auto-calculated (or press the F9 key).

Step 2: Repeat for **With-Action** table using information for the entire area for the With-Action scenario (project + No-Action scenario).

Step 3: The "TOTAL" columns have the formulas in place to calculate total percent, surface area, and weighted runoff coefficient. If they do not automatically compute, click on the cell and ensure the correct cells are highlighted, then press enter. This should activate the computation.

Step 4: Use the Runoff Coefficient in "TOTAL" column (or the Weighted Runoff Coefficient) for the Rational Method calculations in WS2, Volume Calculations, tables.

Step 5: The **Existing** and **With-Action** surfaces calculations tables should be directly inserted into CEQR Infrastructure chapters.

Note: The applicant should only input information in the fields highlighted in yellow.

WORKSHEET 2 (WS2): Volume Calculations

Worksheet 2 calculates the discharge volume (in millions of gallons - MG) from the existing and proposed site to the CSS as well as stormwater volumes to separate storm sewers or direct discharges to surface waterbodies. Identify the CSO subcatchment area or recieving water body, and complete a separate table for each,

Step 1: Enter the CSO subcatchment area for the site at the top of the **Existing** table.

Step 2: In **Existing** table, reference WS1 and enter the total area of the site's runoff being directed to combined or separate storm sewers or direct discharge. Square feet will need to be converted to acres for this worksheet (1 Acre = 43,560 sq. ft.). WS1 will provide the areas for each discharge type. The area entered will be the same for each row of storm volume and duration.

Step 3: Enter the Weighted Runoff Coefficient for that area in the corresponding column. Use the weighted runoff coefficients for entire proposed project from WS1.

Step 4: in column H, enter the total sanitary flow (*i.e.*, sewage generation) calculated for the existing site per the guidance in the CEQR Technical Manual. The worksheet will calculate the volume associated with sanitary flows during specific storm events using the durations provided in the table (in column I).

Step 5: If necessary, repeat tables for areas of the site that discharge to separate storm sewers or direct discharge/overland flow. Also, repeat all tables if proposed project crosses over several different CSO subcatchment areas or if proposed project includes a phased implementation plan or discrete sites.

Step 6: Repeat for the **With-Action** tables using information from the proposed project's site plan. See instructions above referring to completion of a separate table for each discharge point, catchment area or phase associated with the proposed project.

Step 7: The formulas are in place for summing the **"TOTAL"** tables on the right side of the worksheet. Use these totals in the Summary Table. Note: any direct discharge volumes to adjacent waterbodies will be needed for the Summary Table for the "RUNOFF TO RIVER" column.

Note: The applicant should only input information in the fields highlighted in yellow.

Reference:

MG	millions of gallons
GPD	gallons per day
in	inches
hr	hour
A	area
SF	square feet
I	intensity
C	runoff coefficient
CSS	combined sewer system
CSO	combined sewer overflow
CEQR	City Environmental Quality Review

COMPARISON OF EXISTING AND WITH-ACTION VOLUME

CSO SUBCATCHMENT AREA:[1]

EXISTING

		Area = 100,000 SF (2.3 ACRES)								
		SITES 1-4								SITES 1-4
RAINFALL VOLUME (in)	RAINFALL DURATION (hr)[3]	RUNOFF VOLUME DIRECT DRAINAGE (MG)[4]	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	RUNOFF VOLUME TO RIVER (MG)	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)
0.00	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.20	11.30	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01
2.50	19.50	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.03

With-Action

		Area = 100,000 SF (2.3 ACRES)								
		SITES 1-4								SITES 1-4
RAINFALL VOLUME (in)	RAINFALL DURATION (hr)[3]	RUNOFF VOLUME DIRECT DRAINAGE (MG)[4]	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	RUNOFF VOLUME TO RIVER (MG)	RUNOFF VOLUME TO CSS (MG)	SANITARY VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)	TOTAL VOLUME TO CSS (MG)
0.00	3.80	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.02
0.40	3.80	0.00	0.02	0.02	0.04	0.00	0.00	0.00	0.00	0.04
1.20	11.30	0.00	0.06	0.07	0.13	0.00	0.00	0.00	0.00	0.13
2.50	19.50	0.00	0.13	1.14	1.27	0.00	0.00	0.00	0.00	1.27

[1] If the proposed project crosses over several different CSO subcatchment areas, the above summary table should be completed for each CSO sub-catchment area.

[2] If proposed project includes a phased implementation plan or discrete sites, assess volumes using additional cells above (e.g., Site B).

[3] Based on ***Intensity/duration/Frequency Rainfall Analysis, New York City and the Catskill Mountain Water Supply Reservoirs,*** Vieux & Associates, Inc., April 4, 2006. The 24-hour rainfall volume is based on average rainfall intensity over 24-hours (inch/per) times 24 hrs. (Duration information provided by T. Newman & P. Jadhav, HydroQual).

[4] The volume (calculated in WS2) of stormwater runoff from any portion of the proposed project site draining to a separate storm sewer or as overland flow directly to a waterbody should be entered here.

SURFACE CALCULATIONS

CSO SUBCATHMENT OR RECEIVING WATERBODY FOR STORM SEWER OR DIRECT DISCHARGE: Projected Development Sites 1-4

	EXISTING					
	WEIGHTED RUNOFF COEFFICIENT, C					
	SURFACE TYPE[1]	ROOF[2]	PAVT & WALKS	OTHER[3]	GRASS & SOFT SCAPE	TOTAL
SITES 1-4	AREA, %	0%	0%	0%	100%	100%
	SURFACE AREA, SF	0	0	0	100000	100000
	RUNOFF COEFFICIENT	1.00	0.85	0.85	0.20	**0.20**
	AREA, %	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
	SURFACE AREA, SF	XX,XXX	XX,XXX	XX,XXX	XX,XXX	0
	RUNOFF COEFFICIENT	1.00	0.85	0.85	0.20	**#VALUE!**

NOTES:

1 Runoff coefficients for each surface type are as per DEP.

2 Total roof areas onsite.

3 Identify any other surfaces onsite and obtain runoff coefficients from DEP.

CSO SUBCATHMENT OR RECEIVING WATERBODY FOR STORM SEWER OR DIRECT DISCHARGE: Projected Development Sites 1-4

	WITH-ACTION SCENARIO (PROJECT + NO-ACTION SCENARIO)					
	WEIGHTED RUNOFF COEFFICIENT, C					
	SURFACE TYPE[1]	ROOF[2]	PAVT & WALKS	OTHER[3]	GRASS & SOFT SCAPE	TOTAL
SITES 1-4	AREA, %	67%	16%	0%	17%	100%
	SURFACE AREA, SF	66965	15655	0	17380	100000
	RUNOFF COEFFICIENT	1.00	0.85	0.85	0.20	**0.84**
	AREA, %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	SURFACE AREA, SF	0	0	0	0	0
	RUNOFF COEFFICIENT	1.00	0.85	0.85	0.20	**#DIV/0!**

NOTES:

1 Runoff coefficients for each surface type are as per NYCDEP.

2 Total roof areas onsite.

3 Identify any other surfaces onsite and obtain runoff coefficients from NYCDEP.

EXISTING:

CSO SUBCATCHMENT AREA:

Rainfall, in	Duration, hr	Total Area (A), acre	Weighted Runoff Coefficient (C)	Stormwater to CSS, MG	Daily Sanitary Sewage Generation per CEQR TM, MGD	Sanitary to CSS , MG
0.00	3.80	2.3	0.20	0.00	0.00	0.000
0.40	3.80	2.3	0.20	0.00	0.00	0.000
1.20	11.30	2.3	0.20	0.01	0.00	0.000
2.50	19.50	2.3	0.20	0.03	0.00	0.000

RECEIVING WATERBODY FOR STORM SEWER OR DIRECT DISCHARGE:

Rainfall, in	Duration, hr	Total Area (A), acre	Weighted Runoff Coefficient (C)	Stormwater Runoff, MG	Daily Sanitary Sewage Generation per CEQR TM, MGD	Sanitary to CSS, MG	TOTAL Sanitary to CSS, MG	TOTAL TO CSS, MG
0.00	3.80	0	0.00	0.00	0.00	0.000	0.000	0.00
0.40	3.80	0	0.00	0.00	0.00	0.000	0.000	0.00
1.20	11.30	0	0.00	0.00	0.00	0.000	0.000	0.01
2.50	19.50	0	0.00	0.00	0.00	0.000	0.000	0.03

WITH-ACTION SCENARIO (PROPOSED PROJECT + WITHOUT ACTION SCENARIO):

CSO SUBCATCHMENT AREA:

Rainfall (I), in	Duration, hr	Total Area (A), acre	Weighted Runoff Coefficient (C)	Stormwater to CSS, MG	Daily Sanitary Sewage Generation per CEQR TM, MGD	Sanitary to CSS , MG
0.00	3.80	2.3	0.84	0.00	0.14	0.022
0.40	3.80	2.3	0.84	0.02	0.14	0.022
1.20	11.30	2.3	0.84	0.06	0.14	0.066
2.50	19.50	2.3	0.84	0.13	0.14	0.114

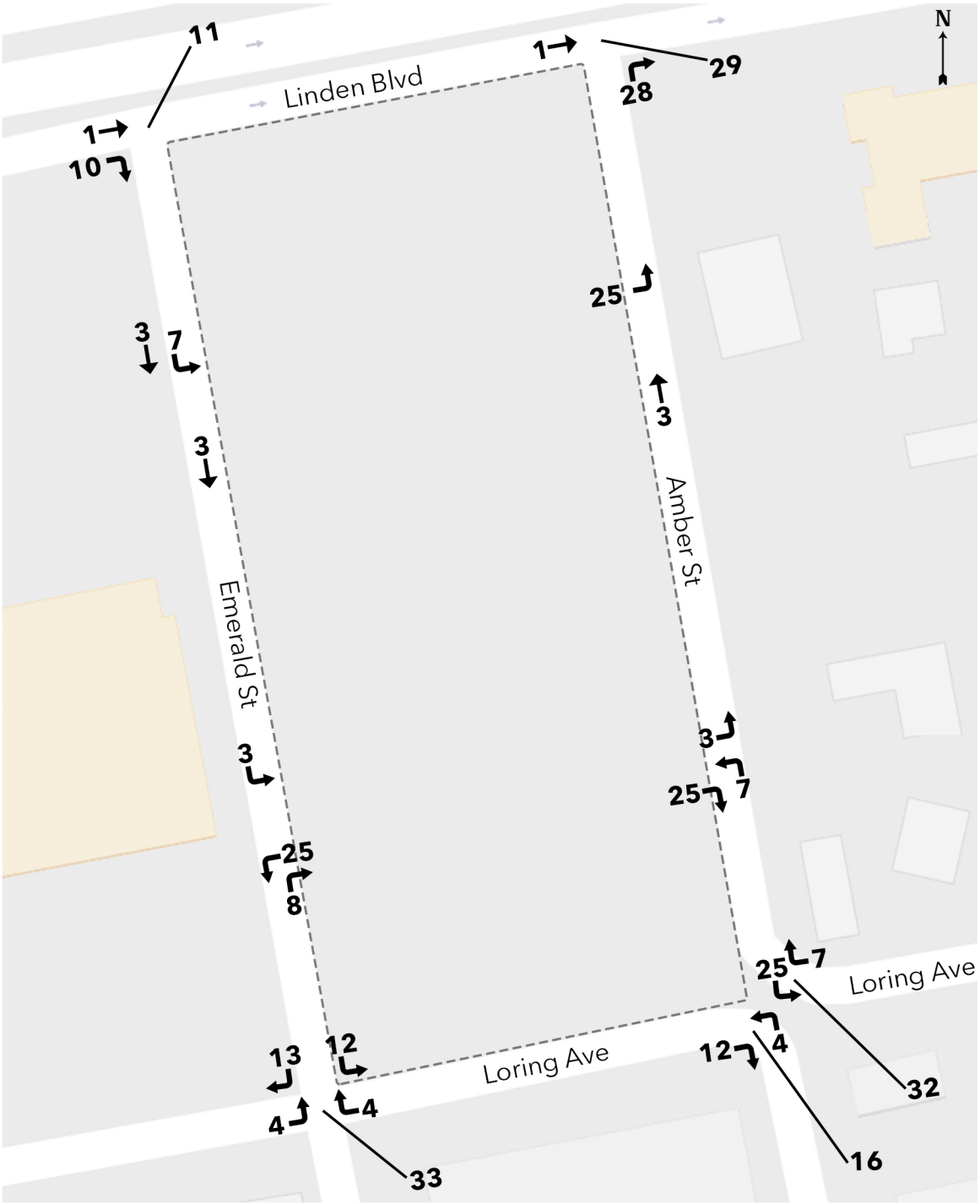
RECEIVING WATERBODY FOR STORM SEWER OR DIRECT DISCHARGE:

Rainfall (I), in	Duration, hr	Total Area (A), acre	Weighted Runoff Coefficient (C)	Stormwater Runoff, MG	Daily Sanitary Sewage Generation per CEQR TM, MGD	Sanitary to CSS, MG	TOTAL Sanitary to CSS , MG	TOTAL TO CSS, MG
0.00	3.80	0	0.00	0.00	0.00	0.000	0.022	0.02
0.40	3.80	0	0.00	0.00	0.00	0.000	0.022	0.04
1.20	11.30	0	0.00	0.00	0.00	0.000	0.066	0.13
2.50	19.50	0	0.00	0.00	0.00	0.000	0.114	0.24

Attachment C

Transportation Tables

Project Generated Total Vehicle Trips
Weekday AM Peak Hour

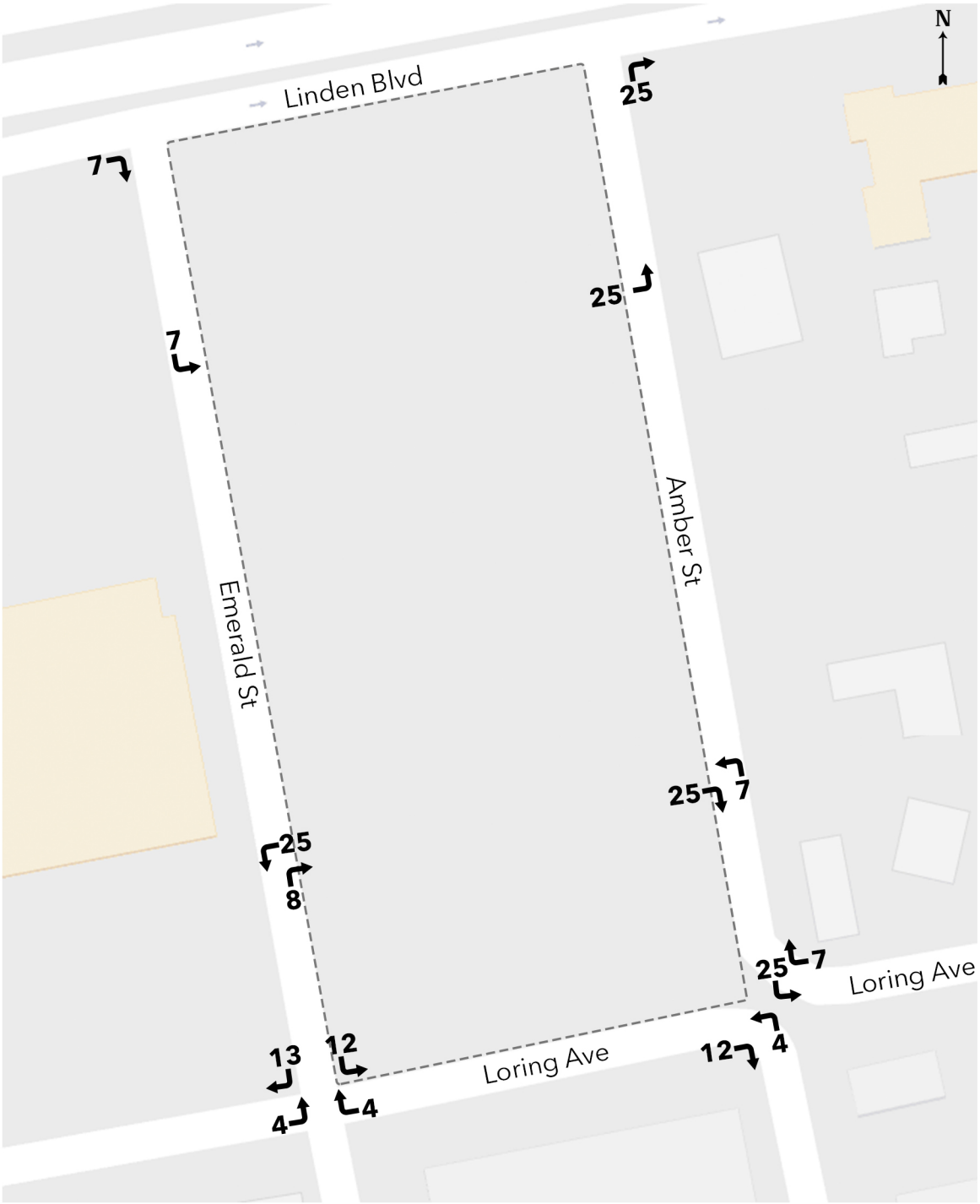


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Total Vehicle Trips 26 IN / 79 OUT

Figure 1

Project Generated Auto Trips
Weekday AM Peak Hour



Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Auto Trips 22 IN / 75 OUT

Figure 1a

Project Generated Taxi Trips
Weekday AM Peak Hour

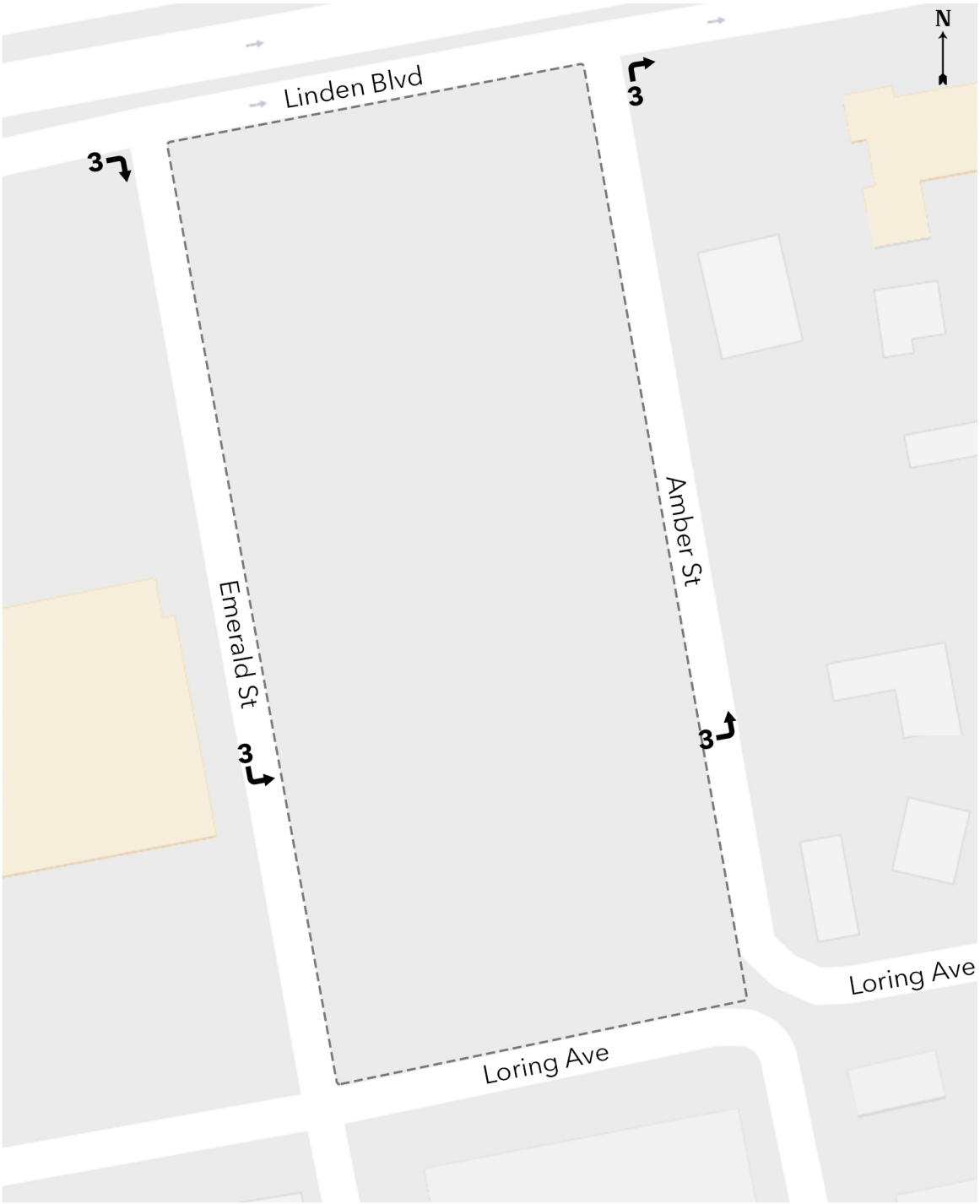


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Taxi Trips 1 IN / 1 OUT

Figure 1b

Project Generated Truck Trips
Weekday AM Peak Hour

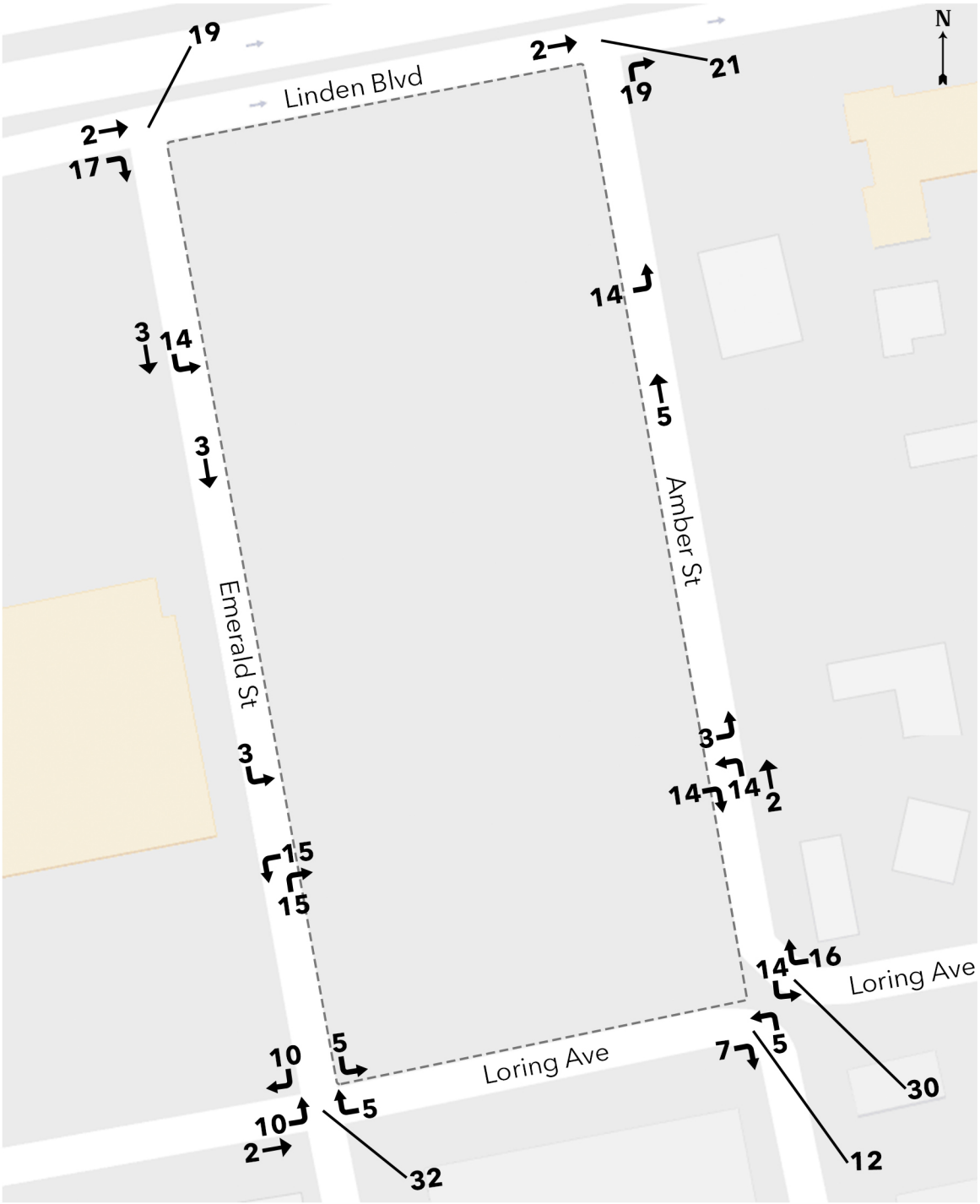


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Truck Trips 3 IN / 3 OUT

Figure 1c

Project Generated Total Vehicle Trips
Weekday Midday Peak Hour

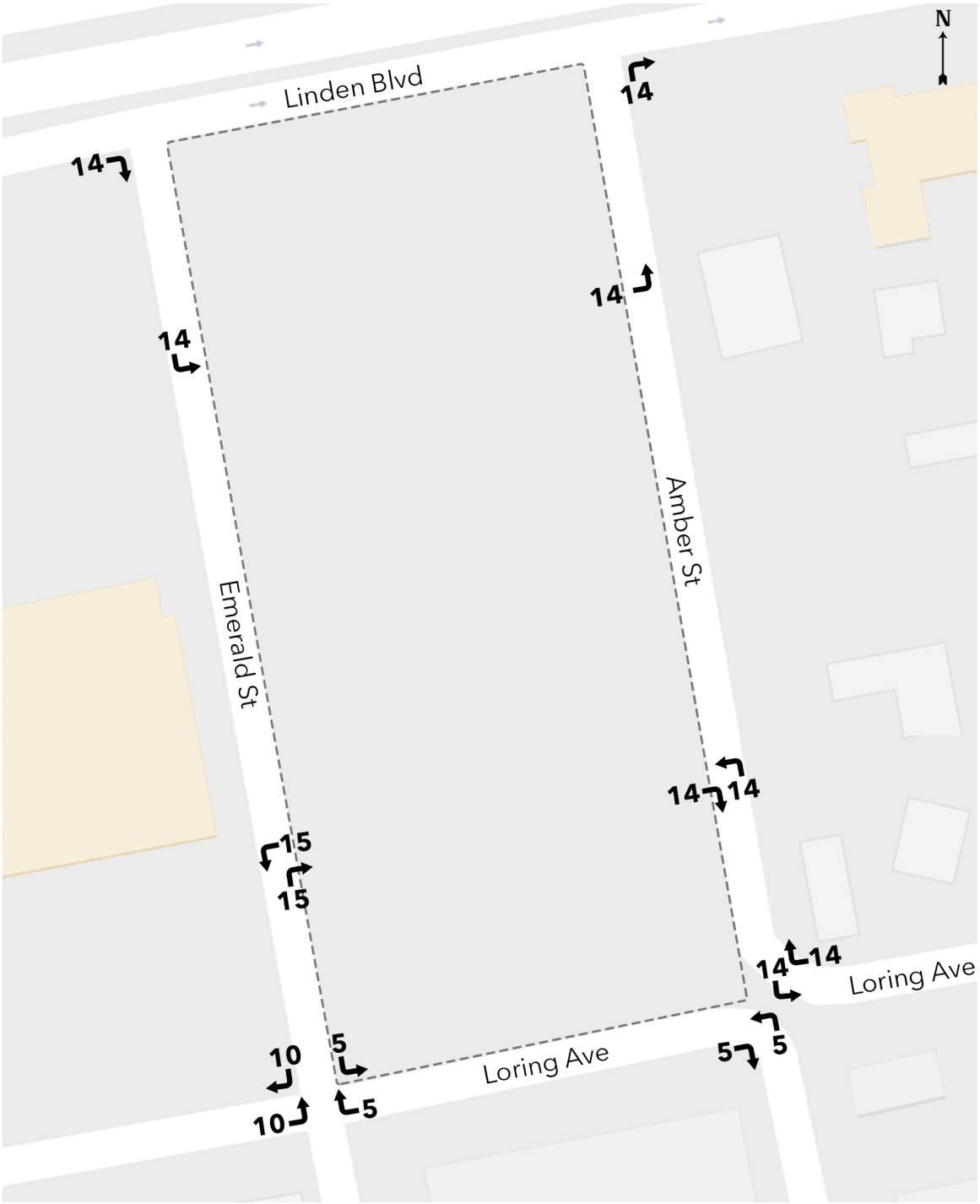


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Total Vehicle Trips 52 IN / 52 OUT

Figure 2

Project Generated Auto Trips
Weekday Midday Peak Hour

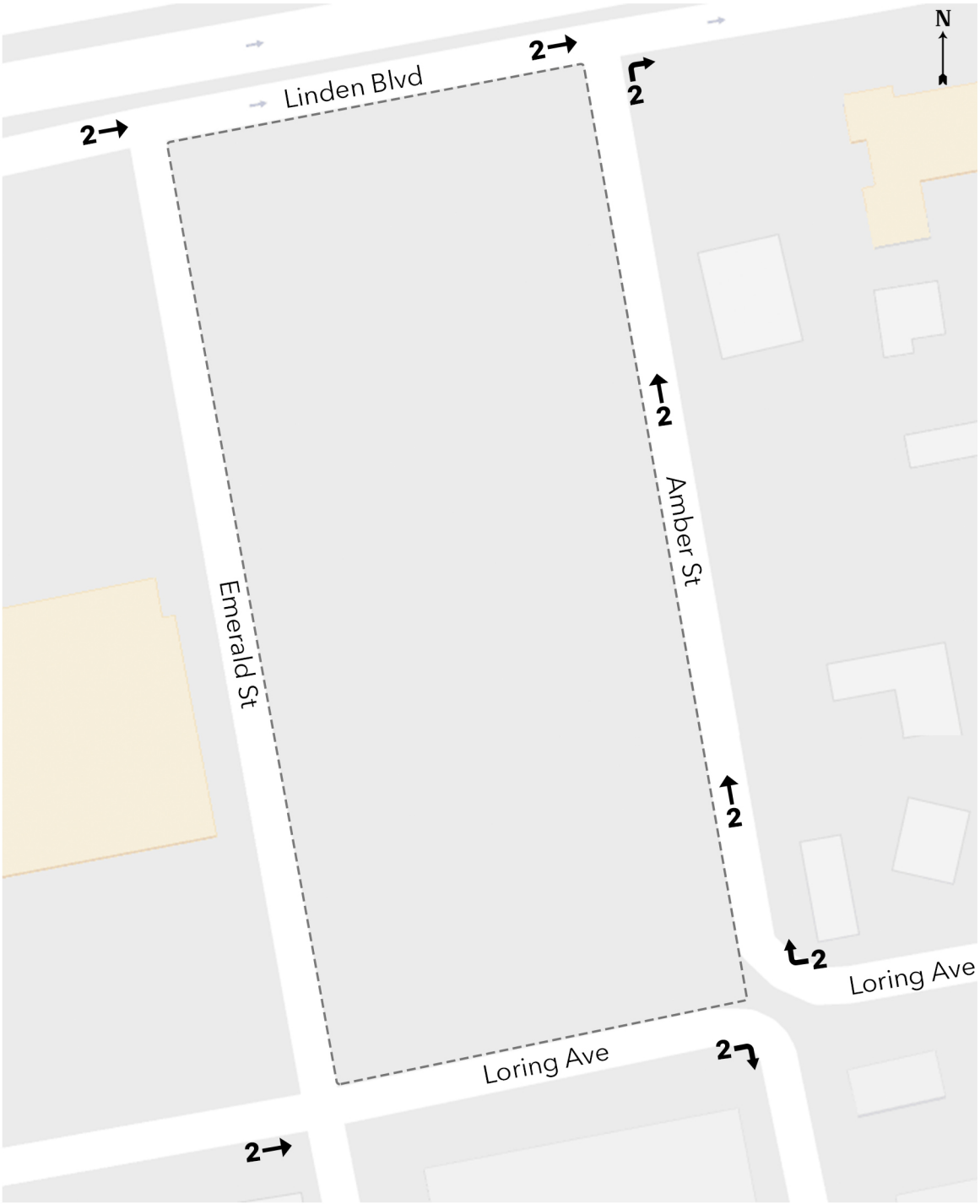


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Auto Trips 43 IN / 43 OUT

Figure 2a

Project Generated Taxi Trips
Weekday Midday Peak Hour

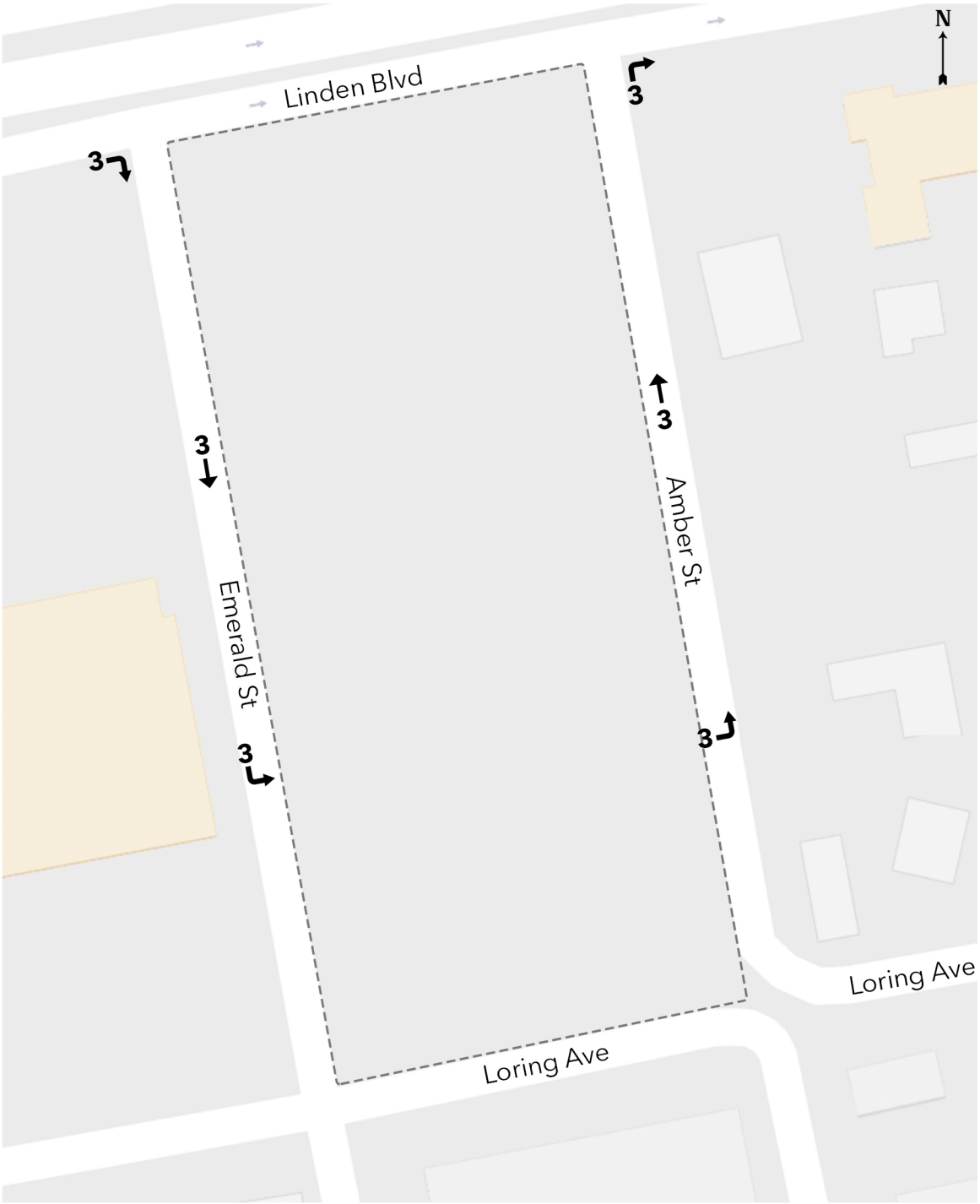


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Taxi Trips 6 IN / 6 OUT

Figure 2b

Project Generated Truck Trips
Weekday Midday Peak Hour

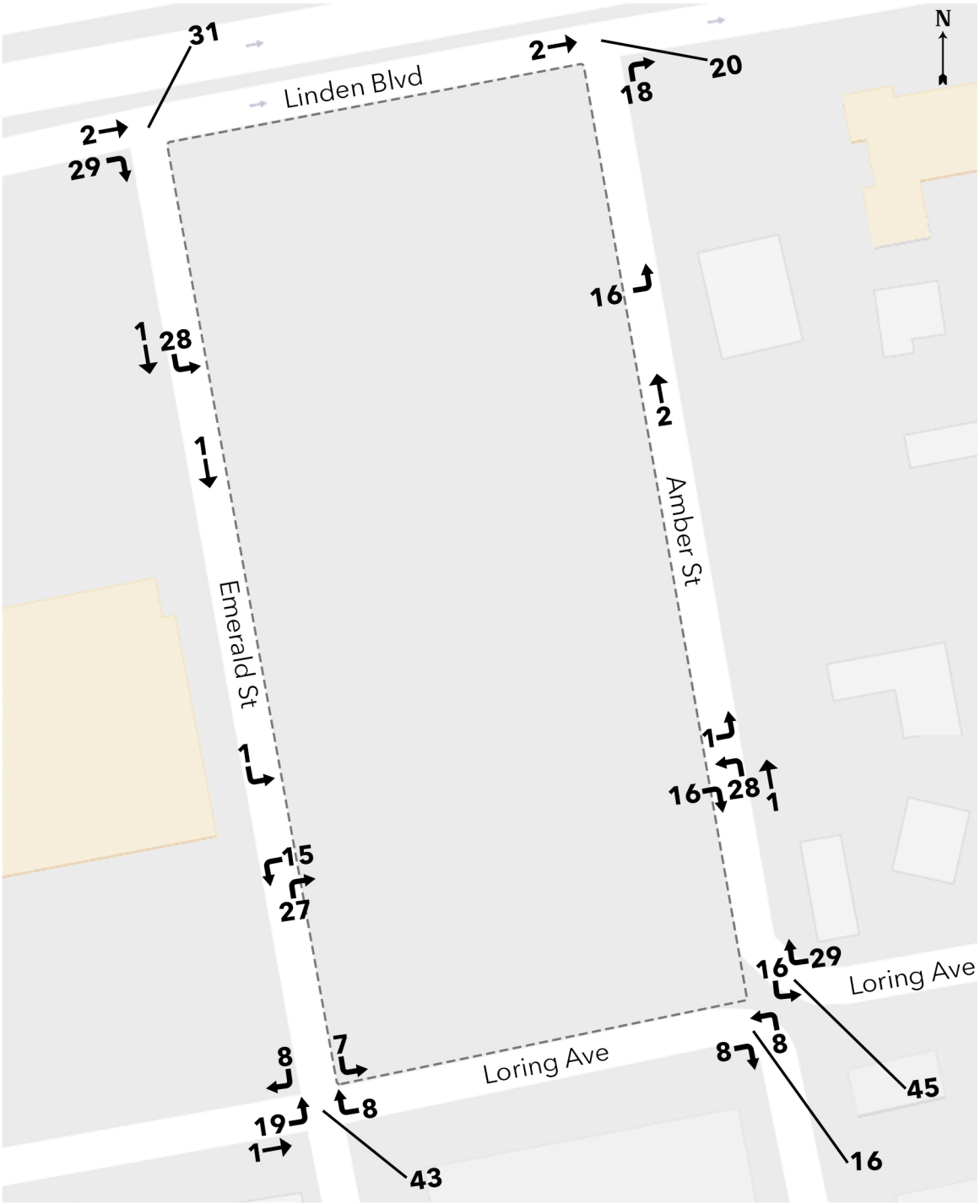


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Truck Trips 3 IN / 3 OUT

Figure 2c

Project Generated Total Vehicle Trips
Weekday PM Peak Hour

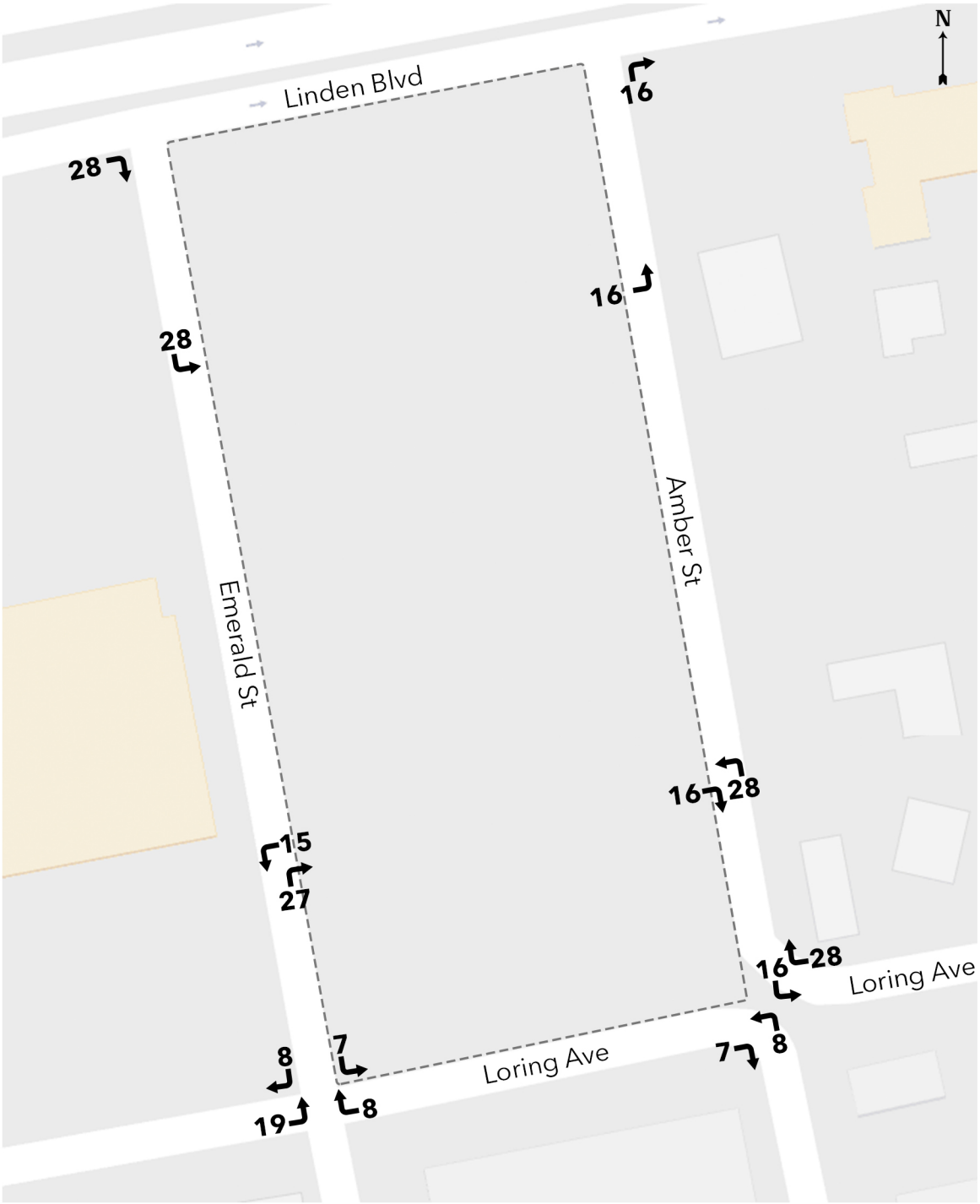


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Total Vehicle Trips 88 IN / 52 OUT

Figure 3

Project Generated Auto Trips
Weekday PM Peak Hour

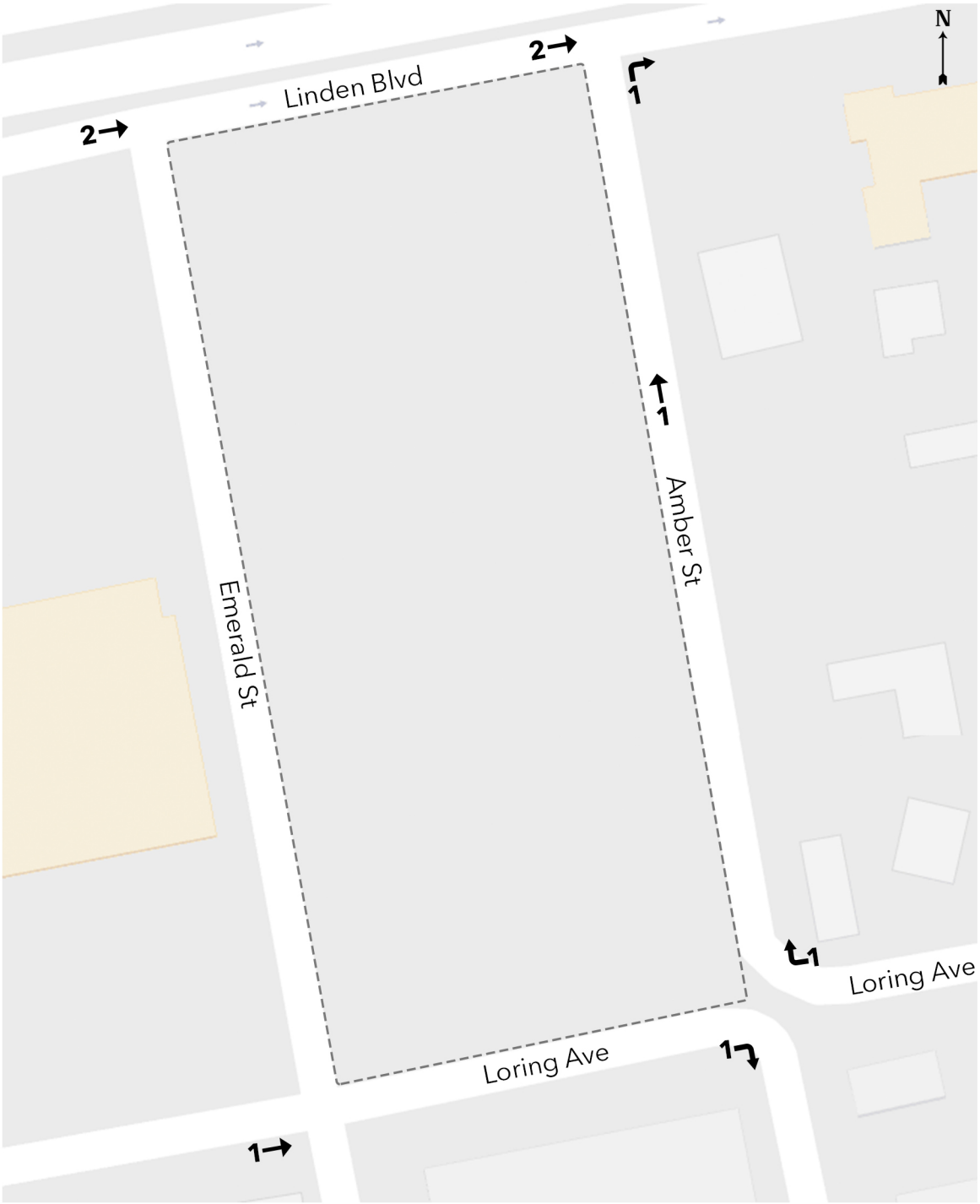


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Auto Trips 83 IN / 47 OUT

Figure 3a

Project Generated Taxi Trips
Weekday PM Peak Hour

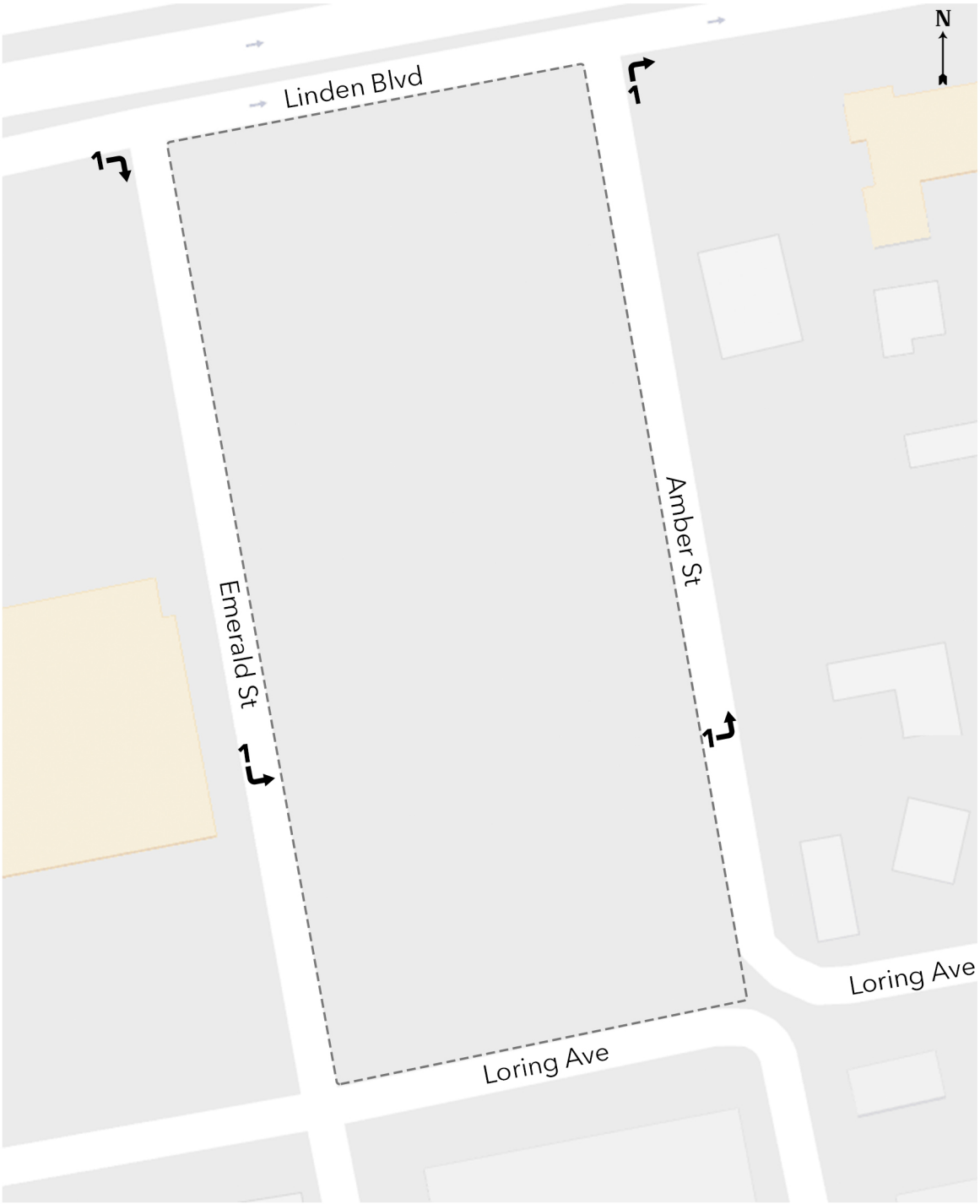


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Taxi Trips 4 IN / 4 OUT

Figure 3b

Project Generated Truck Trips
Weekday PM Peak Hour

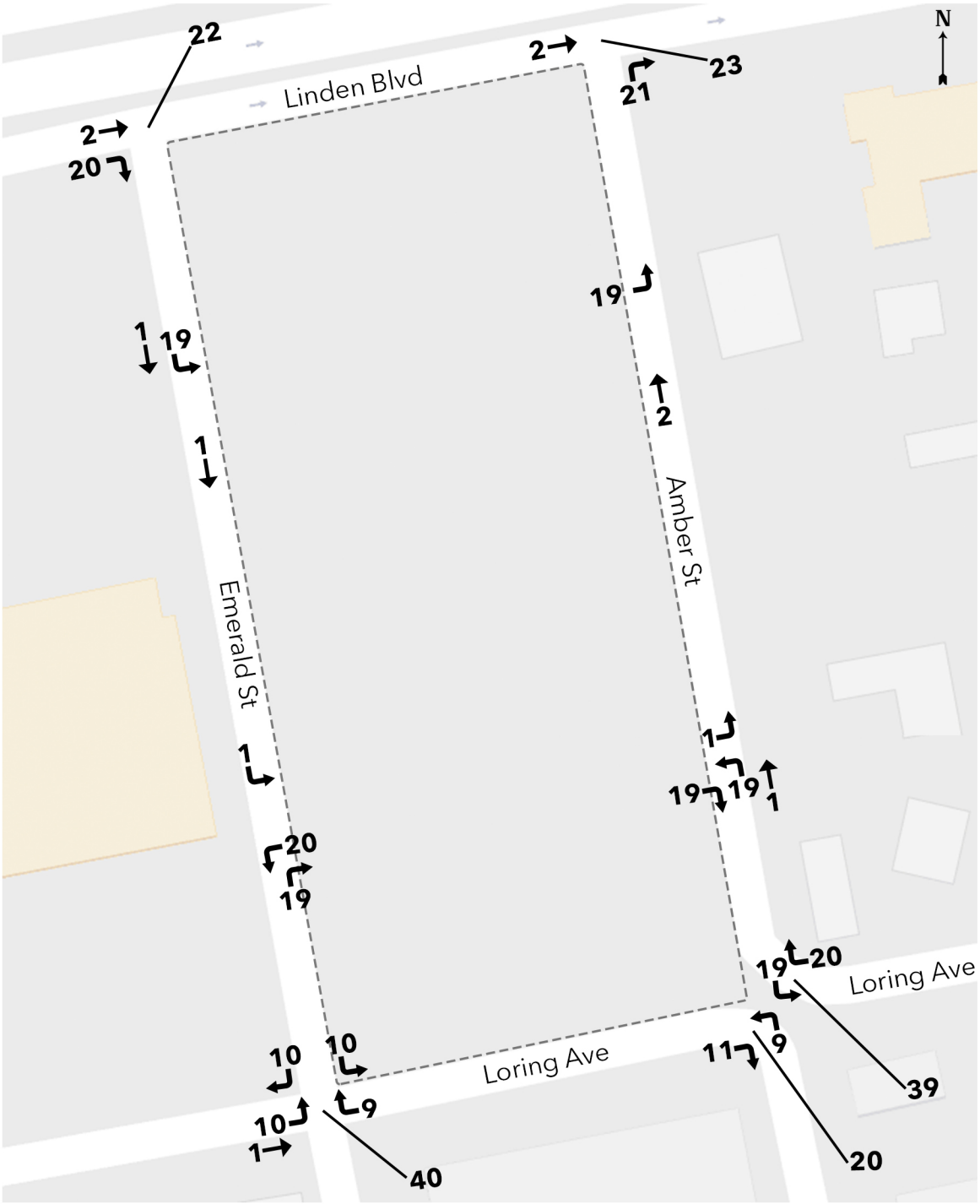


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Truck Trips 1 IN / 1 OUT

Figure 3c

Project Generated Total Vehicle Trips
Saturday Midday Peak Hour

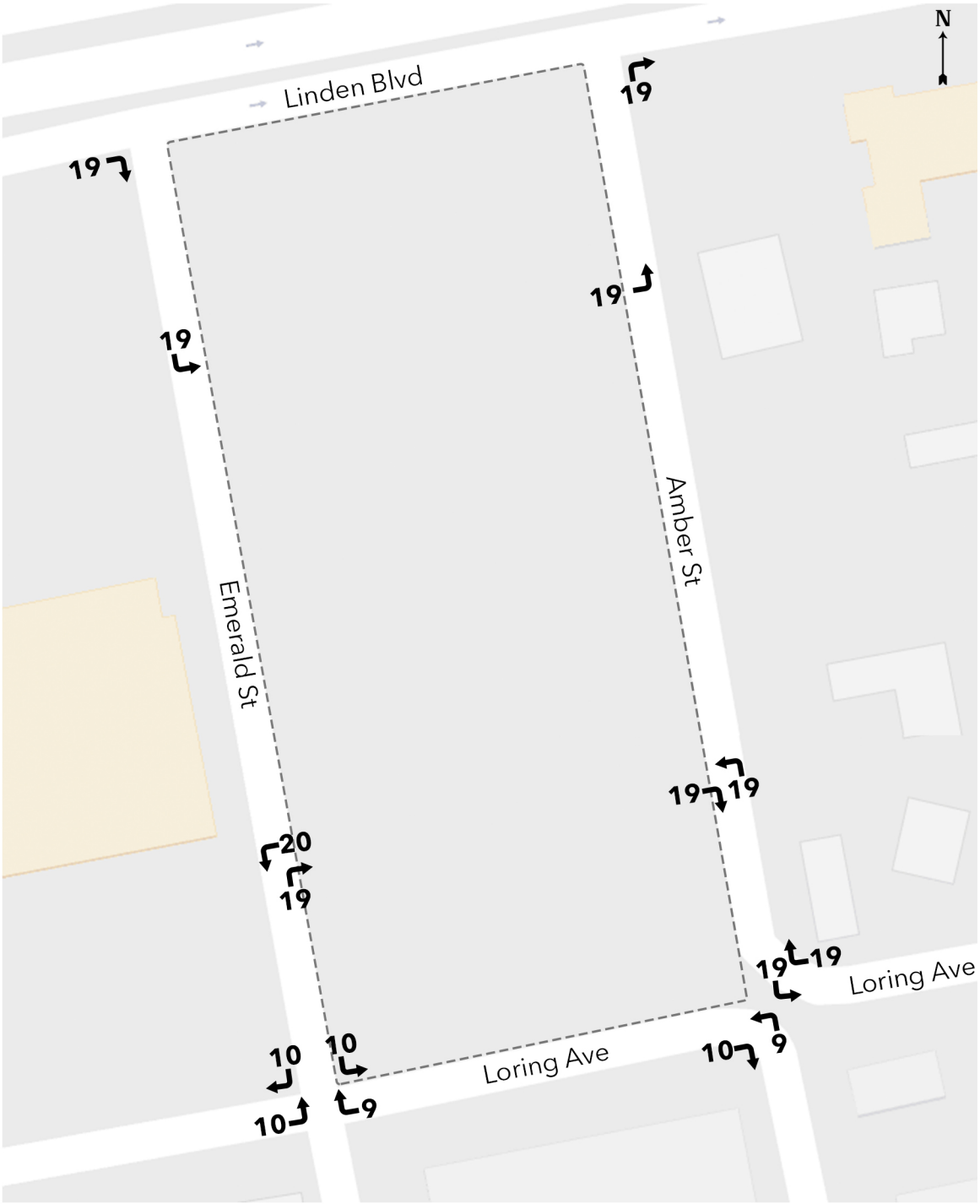


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Total Vehicle Trips 62 IN / 63 OUT

Figure 4

Project Generated Auto Trips
Saturday Midday Peak Hour

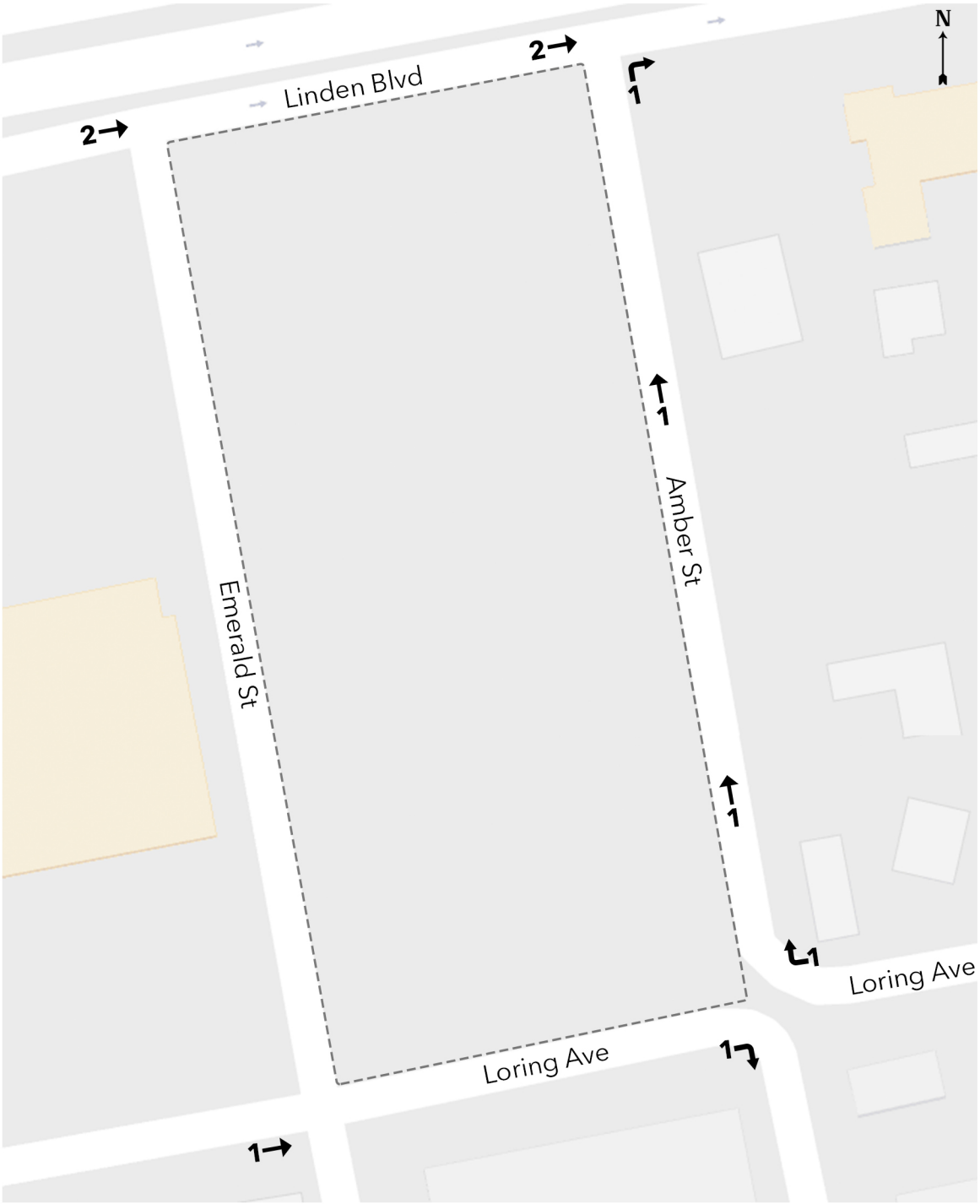


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Auto Trips 57 IN / 58 OUT

Figure 4a

Project Generated Taxi Trips
Saturday Midday Peak Hour

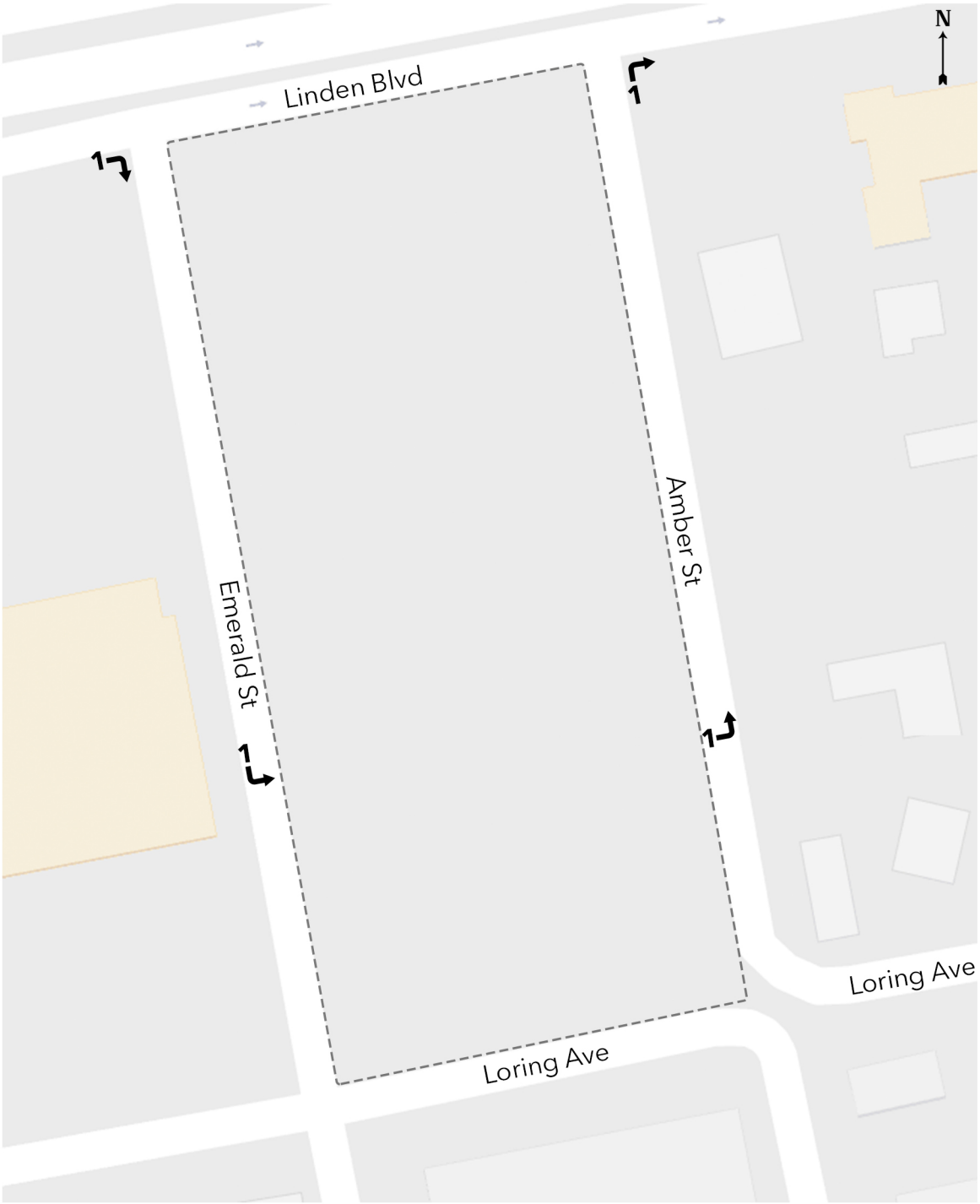


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Taxi Trips 4 IN / 4 OUT

Figure 4b

Project Generated Truck Trips
Saturday Midday Peak Hour

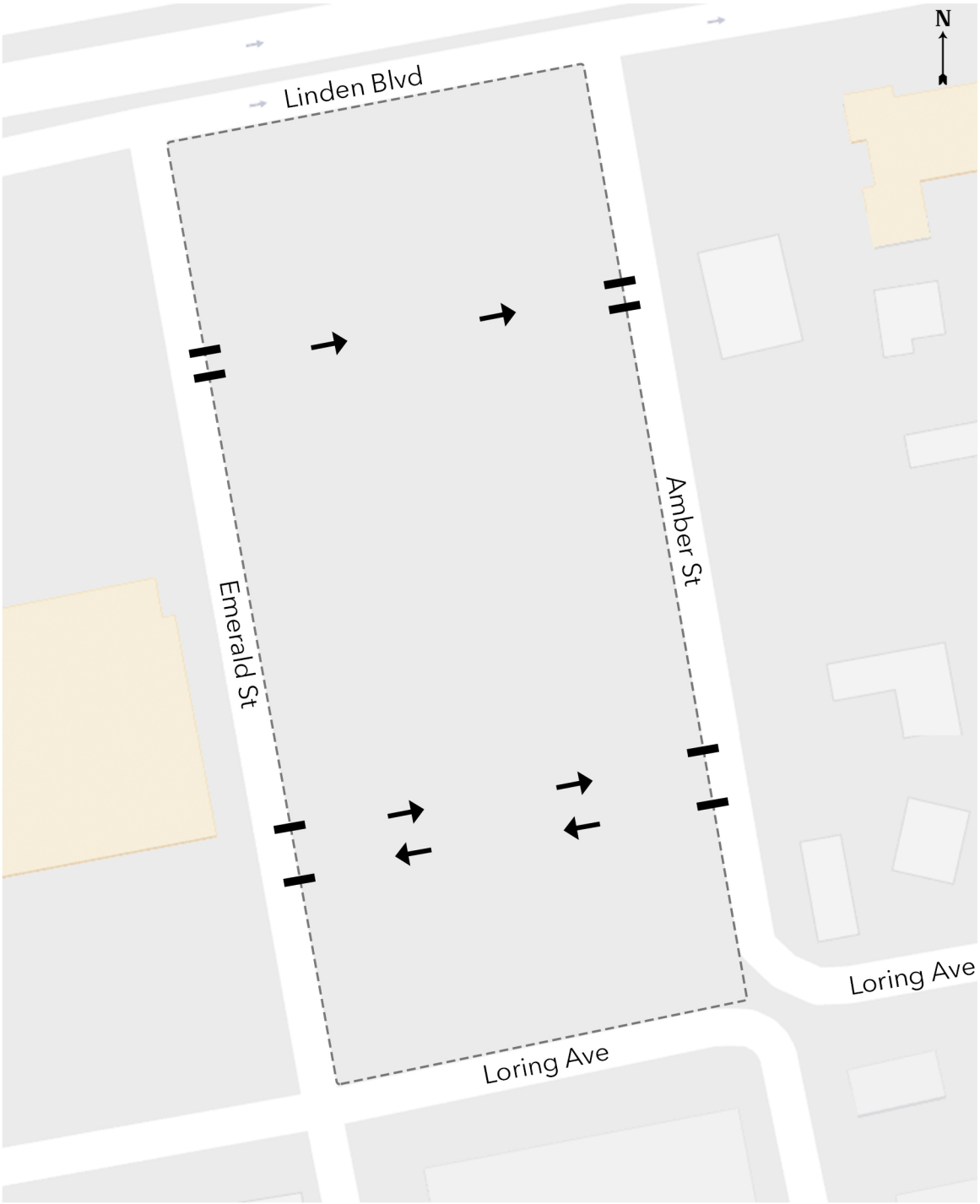


Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Truck Trips 1 IN / 1 OUT

Figure 4c

Project Entrance & Exit Curb-cuts



Rezoning Area at 2846-2868 Linden Boulevard, Brooklyn, NY

Figure 5

Exhibit A

Modal Split Information

2011-2015 ACS 5-YEAR Journey-to-Work (JTW) for Census Tract numbers 1208, 1210, 1214 and 1220 in Brooklyn, NY

Linden Blvd. Brooklyn New York

2011-2015 ACS 5-Year, Journey-to-Work:

Census Tract	Total Workers	Car or Van Drive-Alone	Carpool	Bus	Street Car	Subway	R.R.	Ferry	Taxi	Motor cycle	Bicycle	Walked	Other Means	Worked @ Home	Total
1208	**3305**	**521**	**66**	**332**	**0**	**2122**	**101**	**0**	**0**	**0**	**0**	**94**	**54**	**15**	3,305
1210	**1038**	**76**	**10**	**141**	**7**	**707**	**33**	**0**	**0**	**0**	**9**	**46**	**0**	**9**	1,038
1214	**1167**	**143**	**88**	**170**	**17**	**636**	**8**	**0**	**0**	**0**	**9**	**36**	**0**	**60**	1,167
1220	2,447	684	208	94	20	1,411	0	0	0	0	0	0	0	30	2,447
Total	7,957	1,424	372	737	44	4,876	142	0	0	0	18	176	54	114	7,957
		0.179	***0.047***	***0.093***	***0.01***	***0.613***	***0.018***	***0.00***	***0.00***	***0.00***	***0.00***	***0.022***	***0.01***	***0.014***	***1.00***

Exhibit B

Vehicle Occupancy Information

2010-2015 ACS 5-YEAR Journey-to-Work (JTW) for Census Tract numbers 1208, 1210, 1214 and 1220 in bROOKLYN, NY

Vehicle Occupancy Rate:

Census Tract	Total	Drove alone	Total carpool	2person	3 Person	4 Person	5 or 6 Person	7 or more Person	Total
1208	587	521	66	66	0	0	0	0	66
1210	86	76	10	10	0	0	0	0	10
1214	231	143	88	88	0	0	0	0	88
1220	892	684	208	191	17	0	0	0	208
						0			
	1,796	1,424		178	6	0	0	0	1,607
Vehicle Occupancy =			**1.12**						

Modal Split summary

Auto	**0.226**
Taxi	**0.000**
Bus	**0.098**
Subway	**0.631**
Walk	**0.022**
Other	**0.023**
Total	**1.000**

Table 1 : Transportation Planning Factors

Linden Boulevard, Brooklyn NY

Land Use:	Residential	Local Retail	Medical Office	Day care	Commnuity Center
	d.u.	Space-sq.ft.	Space-sq.ft.	Space-sq.ft.	Space-sq.ft.
Size/Units:	521	17,214	6,583	7,716	7,240
	(1)	**(1)**	**(3)**	**(3)**	**(3)**
Trip Generation:					
Weekday	8.075	205	127	33	44.7
Saturday	9.6	240	127	2	26.1
	per 1,000 sq-f	per 1,000 sq.ft.	per 1,000 sq.ft	per 1,000 sq.ft.	per 1,000 sq.ft.
Linked-Trip:	0%	25%	0%	0%	0%
Temporal Distribution:	**(1)**	**(1)**	**(3)**	**(3)**	**(3)**
AM Peak Hour	10%	3%	4%	16%	4%
MD Peak Hour	5%	19%	11%	5%	9%
PM Peak Hour	11%	10%	12%	19%	5%
Saturday Midday Peak Hour	8%	10%	11%	12%	9%
	(2)	**(3)**	**(3)**	**(3)**	**(3)**
Modal Split :	all periods	all periods	all periods	all periods	all periods
Auto	22.6%	5%	30%	5%	5%
Taxi	0.0%	1%	2%	1%	1%
Subway	63.1%	6%	33%	6%	6%
Bus	9.8%	3%	18%	3%	3%
Walk	2.2%	85%	17%	85%	85%
Other	2.3%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%
	(3)	(3)	(3)	(3)	(3)
In/Out Splits:	In/Out	In/Out	In/Out	In/Out	In/Out
AM Peak Hour	15/85	50/50	89/11	53/47	61/39
MD Peak Hour	50/50	50/50	51/49	50/50	55/45
PM Peak Hour	70/30	50/50	48/52	47/53	29/71
Saturday Midday Peak Hour	50/50	55/45	41/59	47/53	49/51
Vehicle Occupancy:	**(2)**	(3)	(3)	(3)	(3)
Auto	1.12	2	1.5	1.65	1.65
Taxi	1.30	2	1.5	1.4	1.3
Truck Trip Generation:	**(1)**	**(1)**	**(3)**	**(3)**	**(3)**
Weekday	0.06	0.35	0.29	0.07	0.29
Saturday	0.02	0.04	0.29	0	0.29
	per 1,000 sqft	per 1,000 s.f.	per 1,000 s.f.	per 1,000 s.f.	per 1,000 s.f.
	(1)	**(1)**	**(3)**	**(3)**	**(3)**
AM Peak Hour	12%	8%	3%	9.6%	9.6%
MD Peak Hour	9%	11%	11%	11%	11%
PM Peak Hour	2%	2%	1%	1%	1%
Saturday Midday Peak Hour	9%	11%	0%	0%	0%
AM/MD/PM/Saturday Midday	50/50	50/50	50/50	50/50	50/50

Sources:

(1)-2014 CEQR Technical Manual, Table 16-2.

(2)-2010-2015 (ACS)-Journey-to-Work (JTW)Census Tract #'s 1208, 1210, 1214 and 1220 in Brooklyn N.Y.

(3)_East New York FEIS

Table 2 : Estimated Person Trips

Linden Boulevard, Brooklyn NY

Land Use:	Residential d.u.	Local Retail Space sq.ft.	Medical Office Space sq.ft.	Day-Care Center sq.ft.	Commnuity Center Space-sq.ft.	Total Net Demand	
Size/Units:	521	17,214	6,583	7,716	7,240		
Peak hour Trips							
AM Peak Hour	421	79	33	41	13	587	
Midday Peak Hour	210	503	92	13	29	847	
PM Peak Hour	463	265	100	48	16	892	
Saturday Midday Peak Hour	400	310	92	2	17	821	
Person Trips:							
AM Peak Hour							
Auto	95	4	10	2	1	112	
Taxi	0	1	1	0	0	2	
Subway	265	5	11	2	1	284	284
Bus	41	2	6	1	0	51	51
Walk	9	67	6	35	11	128	128
Other	10	0	0	0	0	10	10
Total	421	79	33	41	13	588	473
Midday Peak Hour							
Auto	48	25	28	1	1	103	
Taxi	0	5	2	0	0	7	
Subway	133	30	30	1	2	196	196
Bus	21	15	17	0	1	54	54
Walk	5	427	16	11	25	483	483
Other	5	0	0	0	0	5	5
Total	210	503	93	13	29	848	737
PM Peak Hour							
Auto	105	13	30	2	1	152	
Taxi	0	3	2	0	0	5	
Subway	292	16	33	3	1	345	345
Bus	45	8	18	1	0	73	73
Walk	10	225	17	41	14	307	307
Other	11	0	0	0	0	11	11
Total	463	265	100	48	16	893	736
Saturday Midday Peak Hour							
Auto	90	15	28	0	1	135	
Taxi	0	3	2	0	0	5	
Subway	252	19	30	0	1	303	303
Bus	39	9	17	0	1	66	66
Walk	9	263	16	2	14	304	304
Other	9	0	0	0	0	9	9
Total	400	310	92	2	17	821	681

Table 3 : Estimated Vehicular Trips

Linden Boulevard, Brooklyn NY

Vehicular Trips	Residential	Local Retail	Medical Office	Day-Care Center	Commnuity Center	Total
AM Peak Hour						
Auto (Total)	85	2	7	1/1	1	97
Taxi	0	0	0	0	0	0
Taxi (Balanced)	0	0	0	0	0	0
Truck	4	0	0	0	0	4
Truck(Balanced)	4	0	0	0	0	4
Total	89	2	7	1/1	1	101
Inbound/Outbound Trips	***15/74***	***1/1***	***6/1***	***1/1***	***1/0***	***24/77***
Midday Peak Hour						
Auto (Total)	42	12	19	0/0	1	74
Taxi	0	3	1	0	0	4
Taxi (Balanced)	0	6	2	0	0	8
Truck	3	1	0	0	0	4
Truck(Balanced)	4	2	0	0	0	6
Total	46	20	21	0/0	1	88
Inbound/Outbound Trips	***23/23***	***10/10***	***11/10***	***0/0***	***1/0***	***45/43***
PM Peak Hour						
Auto (Total)	94	6	20	1/1	1	123
Taxi	0	1	1	0	0	2
Taxi (Balanced)	0	2	2	0	0	4
Truck	1	0	0	0	0	1
Truck(Balanced)	2	0	0	0	0	2
Total	96	8	22	1/1	1	129
Inbound/Outbound Trips	***67/29***	***4/4***	***11/11***	***1/1***	***0/1***	***83/46***
Saturday Midday Peak Hour						
Auto (Total)	81	8	19	0	1	109
Taxi	0	2	1	0	0	3
Taxi (Balanced)	0	4	2	0	0	6
Truck	1	0	0	0	0	1
Truck(Balanced)	2	0	0	0	0	2
Total	83	12	21	0	1	**117**
Inbound/Outbound Trips	***42/41***	***6/6***	***9/12***	***0/0***	***0/1***	***57/60***

Table i

Pedestrian Count
Linden Boulevard, Brooklyn NY
South Sidewalk
Date: Thursday, January 26,2017

2017 existing pedestrian volumes (1:00-2:00PM) peak Hour

Time	Movement 1 (Eastbound)	Movement 2 (Westbound)	Total
Linden Boulevard, bet Amber& Emerald Streets			
South Sidewalk			
1:00-1:15PM	16	9	25
1:15-1:30	14	9	23
1:30-1:45	13	10	23
1:45-2:00PM	10	11	21
total	**53**	**39**	**92**
PHF=	**0.92**		

Table ii

2020 no-build pedestrian volumes (1:00-2:00PM) peak Hour

Linden Boulevard, bet Amber& Emerald Streets	
South Sidewalk	
1:00-2:00PM	**93**

Table iii

2020 build pedestrian volumes (1:00-2:00PM) peak Hour

Linden Boulevard, bet Amber& Emerald Streets	
South Sidewalk	
Project generated pedestrian Trip ends	**737**
No-Build pedestrian Volumes	**93**
1:00-2:00PM	**830**

Table B
Pedestrian Levels of Service analysis
Back up information

Sidewalk	movements	Voume Both Direction Vped p/hr	PHF	Actual Width W	Effective Width	Flow RATE PER Unit Width Vp=Vped/60*w*phf	Free Flow Walk Speed ft/sec. Spf	Adjusted Walk Speed Sp=(1-(0.0078v*v)Sf	Avg Ped Space Ap=60*Sp/Vp	LOS	Platoon Adj LOS
						2017 Existing conditions					
Linden Boulevard Between Amber&Emerald Streets **South sidewalk**	1 and 2	92	0.92	5.5	3.5	0.48	4	3.99	503	**A**	**B**
						2020 No-Build conditions					
Linden Boulevard Between Amber&Emerald Streets **South sidewalk**	1 and 2	93	0.92	5.5	3.5	0.48	4	3.99	498	**A**	**B**
						2020 Build conditions					
Linden Boulevard Between Amber&Emerald Streets **South sidewalk**	1 and 2	1343	0.92	15.5	13.5	1.80	4	3.90	130	**A**	**B**

EXHIBIT P

Pedestrian Analysis

The Proposed Action would generate an increment of approximately 473 bus, subway and walk/other trips in the weekday AM peak hour, 737in the weekday midday, 736 in the weekday PM and 681 in the Saturday midday peak hour as summarized in Table 2 (Estimated Person Trips). Peak period level of service (LOS) pedestrian condition was evaluated for the Weekday midday peak hour time period at one (1) pedestrian element, Linden Boulevard south sidewalk, between Amber and Emerald Streets where new trips generated by projected development are expected to be most concentrated because of the proposed commercial retail component, which would be located on the northern section of the proposed project site or southern side of Linden Boulevard in Site 1.

2017 Existing Conditions

EPDSCO has conducted a pedestrian count on Thursday, January 26, 2017, during the Weekday (1:00PM-2:00PM) Midday peak hour for one sidewalk. As summarized in Tables i, ii and iii for the Existing, No-Build and build peak hour conditions, the south sidewalk pedestrian volumes would increase from approximately 92 in the 2017 existing to 93 in the 2020 no-build and 830 in the 2020 build conditions.

The actual width of the existing south sidewalk is approximately 5.5 feet wide and it would increase by 10 feet for a total of 15.5 feet under the build condition scenario in 2020.

Table B shows the existing peak hour pedestrian volumes, average pedestrian space in square feet per pedestrian (sf/ped), levels of service (LOS) and LOS with platoon at analyzed sidewalk.

As shown in Table B, the analyzed Linden Boulevard south sidewalk is currently operating at an uncongested LOS A (w/o platoon) and B (w/ platoon) in the (1:00pm-2:00) Weekday midday peak hour time period.

Pedestrian Sidewalk Levels of Service (LOS) description with and without platoon is shown in Table A.

TABLE A
Pedestrian Sidewalk Levels of Service Descriptions

LOS	Crosswalk/Corner	Non□Platoon Sidewalk Criteria (sf/ped)	Platoon Sidewalk Criteria (sf/ped)
A	(Unrestricted)	> 60	> 530
B	(Slightly Restricted)	> 40 to 60	> 90 to 530
C	(Restricted but fluid)	> 24 to 40	> 40 to 90
D	(Restricted, necessary to continuously alter walking stride and direction)	> 15 to 24	> 23 to 40
E	(Severely restricted)	> 8 to 15	> 11 to 23
F	(Forward progress only by shuffling; no reverse movement possible)	<8	< 11

Notes:

Based on average conditions for 15 minutes sf/ped – square feet of area per pedestrian

Source: *CEQR Technical Manual*

2020 No-Build Conditions

As described in Land Use Section, the surrounding land uses within the immediate study area are expected to remain largely unchanged by the Projected Build Year of 2020. No new development is anticipated to occur within the 400-foot study area by 2020.

To estimate 2020 no-build pedestrian volumes, a ½ percent per year for a total of 1.5 percent was added to the existing pedestrian volumes based upon the *CEQR Technical Manual, Table 16-4, "Annual Background Growth Rates" for Brooklyn*

(Other). As shown in Table ii, the no-build pedestrian volumes would increase from 92 pedestrian trip ends to 93 on Linden Boulevard (south sidewalk).

As shown in Table B, the analyzed Linden Boulevard south sidewalk would operate at an uncongested LOS A (w/o platoon) and B (w/ platoon) in the (1:00pm-2:00) Weekday midday peak hour time period.

2020 Build Conditions

In the future 2020, the proposed project would add approximately 737 pedestrian trips during the Weekday (1:00PM- 2:00PM) midday peak hour time period. As shown in Table iii, the build pedestrian volumes would increase from 93 in the 2020 no-build conditions to 830 under the 2020 build conditions on Linden Boulevard (south sidewalk).

As shown in Table B, the analyzed Linden Boulevard south sidewalk would operate at an uncongested LOS A (w/o platoon) and B (w/ platoon) in the (1:00pm-2:00) Weekday midday peak hour time period.

Attachment D

DEP Correspondence

(Air Toxics)

Urban Cartographics

112 West 34th Street 18th Floor New York, NY 10120
718.427.5299 www.urbancartographics.com urbancartographics@gmail.com

November 7, 2016

Kit Liang
Director of Engineering
NYC Department of Environmental Protection
59-17 Junction Boulevard
Flushing, NY 11373

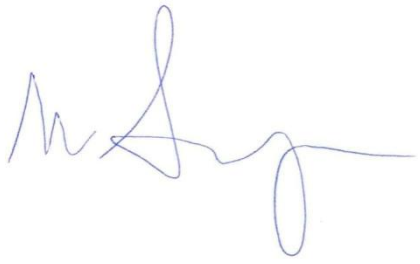
Re: Linden Boulevard, Brooklyn & Queens

Dear Ms. Liang:

In connection with an environmental assessment being performed for the above referenced property, and pursuant to CEQR process, we are writing to request an Air Quality Permit search for the sites listed on the following page.

Please advise us as soon as the files are available for our review. If you have any questions or require any additional information, please feel free to contact me directly at mike@urbancartographics.com or 631.942.0582.

Respectfully submitted,



Mike Synan

Encl.

Linden Boulevard, Brooklyn (and Queens) - Air Quality Permit Search Locations

Block	Lot(s)	Address
11384	1	78-08 Linden Boulevard, Queens NY 11414
4497	49 & 50	317 Amber Street, Brooklyn, NY 11208
4472	13	484 Emerald Street, Brooklyn, NY 11208

Gmail by Google

Mike Synan <mike@urbancartographics.com>

Air Quality Permit Search Requests

Cofield, Brenda <BCofield@dep.nyc.gov> Mon, Nov 7, 2016 at 4:32 PM
To: Mike Synan <mike@urbancartographics.com>
Cc: "Narvaez, Angel" <AngelN@dep.nyc.gov>, Ian Rasmussen <ian@urbancartographics.com>

Hi Mike,

Below, please find the area permit searches you requested in your 3 pdf letters dated 11-7-16.

Linden Blvd - Queens, NY 11414					
11384	1		78-08 Linden Boulevard	GA002592 & GA009299	78-10 Linden Blvd. aka 137-23 78 St.; 137-26 79 St.
Linden Blvd - Brooklyn, NY 11208					
4497	49		317 Amber Street	No Record	
4497	50		317 Amber Street	No Record	
4472	13		484 Emerald Street	No Record	
263 McGuiness Blvd - Brooklyn, NY					
2551	51		187 Kent Street	No Record	2357 & 1
2552	1		266 McGuiness Blvd	No Record	
2552	3		270 McGuiness Blvd	No Record	
2552	5		276 McGuiness Blvd	No Record	aka 222 Java Street
2552	10		224 Java Street	PA010288, PA066684 & PA066584	231 Kent Street; aka 228 Java St.
2552	13		230 Java Street	No Record	
2552	14		232 Java Street	No Record	
2552	47		237 Kent Street	No Record	
2560	1		256 McGuiness Blvd	GB002007	197 Greenpoint Ave.; 228 Kent St.; & 256 Rear McGuinness Blvd.
2560	41		223 Greenpoint Avenue	No Record	
2576	7		210 Greenpoint Avenue	GA003693 & GB000113	243 McGuinness Blvd.
2577	1		216 Greenpoint Avenue	No Record	
901 Quentin Road - Brooklyn, NY 11223					
6642	26		1988 Coney Island Avenue	No Record	
6642	27		1990 Coney Island Avenue	No Record	
6666	8		918 Quentin Road	PA055392 & PA055492	
6666	13		1002 Quentin Road	No Record	
6665	21		809 Kings Highway	No Record	
6666	44		907 Kings Highway	No Record	

Brenda

Brenda Cofield **| Clerical Associate | NYC Environmental Protection**

(Office) (718) 595-3704 | bcofield@dep.nyc.gov

Please consider the environment before printing this e-mail

From: Mike Synan [mailto:mike@urbancartographics.com]
Sent: Monday, November 07, 2016 12:07 PM
To: Cofield, Brenda <BCofield@dep.nyc.gov>
Cc: Narvaez, Angel <AngelN@dep.nyc.gov>; Ian Rasmussen <ian@urbancartographics.com>
Subject: Air Quality Permit Search Requests

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Attachment E

Parking Garage Analysis

PARKING FACILITIES ANALYSIS

Screening Analysis

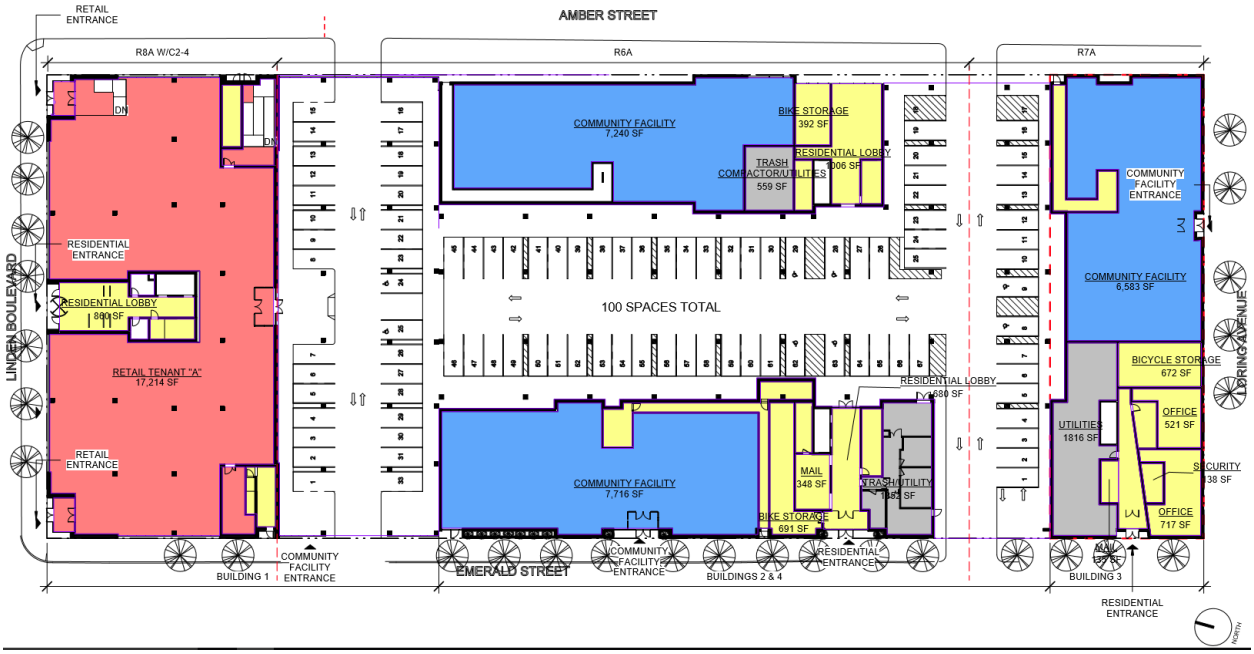
Emissions from the vehicles using the parking lot could potentially affect pollutant levels at nearby sensitive land uses. As such, an analysis was conducted to determine whether the potential air quality impacts of these emissions would be significant.

The proposed project would contain a parking garage with a capacity of 100 spaces. The *CEQR TM* situate the proposed project in Zone 4, as it is within 1 mile of a subway station. The threshold criteria that would trigger a detailed analysis in Zone 4 is 60 parking spaces. The 100 parking spaces capacity of the proposed project exceeds the 60 parking spaces threshold criteria. Therefore, a detailed analysis was conducted.

Detailed Analysis

The proposed project would include 100 attended parking spaces on the ground floor level with four separate entrances; two through Emerald Street and two through Amber Street. The parking garage would occupy an area of 46,566 gross square feet at grade. The ground floor plan showing the parking garage is displayed in Figure 17-1.

Figure 17-1. The Proposed Project Ground Floor Plan



As a conservative approach, the analysis assumed that all vehicles travel through the same entrance/exit. This assumption is the most conservative as the garages' combined emissions are vented through a single vent and pollutants concentrations are evaluated next to and directly downwind from that vent. The highest pollutants concentrations were evaluated for significant air quality impact.

As determined by the preliminary traffic analysis and shown in Table 17-1, there is a maximum of 36 vehicles entering the parking garage in the PM hour between 17:00 to 18:00, and a maximum of 33 vehicles exiting the parking garage in the AM hour between 8:00 to 9:00. These traffic data were considered as a worst-case scenario.

In addition, the preliminary traffic analysis for the proposed project indicated that the weekday PM peak hour increment of 129 passenger cars, some traveling on Emerald Street and some on Amber Street, is the worst-case increment. As a worst-case scenario, all project-generated traffic was assumed to travel through one of these streets.

Table 17-1
Parking Accumulation

Time	in	out	total	Parking Accumulation
				100
7-8AM	3	14	17	89
8-9	10	**33**	43	66
9-10	12	24	36	54
10-11	14	17	31	51
11-12N	15	16	31	50
12N-1PM	16	17	33	49
1-2	18	18	36	49
2-3	15	15	30	49
3-4	19	14	33	54
4-5	27	16	43	65
5-6	**36**	21	57	80
6-7	29	16	45	93
7-8	20	13	33	100
8-9PM	10	10	20	100
Total	244	244	488	

Per *CEQR TM*, vehicles exiting the parking garage idle for 1 minute before starting to travel to the parking lot exit and all parking garage vehicles are assumed to drive at a speed of 5 miles per hour. In addition, entering and exiting vehicles are assumed to travel a mean travel distance of two-thirds of the width and the length of the parking garage plus the ramp's length.

Methodology

The pollutants of concern for parking facilities are carbon monoxide (CO) and particulate matter smaller than 2.5 microns ($PM_{2.5}$). This analysis was conducted

following guidelines provided in the *City Environmental Quality Review Technical Manual (CEQR TM) Appendices* for parking facilities.

To estimate pollutant concentrations from the vehicles using the parking lot, the computational procedure provided in EPA's Workbook of Atmospheric Dispersion Estimates, as referenced in the *CEQR Technical Appendix* on Page 6, was utilized. This methodology estimates concentrations at various distances from the parking lot using appropriate initial horizontal and vertical dispersion coefficients. Pollutant concentrations are estimated at locations on near the parking lot and at receptors across the roadway to ensure that the maximum cumulative effects from on-street traffic and parking lot emissions are estimated.

To conservatively estimate on-street CO mobile source emission contributions, the *CEQR TM* recommends multiplying on-street CO emission rates in grams/meter-second by a factor of 307.7, which yields maximum predicted impacts. While this approach could be applied for CO to estimate on-street emission contributions, $PM_{2.5}$ is the critical pollutant for this analysis, having a very strict CEQR significant threshold value, and this overly conservative approach could lead to predicted exceedances. Therefore, contributions of $PM_{2.5}$ vehicular emissions were calculated through refined dispersion modeling analyses using EPA's AERMOD dispersion model, which is currently recommended by EPA for mobile source (intersection or highway) modeling. These values were then added to parking lot-generated impacts for comparison with *CEQR* significant impact thresholds as well as appropriate background levels to estimate total $PM_{2.5}$ concentrations for comparison with the 24-hour $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS).

The 24-hour $PM_{2.5}$ *CEQR* significant incremental impact value was estimated as half the difference between NAAQS of 35 ug/m^3 and the applicable $PM_{2.5}$ background concentration recorded in Brooklyn JHS-126 monitoring station. As the 3-year 98% percentile of 24-hour $PM_{2.5}$ background concentrations recorded at this monitoring station is 23 ug/m^3 (for 2013-2015), half the difference between NAAQS of 35 ug/m^3 and 23.0 ug/m^3 is 6.0 ug/m^3. This incremental value was used as the *de minimis* criteria to determine whether the $PM_{2.5}$ parking lot emissions together with on-site mobile source emissions could cause exceedances of *CEQR* significant impact threshold.
To determine compliance with the 8-hour CO NAAQS, maximum CO concentrations were predicted for 1-hour and 8-hour averaging periods.

The following conditions, as outlined in the *CEQR TM*, are assumed in the analysis to simulate the maximum potential air quality impacts:

- Pollutants within the garage are exhausted through a single vent situated above the parking garage entrance at 12 feet above grade.
- A receptor is placed at 6 feet high and 6 feet from the parking garage entrance, directly downwind from the garage's exhaust vent, to simulate a pedestrian on the adjacent sidewalk of the parking garage.

- A receptor is placed at 6 feet high and at the opposite sidewalk, directly downwind from the garage's exhaust vent.
- A receptor is placed 5 feet above the garage's exhaust vent to simulate a receptor placed in a window above the exhaust vent.
- Wind speed is assumed to be 1 meter per second.
- The garage ventilation rate is assumed to be the minimum rate as required by the New York City Building Code and outlined in the *CEQR TM*.
- The impact of the pollutants generated by on-street traffic are added to the receptor placed on the opposite sidewalk from the parking garage, 52 feet from the garage vent. These include both emissions from vehicular mechanical components and dust generated by vehicles travelling on paved roads.

Pollutants from vehicle emissions were generated by the EPA's mobile source emission factor model, MOVES2014a, as outlined below. Pollutants concentrations from the garage's exhaust vent and from the on-street traffic emissions were calculated using the spreadsheet and formula referenced in the *CEQR TM Appendices.*

Incremental on-street traffic accumulation was considered for the NYC Incremental Guidelines, *de minimis,* and the With-Action traffic considered for the NAAQS. For the With-Action, the incremental on-street traffic was added to traffic data obtained from the New York State Department of Transportation (NYSDOT) Traffic Count Hourly Report for 79th Street Northbound, Station 054257. In addition, the vehicle speed of on-street traffic was obtained from the Speed Count Average Weekday Report from the same station.

A specific receptor was considered for the annual *de minimis* criterion as the garage's exhaust vent is a stationary source.

Per *CEQR TM*, a persistence factor of 0.7 was applied to the 1-hour CO concentrations to evaluate the 8-hour CO concentrations.

According to the EPA's *AERSCREEN User Guide*, the 24-hour concentrations of PM_{10} and $PM_{2.5}$ were evaluated by multiplying the hourly concentrations by a 0.6 persistence factor, and the annual concentration of $PM_{2.5}$ was evaluated by multiplying the hourly concentration by a 0.1 persistence factor.

Parking Garage Emission Factors

MOVES can be used to calculate emission rates of criteria air pollutants, greenhouse gas emissions, and some hazardous air pollutants for both onroad motor vehicles and nonroad equipment. MOVES models calculate emissions at the national, county, and project level by use of databases and by specifying the characteristics (Run Specification) of the scenario that is modeled.

The onroad emission factors that MOVES produces are either grams/vehicle-mile or grams/hour. For a microscale analysis, project level scale—which is the finest level of modeling—and a specific hour of the day are specified and the model output emission

factors for each roadway (link) specified in the database. Table 17-2 shows the Run Specification and databases that were used to develop CO, $PM_{2.5}$, and PM_{10} emission factors.

Table 17-2. MOVES2014a Inputs

Run Specification		Databases	
Scale	Project	**I/M Program**	NYSDEC
Calculation Type	Inventory (gram per hour)	**Age Distribution**	NYSDEC
	Emission Rate (gram per vehicle-mile)	**Fuel**	NYSDEC
Time Span (Year/Month/Day/Hour)	2019/January/Weekday/17:00–17:59	**Meteorology Data**	NYSDEC
Geographic Bounds	Kings county, NY	**Links**	Project input
Vehicle and Equipment (Fuels/Source Use	Gasoline/Passenger Car	**Links Source Type**	Project Input
Road Types	Urban Unrestricted Access	**On-Street Traffic Count**	DOT Station 054257
Pollutants and Processes		**On-Street Average Speed**	DOT Station 054257
CO	Running Exhaust and Crankcase Running Exhaust	**On-Street Traffic**	Project Input
PM_{10}/$PM_{2.5}$	Running Exhaust, Crankcase Running Exhaust, Brakewear, Tirewear		
Total Gaseous Hydrocarbons	Running Exhaust		

In addition to exhaust running $PM_{2.5}/PM_{10}$ emissions, vehicle-related $PM_{2.5}/PM_{10}$ emissions of dust generated by vehicles traveling on paved roadways (79TH Street) were added to estimate total particulate matter emission factors. Depending of the silt content on a road, re-entrained road dust can be a significant contributor to the total $PM_{2.5}/PM_{10}$ concentration. Per the *CEQR TM,* a silt loading factor of 0.4 g/m^2 for local roads and standard average fleet vehicle weight of 3-tons were used in the analysis. In addition, based on DEP guidance, the conservative assumptions of "dry" road conditions were used for the short-term calculation (precipitation reduced silt loading). The emission factors, links number of vehicles, and links volumes are displayed in Table 17-3.

Table 17-3. MOVES Links' Inputs and Emission Factors

Link Description	Link Length (Mile)	Link Volume	CO EF GramsPerVehicleMile	PM10 EF GramsPerVehicleMile	PM2.5 EF GramsPerVehicleMile

[L1] On-Street Traffic	0.09791	315	**2.281559**	**1.406596**	**N.A.**
[L2] On-Street Traffic Incremental	0.09791 67	129	**2.281559**	**N.A.**	**0.35024199 (24-hr) 0.017215882(Annu**
[L4] Parking Garage traveling out	0.05719 7	33	**4.980949**	**0.20149**	**0.043906722**
[L5] Parking Garage traveling in	0.05719 7	36	**4.980949**	**0.20149**	**0.043906722**
			CO EF GramsPerHour	**PM10 EF GramsPerHour**	**PM2.5 EF GramsPerHour**
[L3] Parking Garage Idle for 5 minutes	0	33	**215.7981616**	**2.785628**	**2.464217247**

Results of Parking Garage Analysis

Table 17-4 shows the predicted highest concentrations of the parking garages analyses.

Table 17-4. Parking Garage Air Quality Impact

Pollutant		**Near Sidewalk**		**Far Sidewalk**		**Window Above Vent**	
CO (ppm)	**Averaging Period**	**1-hour**	**8-hour**	**1-hour**	**8-hour**	**1-hour**	**8-hour**
	Pollutant Concentration	0.0642	0.0449	0.0612	0.0538	0.1087	0.0761
	Background concentration	2.1	1.4	2.1	1.4	2.1	1.4
	Total concentration	**2.2**	**N.A.**	**2.2**	**N.A.**	**2.3**	**N.A.**
	NAAQS	35	9	35	9	35	9
	de minimis	N.A.	3.8	N.A.	3.8	N.A.	3.8
	Impact	**No**		**No**		**No**	
$PM_{2.5}$ ($\mu g/m^3$)		**24-hour**	**Annual**	**24-hour**	**Annual**	**24-hour**	**Annual**
	Pollutant Concentration	0.73	0.122	2.17	0.09994	0.69	0.115
	de minimis	6.0	0.3	4.6	0.3	4.6	0.3
	Impact	**No**		**No**		**No**	
PM_{10} ($\mu g/m^3$)		**24-hour**		**24-hour**		**24-hour**	
	Pollutant Concentration	1.5		17.3		2.7	
	Background concentration	38.0		38.0		38.0	
	Total concentration	**39.5**		**55.3**		**40.7**	
	NAAQS	150		150		150	
	Impact	**No**		**No**		**No**	

Conclusion

The analysis concluded that all the pollutants are within the NAAQS and the *de minimis* criterions. Therefore, no significant air quality impacts are expected as a result of the parking garages facilities.

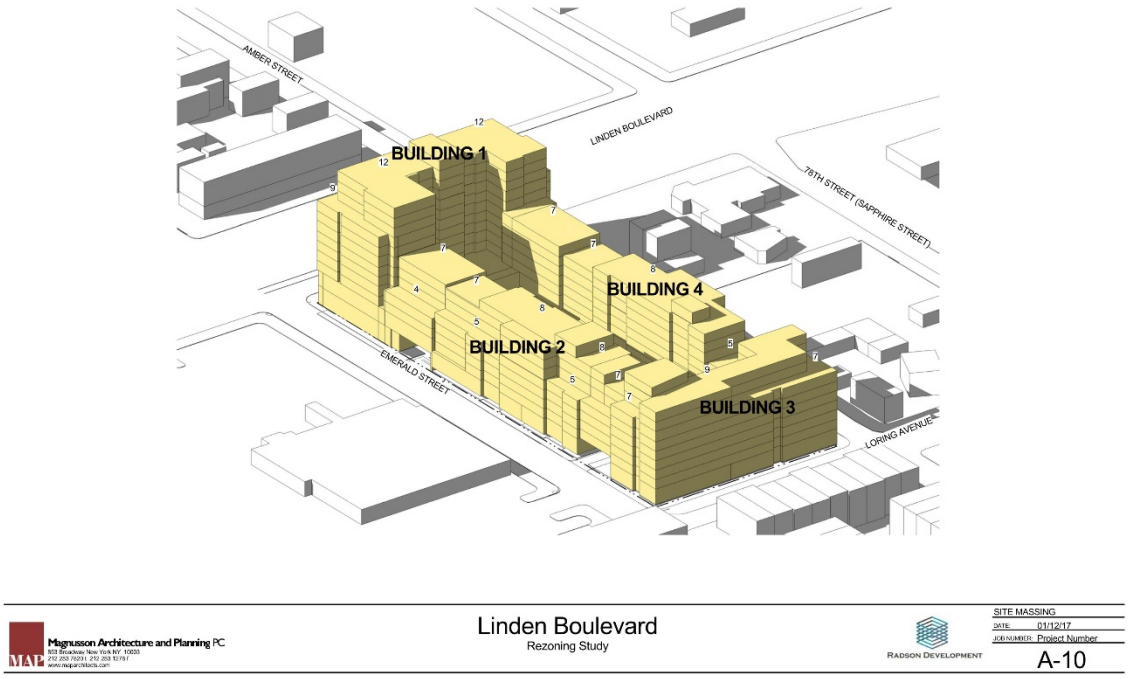
Attachment G

Stationary Source Air Quality Analysis

INTRODUCTION

The Proposed Action would facilitate development of four buildings at 2846 to 2868 Linden Boulevard (on Block 4496) in the East New York section of Brooklyn. The development encompasses the entire block, which contains 29 tax lots between Linden Boulevard and Loring Avenue. In total, the project area, which is currently vacant, includes 100,000 square feet of lot area. The proposed buildings, which range in height from 7-stories to 12-stories, are shown on Figure 1.

Figure 1: Proposed Linden Boulevard Development (Block 4496)



The following is a brief description of the proposed developments:

- A 12-story Building 1 will be located on Tax Lots 1, 3, 5, 8, 9, 50, 51, 52, 11, and 12, and partially on lots 48 and 14 within the area to be rezoned as R8A/C2-4 and partially as R6A -- with frontage along Linden Boulevard, Emerald Street and Amber Street. The maximum height of Building 1 would be 103 feet 4 inches (130'-4") tall -- and with the 10-foot bulkhead, 140'-4" tall. The building will contain 213,714 gross square feet (gsf) of residential space and 17,214 gsf of commercial retail space -- for total of 254,203 gsf.
- An 8-story Building 2 will be located on Tax Lots 39, 42, 43, 44, 45, 56, 47, and partially on Lots 48, 35, 33, and 32 within the area to be rezoned as R6A and R7A -- with frontage along Emerald Street. The maximum Building 2 height would be 82'-1" tall -- and with the 11'-3" bulkhead, 93'-4" tall. The building will contain 103,345 gsf of residential space and 7,716 gsf of community facility space -- for a total of 124,998 gsf.
- A 9-story Building 3 will be located on a portion of Tax Lots 35, 33, 32, 29, and 27 within the area to be rezoned as R7A -- with frontage along Loring Avenue, Emerald Street and Amber Street. The maximum height of Building 3 would be 90'-8" tall -- and

with a 9'-4" bulkhead, 100'-0" tall. Building 3 will contain 89,293 gsf of residential space with 6,583 gsf of community facility space -- for a total of 95,876 gsf.

- An 8-story Building 4 will be located on Tax Lots 24, 18, 17, 16, and 15, and partially on Lots 29, 27, and 14 within the area to be rezoned as R6A and partially to be rezoned as R7A -- with frontage along Amber Street. The maximum height of Building 4 would be 79'-8" tall -- and with a 11'-3" bulkhead, 91'-1" tall. The building will contain 93,555 gsf of residential space and 7,240 gsf of community facility space –for a total 114,732 gsf.

Emissions released from the heating, ventilation, and air conditioning (HVAC) systems of each of the proposed building could potentially impact the other proposed taller (or the same height) buildings. All buildings are either adjacent or near to each other, and encircle open space and parking areas. Therefore, a project-on-project analysis was conducted to determine whether the potential impacts of the HVAC emissions would be significant.

A review of existing land uses using NYC Oasis interactive mapping application and Google imaging software show that there are no existing buildings taller than any of the proposed developments or any major combustion emission sources (e.g., Title V or State Facilities) within 400 feet of the study area. As such, no project-on-existing or major source analyses are warranted.

The potential air quality impacts were estimated following the procedures and methodologies prescribed in the *New York City Environmental Quality Review 2014 Technical Manual (CEQR TM)*.

ANALYSIS

Relevant Air Pollutants

The EPA has identified several pollutants, which are known as criteria pollutants, as being of concern nationwide. As the proposed development buildings would be heated by natural gas, the two criteria pollutants associated with natural gas combustion – nitrogen dioxide (NO_2) and particulate matter smaller than 2.5 microns ($PM_{2.5}$) – were considered for analysis.

Applicable Air Quality Standards and Significant Impact Criteria

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for the criteria pollutants by EPA. The NAAQS are concentrations set for each of the criteria pollutants in order to protect public health and the nation's welfare, and New York has adopted the NAAQS as the State ambient air quality standards. This analysis addressed compliance of the potential impacts with the 1-hour and annual NO_2 NAAQS.

In addition to the NAAQS, the *CEQR TM* requires that projects subject to CEQR apply a $PM_{2.5}$ significant impact criteria (based on concentration increments) developed by the New York City Department of Environmental Protection (NYCDEP) to determine whether potential adverse $PM_{2.5}$ impacts would be significant. If the estimated impacts of a proposed project are less than these increments, the impacts are not considered to be significant. This analysis addressed compliance of the potential impacts with the 24-hour and annual $PM_{2.5}$ CEQR significant incremental impact criteria.

The current standards and CEQR significant impact criteria that were applied to this analysis, together with their health-related averaging periods, are provided in Table 1.

TABLE 1
APPLICABLE NATIONAL AMBIENT AIR QUALITY STANDARDS AND CEQR THRESHOLD VALUES

Pollutant	Averaging Period	NAAQS	CEQR
NO_2	1 Hour	0.10 ppm (188 µg/m^3)	--
	Annual	.053 ppm (100 µg/m^3)	--
$PM_{2.5}$	24 Hour	35 µg/m^3	6.0
	Annual	12 µg/m^3	0.3

NO_2 NAAQS

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

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

Based on New York City Department of Planning (NYCDCP) guidance, Tier 1, as the most conservative approach, should initially be applied as a preliminary screening tool to determine whether violations of the NAAQS is likely to occur. If exceedances of the 1-hour NO_2 NAAQS were estimated, the less conservative Tier 3 approach was applied.

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

$PM_{2.5}$ CEQR Significant Impact Criteria

CEQR TM 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.*

A 24-hour $PM_{2.5}$ background concentration of 23.0 ug/m^3 was obtained from Brooklyn JHS-126 monitoring station as the average of the 98th percentile for the latest 3 years of available monitoring data collected by the NYSDEC for 2013-2015. As the applicable background value is 23.0 ug/m^3, half of the difference between the 24-hour $PM_{2.5}$ NAAQS and this background value is 6.0 ug/m^3. As such, a significant impact criterion of 6.0 ug/m^3 was used for determining whether the potential 24-hour $PM_{2.5}$ impacts of the proposed development are considered to 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 ug/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.

Scenarios Considered

The project-on-project HVAC analysis includes the consideration of multiple scenarios and combinations as the HVAC emissions from each proposed building may impact one or more of the other proposed developments. A cumulative impact assessment of the emissions from Buildings 2, 3, and 4 emissions on Building 1 was also conducted. The following seven (7) scenarios were evaluated:

1. Building 2 on Building 1
2. Building 2 on Building 3
3. Building 2 on Building 4
4. Building 4 on Building 1
5. Building 4 on Building 2
6. Building 4 on Building 3
7. Cumulative Impact on Building 1

CEQR Screening Analysis

Based on CEQR guidance, a preliminary screening analysis needs to be conducted as a first step to predict whether the potential impacts of the HVAC emissions would be significant and therefore require a detailed analysis. The CEQR screening procedure is only applicable to single buildings that are more than 30 feet apart from the nearest building of similar or greater height. Therefore, the screening procedure could be only applied to Building 3 as it impacts the taller Building 1. For the other buildings, which are adjacent or near to each other, and Building 3, if it fails the screening procedure, detailed analyses need to be conducted.

The total square footage of Building 3 was used in the analysis and the Figure 17-7 of the *CEQR TM* Technical Appendix "NO_2 Boiler Screen – Residential Development" for a corresponding stack height, was applied.

This nomograph depicts the size of the development versus the distance below which a potential impact could occur, and provides a threshold distance. As required by *CEQR* screening procedures, the 100-foot curve was applied as the 100 feet curve height is closest to but not higher than the stack height of the Building 3 (with are based on building height and an assumed stack height of 3 feet).

If the actual distance between a stack and an affected building is greater than the threshold distance for a building size, then that building passes the screening analysis (and no significant impact is predicted). However, if the actual distance is less than the threshold distance for a

building, then there is a potential for a significant impact and a detailed analysis would be required.

The result of the screening analysis is that Building 3 passed the screening analysis because the actual distance between Building 3 and Building 1 (approximately 330 feet) is greater than the threshold distance determined from CEQR Figure 17-7, indicating that no further detailed analysis for Building 3 is required.

Detailed Analysis

A dispersion modeling analysis was conducted to estimate impacts from the HVAC emissions of each of the proposed buildings using the latest version of EPA's AERMOD dispersion model 12.1 (EPA version 16216r). In accordance with CEQR guidance, this analysis was conducted assuming stack tip downwash, urban dispersion surface roughness length, and elimination of calms. AERMOD's Plume Volume Molar Ratio Method (PVMRM) module was utilized for 1-hour NO_2 analysis -- to account for NOx to NO_2 conversion if warranted. Analyses were conducted with and without the effects of wind flow around the proposed Buildings (i.e., with and without downwash) utilizing AERMOD Building Profile Input Program (BPIP) algorithm and both results are reported.

Emission rates for HVAC analysis were estimated as follows:

- As the proposed developments will be heated by natural gas, emission rates of NOx and $PM_{2.5}$ were calculated based on annual natural gas usage corresponding to the gross floor area of building (gsf), EPA AP-42 emission factors for firing natural gas combustion in small boilers, and gross heating value of natural gas;
- $PM_{2.5}$ emissions from natural gas combustion accounted for both filterable and condensable particulate matter;
- Short-term NO_2 and $PM_{2.5}$ emission rates were estimated by accounting for seasonal variation in heat and hot water demand; and
- The natural gas fuel usage factor 59.1 cubic foot per square foot per year was obtained from CEQR Table US1, Total Energy Consumption, Expenditures and Intensities, 2005, Part I: Housing Unit Characteristics and Energy Use Indicators for New York using the conservative factor for residential uses (even though some of the buildings are mixed use).

Table 2 provides estimated $PM_{2.5}$ and NO_2 short-term (e.g., 24-hour and 1-hour) and annual emission rates for each development from the boiler firing natural gas. The diameter of the stacks and the exhaust's exit velocities were estimated based on values obtained from NYCDEP "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million BTUs per hour). Boiler sizes were estimated based on assumption that all fuel would be consumed during the 100-day (or 2,400 hour) heating season. A stack exit temperature was assumed to be $300^{o}F$ ($423^{o}K$), which is appropriate for boilers, was assumed for all boilers.

Table 2: Estimated Pollutant Short-term and Annual Emission Rates

Building ID	Lot	Stack Height	Total Floor Area	$PM_{2.5}$ Emission Rate (1)		NO_2 Emission Rate (2)	
		feet	ft^2	g/sec	g/sec	g/sec	g/sec
				24-hr	Annual	1-hr	Annual
Building 1	1, 3, 5, 8, 9, 50, 51, 52, 11, 12, p/o 48, 14.	143.3	196,442	4.63E-03	1.27E-03	6.09E-02	1.67E-02
Building 2	39,42-45,47, 56, p/o 32,33,35 48	96.3	107,750	2.54E-03	6.96E-04	3.34E-02	9.16E-03
Building 3	27,29,32,33, 35	103.0	106,500	2.51E-03	6.88E-04	3.30E-02	9.05E-03
Building 4	24, 18, 17, 16, 15, p/o 29, 27, 14	94.1	107,750	2.54E-03	6.96E-04	3.34E-02	9.16E-03

Notes:

1. $PM_{2.5}$ emission factor for natural gas combustion of 7.6 $lb/10^6$ cubic feet included filterable and condensable particulate matter (Filterable $PM_{2.5}$ =1.9 $lb/10^6$ ft^3 and condensable $PM_{2.5}$=5.7 $lb/10^6$ ft^3 (AP-42, Table 1.4-2).
2. NOx emission factor for natural gas of 100 $lb/10^6$ ft^3 for uncontrolled boilers with <100MMBtu/hr (AP-42, Table 1.4-1).

Meteorological Data

All analyses were conducted using the latest five consecutive years of meteorological data (2011-2015). Surface data was obtained from La Guardia Airport and upper air data was obtained from Brookhaven station, New York. The data were processed by Trinity Consultants, Inc. using the current EPA AERMET and EPA procedures. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period.

Five years of meteorological data were combined into a single multiyear file to conduct 24-hour $PM_{2.5}$ and 1-hour NO_2 modeling. The $PM_{2.5}$ special procedure which incorporated into AERMOD calculates concentrations at each receptor for each year modeled, averages those concentrations across the number of years of data, and then selects the highest values across all receptors of the 5-year averaged highest values.

Background Concentrations

Because Brooklyn JHS-126 does not collect hourly ozone and NO_2 background data, in order to conduct the 1-hour NO_2 Tier 3 analysis, hourly NO_2 and hourly ozone background concentrations was developed from available monitoring data collected by the New York State Department of Environmental Conservation (NYSDEC) at the Queens College II monitoring station for the 5 consecutive years (2011-2015), and compiled into AERMOD's required hourly emission (NO_2) and concentration (ozone) data format.

The maximum 1-hour NO_2 background concentration at Queens College monitoring station of 60.2 ppb or 114 ug/m^3, which is 3-year average of the 98th percentile of daily maximum 1-hour concentrations for 2013-2015, and the annual NO_2 background concentration of 17.14 ppb or 32.3 ug/m^3, which is the maximum annual average for latest 3 years from Queens College monitoring station, were also used.

Stack and Receptor Locations for HVAC Analysis

It was assumed that emissions from each development building would be released through a single stack located on the bulkhead of the tallest section of the roof of each building. The locations and heights of the bulkheads for each building were determined based on project drawings. Stack heights were assumed to be 3 feet above the height on the bulkhead.

Receptors were placed around all faces of each building being impacted in 10 foot increments on all floor levels, starting 10 feet above the ground and extending up to the level of the upper

windows (which were assumed to be 5 feet below roof level). More than 1,200 receptors were considered.

Modeling parameters used in the analysis are provided in Table 3.

Table 3: Modeling Parameters for HVAC Analysis

Model	AERMOD (EPA Version 16216r)
Source Type	Point Source
Number of emission points (stacks)	One on each building bulkhead
Surface Characteristic	Urban Area Option
Urban Surface Roughness Length	1
Downwash effect	BPIP Program
Meteorological Data	Preprocessed by the AERMET meteorological preprocessor program by Trinity Consultants, Inc. Yearly meteorological data for 2011-2015 concatenated into single multiyear file for $PM_{2.5}$ modeling, as EPA recommended
Surface Meteorological Data	LaGuardia 2011-2015
Profile Meteorological Data	Brookhaven Station 2011-2015
Pollutant Background Concentrations	Brooklyn JHS-126 and Queens College 2 monitoring stations data for 2011-2015
$PM_{2.5}$ Analysis	Special procedure incorporated into AERMOD where model calculates concentration at each receptor for each year modeled, averages those concentrations across the number of years of data, and then selects the highest across all receptors of the 5-year averaged highest values

RESULTS

$PM_{2.5}$ Results

Results of the $PM_{2.5}$ analysis are provided in Table 4. As shown, both 24-hr and annual PM2.5 impacts are less than the CEQR significant impact thresholds of 6.0 ug/m^3 and 0.3 ug/m^3, respectively. Therefore, $PM_{2.5}$ emissions would not cause significant impacts with the proposed E-designations.

Table 4: $PM_{2.5}$ Analysis Results

Building ID	Receptor Buildings	Maximum 24-hr $PM_{2.5}$ Impacts	Maximum Annual $PM_{2.5}$ Impacts	CEQR Significant Impact Criteria 24hr/Annual
		µg/m^3	µg/m^3	µg/m^3
Building 2	Building 1	1.30	<0.1	6.0/0.3
Building 2	Building 3	1.51	<0.1	6.0/0.3
Building 2	Building 4	0.23	<0.1	6.0/0.3
Building 4	Building 2	0.15	<0.1	6.0/0.3
Building 4	Building 1	1.28	<0.1	6.0/0.3
Building 4	Building 3	1.53	<0.1	6.0/0.3
Cumulative Impact on Building 1		2.15	<0.1	6.0/0.3

Proposed buildings with stacks on bulkheads in Google coordinates are shown on Figure 2.

Figure 2: 3-D View of Proposed Buildings with Stacks on Bulkheads



NO_2 Results

The NO_2 analysis was conducted using the same stack locations on buildings bulkheads as determined in the $PM_{2.5}$ analysis. For the 1-hour NO_2 analysis, a Tier 1 analysis was sufficient to demonstrate the compliance with 1-hour NO_2 NAAQS of 188 ug/m^3 for all proposed buildings and therefore, Tier 3 analysis was not warranted.

With the Tier 1 analysis, total 1-hour NO_2 concentrations with added background concentrations were compared to the 1-hour NO_2 NAAQS. All estimated 1-hour NO_2 concentrations were less than the 1-hour NO_2 NAAQS of 188 ug/m^3. The estimated annual average NO_2 total concentrations, which include impacts and the NO_2 annual background concentration, was also less than the annual NO_2 NAAQS of 100 ug/m^3 for all building combinations. The results of the NO_2 analyses are provided in Table 5.

Therefore, NO_2 emissions would not cause significant impacts with the proposed E-designations.

Table 5: NO_2 Analysis Results

Building ID	Receptor Buildings	1-hr NO_2 Total Conc.	Annual NO_2 Total Conc.[(2)]	NAAQS 1-hr/Annual
		µg/m^3	µg/m^3	µg/m^3
Building 2	Building 1	149.2 [(1)]	32.4	188/100
Building 2	Building 3	150.0 [(1)]	32.6	188/100
Building 2	Building 4	120.2 [(1)]	32.4	188/100
Building 4	Building 2	120.3 [(1)]	32.3	188/100
Building 4	Building 1	148.7 [(1)]	32.7	188/100
Building 4	Building 3	150.5 [(1)]	32.8	188/100
Cumulative Impact on Building 1		161.8 [(1)]	33.1	188/100

Notes:
(1) Tier 1 Analysis include 1-hour NO_2 background value of 114 ug/m3
(2) Total annual NO_2 concentrations include background value of 32.3 ug/m^3.

A summary of the results for all averaging time periods, with and without downwash effect, are presented in Table 6.

When considering results, it should be noted that when emissions from buildings of the same height impact each other (such as Building 2 on Building 4 or vice versa), lower impacts generally occur because the exhaust stack is 3 feet above the bulkhead and the upper receptor windows of the impacted building (where the highest impacts occur) are 5 feet below the roof height, and, as such, the height separation between stack and receptors is 18 feet (or greater with plume rise). This significant difference is due to the stack locations on bulkhead (e.g., 9'-11'' feet above the roof) which lead to lessening of the potential impacts.

In addition, when the emissions from the shorter building impact receptors on taller buildings, such as Buildings 2 or 4 on Building 1, and likely higher impacts should occur, the distance between stack on bulkheads of the building 2 and 4 and Building 1 receptors are so long (more than 200 feet) that also significantly reduce the potential impact.

As the results in Tables 5 and 6 show, no exceedances of the CEQR significant impact thresholds or 1-hour NO_2 NAAQS were found for all scenarios analyzed. Therefore, no restrictions on stack locations within the bulkheads (which occupies relatively large [30'x30'] on the roofs) are warranted for any of the proposed buildings.

Table 6: Summary of Results (ug/m^3)

Pollutant	Modeled	Background Conc.	Total Conc.	Evaluation Criteria
$PM_{2.5}$				
Building 2 on Building 1				
24-hr $PM_{2.5}$	0.31/1.30	N/A	1.30	6.0 (*CEQR Criteria)*
Annual $PM_{2.5}$	<0.1	N/A	<0.1	0.3 (*CEQR Criteria*)
Building 2 on Building 3				
24-hr $PM_{2.5}$	1.51/0.26	N/A	1.51	6.0 (*CEQR Criteria)*
Annual $PM_{2.5}$	<0.1	N/A	<0.1	0.3 (*CEQR Criteria*)
Building 2 on Building 4				
24-hr $PM_{2.5}$	0.23/0.13	N/A	0.23	6.0 (*CEQR Criteria)*
Annual $PM_{2.5}$	<0.1	N/A	<0.1	0.3 (*CEQR Criteria*)
Building 4 on Building 2				
24-hr $PM_{2.5}$	0.13/0.15	N/A	0.51	6.0 (*CEQR Criteria)*
Annual $PM_{2.5}$	<0.1	N/A	<0.1	0.3 (*CEQR Criteria*)
Building 4 on Building 1				
24-hr $PM_{2.5}$	0.16/1.28	N/A	1.28	6.0 (*CEQR Criteria)*
Annual $PM_{2.5}$	<0.1	N/A	<0.1	0.3 (*CEQR Criteria*)
Building 4 on Building 3				
24-hr $PM_{2.5}$	1.53/0.26	N/A	1.53	6.0 (*CEQR Criteria)*
Annual $PM_{2.5}$	<0.1	N/A	<0.1	0.3 (*CEQR Criteria*)
NO_2				
Building 2 on Building 1 (1)				
1-hr NO_2 (2)	11.3/35.2	114	149.2	188 (NAQQS)
Annual NO_2	0.1	32.3	32.4	100 (NAAQS
Building 2 on Building 3 (1)				
1-hr NO_2 (2)	36.0/10.6	114	150.0	188 (NAQQS)
Annual NO_2	0.3	32.3	32.6	100 (NAAQS)
Building 2 on Building 4 (1)				
1-hr NO_2	120.2/119.5	114	120.2	188 (NAQQS)
Annual NO_2	0.1	32.3	32.4	100 (NAAQS)
Building 4 on Building 2 (1)				
1-hr NO_2	3.7/6.3	114	120.3	188 (NAQQS)
Annual NO_2	<0.1	32.3	32.3	100 (NAAQS)
Building 4 on Building 1(1)				
1-hr NO_2 (2)	5.1/34.7	114	148.7	188 (NAQQS)
Annual NO_2	0.4	32.3	32.7	100 (NAAQS)
Building 4 on Building 3 (1)				
1-hr NO_2 (2)	36.5/10.4	114	150.5	188 (NAQQS)
Annual NO_2	0.5	32.8	32.4	100 (NAAQS)

Notes:

(1) With Tier 1 approach, the total 1-hour and annual NO_2 concentrations included modeled impacts and background concentrations

(2) Modeled concentrations are shown with/without downwash effects.

However, E-designation would be required for all project-induced buildings that will limit stack locations to bulkheads only and also limit fuel use to natural gas exclusively in the HVAC systems of all buildings. With E-designation in place, emissions from each proposed building would not significantly impact any of the other buildings.

E- DESIGNATIONS

An (E) designation would be required to restrict stack location to the bulkheads of each building as specified on the project plans and fuel to the exclusive use of natural gas in the HVAC systems in all of the proposed development buildings.

The text of the (E) designations for the Building 1 would be as follows:
Building 1 (Block 4496, Lot 29)
Any new commercial or residential development on must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC) and hot water systems to avoid any potential significant adverse air quality impacts.

The text of the (E) designations for the Building 2 would be as follows:
Building 2 (Block 4496, Lot 15):
Any new residential and/or commercial development on the above-referenced properties must use natural gas for HVAC systems and ensure that the heating, ventilating and air conditioning stack is located at the highest tier or 93 feet above grade to avoid any potential significant adverse air quality impacts.

The text of the (E) designations for the Building 3 would be as follows:
Building 3 (Block 4496, Lot 1):
Any new residential and/or commercial development on the above-referenced properties must use natural gas for HVAC systems and ensure that the heating, ventilating and air conditioning stack is located at the highest tier or 100 feet above grade to avoid any potential significant adverse air quality impacts.

The text of the (E) designations for the Building 3 would be as follows:

Building 4 (Block 4496, Lot 48)
Any new residential and/or commercial development on the above-referenced properties must use natural gas for HVAC systems and ensure that the heating, ventilating and air conditioning stack is located at the highest tier or 91 feet above grade to avoid any potential significant adverse air quality impacts.

CONCLUSION

The result of the air quality analyses are as follows:

- No significant adverse air quality impacts from the HVAC emissions of each proposed development building on each other are predicted if stacks are located on the bulkheads of the proposed buildings; and
- All development buildings would require use exclusively natural gas in their HVAC systems.

These E-designations will assure that no significant adverse air quality impacts will occur from the proposed developments' HVAC emissions.

Attachment F

Jamaica Bay Watershed Form

Print Form

Jamaica Bay Watershed Protection Plan
Project Tracking Form

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

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

A. GENERAL PROJECT INFORMATION

1. CEQR Number: _____ 1a. Modification ☐
2. Project Name: Linden Boulevard Rezoning
3. Project Description:

The applicant seeks a series of discretionary actions that would facilitate the development of four new buildings on an entire block (Block 4496) in the East New York section of Brooklyn Community District #5.

4. Project Sponsor: Canyon, Sterling & Emerald LLC and Radson Development
5. Required approvals: Zoning Map Amendment; Zoning Text Amendment
6. Project schedule (build year and construction schedule): multi-phase construction schedule occurri

B. PROJECT LOCATION:

1. Street address: 2846-2868 Linden Boulevard
2. Tax block(s): 4496 Tax Lot(s): All
3. Identify existing land use and zoning on the project site: Vacant
4. Identify proposed land use and zoning on the project site: Residential/Commercial/CF
5. Identify land use of adjacent sites (include any open space): Multiple dwelling, vacant land
6. Describe existing density on the project site and the proposed density:

Existing Condition	Proposed Condition
Vacant	four buildings totaling 589,809 gross square feet

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

C. GROUND AND GROUNDWATER

1. Total area of in-ground disturbance, if any (in square feet): 100,000
2. Will soil be removed (if so, what is the volume in cubic yards)? N/A
3. Subsurface soil classification:
   (per the New York City Soil and Water Conservation Board): 211. Flatbush-Riverhead Complex
4. If project would change site grade, provide land contours (**attach** map showing existing in 1' contours and proposed in 1' contours).
5. Will groundwater be used (list volumes/rates)? ☐ **Yes** ☒ **No**

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

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

   The seasonal high water table is rarely higher than 40 inches from the surface for any significant period during the growing season.

D. HABITAT

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

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

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

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

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

   Additional lighting to be installed on building exterior; building not near open space/natural areas

E. SURFACE COVERAGE AND CHARACTERISTICS

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

	Existing Condition	Proposed Condition
1. ***Surface area:***		
Roof:	None	25,705-green roof; 41,260- hard roof
Pavement/walkway:	None	15,655
Grass/softscape:	100,000	17,380
Other (describe):		
2. ***Wetland*** (regulated or non-regulated) area and classification:	None	None
3. ***Water surface area:***	None	None

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

Existing – how is the site drained?

Storm water drains overland into sewers in adjacent streets.

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

Storm water would continue to drain overland into sewers in adjacent streets. No infrastructure improvements are necessary off-site.

Attachment G

Correspondence with New York City Landmarks Preservation Commission (LPC)

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 17DCP155K
Project: LINDEN BLVD REZONING
Date received: 4/12/2017

Properties with no Architectural or Archaeological significance:

1) ADDRESS: Linden Boulevard, BBL: 3044960001
2) ADDRESS: Linden Boulevard, BBL: 3044960003
3) ADDRESS: Linden Boulevard, BBL: 3044960005
4) ADDRESS: Linden Boulevard, BBL: 3044960008
5) ADDRESS: Linden Boulevard, BBL: 3044960009
6) ADDRESS: Amber Street, BBL: 3044960011
7) ADDRESS: Amber Street, BBL: 3044960012
8) ADDRESS: Amber Street, BBL: 3044960014
9) ADDRESS: Amber Street, BBL: 3044960015
10) ADDRESS: Amber Street, BBL: 3044960016
11) ADDRESS: Amber Street, BBL: 3044960017
12) ADDRESS: 336 Amber Street, BBL: 3044960018
13) ADDRESS: Amber Street, BBL: 3044960024
14) ADDRESS: 1449 Loring Avenue, BBL: 3044960027
15) ADDRESS: Loring Avenue, BBL: 3044960029
16) ADDRESS: Loring Avenue, BBL: 3044960032
17) ADDRESS: Loring Avenue, BBL: 3044960033
18) ADDRESS: Loring Avenue, BBL: 3044960035
19) ADDRESS: 561 Emerald Street, BBL: 3044960039
20) ADDRESS: 563 Emerald Street, BBL: 3044960042
21) ADDRESS: Emerald Street, BBL: 3044960043
22) ADDRESS: Emerald Street, BBL: 3044960044
23) ADDRESS: Emerald Street, BBL: 3044960045
24) ADDRESS: Emerald Street, BBL: 3044960047
25) ADDRESS: Emerald Street, BBL: 3044960048
26) ADDRESS: Emerald Street, BBL: 3044960050
27) ADDRESS: Emerald Street, BBL: 3044960051
28) ADDRESS: Emerald Street, BBL: 3044960052
29) ADDRESS: Emerald Street, BBL: 3044960056

Gina Santucci

4/26/2017

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 32307_FSO_DNP_04172017.doc

Attachment H

DEP & DOT Correspondence (Water and Sewers Infrastructure)

NEW YORK CITY DOT Department of Transportation

POLLY TROTTENBERG, Commissioner

June 2, 2017

Mr. Robert Dobruskin
Director, Environmental Assessment and Review Division
NYC Department of City Planning
22 Reade Street
New York, NY 10007

Re: Linden Boulevard Project

Dear Mr. Dobruskin:

This letter is to inform you that New York City Department of Transportation is aware of the Linden Boulevard Project rezoning located at 2846-2868 Linden Boulevard. The applicant intends to seek a grade waiver for this project.

Please do not hesitate to contact me if you have any questions.

Sincerely,

Keith Bray

Keith Bray
Brooklyn Borough Commissioner

KB/ami

c: Koren Manning, NYCDCP

NYC Department of Transportation
Office of the Brooklyn Borough Commissioner
16 Court Street, Brooklyn, NY 11241
T: 646.892.1350 F: 646.892.1362
www.nyc.gov/dot

Environmental Protection

Vincent Sapienza, P.E.
Acting Commissioner

Anastasios Georgelis, P.E.
Acting Deputy Commissioner
Bureau of Water and
Sewer Operations

59-17 Junction Boulevard
Flushing, NY 11373

watersewerplanning@dep.nyc.gov

MEMORANDUM

To: Mitchell Wimbish
Terrell Estesen
BEPA

From: Guo Zhan Wu
BWSO

Subject: CEQR # 77DCP361K
Linden Boulevard Rezoning
Borough of Brooklyn

Date: March 31, 2017

This is in reference to the Environmental Assessment Statement (EAS) received by BWSO on March 9, 2017 via e-mail. Please be advised of the following comments.

1. The proposed rezoning will results in an increase of 266% for the sanitary flow in the adjacent sewers. Therefore, there will be a need to amend the existing/pending City Drainage Plan. In addition, a hydraulic analysis of the existing sewer system may be needed to determine whether the existing sewer system is capable of supporting higher density development and related increase in wastewater flow.

2. Please be advised that a sewer extension and building the street to legal grade will be necessary for this development. A waiver for legal grade will not be permitted for this area.

3. The storm flow is required to be restricted as per the new stormwater requirements:

   a. The Stormwater Release Rate must be no more than the greater of 0.25 cfs or 10% of the Allowable Flow or, if the Allowable Flow is less than 0.25 cfs, no more than the Allowable Flow. Allowable Flow is defined as the stormwater flow from a development that can be released into an existing storm or combined sewer based on existing sewer design criteria.

   b. A method to restrict the site generated storm flow must be provided and must adhere to the Stormwater Release Rate requirements stated above.

C: Jannine McColgan, P.E., Director, Water & Sewer Planning
Ketki Patel, P.E., Chief, Drainage Review
Lillian Cheng, P.E., Drainage & Modeling
Janella Peters, Review Engineer
File; JP/jp
Record No.: 38780