Empire Boulevard Rezoning

Environmental Assessment Statement

CEQR # 10DCP020K

ULURP # 100202ZMK



Prepared for:
529 Empire Realty Corporation

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Environmental Assessment Statement

Table of Contents

Environmental Assessment Statement (EAS)……...Form

Project Description…….. Attachment A

Screening Analyses……..Attachment B

Land Use, Zoning and Public Policy……..……...…….. Attachment C

Open Space……..Attachment D

Urban Design and Visual Resources……... Attachment E

Transportation…….. Attachment F

Noise……Attachment G

Appendices

Appendix 1…….. NYC LPC Environmental Review Letter

Appendix 2…… Phase I Environmental Site Assessment

Appendix 3……...NYC DEP Phase I Environmental Assessment Review Letter

ENVIRONMENTAL ASSESSMENT STATEMENT
FORM

City Environmental Quality Review
ENVIRONMENTAL ASSESSMENT STATEMENT SHORT FORM ● FOR UNLISTED ACTIONS ONLY

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

PART I: GENERAL INFORMATION

1. ***Does 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

2. ***Project Name*** **Empire Boulevard Rezoning**

3. ***Reference Numbers***

CEQR REFERENCE NUMBER (To Be Assigned by Lead Agency)	BSA REFERENCE NUMBER (If Applicable)
10DCP020K	
ULURP REFERENCE NUMBER (If Applicable))	OTHER REFERENCE NUMBER(S) (If Applicable) (e.g. Legislative Intro, CAPA, etc)
100202ZMK	

4a. ***Lead Agency Information***			4b. ***Applicant Information***		
NAME OF LEAD AGENCY			NAME OF APPLICANT		
NYC Dept. of City Planning, EARD			**529 Empire Realty Corporation**		
NAME OF LEAD AGENCY CONTACT PERSON			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON		
Robert Dobruskin			**Jerald Johnson, Fox Rothschild LLP**		
ADDRESS **22 Reade Street, Room 4E**			ADDRESS **100 Park Avenue, 15th Floor**		
CITY **New York**	STATE **NY**	ZIP **10007**	CITY **New York**	STATE **NY**	ZIP **10017**
TELEPHONE **212-720-3423**	FAX **212-720-3495**		TELEPHONE **212-878-7992**	FAX **212-692-0940**	
EMAIL ADDRESS **rdobrus@planning.nyc.gov**			EMAIL ADDRESS **jjohnson@foxrothschild.com**		

5. ***Project Description:***

This application is for a zoning map amendment of portions of four City tax blocks in the Wingate area of Brooklyn. The proposed zoning map change would affect an area of approx. 97,498 sf and would change the existing R5/C1-3 zoning to R7A/C2-4, and remove the C1-3 commercial overlay in the portion of the rezoning area currently zoned R7-1/C1-3. The reasonable worst case development scenario (RWCDS) analyzed in the EAS consists of a 7-story mixed-use residential, commercial, and community facility building on a property located at 521-545 Empire Boulevard ("project site"), which is located within the portion of the rezoning area that is proposed to be rezoned R7A/C2-4 (currently zoned R5/C1-3). This building would have a total zoning floor area of 138,244 gsf, and contain 80 dwelling units with a total of 81,357 gsf of residential floor area, 27,958 gsf of local retail, and 28,930 gsf of community facility (use to be determined) as well as 66 accessory parking spaces in an underground garage (refer to Attachment A, "Project Description" for details).

6a. ***Project Location: Single Site*** *(for a project at a single site, complete all the information below)*

ADDRESS	NEIGHBORHOOD NAME	
TAX BLOCK AND LOT	BOROUGH	COMMUNITY DISTRICT
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION IF ANY:		ZONING SECTIONAL MAP NO:

6b. ***Project Location: Multiple Sites*** *(Provide a description of the size of the project area in both City Blocks and Lots. If the project would apply to the entire city or to areas that are so extensive that a site-specific description is not appropriate or practicable, describe the area of the project, including bounding streets, etc.)*

The project site, which is comprised of Lots 66, 74, 75, and 76 on Block 1311 at 521-546 Empire Blvd. in the Wingate neighborhood of Brooklyn Community District 9, is located mid-block between Brooklyn Ave. and the extension of Lamont Ct., bounded by Empire Blvd. to the south, and the northern boundary is the mid-block line. The rezoning area, which includes the project site, generally extends south along Empire Blvd. between Brooklyn Ave. and Lamont Ct.*

7. ***REQUIRED ACTIONS OR APPROVALS*** *(check all that apply)*

City Planning Commission: YES ☑ NO ☐

- ☐ CITY MAP AMENDMENT
- ☑ ZONING MAP AMENDMENT
- ☐ ZONING TEXT AMENDMENT
- ☑ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)
- ☐ CONCESSION
- ☐ UDAAP
- ☐ REVOCABLE CONSENT
- ☐ ZONING CERTIFICATION
- ☐ ZONING AUTHORIZATION
- ☐ HOUSING PLAN & PROJECT
- ☐ SITE SELECTION — PUBLIC FACILITY
- ☐ FRANCHISE
- ☐ DISPOSITION — REAL PROPERTY

ZONING SPECIAL PERMIT, SPECIFY TYPE:

- ☐ MODIFICATION OF
- ☐ RENEWAL OF
- ☐ OTHER

Board of Standards and Appeals: YES ☐ NO ☑

- ☐ SPECIAL PERMIT

EXPIRATION DATE MONTH DAY YEAR

- ☐ VARIANCE (USE)
- ☐ VARIANCE (BULK)

SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION

*** The rezoning area includes lots on four City blocks: Block 1311: Lots 66, 74, 75, and 76 (the project site), Lots 1 to 5, 25 (portion), and 64 (portion); Block 1317: Lots 38 (portion), 39, 41 (portion); Block 1323: Lots 14 (portion), 17 (portion), 58 (portion); Block 1324: Lots 15 (portion), 16, 116, 17 to 21, 35, and 42 (portion) (refer to Table A-2 in Attachment A, "Project Description", for details).**

Department of Environmental Protection: YES ☐ NO ☑ IF YES, IDENTIFY:

Other City Approvals: YES ☐ NO ☑

- ☐ LEGISLATION
- ☐ RULEMAKING
- ☐ FUNDING OF CONSTRUCTION; SPECIFY:
- ☐ CONSTRUCTION OF PUBLIC FACILITIES
- ☐ POLICY OR PLAN; SPECIFY:
- ☐ FUNDING OF PROGRAMS; SPECIFY:
- ☐ LANDMARKS PRESERVATION COMMISSION APPROVAL *(not subject to CEQR)*
- ☐ PERMITS; SPECIFY:
- ☐ 384(b)(4) APPROVAL
- ☐ OTHER; EXPLAIN
- ☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC) *(not subject to CEQR)*

State or Federal Actions/Approvals/Funding: YES ☐ NO ☑ IF "YES," IDENTIFY:

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

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 11×17 inches in size and must be folded to 8.5 ×11 inches for submission*

- ☑ Site location map
- ☑ Zoning map
- ☑ Photographs of the project site taken within 6 months of EAS submission and keyed to the site location map
- ☑ Sanborn or other land use map
- ☑ Tax map
- ☐ For large areas or multiple sites, a GIS shape file that defines the project sites

PHYSICAL SETTING (both developed and undeveloped areas)

Total directly affected area (sq. ft.):	Type of Waterbody and surface area (sq. ft.):	Roads, building and other paved surfaces (sq. ft.)
Project Site: 28,725 sf; Rezoning Area: 97,498 sf	**N/A**	**28,725 sf; Rezoning Area: 97,498 sf**

Other, describe (sq. ft.): **N/A**

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

Size of project to be developed: **138,244 gsf** (gross sq. ft.)

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

If 'Yes,' identify the total square feet owned or controlled by the applicant: **28,725** Total square feet of non-applicant owned development: **N/A**

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

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

Area: **Approx. 27,068 sf** sq. ft. (width × length) Volume: **Approx. 20,000 cubic feet** cubic feet (width × length × depth)

DESCRIPTION OF PROPOSED USES (please complete the following information as appropriate)

	Residential	*Commercial*	*Community Facility*	*Industrial/Manufacturing*
Size (in gross sq. ft.)	**81,357 gsf**	**27,958 gsf**	**28,930 gsf**	**N/A**
Type (e.g. retail, office, school)	**80 Dwelling Units** units	**FRESH supermarket (26,347 gsf) Local Retail (1,611 gsf)**	**Use to be determined**	**N/A**

Does the proposed project increase the population of residents and/or on-site workers? YES ☑ NO ☑ Number of additional residents? **210** Number of additional workers? **171****

Provide a brief explanation of how these numbers were determined: **2.62 residents per household* x 80 dwelling units = 210 residents**

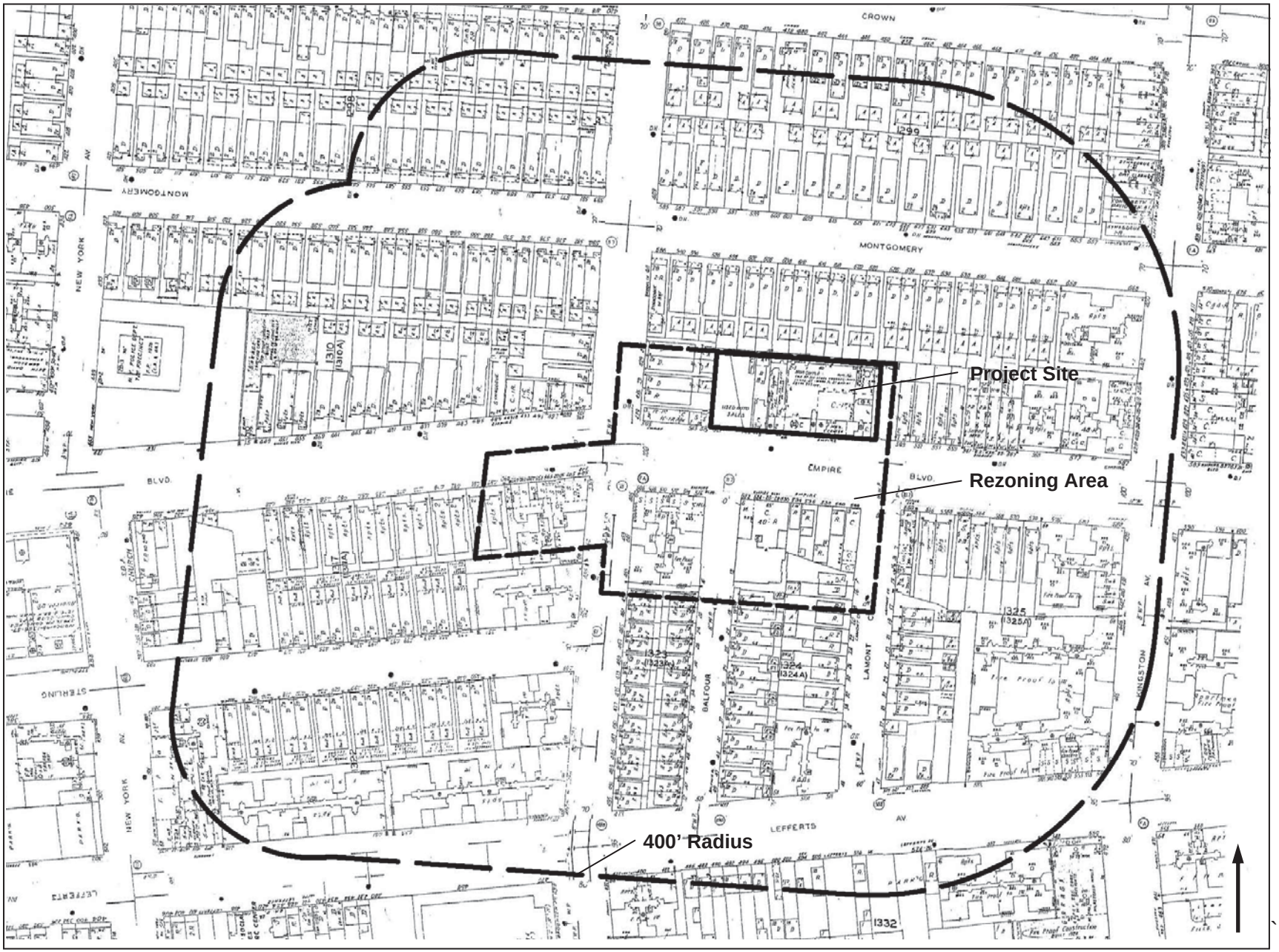
Does the project create new open space? YES ☐ NO ☑ *** if Yes (sq. ft)

Using Table 14-1, estimate the project's projected operational solid waste generation, if applicable: **10,081,327 pounds per week** (pounds per week)

Using energy modeling or Table 15-1, estimate the project's projected energy use: **19.6 billion annual BTUs** (annual BTUs)

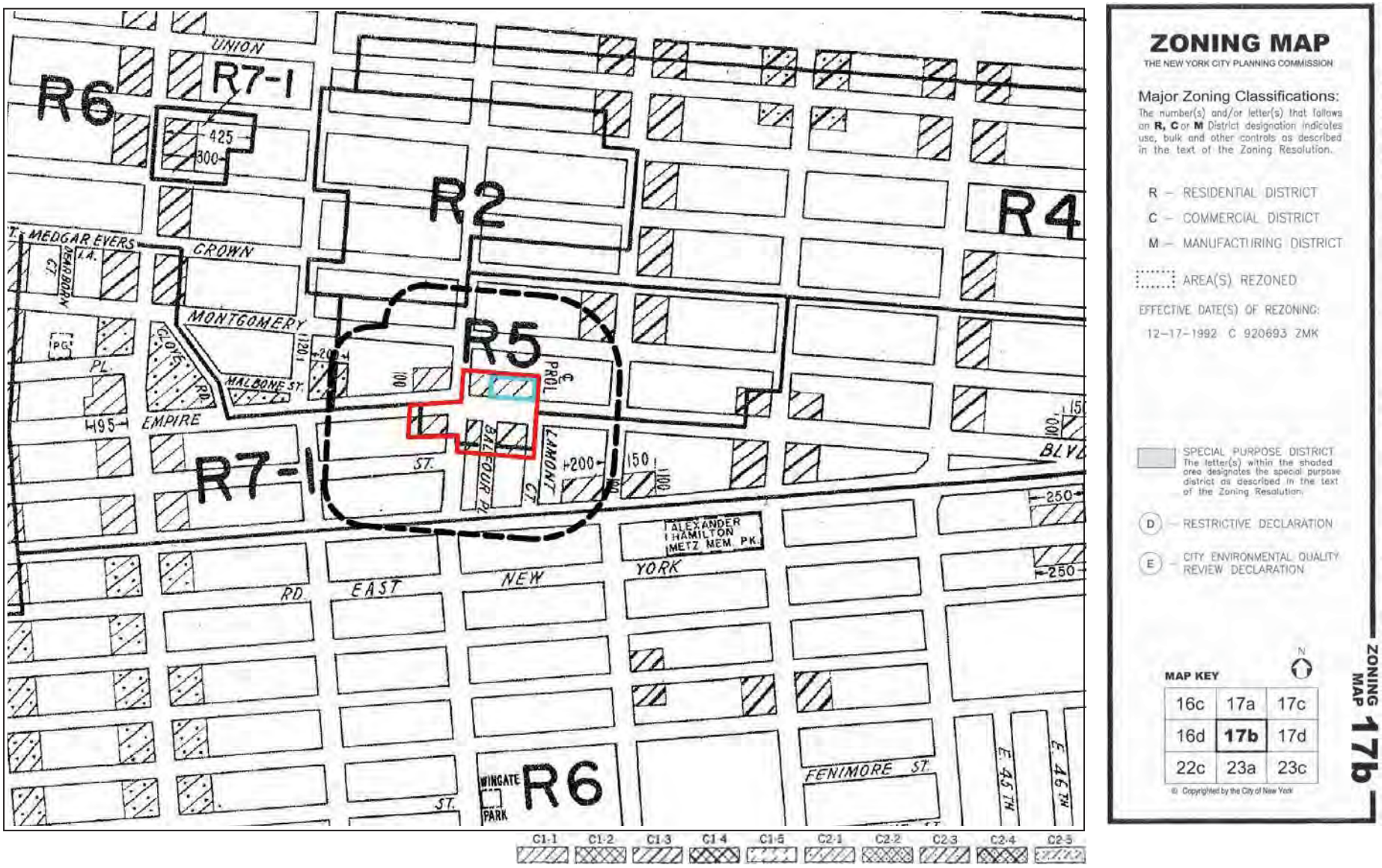
Has a No-Action scenario been defined for this project that differs from the existing condition? YES ☐ NO ☑ If 'Yes,' see Chapter 2, "Establishing the Analysis Framework" and describe briefly:

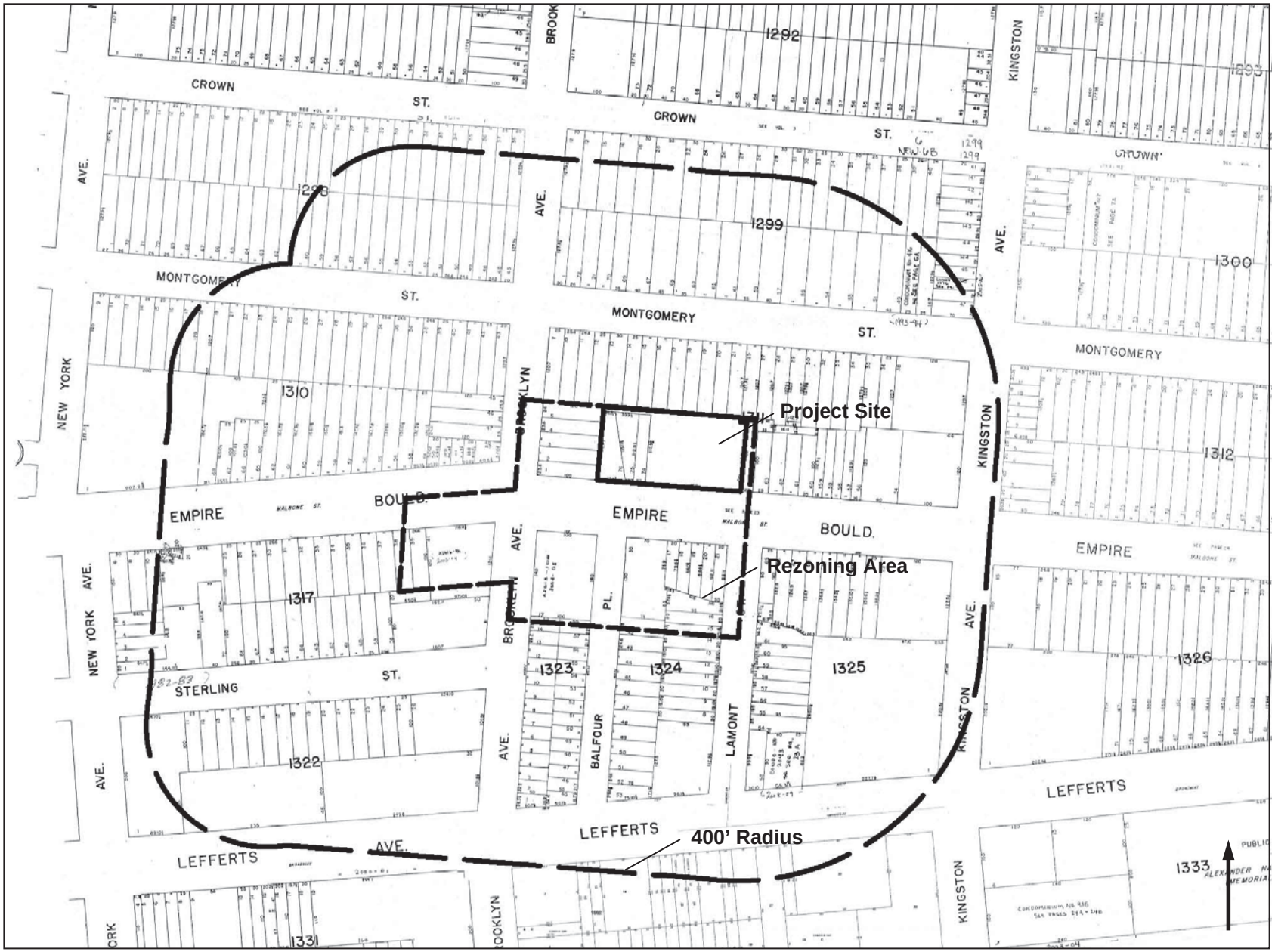
*** Source: Demographic Profile - New York City Community Districts, Brooklyn Community District 9, 2010, U.S. Census 2010**
**** Assumptions: a) Retail Employees: 3 per 1,000 sf (=84 employees/27,958 gsf), and b) Community Facility Employees: 3 per 1,000 sf (=87 employees/28,930 sf)**
***** The proposed mixed-use building would include accessory roof garden space of approximately 13,854 sf.**



Empire Boulevard Rezoning EAS **Figure 1**

Sanborn Map

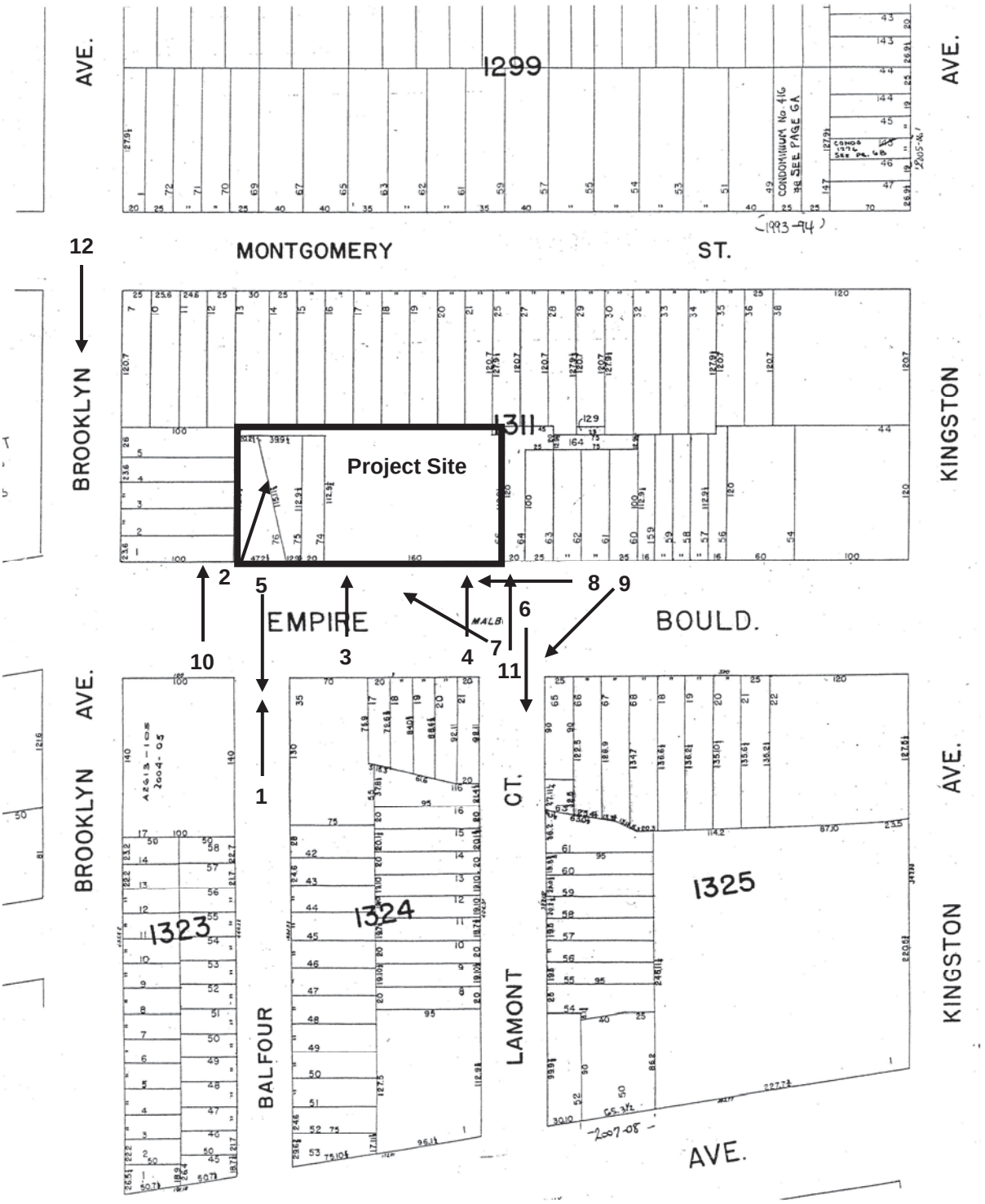

ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
AREA(S) REZONED
EFFECTIVE DATE(S) OF REZONING:
12-17-1992 C 920693 ZMK
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
D – RESTRICTIVE DECLARATION
E – CITY ENVIRONMENTAL QUALITY REVIEW DECLARATION
MAP KEY
16c 17a 17c
16d 17b 17d
22c 23a 23c
© Copyrighted by the City of New York
ZONING MAP 17b
R6
R7-1
R2
R4
R5
R7-1
R6
UNION
MEDGAR EVERS
CROWN
MONTGOMERY
MALBONE ST.
CLOVE RD.
EMPIRE
ST.
BALFOUR PL.
LAMONT CT.
PROL
ALEXANDER HAMILTON METZ MEM. PK.
NEW YORK
EAST RD.
WINGATE PARK
FENIMORE ST.
E. 45TH
E. 46TH
BLVD
C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5
Project Site
Rezoning Area
400’ Radius



Empire Boulevard Rezoning EAS **Figure 3**

Tax Map

Site Location Map



3 ⟶ refers to photo numbers in Figures 5a and 5b



1 View looking north from Empire Blvd. to parking lot on Project Site



2 Looking north on existing parking lot on the Project Site (Lots 75 and 76)



3 View north across Empire Blvd. towards DM Pharmacy and Empire Kosher supermarket (Lots 74 and 66 of the Project Site, respectively)



4 View north across Empire Blvd. towards the CH Cycles store and the former Crown Heights Family Health Center (currently vacant)



5 View from the Project Site looking south to Balfour Place



6 View from the Project Site looking south to Lamont Court



7 Looking west along Empire Boulevard towards the Project Site



8 Looking west along Empire Boulevard at the Project Site frontage



9 Looking southwest along Empire Boulevard from east of the Project Site



10 Restaurant adjacent to the Project Site (west)



11 Vacant Lot (Lot 64) adjacent to the Project Site (east)



12 View along Brooklyn Avenue south towards Empire Boulevard

10. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (DATE THE PROJECT WOULD BE COMPLETED AND OPERATIONAL):	ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS:
The proposed building is expected to be complete and operational in 2016.	**Approximately 24 months**

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? YES ☑ NO ☐ | IF MULTIPLE PHASES, HOW MANY PHASES: **N/A**

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

11. *What is the Predominant Land Use in Vicinity of Project?* *(Check all that apply)*

☑ RESIDENTIAL ☐ MANUFACTURING ☑ COMMERCIAL ☐ PARK/FOREST/OPEN SPACE ☑ OTHER, Describe: **Institutional**

PART II: TECHNICAL ANALYSES

INSTRUCTIONS: The questions in the following table refer to the thresholds for each analysis area in the respective chapter of the CEQR Technical Manual.

- 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.
- Often, a 'Yes' answer will result in a preliminary analysis to determine whether further analysis is needed. For each 'Yes' response, consult the relevant chapter of the CEQR Technical Manual for guidance on providing additional analyses (and attach supporting information, if needed) to determine whether detailed analysis is needed. Please note that a 'Yes' answer does not mean that an EIS must be prepared—it often only means that more information is required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant either to provide additional information to support this Short EAS Form or complete a Full EAS Form. For example, if a question is answered 'No,' an agency may request a short explanation for this response. In addition, if a large number of the questions are marked 'Yes,' the lead agency may determine that it is appropriate to require completion of the Full EAS Form.

	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 or zoning that is different from surrounding land uses and/or zoning? Is there the potential to affect an applicable public policy? If "Yes", complete a preliminary assessment and attach.	✓	
(b) Is the project a large, publicly sponsored project? If "Yes", complete a PlaNYC assessment and attach.		✓
(c) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries? If "Yes", complete the Consistency Assessment Form. **Refer to Attachment C, "Land Use, Zoning and Public Policy"**		✓
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) Does the proposed project exceed any of the thresholds outlined in Table 6-1 of Chapter 6?		✓
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7 **Refer to Attachment D, "Open Space"**		
(a) Would the proposed project change or eliminate existing open space?		✓
(b) Is the proposed project within an underserved area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island? If "Yes," would the proposed project generate 50 or more additional residents?		✓
If "Yes," would the proposed project generate 125 or more additional employees? **N/A**		
(c) Is the proposed project in a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island? If "Yes," would the proposed project generate 300 or more additional residents?		✓
If "Yes," would the proposed project generate 750 or more additional employees? **N/A**		
(d) If the proposed project is not located in an underserved or well-served area, would the proposed project generate: 200 or more additional residents?	✓	
500 additional employees?		✓

	YES	NO
5. *SHADOWS:* CEQR Technical Manual Chapter 8 **Refer to Attachment B, "Supplemental Screening"**		
(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 **Refer to NYC LPC Letter in Appendix 2**		
(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; is listed or eligible for listing on the New York State or National Register of Historic Places; or is within a designated or eligible New York City, New York State, or National Register Historic District?		✓
If "Yes," list the resources and attach supporting information on whether the project would affect any of these resources. **N/A**		
7. *URBAN DESIGN*: CEQR Technical Manual Chapter 10 **Refer to Attachment E, "Urban Design and Visual Resources"**		
(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 that is not currently allowed by existing zoning?		✓
8. *NATURAL RESOURCES:* CEQR Technical Manual Chapter 11		
(a) Is any part of the directly affected area within the Jamaica Bay Watershed? If "Yes," complete the Jamaica Bay Watershed Form.		✓
(b) Does the proposed project site or a site adjacent to the project contain natural resources as defined in section 100 of Chapter 11? If "Yes," list the resources and attach supporting information on whether the project would affect any of these resources.		✓
9. *HAZARDOUS MATERIALS:* CEQR Technical Manual Chapter 12 **Refer to Attachment B, "Supplemental Screening"**		
(a) Would the project allow commercial or residential use in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?		✓
(b) Does the project site have existing institutional controls (*e.g.* (E) designations or a Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?		✓
(c) Would the project require soil disturbance in a manufacturing zone or any development on or near a manufacturing zone 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 where underground and/or aboveground storage tanks (*e.g.* gas stations) are or were on or near the site?	✓	
(f) Would the project result in renovation of interior existing space on a site with potential compromised air quality, vapor intrusion from on-site or off-site sources, asbestos, PCBs or lead-based paint?		✓
(g) Would the project result in development on or near a government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, municipal incinerators, coal gasification or gas storage sites, or railroad tracks and rights-of-way?		✓
(h) Has a Phase I Environmental Site Assessment been performed for the site? If 'Yes," were RECs identified? Briefly identify: **No RECs were identified.**	✓	
10. *INFRASTRUCTURE:* CEQR Technical Manual Chapter 13		
(a) Would the proposed project result in water demand of more than one million gallons per day?		✓
(b) Is the proposed project located in a combined sewer area and result in at least 1,000 residential units or 250,000 SF or more of commercial space in Manhattan or at least 400 residential units or 150,000 SF or more of commercial space in the Bronx, Brooklyn, Staten Island or Queens?		✓
(c) Is the proposed project located in a separately sewered area and result in the same or greater development than that listed in Table 13-1 of Chapter 13?		✓
(d) Would the project involve development on a site five acres or larger where the amount of impervious surface would increase?		✓
(e) Would the project involve development on a site one acre or larger where the amount of impervious surface would increase and 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?		✓
(f) Is the project 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 WWTP 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) 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?		✓

	YES	NO
12. *ENERGY:* CEQR Technical Manual Chapter 15		
(a) Would the proposed project affect the transmission or generation of energy?		✓
13. *TRANSPORTATION:* CEQR Technical Manual Chapter 16 **Refer to Attachment F, "Transportation"**		
(a) Would the proposed project exceed any threshold identified in Table 16-1 of Chapter 16?	✓	
(b) If "Yes," conduct the screening analyses, attach appropriate back up data as needed for each stage, and answer the following questions:		
(1) 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, "Transporation," for information.*		✓
(2) 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? **N/A**		✓
(3) 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 **Refer to Attachment B, "Supplemental Screening"**		
(a) *Mobile Sources:* Would the proposed project result in the conditions outlined in Section 210 of Chapter 17?	✓	
(b) *Stationary Sources:* Would the proposed project result in the conditions outlined in Section 220 of Chapter 17? If 'Yes,' would the proposed project exceed the thresholds in the Figure 17-3, Stationary Source Screen Graph? (attach graph as needed)	✓	
		✓
(c) Does the proposed project involve multiple buildings on the project site?		✓
(d) Does the proposed project require Federal approvals, support, licensing, or permits subject to conformity requirements?		✓
(e) Does the proposed project site have existing institutional controls (*e.g.* E-designations or a 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, a power plant, or would fundamentally change the City's solid waste management system?		✓
(b) If "Yes," would the proposed project require a GHG emissions assessment based on the guidance in Chapter 18? **N/A**		
16. *NOISE:* CEQR Technical Manual Chapter 19 **Refer to Attachment G, "Noise"**		
(a) Would the proposed project generate or reroute vehicular traffic?	✓	
(b) Would the proposed project introduce new or additional receptors (see Section 124 of Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	✓	
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?		✓
(d) Does the proposed project site have existing institutional controls (*e.g.* E-designations or a Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?		✓
17. *PUBLIC HEALTH:* CEQR Technical Manual Chapter 20		
(a) Would the proposed project warrant a public health assessment based upon the guidance in Chapter 20?		✓
18. *NEIGHBORHOOD CHARACTER:* CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted for the following technical areas, check yes if any of the following technical areas required 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	✓	
If "Yes," explain here why or why not an assessment of neighborhood character is warranted based on the guidance of in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		

The proposed action would not have the potential to result in any significant adverse impacts in Land Use, Zoning and Public Policy (refer to Attachment C), Open Space (refer to Attachment D), Urban Design and Visual Resources (refer to Attachment E), Tranportation (refer to Attachment F), and Noise (refer to Attachment G); nor would it result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. Therefore, a preliminary assessment of neighborhood character is not required.

		YES	NO
19.	***CONSTRUCTION IMPACTS***: CEQR Technical Manual Chapter 22 Would the project's construction activities involve (check all that apply):		
	• Construction activities lasting longer than two years;		✓
	• Construction activities within a Central Business District or along an arterial or major thoroughfare;		✓
	• Require 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 community facilities or disruption in its service;		✓
	• Activities within 400 feet of a historic or cultural resource; or		✓
	• Disturbance of a site containing natural resources.		✓

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

The proposed action would result in the construction of a mixed-use residential, local retail, and community facility building on the project site. The proposed development would be constructed in a time period of up to 24 months, and is expected to be operational in 2016. The proposed action is not expected to result in any significant adverse construction impacts. Refer to Attachment B, "Supplemental Screening" for details.

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 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

Joseph Doueck of **529 Empire Realty Corporation**

APPLICANT/SPONSOR SIGNATURE — NAME THE ENTITY OR OWNER

the entity which seeks the permits, approvals, funding or other governmental action described in this EAS.

Check if prepared by: ☑ APPLICANT/REPRESENTATIVE or ☐ LEAD AGENCY REPRESENTATIVE (FOR CITY-SPONSORED PROJECTS)

Philip A. Habib

APPLICANT'S ENVIRONMENTAL CONSULTANT

SIGNATURE:

LEAD AGENCY REPRESENTATIVE NAME:

December 12, 2013

DATE:

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 of 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 effect on the environment. 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.

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

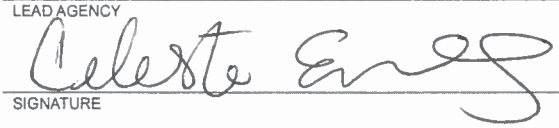
2. Are there any aspects of the project relevant to the determination whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? If there are such impacts, explain them and state where, as a result of them, the project may have a significant impact on the environment.

3. ***LEAD AGENCY CERTIFICATION***

Deputy Director, Environmental Review and Assessment Division
TITLE

New York City Department of City Planning
LEAD AGENCY

Celeste Evans
NAME


SIGNATURE

ATTACHMENT A
PROJECT DESCRIPTION

I. INTRODUCTION

This attachment provides a detailed description of the proposed action, including project site location, existing conditions of the site, project purpose and need, and the governmental approvals required for implementation.

This application is for a zoning map amendment affecting portions of four City tax blocks in the Wingate neighborhood of Brooklyn Community District 9 (see Figure A-1). The proposed action affects an area of approximately 97,498 square feet (sf) of lot area that is generally bounded by Brooklyn Avenue in the northwest, Lamont Court in the east, and the mid-block line of Block 1311 in the north. To the south, the area extends along Empire Boulevard from Brooklyn Avenue to Lamont Court, where it includes 150-foot deep portions of Blocks 1324, 1323 as well as a 150 x 100 foot portion of Block 1317 (see Figure A-2). The applicant, 529 Empire Realty Corporation, is proposing to rezone the majority of this area from R5/C1-3 to R7A/C2-4, and to remove the existing C1-3 commercial overlay from the underlying R7-1 district in the remaining portion of the rezoning area ("the proposed action"). The existing and proposed zoning districts within the rezoning area are shown in Figure A-3.

In the portion of the rezoning area that is proposed to be rezoned from R5/C1-3 to R7A/C2-4, the proposed action would enable a proposal by the applicant to develop a mixed-use building, with accessory, below-grade parking, on four lots fronting on Empire Boulevard and owned by 529 Empire Realty Corporation. The development as proposed by the applicant would include approximately 68 dwelling units (68,727 sf), approximately 66 spaces of accessory parking, 24,289 sf of commercial space and 21,572 sf of community facility space. The development would be constructed on Lots 66, 74, 75, and 76 on Block 1311 (the "project site"). The proposed building would have approximately 114,588 gsf of new development[1].

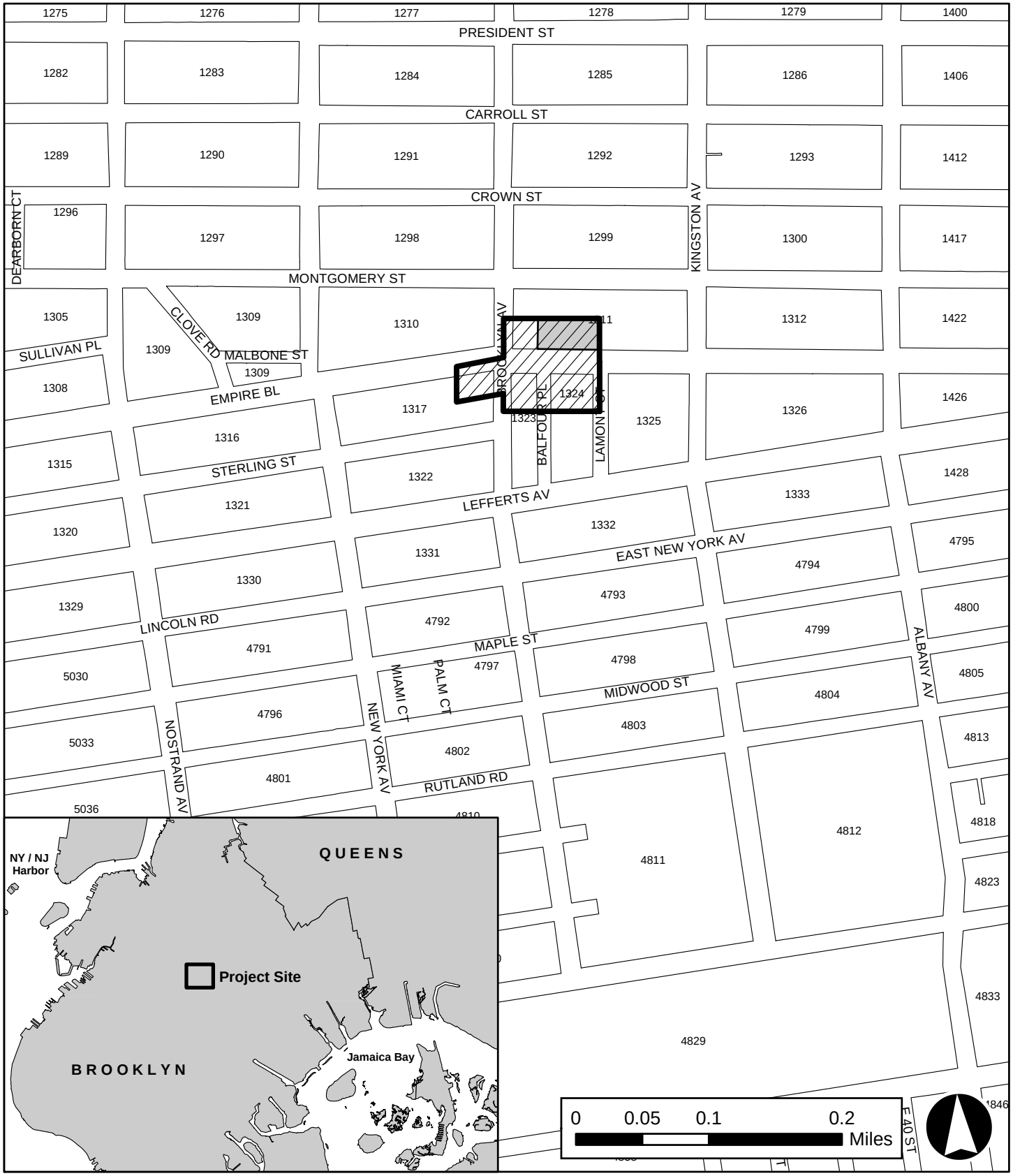
In addition, the existing C1-3 commercial overlay would be removed from a small portion of the rezoning area that is currently zoned R7-1/C1-3. Through the removal of the C1-3 commercial overlay from the underlying R7-1 district the zoning map would better reflect the existing exclusively residential uses on these lots.

The residential component would be developed in accordance with the Quality Housing Program, and include market rate housing. In addition, the proposed building would also include an underground parking garage with 66 accessory parking spaces on the cellar level.

There are no known or expected development proposals at any other sites in the rezoning area. Some lots on the four blocks (Block 1317, Lot 41; Block 1323, Lot 17; Block 1324, Lot 35) already exceed their maximum Floor Area Ratio (FAR) and the maximum FAR under the

[1] Estimated gross floor area represents a 3 percent increase in zoning floor area for residential use, and a 10 percent increase in zoning floor area for commercial and community facility uses (Source: West Harlem FEIS, August 24, 2012).

Location Map



Legend

Project Site

Rezoning Area

4211 Tax Block Number

Proposed Rezoning Area



Legend

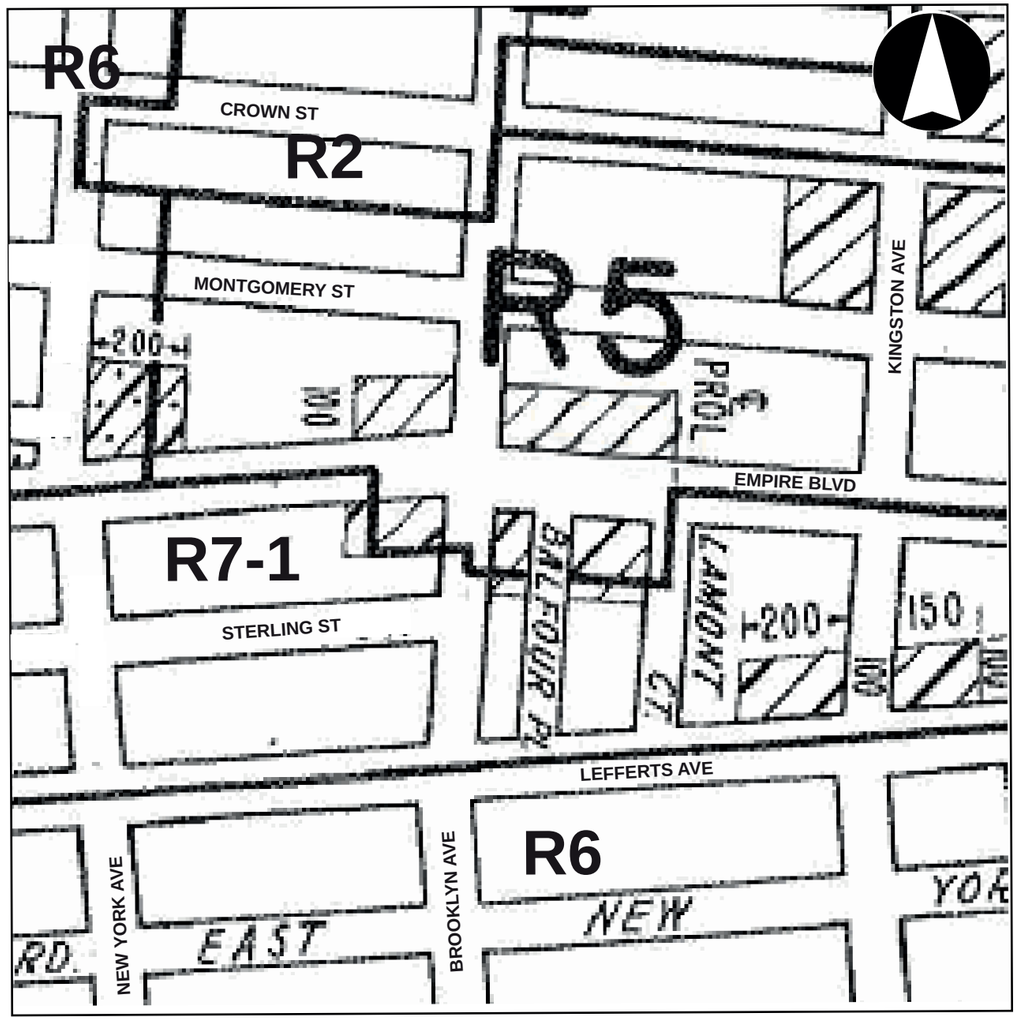
35 Lot Number **1323** Block Number

Area to be rezoned from R5/C1-3 to R7A/C2-4

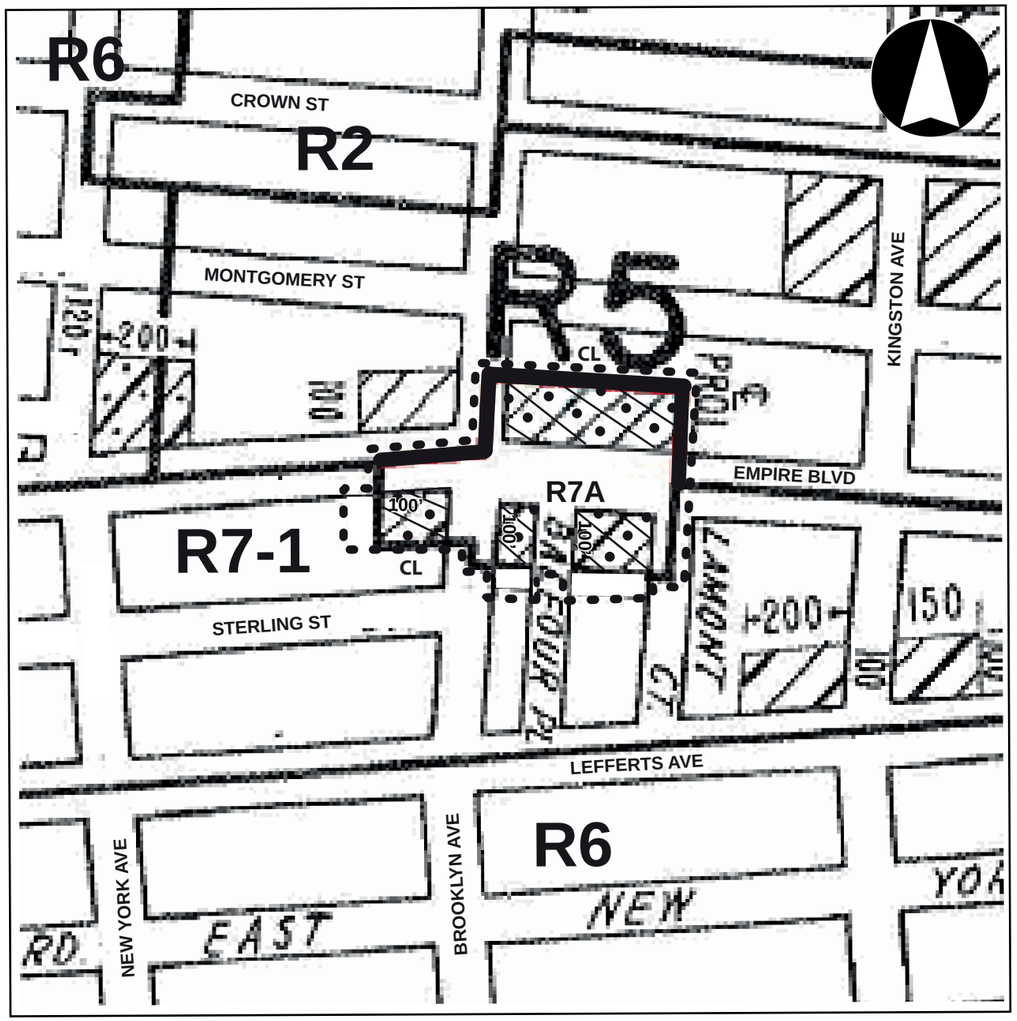
Area to be rezoned from R7-1/C1-3 to R7-1

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.



CURRENT ZONING MAP



PROPOSED ZONING MAP - Area being rezoned is outlined with dotted lines.

Changing a R5/C1-3 district to a R7A/C2-4 and removing the existing C1-3 commercial overlay from the underlying R7-1 district.

proposed action. Additionally, the other lots that are substantially under the existing and proposed action's FAR do not comply with the development site criteria (discussed below) and are not expected to be redeveloped as a result of the proposed action.

The applicant may redevelop the project site with a FRESH supermarket, community facility use and residential dwelling units. The applicant states that he has not been able to acquire a tenant for a potential FRESH supermarket and likely will not be able to do so until after the proposed action is approved. The applicant's intent is to seek a FRESH Certification in the future with the proposed action, which is a ministerial action and does not require a CEQR review. Therefore, for the purposes of a conservative analysis, the EAS assumes a FRESH supermarket in the future with the proposed action as part of the reasonable worst case development scenario (RWCDS).

Based on the aforementioned, a RWCDS was developed to analyze the potential environmental impacts that could result from the proposed action. In the RWCDS, it is anticipated that the project site would be redeveloped with 80 dwelling units (DUs), 27,958 gsf of retail space of which 26,347 gsf would be a FRESH supermarket, and 28,930 gsf of community facility (to be determined) space. In the future without the proposed action, the applicant has stated that the project site would not be redeveloped and the current uses would remain the same. The analysis year for the proposed action is 2016.

II. EXISTING CONDITIONS

The proposed rezoning area is located in the Wingate neighborhood of Brooklyn Community District 9. The rezoning area encompasses approximately 97,498 sf of lot area, the majority of which is proposed to be rezoned from R5/C1-3 to R7A/C2-4, while the C1-3 commercial overlay in the remaining portion of the rezoning area would be removed from the underlying R7-1 district, as shown in Figures A-2 and A-3.

The 28,725 sf project site (consisting of Lots 66, 74, 75, and 76 on Block 1311) owned by the applicant currently includes two 2-story buildings and one 3-story building. The 2-story building on Lot 66 includes ground floor retail use and vacant space, and second floor storage and retail use. The building is located at 527-545 Empire Boulevard and has 12,000 sf of retail space that is occupied by a supermarket (Empire Kosher Supermarket), and 6,000 sf of vacant space (former Kingsbrook Jewish Medical Center) on the ground floor. The second floor of the building includes 17,175 sf of storage space that is occupied by Hachai Publishing Inc. and Lambda Publishers Inc., and 825 sf that are occupied by CH Cycles, a bicycle store and repair workshop. The mezzanine level of the building, which is comprised of 1,104 sf is currently vacant.

The 3-story building on Lot 74 includes ground floor retail use, and former residential spaces on the second and third floors. The building is located at 525 Empire Boulevard and has 2,000 sf of retail that is occupied by a DM Pharmacy. The upper floors include three former residential units, which are currently vacant. The 2-story building on Lot 74 includes former residential spaces, but is currently vacant. Lots 75 and 76 with the total lot area of 6,767 sf

provide accessory parking associated with the retail uses on Lots 66 and 74. Figure A-4 shows the existing building footprints on the project site, the rezoning area, and the surrounding area.

The total existing uses on the project site are comprised of 14,825 sf of retail space, 17,175 sf of storage space, and at least 7,104 sf of vacant space (former Kingsbrook Jewish Medical Center, and mezzanine floor in 2-story building on Lot 66; the area (sf) for former residential spaces in buildings on Lot 74 is not available).

Besides the project site, the remainder of the proposed rezoning area includes a portion of a lot which is vacant (Block 1311, Lot 64), and a mix of mainly 1- to 3-story walk-up buildings, many of which have ground floor retail and/or commercial uses, and a few 6-story multi-family elevator buildings which all have ground floor retail and/or commercial uses. The ground floor retail and/or commercial uses within the rezoning area are located along Empire Boulevard. Even though the current zoning map shows a C1-3 commercial overlay with a depth of 150 feet to the south of Empire Boulevard, no retail and/or commercial uses are located in buildings at either Brooklyn Avenue, Balfour Place, or Lamont Court. The existing retail and/or commercial uses within the remainder of the rezoning area are shown in more detail in Table A-1 below.

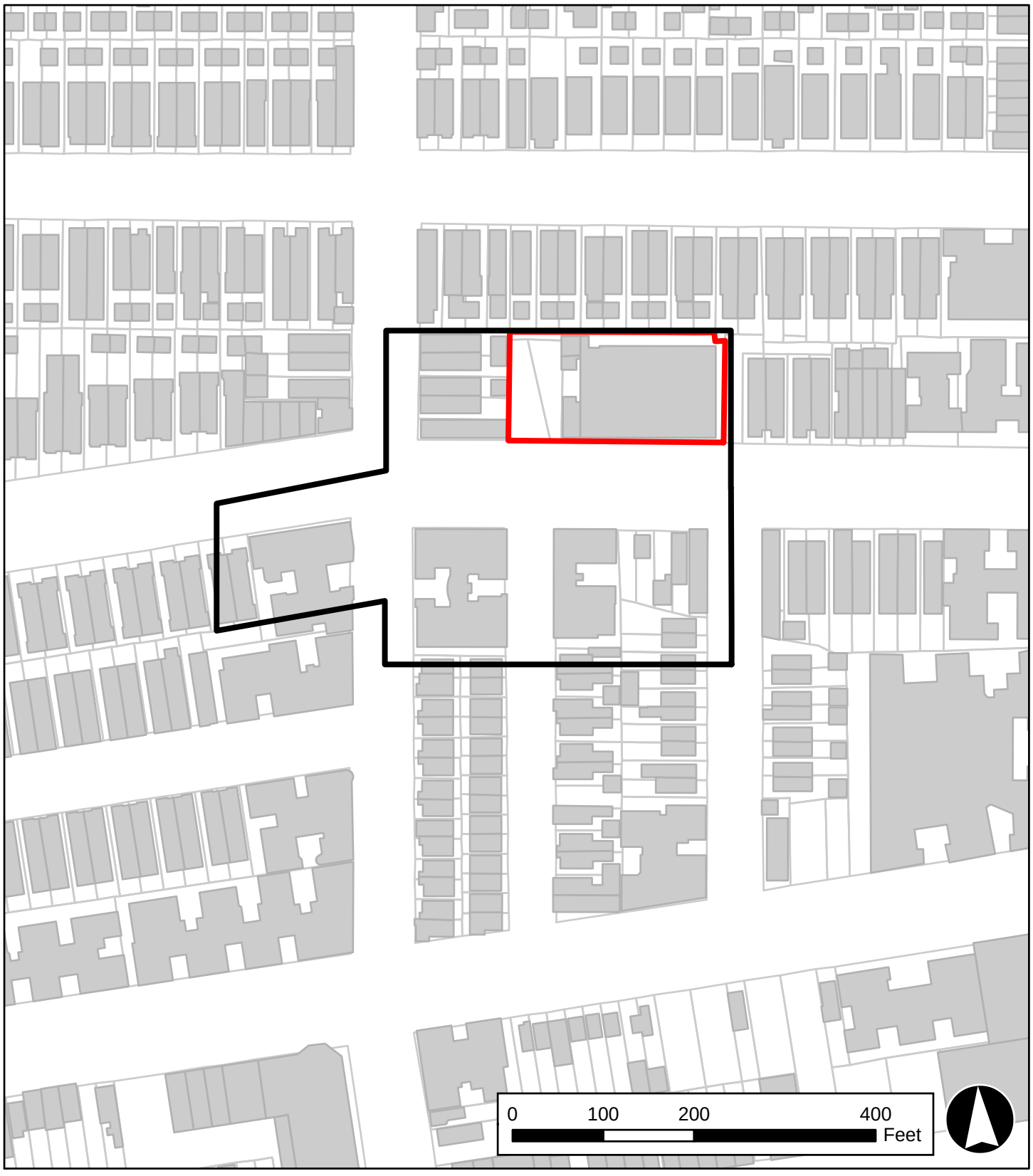
Table A-1
Ground Floor Retail Space Use in the Remainder of the Rezoning Area

Block	Lot	Address	Ground Floor Use
1311	1	505 Empire Boulevard	Hing Yit Chinese Restaurant
	1	507 Empire Boulevard	Vacant
	1	509 Empire Boulevard	Vacant
	1	511 Empire Boulevard	Vacant
1317	41	490 Empire Boulevard	Vacant
	41	492-498 Empire Boulevard	Pace Plumbing and Hardware
	41	504 Empire Boulevard	Deli
1323	17	506 Empire Boulevard	Little Feet (Children Shoe Store)
	17	508 Empire Boulevard	Ellis Cleaners (Dry Cleaner)
	17	510 Empire Boulevard	CHYE Crown Heights Young Entrepreneur
	17	512 Empire Boulevard	Hair Salon
	17	514 Empire Boulevard	Vacant
	17	516 Empire Boulevard	Vacant
1324	35	522 Empire Boulevard	Beauty / Nail Salon
	35	524 Empire Boulevard	Jewish Book Shop (Sosover Sefrom)
	35	526 Empire Boulevard	B. H. TAL Real Estate
	35	528 Empire Boulevard	Bed Star Car Service
	35	530 Empire Boulevard	Multi Service Center: Immigration and Naturalization
	18	536 Empire Boulevard	Jey By Inc. Communication Electronics

Source: PHA Field Inventory February 12, 2013.

The proposed rezoning area is currently comprised of an R5 district with a C1-3 commercial overlay along both sides of Empire Boulevard, as well as an R7-1 district with a C1-3

Existing Building Footprints on Project Site



Legend

Rezoning Area

Project Site

Existing Buildings

commercial overlay at Empire Boulevard (west of the project site), Brooklyn Avenue, Balfour Place, and Lamont Court (refer to Figure A-3). R5 is a residential district with a maximum floor area ratio (FAR) of 1.25. Typically, R5 districts produce 3-story attached houses and small apartment houses. R5/C1-3 is an R5 residential district with commercial overlay of a 150 feet width and a maximum FAR of 1.0. Such commercial overlays are typically mapped in residential areas along major avenues that accommodate the retail and personal service shops needed in residential neighborhoods. R5 districts allow use groups 1 to 4 as-of-right.

The R7-1 zoning district allows a maximum FAR from 0.87 to 3.44 for residential use; the required Open Space Ratio ranges from 15.5 to 25.5 percent. The R7-1 zoning district is a medium-density apartment house district mapped throughout Brooklyn. The commercial FAR for a C1-3 overlay mapped within an R7 district is 2.0 with an overlay district depth of 150 feet. Similar to R5, R7-1 districts also allow use groups 1 to 4 as-of-right.

III. PROJECT PURPOSE AND NEED

The proposed rezoning from R5/C1-3 to R7A/C2-4 would enable a proposal by the applicant to develop his property with a new 7-story mixed-use residential, commercial, and community facility building. As there is currently no existing residential use on the project site, the development as proposed by the applicant would add 68 market-rate housing units (68,727 gsf) to the Wingate neighborhood, thereby adding to the housing stock in Brooklyn and New York City as a whole. The proposed development would also replace the existing uses on the site with new local retail and community facility uses within the proposed building.

The proposed development would also include a 24,289 gsf local retail space on the ground floor of the new building, which is much larger than currently exists on site. Approximately 26,347 gsf of this local retail space could potentially be a FRESH supermarket, which would carry fresh fruits, vegetables, and meats, and offer healthy food choices that are not typically provided in existing delis and bodegas in the neighborhood. Therefore, the availability of local retail space in the Wingate neighborhood would be enhanced and the accessibility of healthy food items would be improved. The proposed development would also introduce new community facility space to the project site. Therefore, the availability of community service space in the Wingate neighborhood would also be enhanced by the proposed development.

The proposed action is also expected to enhance the character of the rezoning area by facilitating development on a currently partially vacant and underutilized site. The proposed building would extend along Empire Boulevard for nearly the entire length of the applicant's property (approximately 240 feet), thereby creating a continuous street wall. Further, the inclusion of the block frontages to the south of Empire Boulevard in the proposed rezoning area would ensure that the rezoning area is compatible to the surrounding R7-1 zoning district, and would bring a number of properties that currently exceed their allowable FAR closer to and into compliance (refer to Table A-3). In addition, the proposed removal of the C1-3 commercial overlay from the underlying R7-1 zoning district would better reflect the uses on these lots, which are solely residential. The rezoning and associated development on the project site would contribute to the enhancement of the streetscape along Empire Boulevard.

IV. THE PROPOSED ACTION

The rezoning area is comprised of two existing zoning districts: R5/C1-3, which includes the majority of the rezoning area and the project site, and R7-1/C1-3, which includes a small portion of the rezoning area. The proposed zoning map amendment would change the majority of the rezoning area from R5/C1-3 to a R7A/C2-4 zoning district, and would remove the existing C1-3 commercial overlay from a small portion of the rezoning area that is currently zoned R7-1/C1-3, as illustrated in Figures A-2 and A-3. The tax blocks and lots included in the proposed rezoning area are identified in Table A-2 below.

Table A-2
Blocks and Lots affected by Empire Boulevard Rezoning[2]

R5/C1-3 to R7A/C2-4 (portion that includes the project site)	
Block	**Lot**
1311	66, 74, 75, 76 (Applicant's project site)
1311	1, 2, 3, 4, 5, 25 (portion of lot), and 64 (portion of lot)
1317	41 (portion of lot/portion of lot in R5 district)
1323	17 (portion of lot in R5 district)
1324	17, 18, 19, 20, 21, 35 (portion of lot in R5 district), 116 (portion of lot in R5 district)
R7-1/C1-3 to R7-1	
Block	**Lot**
1317	38 (portion of lot), 39, and 41 (portion of lot/portion of lot in R7-1 district)
1323	14 (portion of lot), 17 (portion of lot in R7-1 district), and 58 (portion of lot)
1324	15 (portion of lot), 16, 116 (portion of lot in R7-1 district), 35 (portion of lot in R7-1 district), and 42 (portion of lot)

The proposed R7A zoning district is a contextual zoning district. Contextual zoning districts regulate the height, bulk, and setback of new buildings. The goal of contextual zoning is to create new buildings that are consistent with the existing neighborhood character. The proposed R7A zoning district is a contextual district that allows a maximum FAR of 4.0 for residential use; the maximum allowable lot coverage is 65 percent for an interior lot, such as the lots that shape the project site. The minimum building base height is 40 feet, the maximum building base height is 65 feet, and the maximum building height is limited to 80 feet. The R7A zoning district is a medium-density apartment house district mapped throughout Brooklyn.

The proposed R7-1 zoning district allows a maximum FAR from 0.87 to 3.44 for residential use; the required Open Space Ratio ranges from 15.5 to 25.5 percent. The building height is governed by sky exposure planes, which begin at a height of 60 feet above the front lot line and then slope inward over the zoning lot. The C1-3 commercial overlay currently mapped for the

[2] The current zoning district boundary line is drawn 100 feet west of Brooklyn Avenue (Block 1317), and 100 feet south of Empire Boulevard (Blocks 1323 and 1324). As a result, the zoning district boundary cuts through Lot 41 (Block 1317), Lot 17 (Block 1323), and Lots 35 and 116 (Block 1324). As a result, these four lots have two zoning designations: R5 and R7-1. This information was confirmed by the NYC Department of City Planning's Zoning Information Desk on August 3, 2009. In addition, only parts of the following lots are included in the rezoning area: Lots 25 and 64 (Block 1311), Lots 41 and 38 (Block 1317), Lots 14 and 58 (Block 1323), and Lots 42 and 15 (Block 1324).

portion of the rezoning area that is R7-1/C1-3 would be removed as part of the proposed rezoning action.

The proposed rezoning would increase the maximum allowable FAR for lots that would be rezoned to R7A/C2-4 from 1.25 to 4.0 for residential uses, from 2.0 to 4.0 for community facility uses, and from 1.0 to 2.0 for commercial uses on those lots with a C2-4 commercial overlay within the proposed R7A district. As for the lots that would be affected by the proposed C1-3 commercial overlay removal from the underlying R7-1 zoning district, there would be no change in FAR for residential and community facility uses. The maximum allowable FAR would still be 3.44 for residential uses, and 4.8 for community facility uses. However, after the removal of the C1-3 commercial overlay on these lots, no commercial uses would be allowed in the future (refer to Figures A-2 and A-3).

The proposed R7A/C2-4 zoning would facilitate the redevelopment of the project site, located at 521-547 Empire Boulevard. The existing structures on the site would be demolished and in the RWCDS, the project site would be redeveloped with a new 7-story mixed-use building, with approximately 27,958 gsf of ground level retail, approximately 28,930 gsf of community facility uses on the second floor, and approximately 80 DUs (81,357 gsf). Approximately 66 accessory parking spaces would be provided on the cellar level, while the sub-cellar level would include storage and mechanical space, and various amenities.

The proposed action would eliminate the existing C1-3 commercial overlay, and no commercial uses would be allowed on these lots in the future. The proposed C1-3 removal and therefore R7-1 zoning would better reflect existing uses in the respective portions of the rezoning area since the current use of these lots does not include any commercial use.

V. DEVELOPMENT SCENARIO

In order to assess the potential effects of the proposed action, a reasonable worst case development scenario (RWCDS) for both future "No-Action" and "With-Action" conditions will be analyzed for an analysis year of 2016. Given the small size of the area to be rezoned, and the limited number of sites expected to be redeveloped as a result of the proposed rezoning, a four-year analysis period is considered to be sufficient to assess the potential impacts of the proposed rezoning. The future "With-Action" scenario identifies the amount, type, and location of change that is expected to occur by 2016 as a result of the proposed action. The future without the action (or "No-Action") scenario identifies similar projections for 2016 absent the proposed action. The incremental difference between the With-Action and No-Action scenarios serves as the basis for impact analyses. For the purposes of this analysis it is assumed that in the future without the proposed action, the existing uses within the proposed rezoning area would remain unchanged.

To determine the No-Action and With-Action scenarios, standard methodologies were used following the *CEQR Technical Manual* guidelines and employing reasonable worst-case assumptions, to identify the amount and location of future residential growth. In projecting the amount and location of new residential development, several factors have been considered, including known development proposals and "soft site" criteria, described below, for

identifying likely development sites. The applicant's development plan is considered a known proposal likely to occur as a result of the proposed action.

Possible Development sites were identified based on the following criteria:

Any of the following categories of lots or assemblages totaling 5,000 square feet or larger:
- Vacant lots
- Auto-related uses including: parking lots, open junk yards, auto repair shops and gas stations
- Industrial or commercial buildings constructed to half or less of the proposed residential FAR. The proposed R7A district would permit an FAR of 4.0
- Residential buildings constructed to half or less of the proposed residential FAR, where buildings contain fewer than 6 units (buildings with 6 or more units may fall under New York State rent stabilization laws which offer residents certain protections that would make redevelopment unlikely)

As well as the following categories on lots of any size:
- Vacant residential buildings which could be reactivated under the proposed action
- Industrial loft buildings convertible to a residential use

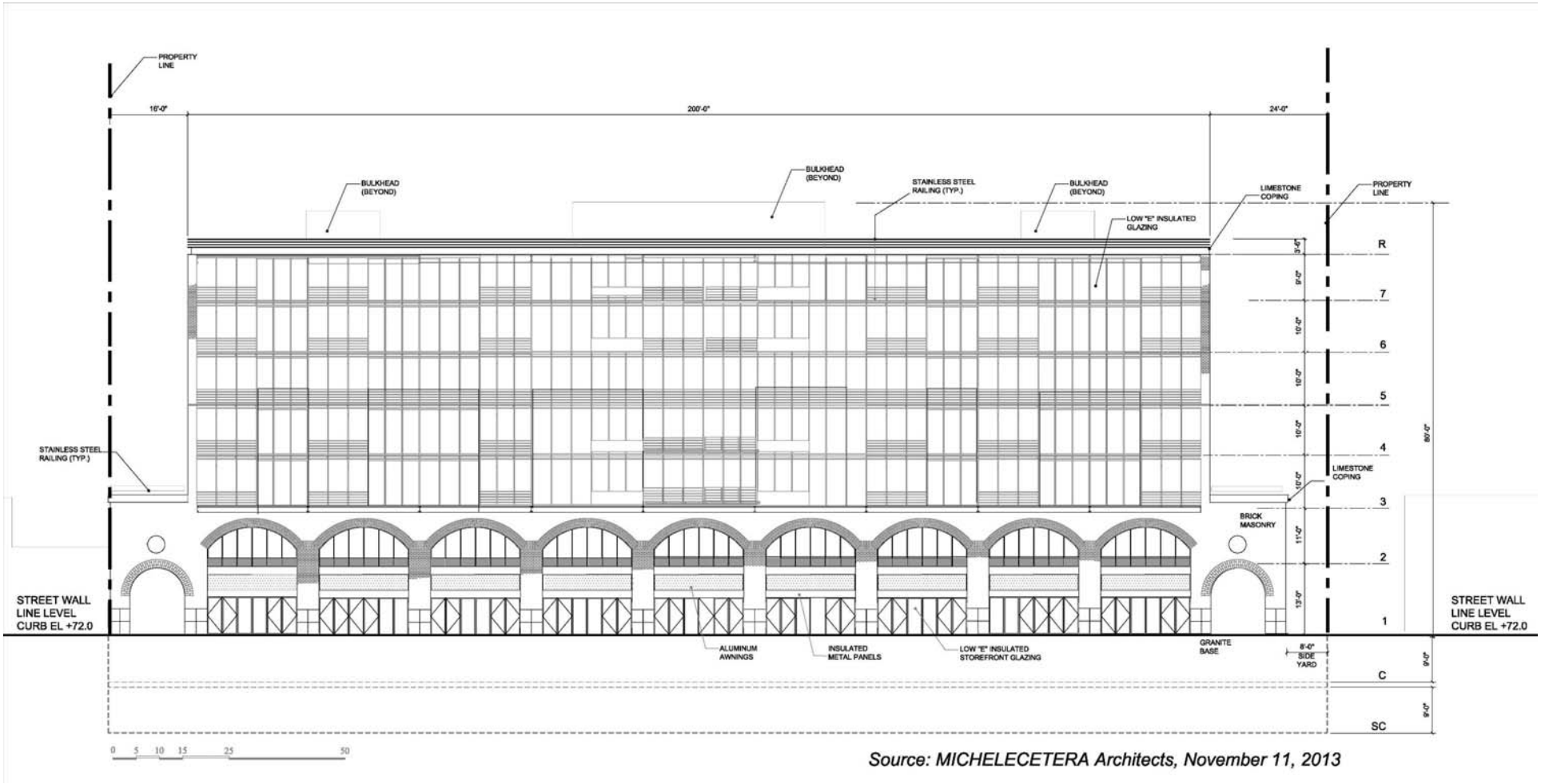
Future No-Action Conditions

In the 2016 future without the proposed action, all of the affected lots would retain their current zoning designations: R5/C1-3 and R7-1/C1-3. As many of the lots within the proposed rezoning area already exceed their current allowable residential FAR of 1.25 (see Table A-3), no new development is expected to occur within the rezoning area in the absence of the proposed action, and the existing uses would remain unchanged. As such, for *CEQR* analysis purposes, the No-Action condition would be identical to existing conditions.

Future With-Action Conditions

In the 2016 RWCDS, the project site (Block 1311, Lots 66, 74, 75, and 76) would be redeveloped with a new 7-story mixed-use residential, commercial, and community facility building, located within the rezoned R7A/C2-4 district. The new building that could be constructed on the project site would comprise a total of 138,244 gsf of floor area, and include up to 80 DUs (81,357 gsf), approximately 27,958 gsf of ground floor retail, 28,930 gsf of community facility space on the second floor, and 66 below grade accessory parking spaces. Two curb cuts would facilitate access to the ingress and egress ramps of the parking garage, which would be located on the cellar floor of the proposed building (refer to the Site Plan in Figure A-6).

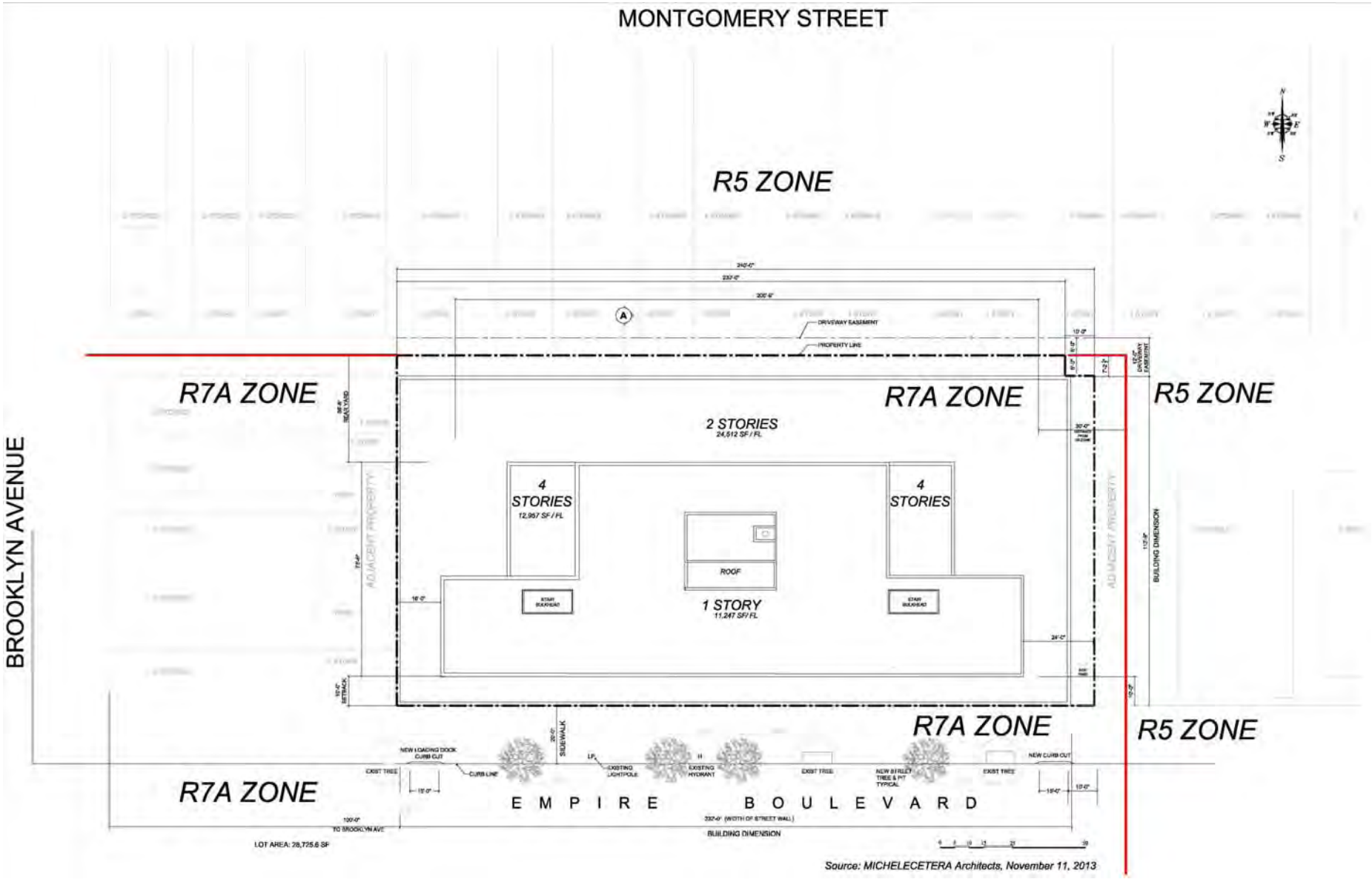
The height of the RWCDS development would be seven stories with a roof elevation of 73 feet (parapet elevation of 79.5 feet). The elevator bulkhead structure on the roof of the RWCDS building is at an elevation of approximately 85.5 feet. An illustrative depiction of the building's south elevation at Empire Boulevard is provided in Figure A-5; a site plan and a section of the building are provided in Figure A-6, and Figure A-7, respectively.



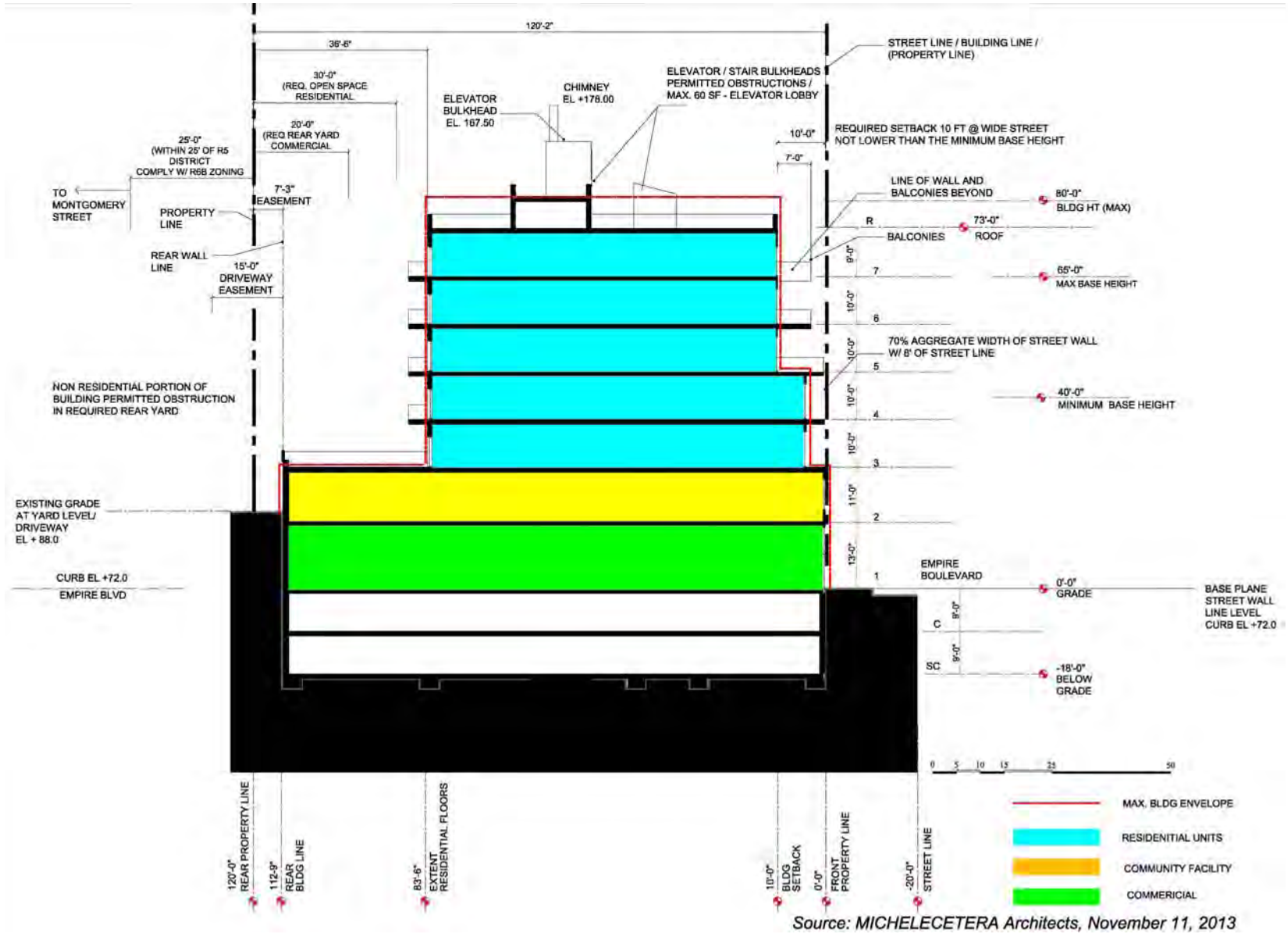
For illustrative purposes only

Empire Boulevard Rezoning EAS **Figure A-5**

South Elevation of the RWCDS Building at Empire Boulevard



For illustrative purposes only



Source: MICHELECETERA Architects, November 11, 2013

For illustrative purposes only

The RWCDS building would be developed in accordance with the Quality Housing Program, whose bulk regulations are mandatory for residential developments within contextual zoning districts such as the proposed R7A district. Its bulk regulations set height limits, allow high lot coverage buildings that are set at or near the street line, and promote building forms in keeping with specific neighborhood characteristics. Quality Housing buildings must include amenities relating to the planting of trees, landscaping and recreational space. The proposed development fulfills this requirement by providing accessory green space on the lower (3rd Floor) and upper roof gardens.

The RWCDS would be approximately 2.62 people per DU[3]. Utilizing this average, the RWCDS would add approximately 210 new residents in 80 DUs. In addition, the RWCDS would also add approximately 171 employees (84 retail employees and approximately 87 community facility employees[4]).

Assessment of Development Potential in Remainder of Rezoning Area

Based on the criteria discussed above, Table A-3 identifies those sites that could potentially be developed as a result of the proposed rezoning. As shown in the table, in addition to the project site to be developed by the applicant, 18 other tax lots could be developed to 50 percent or less of the maximum allowable FAR under the proposed R7A/C2-4 and R7-1 zoning districts. As also indicated in the table, the majority of those lots have very small lot areas, typically less than 3,000 sf, and are in single ownership, with mostly one- and two-family residential developments. Although it is possible that some of these lots could be assembled into a site with single ownership, such assemblage is considered unlikely to occur within the analysis timeframe, given the active uses currently on these lots, the many owners, and the expense and uncertainty that would be involved in assembling those multiple properties.

Therefore, most of the lots that would be developed with less than 50 percent of their allowable FAR in the proposed R7A/C2-4 and R7-1 zoning districts are not expected to be redeveloped in the future with-action condition. Also for Lot 64 on Block 1311, which is currently vacant, and could be redeveloped with a maximum FAR of 2.39 (see notes Table A-3), redevelopment is unlikely because of the small lot area (2,900 sf), and the fact that the maximum allowable floor area would not even be twice the current FAR. As a result, the RWCDS did not identify any other possible projected development sites in addition to the project site.

[3] Source: Demographic Profile - New York City Community Districts, Brooklyn Community District 9, 2010, U.S. Census 2010

[4] Assumption for retail and generic community facility use: 3 employees per 1,000 sf (based on 27,958 gsf of retail space and 28,930 gsf of community facility space).

Table A-3
Lots Within Rezoning Area and their Existing, Built, and Future FAR

Block	Lot	Lot Area	Exist. Use	# of Stories	Max. Allowable FAR [residential/commercial]		Ex. Built FAR
					Existing	Proposed	
1311	***66****	***19,700***	***commercial***	***2***	***1.25/1.0***	***4.0/2.0***	***1.29***
	74*	***2,255***	***residential/commercial***	***3***	***1.25/1.0***	***4.0/2.0***	***1.42***
	75*	***2,964***	***accessory parking***	***n.a.***	***1.25/1.0***	***4.0/2.0***	***0***
	76*	***3,803***	***accessory parking***	***n.a.***	***1.25/1.0***	***4.0/2.0***	***0***
1311	1	2,350	residential/commercial	3	1.25/1.0	4.0/2.0	1.97
	2	2,350	residential	2	1.25/1.0	4.0/2.0	1.14
	3	2,350	residential	2	1.25/1.0	4.0/2.0	1.71
	4	2,350	residential	2	1.25/1.0	4.0/2.0	1.14
	5	2,600	residential	2	1.25/1.0	4.0/2.0	1.03
	25 p/o**	3,194	residential	2	1.25	4.0	0.91
	64 p/o***	2,900	vacant	n.a.	1.25/1.0	2.39/1.58****	0
1317	41 p/o	12,810	residential/commercial	6	1.25/1.0	4.0/2.0	4.76
	38 p/o	2,650	residential	2	3.44/1.0	3.44	1.36
	39	2,650	residential	2	3.44/1.0	3.44	1.36
1323	17	14,000	residential/commercial	6	1.25/1.0	4.0/2.0	4.75
	14 p/o	1,158	residential	2	3.44/1.0	3.44	1.14
	58 p/o	1,129	residential	2	3.44/1.0s	3.44	1.11
1324	15 p/o	1,908	residential	2	3.44/1.0	3.44	0.62
	16	1,900	residential	2	3.44/1.0	3.44	0.93
	116	2,027	residential	2	1.25/1.0	4.0/2.0	0.58
	17	1,590	residential	1	1.25/1.0	4.0/2.0	0.44
	18	1,680	residential	1	1.25/1.0	4.0/2.0	0.71
	19	1,770	residential	2	1.25/1.0	4.0/2.0	0.58
	20	1,858	residential	1.5	1.25/1.0	4.0/2.0	0.97
	21	1,858	residential/commercial	3	1.25/1.0	4.0/2.0	2.68
	35	9,375	residential/commercial	6	1.25/1.0	4.0/2.0	4.67
	42 p/o	2,100	residential	2	3.44/1.0	3.44	0.87

* Lots identified as proposed development site (project site)

** Lot eliminated from further consideration as potential development site, as the portion of the lot that would be re-zoned is very small compared to the remainder of the lot

*** Pursuant to ZR Section 77-11, if a lot is divided by a zoning district boundary line, the use regulation applicable to the district in which more than 50 percent of the lot area is located may apply to the entire zoning lot, provided that the greatest distance from the zoning district boundary line in the district in which less than 50 percent of its area is located does not exceed 25 feet (measured perpendicular to the zoning district boundary line). In case of Lot 64 (Block 1311), 1,200 sf are within the proposed rezoning area (to be rezoned R7A), and 1,700 sf are outside the proposed rezoning area, within an R5 zoning district. Therefore, the applicable use for the whole Lot 64 is R5.

**** Pursuant to ZR Section 77-22, the allowable floor area ratio of lots that include a zoning district boundary is calculated as follows: 41.4 percent of the lot area is located within the proposed R7A zoning district. The maximum residential FAR for R7A is 4.0. Therefore, 41.4 was multiplied with 4.0, which resulted in 1.66. 58.6 percent of the lot area is located outside the proposed rezoning area, and within an R5 zoning district. Within R5 districts, the maximum allowable residential FAR is 1.25. Therefore, 58.6 was multiplied by 1.25, which resulted in 0.73. The two results were added to 2.39, which is the adjusted FAR. Therefore, the maximum floor area on Lot 64 would be 6,931 sf (2.39 x 2,900 sf). Using the same methodology, the floor area ratio for commercial use on Lot 64 would be 1.58.

Note: Shaded rows indicate lots that would be built to less than 50% of the allowable FAR under the proposed zoning

Projected RWCDS

The applicant's proposed development is considered a development site, as it has a specific development plan and would be completed within the four year analysis timeframe. No other potential development sites were identified within the rezoning area. Therefore, for *CEQR* analysis purposes, this EAS analyzes the RWCDS on one projected development site, which is the applicant's project site.

As shown in Table A-4, the incremental (net) change that would result from the RWCDS (With-Action condition) at the project site compared to No-Action condition is 80 DUs (81,357 gsf), 13,133 gsf of retail space, 28,930 gsf of community facility space, and a negative incremental (net) change of 17,175 zsf storage space.

Table A-4
Net Change in Land Uses on Project Site

Use	No-Action	With-Action	Net Increment
Community Facility (gsf)	0	28,930	**28,930**
Retail	14,825	27,958	**13,133**
Residential - gsf **- Units**	0 0	81,357 80	**81,357** **80**
Storage (gsf)	17,175	0	**- 17,175**
Parking Spaces	22	66	**44**

In the RWCDS, the proposed action would add approximately 210 new residents to the area and is expected to generate approximately 84 retail employees, and 87 community facility employees (total of 171 employees). As noted above, the RWCDS would consist of a 7-story building, with a roof height of 73 feet. This RWCDS is analyzed for density-related and site-specific impacts in this EAS. No changes in the number of residents and employees would occur due to the removal of the C1-3 commercial overlay from the underlying R7-1 district in a small portion of the rezoning area.

VI. REQUIRED APPROVALS AND REVIEW PROCEDURES

The proposed rezoning is a discretionary public action subject to both the Uniform Land Use Review Procedure (ULURP), as well as the City Environmental Quality Review (*CEQR*). ULURP is a process that allows public review of proposed actions at four levels: the Community Board; the Borough President; the City Planning Commission and, if applicable, the City Council. The procedure mandates time limits for each stage to ensure a maximum review period of seven months, once the application is complete. Through *CEQR*, agencies review discretionary actions for the purpose of identifying the effects that those actions may have on the environment.

ATTACHMENT B
SCREENING ANALYSES

INTRODUCTION

This Environmental Assessment Statement (EAS) has been prepared in accordance with the guidelines and methodologies presented in the *2012 City Environmental Quality Review (CEQR) Technical Manual*. For each technical area, thresholds are defined which, if met or exceeded, require that a detailed technical analysis be undertaken. Using these guidelines, preliminary analyses were conducted for all aspects of the proposed action to determine whether detailed analysis of any technical area would be appropriate. Part II of the EAS Short Form identified those technical areas that warrant additional assessment. For those technical areas that warranted a "yes" answer in Part II of the EAS Short Form, supplemental screening is provided in this attachment. The technical areas discussed are: Land Use, Zoning and Public Policy, Open Space, Shadows, Urban Design and Visual Resources, Hazardous Materials, Transportation, Air Quality, Noise, and Construction. The remaining technical areas detailed in the *2012 CEQR Technical Manual* were not deemed to require supplemental screening because they do not trigger CEQR thresholds and/or are unlikely to result in significant impacts (see Part II of the EAS Short Form). Based on the findings of the supplemental screening analyses, the following technical areas warranted a detailed analysis: Land Use, Zoning and Public Policy (Attachment C), Open Space (Attachment D), Urban Design and Visual Resources (Attachment E), Transportation (Attachment F), and Noise (Attachment G).

As detailed in Attachment A, "Project Description", the proposed action is a zoning map amendment changing the zoning of portions of four City tax blocks in the Wingate neighborhood of Brooklyn Community District 9. The 97,498 sf rezoning area is comprised of two zoning districts one of which is proposed to be rezoned from R5/C1-3 to R7-A/C2-4 (majority of the rezoning area), while the existing C1-3 commercial overlay is proposed to be removed from the remaining portion of the rezoning area that is currently zoned R7-1/C1-3. The rezoning area is generally bounded by Brooklyn Avenue in the northwest, Lamont Court in the east, and the mid-block line of Block 1311 in the north. In the south the rezoning area parallels Empire Boulevard between Brooklyn Avenue and Lamont Court, where it includes a 150-foot deep portions of Blocks 1324 and 1323, and a 150 x 100 foot portion of Block 1317, as shown in Figure A-2 in Attachment A, "Project Description".

In the portion of the rezoning area that would be rezoned R7A/C2-4, the proposed action would enable a proposal by the Applicant to develop a 7-story mixed-use residential, commercial, and community facility building on four lots fronting on Empire Boulevard and owned by the applicant, 529 Empire Realty Corporation. The development as proposed by the applicant would include approximately 68 dwelling units, approximately 66 spaces of accessory parking, 24,289 square feet (sf) of commercial space of which 26,347 gsf would be a FRESH supermarket, and 21,572sf of community facility space. The development would be constructed on Lots 66, 74, 75, and 76 on Block 1311 (the project site). The building would have a total of approximately 114,588 gsf of new development.

In addition, the existing C1-3 commercial overlay would be removed from a small portion of the rezoning area that is currently zoned R7-1/C1-3. Through the removal of the C1-3 commercial overlay from the underlying R7-1 district the zoning map would better reflect the existing exclusively residential uses on these lots.

In the case of the proposed action, as explained in Attachment A, "Project Description", under the reasonable worst case development scenario (RWCDS) the project site (Block 1311, Lots 66, 74, 75, 76) would be redeveloped with a new 7-story mixed-use residential, commercial, and community facility building, located within the rezoned R7A/C2-4 district. In the RWCDS, the incremental (net) change that would result from the proposed development at the project site compared to No-Action conditions is 80 DUs (81,357 gsf), 27,958 gsf of local retail space, 28,930 gsf of community facility space, and a negative incremental (net) change of 17,175 sf of storage space. The analysis year for the RWDCS is 2016.

The RWCDS would add approximately 210 new residents[1] to the area and is expected to generate approximately 171 jobs on the project site (84 retail employees and 87 community facility employees). The incremental (net) change in employees that would result from the RWCDS at the project site compared to No-Action conditions is 126 employees[2] (39 retail employees and 87 community facility employees). The increased numbers of residents and employees on the project site would be the result of the redevelopment of four underutilized lots that are proposed to be rezoned from R5/C1-3 to R7A/C2-4. The removal of the C1-3 commercial overlay from a small portion of the rezoning area would not result in changes of numbers of residents or employees.

The net numbers discussed above show the increment between the No-Action and With-Action conditions (RWCDS) and therefore constitute the values analyzed throughout this EAS document.

LAND USE, ZONING, AND PUBLIC POLICY

A detailed analysis of land use and zoning is appropriate if the proposed action would result in a significant change in land use or would substantially affect regulations or policies governing land use. An assessment of zoning is typically performed in conjunction with a land use analysis when the proposed action would change the zoning on the project site or result in the loss of a particular use.

As the proposed action is a zoning map amendment, a detailed analysis of land use, zoning, and public policy is provided in Attachment C, "Land Use, Zoning and Public Policy". The proposed rezoning would not result in a significant change of land use in the rezoning area as the uses allowed by the proposed zoning would be identical to uses that are currently allowed,

[1] A rate of 2.62 residents per household was used. Source: Demographic Profile - New York City Community Districts, Brooklyn Community District 9, 2010, U.S. Census 2010.

[2] Assumption: Three employees per 1,000 sf of retail and community facility (= 84 retail employees/27,958 gsf; 87 community facility employees/28,930 gsf, for a total of 171 employees). The net employee number is based on the same assumption, using the net square footage numbers 13,133 gsf for retail use and 28,930 gsf for community facility use (refer to Table A-4 in Attachment A, "Project Description").

and would be consistent with existing land use patterns and trends in the surrounding area. The proposed zoning changes would increase the allowable residential, community facility, and commercial density within 100 feet of Empire Boulevard on Block 1311. They also would remove the existing C1-3 overlay from the remainder of the rezoning area. The RWCDS associated with the proposed rezoning would add 81,357 gsf of residential area (80 DUs) to the neighborhood. In addition, the RWCDS would add 13,133 gsf of commercial/retail space, and 28,930 gsf of community facility space, and therefore increase the space available for these services in the neighborhood.

The proposed zoning change from R5/C1-3 to R7A/C2-4 and the removal of the C1-3 commercial overlay from the underlying R7-1 zoning district would not result in any new non-conforming uses. The new R7A/C2-4 zoning district would be consistent with similar residential zoning classifications in the surrounding area, while the existing R7-1 zoning district would remain the same, except for the removal of the commercial use. In addition, as several of the existing structures in the portion of the rezoning area zoned R5/C1-3 currently exceed the maximum 1.25 FAR allowable by the existing zoning, the proposed R7-A/C2-4 zoning would also result in the compliance of all existing properties in this portion of the rezoning area to the allowable FAR.

Also, through the removal of the C1-3 commercial overlay on the lots within the proposed R7-1 zoning district, the zoning map would better reflect the existing uses on these lots, which are solely residential. Since there are no existing commercial uses on these lots, eliminating the C1-3 commercial overlay would not result in any non-conforming uses, or displacements of businesses. In addition, the removal of the C1-3 commercial overlay would not affect the residential FAR in the portion of the rezoning area that is proposed to be zoned R7-1.

Therefore, as discussed in Attachment C, "Land Use, Zoning and Public Policy", no significant adverse impacts to land use, zoning, or public policy would be expected to occur as a result of the proposed action.

OPEN SPACE

An open space assessment may be necessary if a proposed action could potentially have a direct or indirect effect on open space resources in the project area. A direct effect would "physically change, diminish, or eliminate an open space or reduce its utilization or aesthetic value". An indirect effect may occur when the population generated by a proposed action would be sufficient to noticeably diminish the ability of an area's open space to serve the existing or future population.

According to the guidelines established in the *2012 CEQR Technical Manual*, a project that is not located in an underserved or neither a well-served open space area (such as the project site), which would add fewer than 200 residents or 500 employees, is typically not considered to have indirect effects on open space. Pursuant to these open space thresholds, an assessment of the proposed action's potential to affect open space and recreational facilities is required. The RWCDS would result in the addition of an estimated 210 new residents to the project site and would trigger the CEQR threshold of 200 residents for an initial quantitative analysis of open

space, which is provided in Attachment D of this EAS. The RWCDS would also add 171 employees to the project site, which is well below the CEQR threshold of 500 employees for analysis. Therefore, the analysis of open space will focus exclusively on the proposed action's indirect effects on residential open space needs.

As detailed in Attachment D, "Open Space", the proposed action would not have any significant adverse impacts on open space resources. The proposed action would not result in the direct displacement or alteration of existing public open space resources in the study area. Pursuant to the *2012 CEQR Technical Manual*, a 5 percent or greater decrease in the open space ratio is considered to be "substantial", and a decrease of less than 1 percent is generally considered to be insignificant unless open spaces are extremely limited.

The residential open space ratio in the study area would experience a slight decrease of 0.45 percent compared to No-Action conditions. The reduction of the total open space ratio resulting from the RWCDS, which is an incremental decrease of approximately 0.002 acres per 1,000 residents, is not expected to noticeably diminish the ability of the study area's open spaces to serve its residential population in the future with the proposed action.

Moreover, as described above, the RWCDS on the project site would be developed according to the Quality Housing Program, which mandates the provision of interior recreation space. The RWCDS is expected to provide two roof gardens, with a combined total of approximately 24,015 sf (approximately 0.55 acres)[3], which would be for the exclusive use of the development's residents. These private accessory open spaces would serve the development's residents and would meet some of their open space needs. Although these private accessory open spaces are not included in the quantitative analysis of open space resources, they would help to partially offset the effect of the increase in population in the study area resulting from the RWCDS. Therefore, the proposed action is not anticipated to result in a significant adverse impact on open space resources.

SHADOWS

A shadow assessment considers actions that result in new shadows long enough to reach a publicly accessible open space or historic resource (except within an hour and a half of sunrise or sunset). For actions resulting in structures less than 50 feet high, a shadow assessment is generally not necessary unless the site is adjacent to a park, historic resource, or important natural feature (if the features that make the structure significant depend on sunlight). According to the *2012 CEQR Technical Manual*, some open spaces contain facilities that are not sunlight sensitive, and do not require a shadow analysis including paved areas (such as handball or basketball courts) and areas without vegetation.

As detailed in Attachment A, "Project Description", the proposed action would enable the development of a 7-story mixed-use residential, commercial, and community facility building on the project site. The proposed mixed-use building would be over 50 feet tall and therefore warrant a Tier 1 Screening Assessment. In accordance with *2012 CEQR Technical Manual*

[3] 10,161 sf on the 3rd floor roof and 13,854 sf on the roof.

guidelines, a shadows assessment was undertaken to determine whether the proposed building would result in new shadows long enough to reach publicly accessible open spaces or sunlight-sensitive historic resources, compared to No-Action (existing) conditions.

Preliminary Screening Assessment

Tier 1 Screening Assessment

The *2012 CEQR Technical Manual* requires a shadows assessment for proposed actions that would result in new structures or additions to existing structures, which are greater than 50 feet in height and/or adjacent to an existing sunlight-sensitive resource. The RWCDS building would be a 7-story structure with a roof height of approximately 76 feet (building parapet height is 79.5 feet). The building would also include an elevator bulkhead with a height of 85.5 feet (refer to Figure A-7 in Attachment A, "Project Description"). For conservative analysis purposes a shadow radius was calculated for a building height of 85.5 feet.

According to the *2012 CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height and occurs on December 21, the winter solstice. As such, the longest shadow that could be cast by the proposed development would be approximately 368 feet in length.

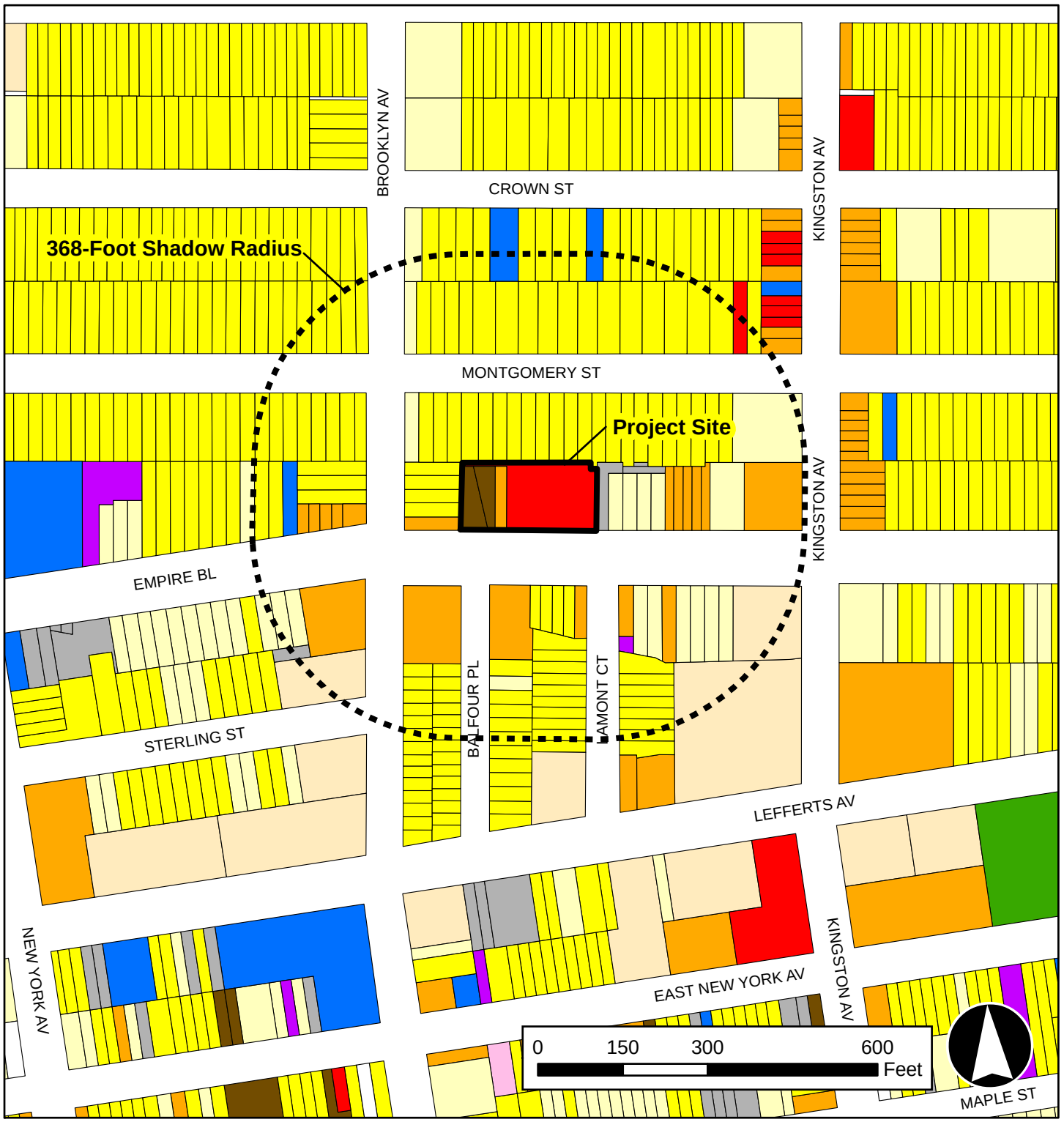
As shown in Figure B-1, no resources of concern were identified within the 368-foot shadow radius. There is no public open space, nor are there any sunlight-sensitive historic resources in the area surrounding the project site. Therefore, a Tier 2 Screening Assessment and a detailed shadows analysis are not warranted. As shown in this preliminary assessment, no significant adverse shadows impacts are anticipated as a result of the RWCDS.

URBAN DESIGN AND VISUAL RESOURCES

Pursuant to the *2012 CEQR Technical Manual* a preliminary analysis of urban design and visual resources is appropriate if a proposed project would result in a building that substantially differs from the existing surrounding neighborhood structure in height, bulk, form, setbacks, size, and scale, and result in an increased built floor area beyond what would be allowed as-of-right.

The proposed action includes zoning changes that would increase permitted residential, community facility, and commercial uses in a portion of the proposed rezoning area. The proposed rezoning would result in the construction of a 7-story mixed-use building on the development site, applying different height, bulk, and setback requirements under the proposed R7A zoning, and could therefore have the potential to result in changes of pedestrian experiences in the study area. As a result, a preliminary urban design and visual resources analysis is warranted and provided in Attachment E, "Urban Design and Visual Resources".
As discussed in Attachment E, the proposed action would facilitate a development that is consistent with the prevailing building forms in the immediate vicinity of the project site. Specifically, three 6-story multi-family residential buildings fronting at Empire Boulevard, located at 440 Brooklyn Avenue (Block 1317, portion of Lot 41), 441 Brooklyn Avenue (Block

Longest Shadow Study Area



Legend

- 1 & 2 Family Residential Walk-up
- Multi-Family Residential Walk-up
- Multi-Family Residential Elevator
- Mixed-use
- Commercial
- Industrial & Manufacturing
- Transportation & Warehousing
- Institutional
- Open Space
- Parking Facilities
- Vacant Land
- Unknown

1323, portion of Lot 17), and 7 Balfour Place (Block 1324, portion of Lot 35; across the street from the project site) are similar in bulk, height, and general scale to the proposed development on the project site. These three buildings currently exceed the allowable floor area for R5 zoning districts and would be brought closer to compliance through the proposed rezoning.

The proposed action would not lead to development that significantly differs in bulk, height, and general scale from the surrounding neighborhood. Furthermore, the proposed action would not alter street patterns, block shapes, or natural features in the study area, nor would it lead to any significant visual resource impacts. Therefore, no significant adverse impacts on urban design and visual resources are expected to occur as a result of the proposed action.

HAZARDOUS MATERIALS

A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semivolatile organic compounds, methane, polychlorinated biphenyls, and hazardous wastes (defined as substances that are chemically reactive, ignitible, corrosive, or toxic). According to the *2012 CEQR Technical Manual*, the potential for significant adverse impacts from hazardous materials can occur when: a) hazardous materials exist on a site, and b) an action would increase pathways to their exposure; or c) an action would introduce new activities or processes using hazardous materials.

A Phase I Environmental Site Assessment (Phase I ESA) was conducted in conformance with the ASTM Standard Practice E 1527-05 to determine whether the proposed action could lead to increased exposure of people or the environment to hazardous materials and whether the increased exposure would result in significant adverse public health impacts or environmental damage. On May 3, 2013, Cardno ATC prepared a Phase I ESA for the project site including the three existing buildings on the project site (refer to Appendix 2 for details). The findings are summarized below.

Phase I ESA for Project Site

The review of historic Sanborn maps identified the project site as being developed with dwellings as first seen on the 1888 Sanborn map, with the addition of some sheds in the 1908 map. The current project site structures were first shown on the 1932 Sanborn map, which have been occupied with commercial retail, a movie theater, dwellings, and vacant lots. Lot 66 on the project site was depicted with a 2-story building occupied by a movie theater from at least 1932 to 1950, a synagogue in 1963 and as manufacturing on 2nd floor and commercial on ground floor from 1965 until 1995, the last Sanborn map reviewed. A medical center has been present on the ground floor of the lot 66 building since at least 1989. Lots 75 and 76 were vacant from 1932 until 1980. A used auto sales facility was present on these lots from at least 1982 until 1995. Lot 74 has been depicted with two buildings (a commercial building and a dwelling) since 1932 until the present.

The ESA report did not identify any Recognized Environmental Conditions (RECs) for the project site. However, four findings were considered environmental concerns and led Cardno

ATC to recommend further action. Appendix 2 provides the Phase I ESA overview section, which is summarized below.

1. Historical Records

The review of the certificates of occupancy available for Lot 66 on the project site identified a fire department approval for the installation of (a) fuel oil tank(s) in 1955. However, the characteristics of the tank(s) are not provided and Lot 66 was not listed in the fuel oil aboveground or underground storage tank databases included in the EDR database report that was reviewed by Cardno ATC. The potential presence of historic fuel oil tank(s) on the project site represent an environmental concern.

Cardno ATC recommends a follow up with the New York Fire Department in order to obtain information pertaining to the historical fuel oil tank(s) on Lot 66, identified as a result of the build records review.

2. Site Reconnaissance: Polychlorinated Biphenyls-Containing Material

Cardno ATC observed fluorescent lights throughout the property buildings. Fluorescent light ballasts manufactured prior to 1979 may contain small quantities of polychlorinated biphenyls (PCBs). Given the pre-1940 construction data of the property buildings, the ballasts may contain PCBs.

Cardno ATC recommends that if leaking light ballasts are identified in the future and/or ballasts are removed during renovations, they should be inspected for labeling regarding the PCB-classification and disposed of in accordance with applicable regulations.

3. Site Reconnaissance: Asbestos-Containing Material

Cardno ATC conducted a limited visual survey for the presence of suspect asbestos-containing material (ACM) within the project site buildings. Various building materials were observed that are typically considered suspect ACM. All suspect materials were observed in good condition.

Cardno ATC recommends that areas scheduled for future renovation or demolition be thoroughly surveyed for suspect ACM materials that may be impacted, pursuant to applicable federal, state and local regulations. In addition, Cardno ATC recommends that the suspect ACM that will not be affected by future renovation or demolition activities be managed under an asbestos Operation and Maintenance (O&M) Plan developed for the building.

4. Site Reconnaissance: Lead-based Paint-Containing Materials

The property buildings' interior painted surfaces were generally found to be in good condition with no evidence of damage and disrepair. Therefore, based on observations no immediate concerns were identified pertaining to lead-based paint (LBP). However given the fact that the buildings were constructed prior to 1978, LBP is likely present.

Cardno ATC recommends that areas scheduled for future renovation or demolition be thoroughly surveyed for suspect LBP materials that may be impacted. If future activities impact suspect LBP that has not been previously tested, the suspect materials should be

assumed to be lead-containing until future testing determines otherwise. All work activities, waste management, and work protection should be undertaken in accordance with all applicable regulations relating to potential LBP.

In addition, Cardno ATC recommends that the suspect ACM that will not be affected by future renovation or demolition activities be managed under an asbestos Operation and Maintenance (O&M) Plan developed for the building.

The Phase I ESA did not identify any RECs by review of regulatory databases, historical information, visual reconnaissance, interviews with relevant personnel, limited observation of surrounding properties, and limited visual screenings.

Any demolition activities on the project site will be undertaken in accordance with all applicable city, state, and federal regulations. Identified or suspected asbestos would be removed, transported, and disposed of in accordance with all regulations. All material removed from demolition activities following a certification of abatement of asbestos will be handled as construction and demolition debris as defined in the Part 360 Solid Waste Regulations of the New York State Department of Environmental Conservation (NYSDEC). This material will be removed and disposed at a facility properly registered or permitted by NYSDEC. With these procedures in place, no significant adverse impacts would be expected to occur as a result of the proposed development on the project site.

The Phase I ESA was reviewed by the New York City Department of Environmental Protection (DEP). In a letter dated August 24, 2012 (refer to Appendix 3), DEP stated that past on-site and/or surrounding area land uses may have impacted the soil and groundwater at the project site. As a result, DEP requires a Phase II Environmental Site Assessment Investigation (Phase II) in order to adequately characterize the surface and subsurface soils prior to construction start. DEP requires the submission of a Phase II Investigative Protocol/Work Plan, which summarizes the proposed drilling, soil/groundwater, and soil vapor sampling activities, and an investigative Health and Safety Plan (HASP), prior to the start of any field work. These plans will be reviewed and approved by the New York City Mayor's Office of Environmental Remediation (OER), which has jurisdiction over (E) designated sites.

To avoid the potential for significant adverse impacts related to hazardous materials, the proposed rezoning action would include an (E) designation for the only projected development site of this rezoning, Block 1311, Lots 66, 74, 75, and 76 (there are no potential development sites). The applicable text for the (E) designation would be as follows:

Task 1

The fee owner(s) of the lot(s) 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 New York City Mayor's Office of Environmental Remediation (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 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 DEP 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 owner(s) of the lot(s) restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owner(s) 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.

TRANSPORTATION

The objective of the transportation analysis is to determine whether a proposed action may have a potential significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of all roadway users (pedestrians, bicyclists, and vehicles), on-and off-street parking or goods movement.

The *2012 CEQR Technical Manual* describes a two-level screening procedure for the preparation of a "preliminary analysis" to determine if quantified operational analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the numbers of person and vehicle trips attributable to the RWCDS. According to the *2012 CEQR Technical Manual*, if the RWCDS is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted.

Traffic

The *2012 CEQR Technical Manual* identifies minimum development densities that have the potential to result in significant adverse impacts to traffic conditions and therefore require a detailed traffic analysis. As shown in Table 16-1 of the *2012 CEQR Technical Manual*, actions with a single or multiple land uses which may result in fewer than 50 peak hour vehicle trips are generally unlikely to cause significant adverse impacts. For future developments in Zone 3 (which includes areas within a half-mile radius of a subway station) the density threshold requiring trip generation analysis to determine the volume of vehicular trips during the peak hours is 200 DUs, 20,000 gsf of retail space, and 25,000 gsf of community facility space. The RWCDS exceeds the CEQR analysis thresholds for retail and community facility uses, and therefore, an assessment is warranted, and is provided in Attachment F, "Transportation".

As presented in Attachment F, the RWCDS would not result in significant adverse traffic impacts under *2012 CEQR Technical Manual* criteria. Table F-2 in Attachment F shows that the RWCDS would result in a net increase of 51 vehicle trips in the weekday AM peak hour, 80 in the weekday midday peak hour, 59 in the weekday PM peak hour, and 53 in the Saturday midday peak hour, compared to the No-Action condition.

Vehicle trips generated under the RWCDS would be most concentrated in the intersections of Balfour Place and Empire Boulevard, and Lamont Court and Empire Boulevard. The proposed building's garage ingress and egress would be located across from where Balfour Place and Lamont Court intersect with Empire Boulevard. As discussed in Attachment F, these two intersections were selected for analysis based on the assignment of project-generated traffic (refer to Figure F-2 in Attachment F). The traffic impact analysis presented in Attachment F examined conditions during the weekday midday peak hour. The 2012 *CEQR* analysis threshold was not exceeded in the weekday AM, PM, and Saturday midday peak hours at any intersection in the vicinity of the project site.

As presented in Attachment F, traffic generated by the RWCDS would not result in any significant adverse traffic impacts at analyzed intersections in any peak hour based on *2012 CEQR Technical Manual* criteria.

Transit

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) and specified in the *2012 CEQR Technical Manual*, detailed transit analyses are generally not required if a proposed action is projected to result in fewer than 200 peak hour rail or bus transit riders. If a proposed action would result in 50 or more bus passengers being assigned to a single bus line (in one direction), or if it would result in an increase of 200 or more passengers at a single subway station or on a single subway line, a detailed bus or subway analysis would be warranted.

As the anticipated subway and bus transit incremental forecast generated by the RWCDS would include 45, 52, 55, and 49 subway trips, and 26, 46, 34, and 33 bus trips in the AM, midday, PM, and Saturday midday peak hours, respectively, the *CEQR* threshold of 200 peak hour transit trips for detailed analysis would not be exceeded. The amount of additional subway

and bus trips to and from the project site and rezoning area is therefore not expected to adversely burden existing subway and bus systems. Significant adverse impacts are unlikely on any portion of the transit system due to the proposed development. As a result, no Level 2 transit screening and no detailed transit analysis are warranted.

Pedestrians

An analysis of pedestrian flow conditions typically focuses on those pedestrian elements, i.e., sidewalks, corner areas, and crosswalks, which would be utilized by concentrations of pedestrians generated as a result of a proposed action. According to the *2012 CEQR Technical Manual,* detailed pedestrian analyses are generally not required when projected increases in pedestrian volumes would total less than 200 persons per hour at any pedestrian element. Increases of less than 200 persons per hour are generally not noticeable and would be unlikely to result in significant adverse impacts based on *2012 CEQR Technical Manual* criteria.

Based on the travel demand forecast shown in Table F-2 of Attachment F, it is estimated that the RWCDS would generate 93, 359, 210, and 229 incremental walk-only trips in the weekday AM, midday, PM, and Saturday midday peak hours. As the midday, PM, and Saturday midday peak hour totals exceed the *CEQR* analysis threshold of 200 pedestrian trips per peak hour, a Level 2 pedestrian screening was conducted.

The analysis of pedestrian conditions focused on those sidewalks and corner areas that would provide access to the proposed development, as demand generated by the RWCDS would exceed 200 trips per hour, the *2012 CEQR Technical Manual* impact analysis thresholds at these locations.

Attachment F provides preliminary screening assessment for the north sidewalk on Empire Boulevard between Brooklyn and Kingston Avenues (where project-generated demand would be most concentrated). Based on the assessment provided in Attachment F, project-generated demand is not expected to result in significant adverse sidewalk impacts on Empire Boulevard.

Under *2012 CEQR Technical Manual* guidelines, if a proposed project would not significantly redesign or reconfigure one or more streets as part of the proposed project, or be located near sensitive land uses, such as hospitals, schools, parks, nursing homes, elderly housing, or study intersections located in Safe Streets for Senior Focus Areas (SPFAs), a detailed analysis of safety impacts is not required. The RWCDS would not include the redesign or reconfiguration of streets, nor is it located near sensitive land uses. In addition, the study intersections are not located in a SPFA. As a result, no detailed pedestrian and vehicular safety analysis is warranted.

As shown in Attachment F, the proposed action would not result in any significant adverse pedestrian impacts.

Parking

As discussed in Attachment F, the RWCDS on the project site would include 66 accessory parking spaces on the cellar level. Per the *2012 CEQR Technical Manual*, as the threshold of 80

parking spaces in off-street parking facilities is not exceeded by the proposed action, a detailed parking analysis is not warranted. In addition, all new parking demand will be accommodated on site and therefore the proposed action is not expected to result in any significant adverse parking impacts based on *2012 CEQR Technical Manual* guidelines. As a result, a parking analysis is not warranted.

AIR QUALITY

Mobile Sources

Based on the *2012 CEQR Technical Manual*, the following criteria are applicable to the proposed action for identifying intersections with the potential to violate the New York City de minimis criteria for carbon monoxide (CO):

- Actions that would generate or divert 170 or more peak hour trips through an intersection.
- Actions that would result in a substantial number of local or regional diesel vehicle trips.

As discussed above, the RWCDS would not add 170 or more vehicle trips to any single intersection in any peak hour. As the RWCDS is not expected to trigger the *CEQR* threshold of 170 vehicles per hour through an intersection for detailed mobile source air quality analysis, it is not provided in this EAS. As the RWCDS does not meet any of the screening guidelines presented in the *2012 CEQR Technical Manual*, it does not warrant detailed mobile source air quality analysis.

Garage Analysis

The RWCDS would result in a 66-space accessory, below-grade parking garage on the project site. This garage would be part of the RWCDS building and would be located in the cellar floor. The unobstructed garage area is approximately 22,421 sf, the gross cellar floor area is 27,120 sf. The proposed completion year is 2016. The more detailed screening analysis is discussed below.

Standards and Criteria

National Ambient Air Quality Standards

Ambient air is defined by the United States Environmental Protection Agency (EPA) as that portion of the atmosphere, external from buildings, to which the general public has access. National Ambient Air Quality Standards (NAAQS) were promulgated by EPA for the protection of public health and welfare, allowing for an adequate margin of safety. The EPA has set NAAQS for six criteria pollutants. They consist of primary standards, established to protect public health with an adequate safety margin, and secondary standards, established to protect "plants and animals and to prevent economic damage." The six major pollutants, deemed criteria pollutants, because threshold criteria can be established for determining adverse effects on human health, are described below:

- Carbon Monoxide (CO). CO is a colorless, odorless gas produced from the incomplete combustion of gasoline and other fossil fuels. The primary source of CO in urban areas is from motor vehicles. Because this gas disperses quickly, CO concentrations can vary greatly over relatively short distances.
- Inhalable Particulates also known as Respirable Particulates. Particulate matter is a generic term for a broad range of discrete liquid droplets or solid particles of various sizes. They are primarily generated by fuel oil combustion and by vehicular traffic that contributes to airborne particulates from brake and tire wear and the disturbance of dust on roadways. The PM_{10} standard covers particulates with diameters of 10 micrometers or less, which are the ones most likely to be inhaled into the lungs. The $PM_{2.5}$ standard covers particulates with diameters of 2.5 micrometers or less.
- Lead (Pb). Lead is a heavy metal. Emissions are principally associated with industrial sources and motor vehicles that use gasoline containing lead additives. Most U.S. vehicles produced since 1975, and all produced after 1980, are designed to use unleaded fuel. As a result, ambient concentrations of lead have declined significantly.
- Nitrogen dioxide (NO_2). Nitrogen dioxide is a highly oxidizing, extremely corrosive toxic gas. It is formed by chemical conversion from nitric oxide (NO), which is emitted primarily by industrial furnaces, power plants, and motor vehicles.
- Ozone (O_3). Ozone, a principal component of smog, is not emitted directly into the air but is formed through a series of chemical reactions between hydrocarbons and nitrogen oxides in the presence of sunlight.
- Sulfur dioxides (SO_2). Sulfur dioxides are heavy gases primarily associated with the combustion of sulfur-containing fuels such as coal and oil. No significant quantities are emitted from mobile sources.

New York State Ambient Air Quality Standards further regulate concentrations of the criteria pollutants discussed above. The New York State Department of Environmental Conservation (NYSDEC), Air Resources Division, is responsible for air quality monitoring in the state. Monitoring is performed for each of the criteria pollutants to assess compliance. Table B-1 shows the National and New York State Ambient Air Quality Standards.

Table B-1
National and New York State Ambient Air Quality Standards

Pollutant	Averaging Period	Standard	2012 Value	Monitor
Sulfur Dioxide	1-hour average[e]	197 μg/m^3(75 ppb)	64.7 μg/m^3 (24.7 ppb)	Queens College 2
	3-hour average	1,300 μg/m^3 (500 ppb)	44.8 μg/m^3 (17.1 ppb)	
Inhalable Particulates (PM10)	24-hour average	150 μg/m^3	33 μg/m^3	Queens College 2
Inhalable Particulates (PM2.5)	3-yr average annual mean	12 μg/m^3	9.1 μg/m^3	Queens College 2
	Maximum 24-hr. 3-yr. avg.[d]	35 μg/m^3	24 μg/m^3	
Ozone	Maximum daily 8-hr avg.[b]	0.075 ppm	0.081 ppm	Queens College 2
Carbon Monoxide	8-hour average[a]	9 ppm	1.1 ppm	Queens College 2
	1-hour average[a]	35 ppm	1.7 ppm	
Nitrogen Dioxide	12-month arithmetic mean	100 μg/m^3(53 ppb)	32.9 μg/m^3 (17.5 ppb)	Queens College 2
	1-hr average[e]	141 μg/m^3(75 ppb)	120.3 μg/m^3 (64 ppb)	
Lead	Quarterly mean	0.15 μg/m^3	0.008 μg/m^3	Morrisiana (2011)

Notes: ppm = parts per million; μg/m^3 = micrograms per cubic meter.
a. Not to be exceeded more than once a year.
b. Three-year average of the annual fourth highest maximum 8-hour average concentration effective May 27, 2008.
c. Not to be exceeded by the 98th percentile of 24-hour $PM_{2.5}$ concentrations in a year (averaged over 3 years).
d. Three-year average of the 98th percentile of the daily maximum 1-hour average, effective January 22, 2010.
e. Three-year average of the 99th percentile of the daily maximum 1-hour average, final rule signed June 2, 2010.
Sources: New York State Department of Environmental Conservation; New York State Ambient Air Quality Development Report, 2011; New York City Department of Environmental Protection, 2012.

NYC De Minimis Criteria

For carbon monoxide from mobile sources, the City's de minimis criteria are used to determine the significance of the incremental increases in CO concentrations that would result from a proposed action. These set the minimum change in an 8-hour average carbon monoxide concentration that would constitute a significant environmental impact. According to these criteria, significant impacts are defined as follows:

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

Carbon Monoxide Background Concentration

As a conservative approach for CO, the highest value from the past five available years of monitored values was used as the background value. These values are listed in Table B-2. Based on the Queens College station, the CO background would be 3.4 ppm for the 1-hour average and 2.8 ppm for the 8-hour average as shown in Table B-2.

Table B-2
Monitored CO Concentrations (ppm)

Monitoring Location	Year	1-Hour	8-Hour
Queens College 2	2008	2.3	1.7
	2009	3.1	1.9
	2010	**3.4**	**2.7**
	2011	2.1	1.8
	2012	1.7	1.1

Note: Numbers in bold type are the highest in their category.
Source: New York State Department of Environmental Conservation.

State Implementation Plan (SIP)

The Clean Air Act requires states to submit to the U.S. Environmental Protection Agency (EPA) a SIP for attainment of the NAAQS. The 1977 and 1990 amendments required comprehensive plan revisions for areas where one or more of the standards have yet to be attained. Kings County is part of a CO maintenance area and is nonattainment (moderate) for the 8-hour ozone standard and nonattainment for PM10 and PM2.5. The state is under mandate to develop SIPs to address ozone, carbon monoxide, and PM10. It is also working with the EPA to formulate standard practices for regional haze and PM2.5.

Existing Conditions

The rezoning area encompasses approximately 97,498 sf of lot area, the majority of which is proposed to be rezoned from R5/C1-3 to R7A/C2-4, while the C1-3 commercial overlay in a small portion of the rezoning area would be removed from the underlaying R7-1 district. The 28,725 sf project site (consisting of Lots 66, 74, 75, and 76 on Block 1311) owned by the applicant includes two 2- story buildings and one 3-story building.

The 2-story building on Lot 66 includes ground floor retail use and community facility use, and second floor office use. The building is located at 527-545 Empire Boulevard and has 12,000 sf of retail space that is occupied by Empire Kosher Supermarket and 825 sf by CH Cycles, 6,000 sf of vacant space (former Kingsbrook Jewish Medical Center), 17,175 sf space that is occupied by storage use (Hachai Publishers Inc. and Lambda Publishing Inc.), and 1,104 sf of vacant space on the mezzanine level. The 3-story building on Lot 74 includes ground floor retail use, and former residential spaces on the second and third floors. The building is located at 525 Empire Boulevard and has 2,000 sf of retail that is occupied by a DM Pharmacy. The upper floors include 3 former residential units, which are currently vacant. The 2-story building on Lot 74 includes former residential spaces. Lots 75 and 76 with the total area of 6,767 sf provide accessory parking associated with the retail uses on Lots 66 and 74.

Besides the project site, the remainder of the proposed rezoning area includes a mix of mainly 1 to 3-story walk-up buildings, many of which have ground floor retail uses, and a few 6-story multi-family elevator buildings which all have ground floor retail uses.

Future without the Proposed Action

In the 2016 future without the proposed action, all of the affected lots would retain their current zoning R5/C1-3 and R7-1/C1-3. As many of the lots within the existing R5/C1-3 zoning district already exceed their current allowable residential FAR of 1.25, no new development is expected to occur in the absence of the proposed action, and the existing uses would remain unchanged. As such, for *CEQR* analysis purposes, the No-Action condition would be identical to existing conditions.

Future with the Proposed Action

In the 2016 future with the proposed action, the majority of the rezoning area would be rezoned from R5/C1-3 to R7A/C2-4. As a result, under the RWCDS the project site (Block 1311, Lots 66, 74, 75, and 76) would be redeveloped with a new 7-story mixed-use residential, commercial, and community facility building. The RWCDS building would comprise a total of 138,244 gsf of floor area, which would include up to 80 DUs, approximately 27,958 gsf of ground floor retail, 28,930 gsf of community facility space on the second floor, 66 below-grade accessory parking spaces in the cellar, and a sub-cellar level with storage, mechanical space, and various amenities. The height of the RWCDS development is expected to be 7 stories (slightly less than 80 feet). No changes in residential use are anticipated for the lots that would be affected by the proposed C1-3 commercial overlay removal from the underlying R7-1 zoning district. However, no commercial uses would be allowed in the future on these lots after the removal of the C1-3 commercial (refer to Figure A-2).

Garage

The RWCDS building would include a garage at the cellar level with 66 parking spaces. It would have an unobstructed parking area of 22,421 sf. An average ramp distance of 134 feet was added to the average vehicular travel distance.

The garage analysis was based on the spreadsheet provided in the *2012 CEQR Manual Technical Appendices*. A persistence factor of 0.70 was used to convert 1-hour CO values to 8-hour CO values. EPA's MOBILE6.2 emissions model was used to obtain emission factors for hot (entering) and cold (exiting) vehicles as well as idling vehicles. Based on field data from other projects, passenger vehicles were divided into 76 percent autos and 24 percent SUVs for the purposes of obtaining a composite emission factor. Exiting vehicles were assumed to idle for one minute before departing, and speeds within the facility were 5 mph.

Table B-3
Parking Facility Volumes, With-Action Condition

Time Period	Local Retail			Residential			Community Facility			Total In	Total Out	Grand Total
	In	Out	Total	In	Out	Total	In	Out	Total			
12-5 AM	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	1	1	0	0	0	0	1	1
6-7	0	0	0	1	4	5	0	0	0	1	4	5
7-8	0	0	0	1	4	5	13	5	18	14	9	23
8-9	1	1	0	3	10	13	20	13	33	24	24	48
9-10	1	0	0	2	4	6	21	21	42	24	25	49
10-11	2	1	3	2	4	6	16	20	36	20	25	45
11-12	2	2	4	2	3	5	17	18	35	21	23	44
12-1 PM	4	4	8	4	3	7	26	21	47	**34**	28	62
1-2	3	2	5	3	3	6	21	13	33	27	18	45
2-3	3	2	5	3	3	6	18	18	36	24	23	47
3-4	2	2	4	5	3	8	20	14	34	27	19	46
4-5	2	2	4	8	5	13	19	26	45	29	**33**	62
5-6	3	3	6	9	4	13	10	25	35	22	32	54
6-7	2	3	5	6	3	9	18	21	39	26	27	53
7-8	1	2	3	5	3	8	10	12	22	16	17	33
8-9	1	2	3	4	1	5	8	10	18	13	13	26
9-10	0	1	1	1	1	2	0	0	0	1	2	3
10-11	0	0	0	1	1	2	0	0	0	1	1	2
11-12 AM	0	0	0	1	1	2	0	0	0	1	1	2
Total	27	27	54	61	61	122	237	237	474	325	325	650

Note: Numbers in bold type indicate highest volumes (Source: Travel Demand Forecast, Philip Habib & Associates, June 14, 2013).

No rooftop vent for the garage was considered due to the proposed rooftop garden. Therefore the garage vent was assumed to be above the garage entrance on Empire Boulevard, which is about 60 feet wide. The vent would be about 12 feet above the sidewalk. For this location, the worst-case receptor points would be: 1) the midpoint of the near sidewalk, about 6 feet from the vent; and 2) the midpoint of the far sidewalk (78 feet from the vent), and 3) a window in the community center on the second floor, which would be about 18 feet above the sidewalk. Table B-4 shows the results of the analysis.

Table B-4
CO Emissions from Parking Garage, With-Action Condition (2016)

Stack Above Empire Boulevard Entrance				
	Window Above Vent			
Horizontal Distance to Vent (ft.)	1.0			
Vent Height (ft.)	12.0			
Receptor Height (ft.)	18.0			
Averaging Period	**1-Hour**	**8-Hour**		
Garage CO result (ppm)	0.7	0.5		
Line Source (ppm)	NA	NA		
Background Value (ppm)	3.4	2.7		
Total Concentration (ppm)	4.1	3.2		
NAAQS, CO (ppm)	35.0	9.0		
Impact	No			

Stack Above Empire Boulevard Entrance				
	Near Sidewalk		**Far Sidewalk**	
Horizontal Distance to Vent	6.0 ft.		78.0 ft.	
Vent Height	12.0		12.0	
Receptor Height	6.0		6.0	
Averaging Period	**1-Hour**	**8-Hour**	**1-Hour**	**8-Hour**
Garage CO result (ppm)	0.7	0.5	0.3	0.2
Line Source (ppm)	NA	NA	0.1226	0.0859
Background Value (ppm)	3.4	2.7	3.4	2.7
Total Concentration (ppm)	4.1	3.2	3.8	3.0
NAAQS, CO (ppm)	35.0	9.0	35.0	9.0
Impact	No		No	

Source: Sandstone Environmental Associates, Inc.

Conclusion

In the future with the proposed action, the worst-case 8-hour CO concentration from the garage is 0.5 ppm for a pedestrian on the sidewalk below the garage vent location or for a window on the second floor above the garage vent. This concentration was added to the 8-hour background value of 2.7 ppm for a total of 3.2 ppm. For the concentration on the far sidewalk, the total worst case 8-hour CO concentration was 3.0 ppm. The far sidewalk concentration includes 0.09 ppm as the line source contribution, as shown in Table B-4. These values are below the NAAQS of 9 ppm and the NYCDEP *de minimis* criteria. Therefore, no significant adverse air quality impacts are expected as a result of the proposed parking garage.

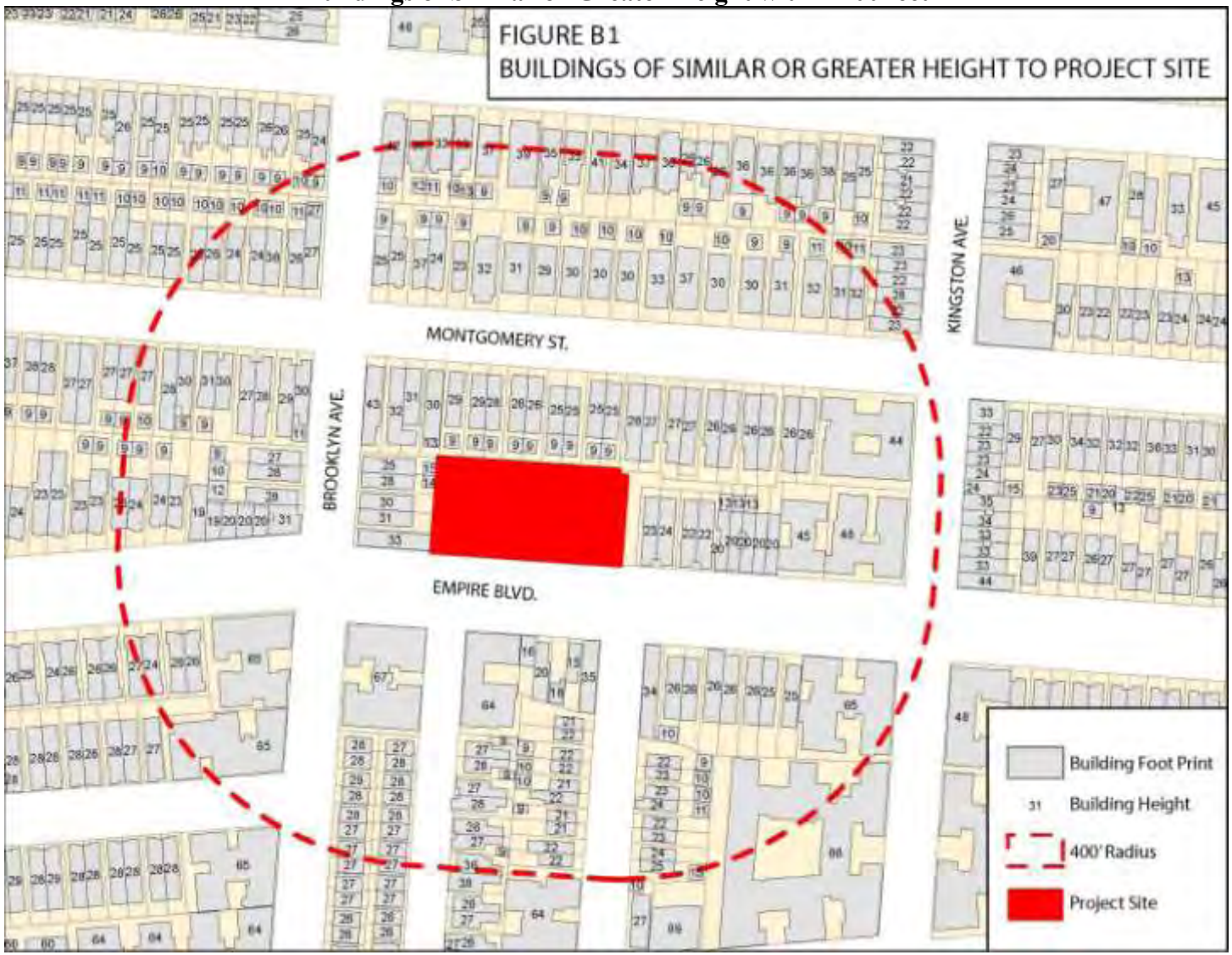
Stationary Sources

Actions can result in stationary source air quality impacts when they create new stationary sources of pollutants that can affect surrounding uses, such as exhaust from boiler stack(s) used for heating/hot water, ventilation, or air conditioning (HVAC) systems; when they locate new sensitive uses (schools, hospitals, residences) near such stationary sources; and when new emission sources are located within a short distance of each other. Air quality impacts from HVAC sources are unlikely at distances of 400 feet or more, but a large source within 1,000

feet may be a source of concern. Figure B-2 shows the heights of buildings within 400 feet from the rezoning boundaries. Only HVAC boilers with a heat input rating of at least 2.8 million Btu per hour require further analysis.

The proposed action would be a rezoning of a 97,498 sf area in the Wingate neighborhood of Brooklyn from R5/C1-3 to R7A/C2-4 and the removal of the existing C1-3 commercial overlay from the underlying R7-1 district in a small portion of the rezoning area. The rezoning to R7A/C2-4 would facilitate the RWCDS of a 7-story mixed-use building. The building would include 80 DUs, ground floor retail use, and second floor community facility use.

Figure B-2
Buildings of Similar or Greater Height within 400 feet



Source: New York Department of City Planning

Stationary Source HVAC

Existing HVAC Emission Sources on Proposed Action

No large institutional or industrial buildings are within 1,000 feet of the project site, and none are anticipated by 2016. Boiler permits from the information provided by the NYC Department of Buildings on the OASIS website were identified for several buildings within 400 feet of the project site. Only buildings of similar or lower height compared to the proposed action are considered. They are shown in Table B-5. Some buildings have mixed residential/commercial uses, but all are primarily residential. Residential use is a worst-case use for a mixed-use building.

Table B-5 also shows the results of a screening analysis using Figure 17-5 (SO_2 boiler screen for residential #2 fuel oil) from the 2012 *CEQR Technical Manual Appendices*. Some of the buildings currently use #4 fuel oil. However the use of #4 fuel oil in New York City will be phased out by 2016. Therefore, all screening analyses used #2 fuel oil for the analyses.

The square footage of the source building is plotted against the distance between the lot line of the source building and the lot line of the receptor building. The nomographs are applicable to buildings where the distance between the lots is at least 30 feet. If the distance is less than 30 feet, the analysis must be carried out using AERMOD modeling. If the plotted point is on or above the applicable curve, the potential for a significant air quality impact exists, and further analysis is required using AERSCREEN or AERMOD modeling. As shown in the table, all the buildings screen out and would not require further analysis.

Table B-5
HVAC Screen for Future Existing Buildings on Proposed Project

Address	Tax Block	Lot	Stack Ht. (ft.)	Building Area (sq. ft.)	Distance to Proposed Action(ft)*	Permit #	Fuel Type	Comments
441 Brooklyn Ave.	1323	17	63	66,527	93	CA078492M	#2 oil	Screens out
7 Balfour Pl.	1324	35	63	43,780	92	CB100708N	#2 oil	Screens out
587 Empire Blvd.	1311	44	43	34,380	250	CB105308X	#2 oil	Screens out
658 Montgomery St.	1311	38	43	43,200	230	CB285300H	#2 oil	Screens out
580 Empire Blvd.	1325	22	63	68,640	245	CA105995P	#2 oil	Screens out
446 Kingston Ave.	1325	1	63	195,726	273	CA181880J	#2 oil	Screens out
440 Brooklyn Ave.	1317	41	63	60,922	190	CB006508Y	#2 oil	Screens out
456 Brooklyn Ave.	1317	50	63	59,083	266	CB100608P	#2 oil	Screens out

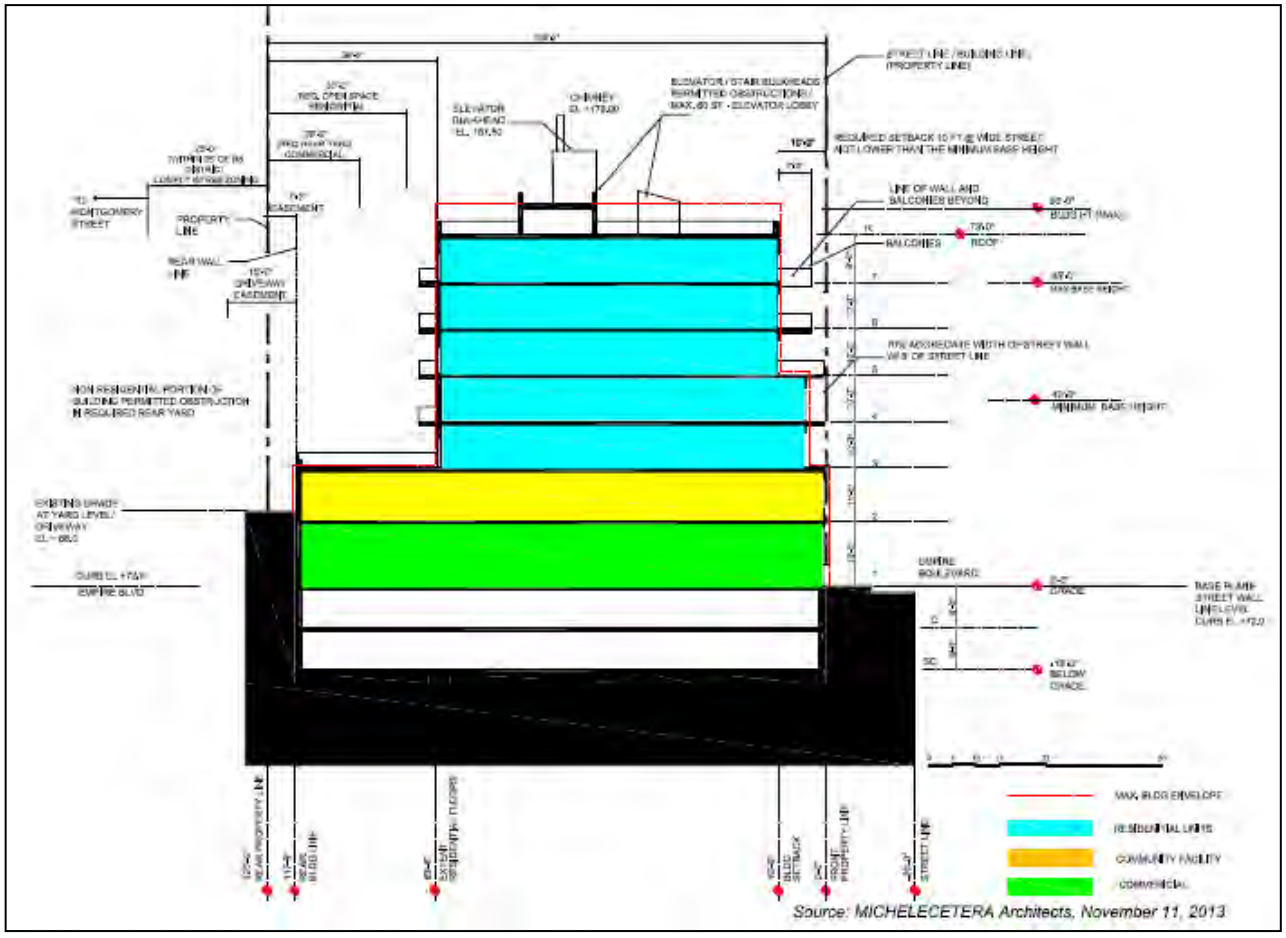
**Distance is measured between the two lot lines*
Source :Sandstone Environmental Associates, Inc.

Proposed Action on Existing Buildings

The RWCDS building, which is 80 feet high, would have a boiler stack on the roof on top of the elevator bulkhead that would vent at 101 feet above ground level as shown in Figure B-3.

This would be higher than any existing buildings within a 400 foot radius. Therefore, it screens out and, no further modeling with AERMOD is required.

Figure B-3
HVAC Stack Location in RWCDS



Air Toxics

According to the *2012 CEQR Technical Manual*, existing facilities with the potential to cause adverse air quality impacts are those that would require permitting under city, state and federal regulations. The Manual lists the following types of uses as a source of concern for the residential uses that would occur under the proposed action:

- large emission source (e.g., solid waste or medical waste incinerators, cogeneration facilities, asphalt and concrete plants, or power generating plants) within 1,000 feet,
- a medical, chemical, or research laboratory nearby,
- a manufacturing or processing facility within 400 feet, and
- an odor producing facility within 1,000 feet.

To identify facilities in the categories listed above, the manufacturing survey included a field survey, on-line searches of NYSDEC's Air Permit Facilities Registry and EPA's Facility Registry System for permitted facilities, an on-line search of data provided by the NYC Department of Buildings, New York City's Open Accessible Space Information System Cooperative (OASIS) data base, telephone directory listings, available aerial photos provided by Google and Bing, internet websites, NYSDEC's DAR-1, and a search for NYCDEP permits.

Based on the online survey and the OASIS data base, a list of industrial and commercial sites was submitted to NYCDEP for a permit search. They are shown in Table B-6. NYCDEP identified an operational permit for Clean Spot Cleaners at 431 Kingston Avenue has one operations permit. This facility is a little over 400 feet away from the proposed action. No air toxics emissions are expected at this dry cleaning facility because the equipment used is a totally enclosed cleaning machine with a closed exhaust system. It is therefore not a source of concern to the proposed building. No permits were found for the other sites. According to a representative for Ellis Cleaners, which is across the street from the project site, the establishment does not conduct dry cleaning on the premises.

Table B-6
Sites of Interest for Air Toxics within 400 feet of the Rezoning Boundary

Block	Lot	Address(es)	Observed Land Use
1323	17	508 Empire Boulevard, Brooklyn , NY- 11225	Ellis Cleaners
1310	50	491 Empire Boulevard, Brooklyn,NY-11225	Crystal Drycleaners
1310	149	493 Empire Boulevard, Brooklyn,NY-11225	Happy Wash Drycleaners
1325	63	13 Lamont Court, Brooklyn,NY-11225	Warehouse

Source: Sandstone Environmental Associates, Inc.

NOISE

The *2012 CEQR Technical Manual* defines noise as any unwanted sound. *CEQR* recommends an analysis of three principal types of noise sources: mobile, stationary, and construction sources. The noise levels associated with the environmental noise assessment are not simply hazardous noise levels that can cause hearing loss, but significant noise levels below the hazardous levels that have potential detrimental effects on the quality of life in New York City.

According to the *2012 CEQR Technical Manual*, an initial noise impact screening considers whether a proposed action generates any mobile, stationary, or construction sources of noise, or, if the development is a sensitive receptor (such as the proposed development), and if it will be located in an area with high ambient noise levels. A sensitive receptor is an area where human activity may be adversely affected by noise levels. Sensitive receptors include residences, health care facilities, museums, schools, parks, and other uses. Areas with high ambient noise levels include those near highly trafficked thoroughfares, airports, railroads, or other loud activities.

Mobile Source Noise

According to the *2012 CEQR Technical Manual*, a detailed mobile source noise analysis is generally required if passenger car equivalent (PCE) values are at least doubled between existing and action conditions during the worst case expected hour at receptors likely to be most affected by the proposed action. The proposed action is expected to change traffic volumes in the general vicinity of the project site and there is potential for the doubling of PCE values. Therefore, a mobile source analysis was conducted.

Developments that are Sensitive Receptors

As stated above, areas with high ambient noise levels include those near highly trafficked thoroughfares, airports, railroads, or other loud activities, which may create unacceptable background noise levels for developments that are sensitive receptors, such as residences, health care facilities, museums, schools, and parks. The RWCDS on the project site would result in a 7-story development with 27,958 gsf of local retail space on the ground floor, 28,930 gsf of community facility space on the second floor, and 81,357 gsf of residential space (80 DUs) on the third to seventh floors, for a total of 138,244 gsf of new development. Since the RWCDS would include residential and community facility uses, it is considered a sensitive receptor.

Since the predominant noise source in the area surrounding the project site stems from vehicular traffic, which is typical of most Brooklyn neighborhoods, a mobile source noise level analysis was conducted. Detailed information is provided in Attachment G, "Noise". Measured (existing) noise levels for the receptor location on Empire Boulevard were in the marginally unacceptable II category for all three peak hours (refer to Table G-5 in Attachment G, "Noise").

The findings of the noise analysis in Attachment G indicate that under the RWCDS, the peak period L_{10} values at the receptor location would range from a minimum of 74.4 dBA to a maximum of 75.2 dBA. Since the relative increases of L_{eq} values are below 3.0 dBA when compared to the No-Action condition (refer to Tables G-7 and G-8), no significant adverse impacts due to project-generated traffic would occur.

As shown in Table G-9 in Attachment G, the required attenuation value to achieve interior noise levels of 45 dBA, which are required for residential and community facility uses on the second through seventh floors, is 31 dBA for all building facades (second through seventh floor façade portions). To achieve 50 dBA interior noise levels on the ground, which is required for commercial use, an attenuation level of 26 dBA is required for all building façades (ground floor façade portions).

Stationary Sources

Generally, the stationary sources of noise that are considered by *CEQR* are associated with mechanical systems, i.e. building heating, ventilating and air-conditioning (HVAC) systems. Though the proposed building will employ these systems, they are not expected to be unusually loud, and therefore, a detailed analysis is not required.

CONSTRUCTION

Construction impacts, although temporary, can include disruptive and noticeable effects of a project. Determination of their significance and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activity could affect the integrity of historical and archaeological resources, hazardous materials, traffic conditions, air quality, and noise conditions.

The RWCDS would facilitate the construction of a 7-story mixed-use development on the project site, fronting at Empire Boulevard in the Wingate neighborhood of Brooklyn. The proposed development would consist of a mix of residential, local retail, and community facility space, and include approximately 138,244 gsf of floor area. The RWCDS would result in the demolition of the three existing buildings on the project site (one 2-story, and one 3-story building on Lot 74, one 2-story building on Lot 66), and entail in-ground disturbance and excavation. The proposed construction activity would be temporary; a short duration lasting up to 24 months.

Construction work for the RWCDS would be comprised of four general stages, including: demolition; below-grade construction; shell and core construction; and interior construction, and is expected to take place over the course of approximately 24 months. The majority of construction activities would take place Monday through Friday, although the delivery or installation of certain equipment could occur on weekend days. Hours of construction are regulated by the New York City Department of Buildings (NYCDOB) and apply in all areas of the City. In accordance with those regulations, almost all work would occur between 7:00 am and 6:00 pm on weekdays, although some workers would arrive and begin to prepare work areas before 7:00 am. Occasionally, Saturday or overtime hours could be required to complete time-sensitive tasks. Weekend work requires a permit from the NYCDOB and, in certain instances, approval of a noise mitigation plan from the New York City Department of Environmental Protection (NYCDEP) under the City's Noise Code.

Construction staging would primarily occur on the project site, and construction is not expected to adversely affect surrounding land uses. Standard practices would be followed to ensure safe pedestrian and vehicular access to nearby buildings and along affected streets and sidewalks. During construction, access to all adjacent businesses, residences, and other uses would be maintained according to the regulations established by the NYCDOB. Construction activities may result in short-term disruption of both traffic and pedestrian movements along the project site. This would occur primarily due to the potential temporary loss of curbside lanes on Empire Boulevard from staging of equipment and the movement of materials to and from the project site. Any lane closures in the vicinity of the project site, if they occur, would be short-term and would not be expected to adversely affect traffic conditions. These conditions would not result in significant adverse impacts on traffic and transportation conditions given the limited duration of any obstructions.

Hazardous Materials

The proposed action would result in a new mixed-use residential, local retail, and community facility development in an area currently zoned for residential uses. A Phase I ESA has been

undertaken for the project site, which is described in the *Hazardous Materials* section above. As described above, the RWCDS would not result in significant adverse hazardous materials impacts. Prior to any excavation and construction activities at the project site, abatement of any potential hazardous materials on the site would occur. With these measures in place, there would be no significant adverse impacts with respect to hazardous materials during the construction process.

In addition, the demolition of buildings is regulated by the NYCDOB, requiring abatement of asbestos prior to any intrusive construction activities including demolition. Asbestos abatement is strictly regulated by NYCDEP, U.S. Department of Labor (DOL), the U.S. Environmental Protection Agency (EPA), and the U.S. Occupational Safety and Health Administration (OSHA) to protect the health and safety of construction workers and nearby residents and workers. Depending on the extent and types of asbestos-containing materials (ACMs), these agencies would be notified of asbestos removal projects and may inspect the abatement site to ensure that work is being performed in accordance with applicable regulations. OSHA regulates construction activities to prevent excessive exposure of workers to contaminants in the building materials including lead in paint. New York State solid waste regulations control where demolition debris and contaminated materials associated with construction are handled and disposed. Adherence to these existing regulations would prevent impacts from development activities at the project site.

Transportation - Traffic and Parking

Construction of the RWCDS facilitated by the proposed action would generate trips resulting from arriving and departing construction workers, movement of materials and equipment, and removal of construction waste. The estimated average number of construction workers on the project site at any one time would vary, depending on the phase of construction. It is anticipated that approximately 208 construction workers would be required to construct the RWCDS. However, the peak construction worker population would be approximately 30 workers at the project site at any one time[4]. As construction would last less than two years and as there would be a maximum of 30 construction workers on-site at peak construction, there would be no construction-related transportation impacts related to the RWCDS.

A certain number of construction workers are expected to travel by private automobile. Given typical construction hours between 7:00 am and 4:00 pm, worker trips would be concentrated in off-peak hours and would not represent a substantial increment during peak travel periods. Construction workers would typically arrive before the typical AM peak commuter period and depart before the PM peak hour. Therefore, vehicle trips associated with construction workers would be unlikely to have significant adverse impacts on surrounding streets.

Truck movements would typically be spread throughout the day on weekdays, and would generally occur between the hours of 7:00 am and 4:30 pm, depending on the period of construction. Trucks would travel along Empire Boulevard, which is the project site's only street frontage. Where possible, the scheduling of deliveries and other construction activities would take place during off peak travel hours. As these truck trips are spread out during the

[4] This estimate was obtained by computing the hard cost for construction (approximately $49,805,700) in RIMS II.

day, when combined with the worker auto trips, they would be unlikely to result in more than 50 Passenger Car Equivalents (PCEs) in any peak hour during the construction period.

Construction activities may result in short-term disruption of both traffic and pedestrian movements at the project site. This would occur primarily due to the temporary loss of curbside lanes on Empire Boulevard from the staging of equipment and the movement of materials to and from the site. These conditions would be temporary and not result in significant adverse impacts on traffic and transportation conditions. The New York City Department of Transportation Office of Construction Mitigation and Coordination (NYCDOT-OCMC) issues permits for any street/sidewalk closures after evaluation of traffic and pedestrian conditions.

Parking is typically done off-site for the larger development sites, and at curbside in the vicinity of the smaller ones. These curbside spaces are typically available as area residents use their autos to travel to work and elsewhere, and are vacated by construction workers in the afternoon before resident demand increases after the typical workday.

Air Quality

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

1. Are considered short-term;
2. Are not located near sensitive receptors;
3. Do not involve construction of multiple buildings where there is a potential for on-site receptors on buildings to be completed before the final build-out; and
4. The pieces of diesel equipment that would operate in a single location at peak construction are limited in number.

If a project either does meet one or more of the criteria above or one of the above criteria is unknown at the time of review, a preliminary air quality assessment is not automatically required. Instead, various factors should be considered, such as the types of construction equipment (gas, diesel, electric), the nature and extent of any commitment to use the Best Available Technology (BAT) for construction equipment, the physical relationship of the project site to nearby sensitive receptors, the type of construction activity, and the duration of any heavy construction activity. However, the RWCDS does not screen out of #2 and #4 above since the development site is next to a sensitive receptor and the type of equipment cannot be anticipated at this time. Therefore, this analysis considers other factors as recommended by the *CEQR Technical Manual*. These factors considered are (1) the duration of any heavy construction activity (2) the physical relationship of the project site to nearby sensitive receptors, (3) the type of construction activity, (4) the types of construction equipment (gas, diesel, electric), and (5) the nature and extent of possible use of BAT for construction equipment.

1. <u>The Duration of Any Heavy Construction Activity</u>

The *CEQR Technical Manual* does not define "short-term" for air quality assessments, but it has generally been accepted that the term refers to a period of two years or less. As indicated above, it is expected that the on-site construction would take less than two years to complete. Moreover, the heaviest construction activity generally occurs during the demolition,

excavation, and foundation stage which generally takes two to four months depending on the size of the project. The majority of construction is spent on the building exterior and interior fitting.

2. The Physical Relationship of the Project Site to Nearby Sensitive Receptors

The RWCDS that would be induced by the proposed actions could potentially occur next to sensitive receptors. However, as noted above, the development would be completed in less than two years.

3. The Type of Construction Activity

The typical construction of a development site, as aforementioned, consists of three general phases or types of construction. The first type of construction is demolition, excavation, foundation. The second type of construction is the building or outfitting of the superstructure or skeleton of the building. The last type of construction that typical takes place is the exterior and interior outfitting of the building.

Demolition of interiors, portions of buildings or entire buildings are regulated by the NYC Department of Buildings requiring abatement of asbestos prior to any intrusive construction activities including demolition. OSHA regulates construction activities to prevent excessive exposure of workers to contaminants in the building materials including lead in paint. New York State Solid Waste regulations control where demolition debris and contaminated materials associated with construction are handled and disposed. Adherence to these existing regulations would prevent impacts from development activities within the proposed rezoning area.

4. Types of Construction Equipment

Depending on the phase of construction different types of construction equipment are necessary. The heaviest construction equipment would be used during the demolition phase. Depending on the phase of construction, a handful of large non-road diesel engines will operate throughout the site. Ultra-low sulfur diesel (ULSD) would be used exclusively for all diesel engines throughout the construction sites as mandated by NYC law.

5. The nature and extent of possible use of BAT for construction equipment

Nonroad diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the project) including but not limited to concrete mixing and pumping trucks, could utilize the best available technology for tailpipe emissions for reducing DPM emissions. Diesel particle filters (DPFs) have been identified as being the tailpipe technology currently proven to have the highest reduction capability. Construction contracts could specify that all diesel nonroad engines rated at 50 hp or greater would utilize DPFs, either installed on the engine by the original equipment manufacturer (OEM) or a retrofit DPF verified by the 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. This measure would be expected to reduce site-wide tailpipe PM emissions by at least 90 percent.

Additionally, a construction program could use construction equipment rated Tier 3 or higher for all nonroad diesel engines with a power output of 50 hp or greater. Tier 3 NOx emissions

range from 40 to 60 percent lower than Tier 1 emissions and are considerably lower than uncontrolled engines.

Strict fugitive dust control plans could also be a part of a possible construction program. For example, stabilized truck exit areas could be established for washing off the wheels of trucks that exit the construction site. Truck routes within a site could be either watered as needed or, in cases where such routes would remain in the same place for an extended duration, the routes could be stabilized, covered with gravel, or temporarily paved to avoid the re-suspension of dust. All trucks hauling loose material could 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 sites could be cleaned as frequently as needed. Chutes could be used for material drops during demolition. An on-site vehicular speed limit of 5 mph could also be imposed. Water sprays could be used for all excavation, demolition, and transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air. Loose materials could be watered, stabilized with a biodegradable suppressing agent, or covered.

Possible impacts on local air quality during construction induced by the RWCDS include fugitive dust (particulate) emissions from land clearing operations and demolition, emissions from heavy-duty diesel-fueled construction equipment (e.g., cranes and bulldozers), and possible mobile source emissions generated by construction equipment vehicles travelling to and from each development site. It is anticipated that much of the construction would be completed using standard and approved techniques that are common to the construction of apartment and mixed use buildings in developed sections of NYC (and that are required by the Buildings Department). It is also anticipated the construction will be less than two years (i.e., short-term construction). Therefore, a qualitative assessment is provided below.

Fugitive Dust Impacts

Fugitive dust emissions from land clearing operations can occur from excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of clearing operations, the type of equipment employed, the physical characteristics of underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. Much of the fugitive dust generated by construction activities generally consists of relatively large-size particles (greater than 100 microns in diameter), which are expected to settle within a short distance (within 20 to 30 feet) from the construction site and to not significantly impact nearby buildings or people. All appropriate fugitive dust control measures—including watering of exposed areas and dust covers for trucks—would be employed during construction of the development site. As a result, no significant air quality impacts from fugitive dust emissions would be anticipated during construction.

Diesel Emission Impacts

Emissions from the heavy-duty diesel-fueled construction equipment can also occur from excavation, hauling, dumping, spreading, grading, and compaction. Actual quantities of these emissions depend on the extent and nature of clearing operations, the type of equipment employed, the speed at which construction vehicles are operated, and the type of emission controlled methods employed. These emissions could impact exiting land uses as well as

development sites that are already operational. Construction of the development site would be accomplished using all appropriate emission control measures, including the mandated use of ultra-low sulfur fuel oil and engine idling restrictions. In addition, these excavation, hauling, dumping, spreading, grading, and compaction activities would generally occur for less than six months. As a result, no significant air quality impacts emissions would be anticipated from these emissions.

Mobile Source Impacts

Mobile source emissions typically result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near the construction site. These emissions, however, would be released from vehicles related to the development of a single site, traveling on multiple roadways throughout the rezoning area over a short period of time.

Moreover, according to the *CEQR Technical Manual*, if the operational analysis indicates that the project would not result in significant mobile source impacts, and the vehicular trip generation from construction would be less than that of the proposed project, then a more detailed assessment is usually not necessary. As discussed in the "Air Quality" section of this attachment, the mobile source analysis conducted for the RWCDS indicates that no significant mobile source air quality impacts are expected as a result of the RWCDS. Therefore, pursuant to CEQR guidelines, a detailed assessment of construction-related mobile source air quality is not warranted.

Noise

Impacts on noise levels during construction of the proposed development would include noise and vibration from the operation of construction equipment. The severity of impacts from these noise sources would depend on the noise characteristics of the equipment and activities, the construction schedule, and the distance to potentially sensitive noise receptors. Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site. Noise caused by construction activities would vary widely, depending on the phase of construction – demolition, land clearing and excavation, foundation and capping, erection of structural steel, construction of exterior walls, etc. – and the specific task being undertaken. Increased noise levels caused by construction activities can be expected to be most significant during the early phases of construction before the building is enclosed.

Noise associated with the construction would not result in significant adverse impacts and would be limited to typical construction activities. Construction resulting from the proposed action would be required to comply with applicable control measures for construction noise. Construction noise is regulated by the New York City Noise Control Code and by noise emission standards for construction equipment issued by the EPA. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7:00 am and 6:00 pm; and that construction material be handled and transported in such a manner as to not create unnecessary noise. These regulations would be carefully followed. In addition, appropriate low-noise

emission level equipment and operational procedures would be used. Compliance with noise control measures would be ensured by directives to the construction contractor.

Furthermore, increases in noise levels caused by delivery trucks and other construction vehicles would not be significant. Small increases in noise levels are expected to be found near a few defined truck routes and the streets in the immediate vicinity of the proposed site.

Conclusion

As discussed above, construction-related activities resulting from the proposed action are not expected to have significant adverse impacts given the relatively small size of the RWCDS and the limited construction period of up to approximately 24 months. Moreover, the construction process in New York City is highly regulated. All construction activities would be carried out in accordance with applicable building codes and regulations, and all required NYCDOB permits will be obtained. The RWCDS may result in temporary disruptions, including noise, dust and traffic associated with the delivery of materials and arrival of workers on the site. However, these effects would be temporary (approximately 24 months) and are not considered significant and adverse, and therefore, no further analysis is warranted.

ATTACHMENT C
LAND USE, ZONING AND PUBLIC POLICY

I. INTRODUCTION

Under the *2012 CEQR Technical Manual* guidelines, a land use analysis evaluates the uses and development trends in the area that may be affected by a proposed project, and determines whether that proposed project is compatible with those conditions or may affect them. Similarly, the analysis considers the project's compliance with, and effect on, the area's zoning and other applicable public policies.

This application is for a zoning map amendment affecting portions of four City tax blocks in the Wingate area of Brooklyn Community District 9. The proposed action affects an area of approximately 97,498 square feet (sf) that is generally bounded by Brooklyn Avenue in the northwest, Lamont Court in the east, and the mid-block line of Block 1311 in the north. To the south, the area also extends along Empire Boulevard from Brooklyn Avenue to Lamont Court, where it includes 150-foot deep portions of Blocks 1324, 1323 as well as a 150 x 100 foot portion of Block 1317 (see Figure A-2 in Attachment A, "Project Description").

The applicant, 529 Empire Realty Corporation, is proposing to rezone this area, which is comprised of two zoning districts. The proposed action would include the rezoning of the majority of the rezoning area from R5/C1-3 to R7A/C2-4, and the removal of the existing C1-3 commercial overlay from the underlying R7-1 district in a small portion of the rezoning area.

The proposed rezoning to R7A/C2-4 would enable a proposal by the applicant to develop a 7-story mixed-use residential, commercial, and community facility building on four lots fronting Empire Boulevard and owned by the applicant, 529 Empire Realty Corporation. The development as proposed by the applicant would include approximately 68 DUs, approximately 66 spaces of accessory parking, 24,289 square feet (sf) of commercial space and 21,572 sf of community facility space.. The development would be constructed on Lots 66, 74, 75, and 76 on Block 1311 (the project site). The building would have a total of approximately 114,588 gsf of floor area.

In addition, the existing C1-3 commercial overlay would be removed from a small portion of the rezoning area that is currently zoned R7-1/C1-3. Through the removal of the C1-3 commercial overlay from the underlying R7-1 district the zoning map would better reflect the existing exclusively residential uses on these lots.

Under the guidelines set forth in the *2012 CEQR Technical Manual*, a preliminary assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. *CEQR* also requires a detailed assessment of land use conditions if a detailed assessment has been deemed appropriate for other technical areas. Since the proposed action is involves a rezoning, a detailed land use and zoning assessment has been conducted. The detailed assessment discusses existing and future conditions with and

without the proposed action in the 2016 analysis year for a primary study area (coterminous with the rezoning area), and a secondary, 400-foot study area surrounding the rezoning area.

As discussed in Attachment A, "Project Description", under the reasonable worst case development scenario (RWCDS) the project site (Block 1311, Lots 66, 74, 75, 76) would be redeveloped with a new 7-story mixed-use residential, commercial, and community facility building, located within the rezoned R7A/C2-4 district. The new building on the project site would comprise a total of 138,244 gsf of floor area, and include up to 80 DUs (81,357 gsf), approximately 27,958 gsf of ground floor retail, 28,930 gsf of community facility space on the second floor, and 66 below grade accessory parking spaces. The analysis year for the proposed action is 2016.

II. METHODOLOGY

Existing land uses were identified by field surveys. New York City Zoning Maps and the Zoning Resolution of the City of New York were consulted to describe existing zoning districts in the study areas, and provided the basis for the zoning evaluation of the Future No-Action and Future With-Action Conditions. Research was conducted to identify relevant public policy documents, recognized by the New York City Department of City Planning (NYCDCP) and other city agencies.

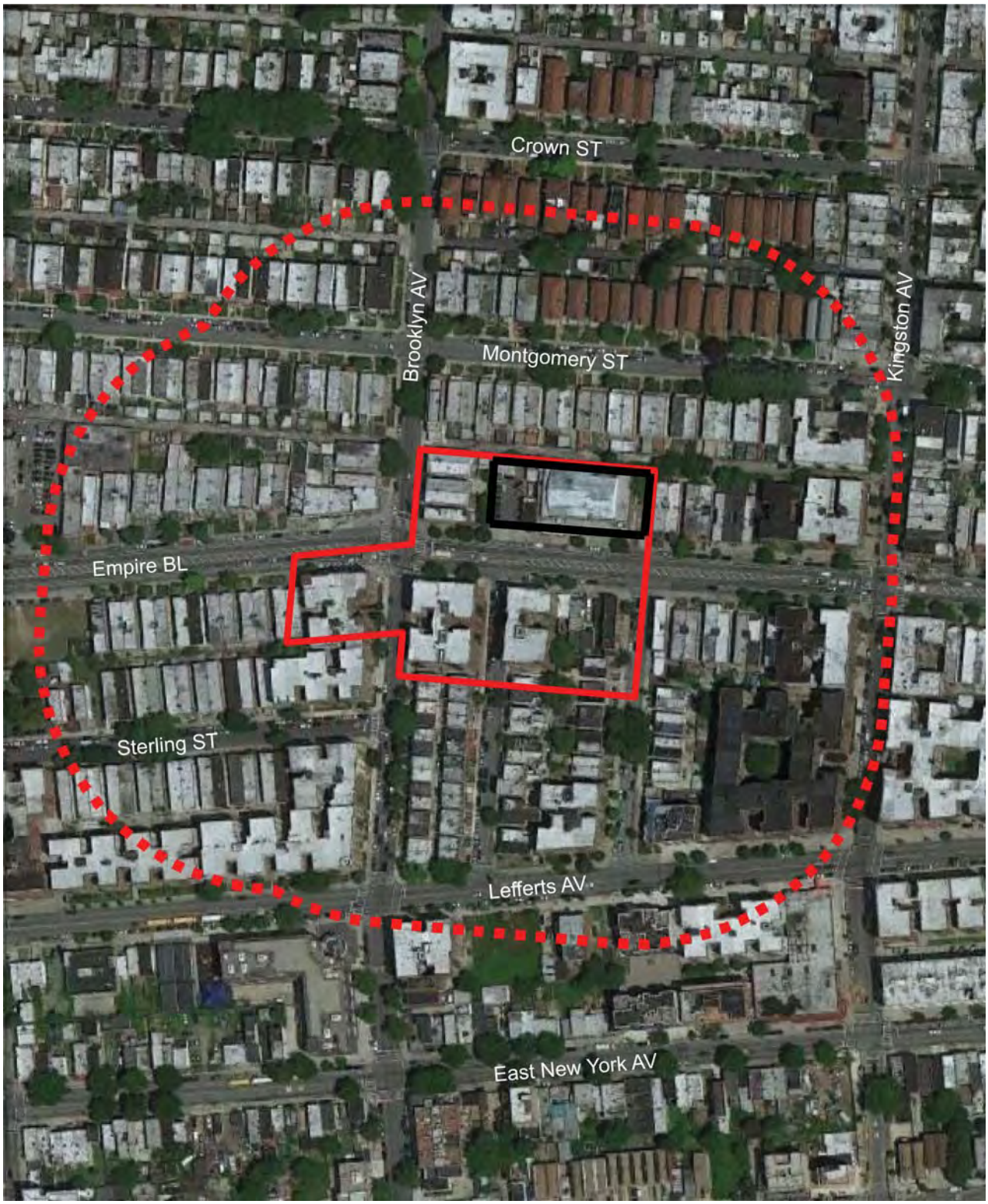
Land use, zoning, and public policy are addressed and analyzed for two geographical areas for the proposed action: (1) rezoning area (which includes the project site), also referred to as the primary study area, and (2) a secondary study area. For the purpose of this assessment, the secondary study area extends an approximate 400-foot radius from the boundary of the rezoning area and encompasses areas that have the potential to experience indirect impacts as a result of the proposed action. The secondary study area is bounded by Crown Street to the north, Lefferts Avenue to the south, New York Avenue to the west, and Kingston Avenue to the east. Both the primary and secondary study areas have been established in accordance with *2012 CEQR Technical Manual* guidelines and can be seen in Figure C-1.

III. PRELIMINARY ASSESSMENT

Land Use and Zoning

A preliminary assessment, which includes a basic description of existing and future land uses and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. Since the proposed action is comprised of a zoning map change, a detailed assessment of land use and zoning is warranted and provided in Section IV below. As a detailed assessment is warranted for the proposed action, the information that would typically be included in a preliminary assessment (e.g., physical setting, present land use, zoning information, etc.) has been incorporated into the detailed assessment in Section IV below. As discussed in the detailed assessment, the proposed action is not expected to adversely affect land use or zoning.

Figure C-1
Land Use Study Area



Legend

Project Site **Rezoning Area** **400-Foot Radius**

Public Policy

In addition, some assessment of public policy should accompany an assessment of land use and zoning. According to the *2012 CEQR Technical Manual*, a project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. A preliminary assessment of public policy should identify and describe any public policies, including formal plans or published reports, which pertain to the study area. If the proposed projects could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is necessary. As described below, the proposed action would not alter or conflict with any public policy for the project area and therefore, does not warrant a detailed assessment of public policies.

The rezoning area and the secondary study area are not governed by a 197-a plan, designated in-place industrial parks or Industrial Business Zones (IBZs), nor do the rezoning area and secondary study area fall within the coastal boundary area that is governed by the City's Waterfront Revitalization Program (WRP). In addition, the proposed action does not involve the siting of any public facilities (Fair Share). There are no other public policies applicable to the proposed action or affecting the rezoning area and secondary study area.

The RWCDS would potentially occupy the local retail portion on the ground floor of the proposed building at 521-547 Empire Boulevard by a FRESH food store[1], and is therefore, pursuant to the New York City Zoning Resolution (ZR) Section 63-30, would require certification for a FRESH food store by the Chairperson of the City Planning Commission.

The project site is located in Brooklyn Community District 9, and according to the New York City Zoning Resolution (ZR) Section 63-02 (a)(2) qualifies as a FRESH food store location. According to the City, the goal of developing FRESH food stores is to promote and protect public health, safety, and general welfare. The City aims to encourage a healthy lifestyle by developing FRESH food stores that sell a healthy selection of food products, and encourages FRESH food stores to locate in locations that are easily accessible to nearby residents. The City will provide incentives for FRESH food stores to locate in neighborhoods that are currently underserved by food stores that offer a healthy selection of food products.

Pursuant to ZR Section 63-01, a FRESH food store is a use group 6 food store comprised of at least 6,000 sf of floor area or cellar space. At least 3,000 sf (or 50 percent; whichever is greater) of a FRESH food store is required to be utilized for the sale of a general line of food products intended for home preparation, consumption, and utilization. In addition, at least 2,000 sf (or 30 percent; whichever is greater) of a FRESH food store is required to be utilized for the sale of perishable goods, such as dairy, fresh produce, frozen foods and fresh meats, and at least 500 sf of such retail have to be designated for the sale of fresh produce.

According to ZR Chapter 6, Section 63-211, with the introduction of a FRESH food store in a mixed-use building where all non-residential uses combined have a permitted floor area ratio

[1] Refer to the New York City Zoning Resolution, Article 6, Chapter 3, Special Regulations Applying to FRESH Food Stores.

equal to or less than that permitted for residential use, the total permitted floor area may be increased by one sf for each sf of FRESH food store floor area, up to 20,000 sf. Therefore, the introduction of a FRESH food store would increase the residential floor area component of the proposed mixed-use building on the project site.

Pursuant to ZR Section 33-121, the permitted mixed-use building floor area on the 28,725 sf project site is 114,900 sf. The proposed FRESH food store would include 26,347 gsf, which leads to a residential floor area bonus of 20,000 sf, the majority of which would be utilized. As a result, the 7-story mixed-use building with the proposed 26,347 gsf FRESH food store on the ground floor would include an additional 1,611 gsf of commercial space on the ground floor, 28,930 gsf of community facility space on the second floor, and a residential floor area of 81,357 gsf (80 DUs) on five floors (floors 3 through 7), and, for a total development of 138,244 sf under the RWCDS.

Assessment

No significant adverse public policy impacts are expected to result from the proposed action. The proposed action would be consistent with the public policies that govern the rezoning area and surrounding area.

The RWCDS and the inclusion of a FRESH food store would enhance the character of the rezoning area by facilitating development and providing neighborhood services on an underutilized site. Not only would the development be compatible with surrounding land uses but it would also benefit the area by providing a FRESH food store, thereby contributing to more healthy food selections for residents of the Wingate neighborhood.

No significant adverse public policy impacts or inconsistencies are expected to result from the proposed action. Therefore, the proposed actions would not require further analysis of public policy.

IV. DETAILED ASSESSMENT

Existing Conditions

Land Use

Rezoning Area/Primary Study Area

The proposed rezoning area is located in the Wingate neighborhood of Brooklyn in the center of Brooklyn Community District 9, which is predominantly occupied by residential and mixed-use residential with ground-floor retail uses. Table C-1 and Figure C-1 show the existing land uses in the rezoning area and the study area, respectively. As shown in Table C-1, 35 percent of the rezoning area's lot area is occupied by mixed uses. This indicates commercial use on the ground floor and residential use on the upper floors of the buildings. 25 percent of the rezoning area's lot area is comprised of residential use. Commercial use accounts for 13 percent of the lot area. These three categories add up to 73 percent of the rezoning area's lot area. The

remaining area contains 15 percent storage use, 6 percent vacant area, and 6 percent parking use. Generally, the area is predominantly residential. The only solely commercial (ground and second floor) uses are those currently existing on the project site (DM Pharmacy, Empire Kosher supermarket, and CH Cycles bike store). A lot that is partially included in the rezoning area is currently vacant (Block 1311, Lot 64).

Table C-1
Summary of Existing Land Uses in the Rezoning Area

Block[1]	Residential		Retail		Vacant		Mixed-Use		Storage[2]		Parking	
	sf	%	sf	%	sf	%	sf	%	sf	%	sf	%
1311	9,710	33	14,825	100	7,104	100	4,605	11	17,175	100	6,767	100
1317	4,638	16					10,825	27				
1323	1,000	3					14,000	34				
1324	13,817	48					11,233	28				
Total	**29,165**	**25**	**14,825**	**13**	**7,104**	**6**	**40,663**	**35**	**17,175**	**15**	**6,767**	**6**

Notes: - This Land Use Summary is based on NYC Oasis Database, and field trips in September 2007, July 2009, October 2010, and February 2013.
- Lot 64 on Block 1311, which is partially included in the rezoning area, is currently vacant.
[1] Includes only those lots falling within the rezoning area (refer to Table C-2)
[2] Second Floor Use on Block 1311, Lot 66 (not included in lot area calculations)

The rezoning area encompasses approximately 97,498 sf of lot area, the majority of which is proposed to be rezoned from R5/C1-3 to R7A/C2-4, while the C1-3 commercial overlay in a small portion of the rezoning area would be removed from the underlying R7-1 district. The 28,722 sf project site owned by the applicant (Block 1311, Lots 66, 74, 75, 76) includes one 2-story commercial building with ground floor retail (supermarket), and vacant space, second floor retail and storage use, and a vacant mezzanine level, located on 529 Empire Boulevard, and one 3-story building with ground floor retail use (pharmacy) and vacant residential spaces on the upper floors, located at 525 Empire Boulevard. Lots 75 and 76 are used as a parking lot for the supermarket.

As discussed in Attachment A, "Project Description" (see Table A-1), besides the applicant's project site, the remainder of the proposed rezoning area includes a mix of mainly 1- to 3-story walk-up buildings, many of which have ground floor commercial and/or retail uses. Also, there are a few 6-story multi-family elevator buildings, which all have ground floor commercial and/or retail uses.

Secondary Study Area

Land uses in the secondary study area are primarily residential and mixed-use residential with ground-floor retail and/or commercial use, along with several institutional buildings (schools, houses of worship, etc.), and one commercial building which is located on the project site. The 71st Precinct of New York City's Police Department is located at the west border of the 400-foot radius (Block 1310, Lot 1). Adjacent to Police Precinct 71, there is the only lot designated for industrial and manufacturing use in the secondary study area. This lot is owned by A-One Merchandising Corporation, a company that manufactures paper goods. With one exception, the Brooklyn Hospital Center, Woman Infant Child (WIC) Program Office (Crown Heights

Site), which is located at 495 Empire Boulevard, the remaining public facilities and institutions are religious facilities.

A house of worship (Community Tabernacle) of the Seventh-Day Adventist Mission is located at 426 Empire Boulevard (corner of Empire Boulevard and New York Avenue). Synagogues are located at 489 Empire Boulevard, 440 and 456 Crown Street (Beth David of Crown Heights, and Agudath Israel of Crown Heights), and 390a and 394 Kingston Avenue (Beth Din of Crown Heights, and Bais Eliezer Yitzchok). There are no public open spaces within the land use secondary study area.

The secondary study area is primarily comprised of both attached and detached single-family buildings north of Empire Boulevard. Along the Avenues in the secondary study area, as well as at Empire Boulevard and south of it, there are many 2 and 3-story walk-up buildings with retail use in the ground floor. Along the avenues, Balfour Place, and Lamont Court, there are several 6-story multi-family elevator buildings, most of them with retail ground floor use.

Zoning

Rezoning Area/Primary Study Area

The project site and rezoning area are mapped within a R5/C1-3 zoning district, and a small portion of the rezoning area also includes a section of an R7-1/C1-3 zoning district. The tax blocks and lots included in the proposed rezoning area are identified in Table C-2.

Table C-2
Blocks and Lots affected by Empire Boulevard Rezoning[2]

R5/C1-3 to R7A/C2-4 (portion that includes the project site)	
Block Lot	
1311	66, 74, 75, 76 (Applicant's project site)
1311	1, 2, 3, 4, 5, 25 (portion of lot), and 64 (portion of lot)
1317	41 (portion of lot/portion of lot in R5 district)
1323	17 (portion of lot in R5 district)
1324	17, 18, 19, 20, 21, 35 (portion of lot in R5 district), 116 (portion of lot in R5 district)
R7-1/C1-3 to R7-1	
Block	**Lot**
1317	38 (portion of lot), 39, and 41 (portion of lot/portion of lot in R7-1 district)
1323	14 (portion of lot), 17 (portion of lot in R7-1 district), and 58 (portion of lot)
1324	15 (portion of lot), 16, 116 (portion of lot in R7-1 district), 35 (portion of lot in R7-1 district), and 42 (portion of lot)

[2] The current zoning district boundary line is drawn 100 feet west of Brooklyn Avenue (Block 1317), and 100 feet south of Empire Boulevard (Blocks 1323 and 1324). As a result, the zoning district boundary cuts through Lot 41 (Block 1317), Lot 17 (Block 1323), and Lots 35 and 116 (Block 1324). As a result, these four lots have two zoning designations: R5 and R7-1. This information was confirmed by the NYC Department of City Planning's Zoning Information Desk on August 3, 2009. In addition, only parts of the following lots are included in the rezoning area: Lots 25 and 64 (Block 1311), Lots 41 and 38 (Block 1317), Lots 14 and 58 (Block 1323), and Lots 42 and 15 (Block 1324).

R5 District

R5 is a residential zoning district widely mapped in Brooklyn, which allows a maximum floor area ratio (FAR) of 1.25 for residential use. The R5 FAR typically produces three-story attached houses and small apartment houses. The R5/C1-3 zoning district indicates commercial overlays within residence districts. Such commercial overlays are mapped along larger streets and accommodate the retail and personal service shops needed in residential neighborhoods. The commercial FAR for a C1-3 district mapped within R5 is 1.0, with an overlay district depth of 150 feet.

R7 District

The R7-1 zoning district allows a maximum FAR from 0.87 to 3.44 for residential use; the required OSR ranges from 15.5 to 25.5 percent. The R7-1 zoning district is a medium-density apartment house district mapped throughout Brooklyn. The height factor regulations for R7 encourage low apartment buildings on small lots and tall buildings with low lot coverage on large lots. The commercial FAR for a C1-3 overlay mapped within an R7 district is 2.0 with an overlay district depth of 150 feet.

Secondary Study Area

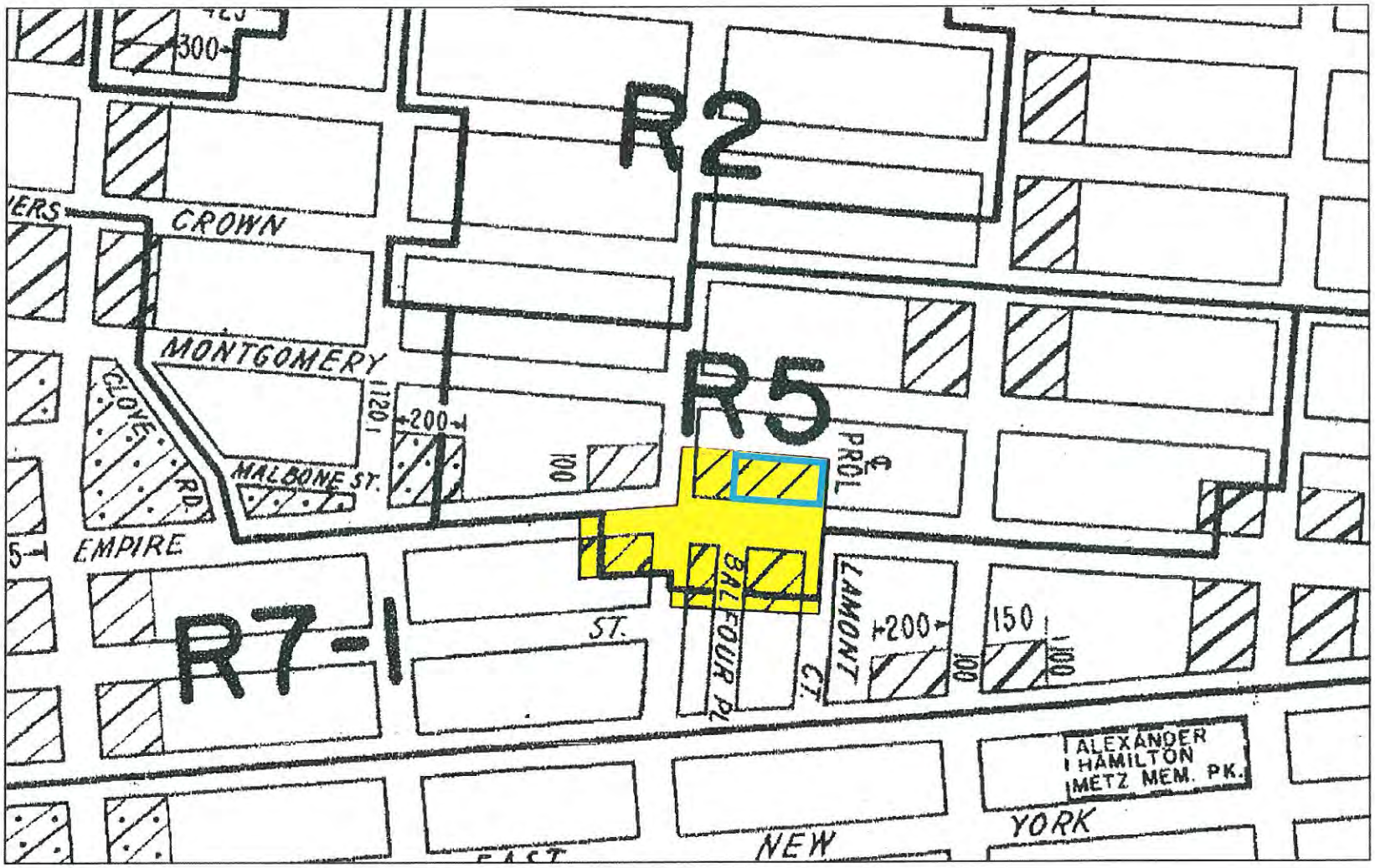
Zoning districts within the secondary study area include R6 to the west, R2 and R5 to the north, R5 to the east, and R7-1 to the south and southeast of the rezoning area (see Figure C-2). Commercial C1-3 and C2-3 overlays are mapped along Kingston Avenue, and Empire Boulevard and New York Avenue, respectively.

R2 District

The R2 zoning district is limited to single-family detached houses. The maximum allowable FAR for residential use is 0.5. There are additional requirements such as a minimum lot width of 40 feet and one off-street parking space for each DU. As shown in Figure C-2, the R2 zoning district in vicinity to the proposed rezoning area extends between New York and Kingston Avenues along Carroll and President Streets, and Crown Street between New York and Brooklyn Avenues.

R6, R6/C1-3, and R6/C2-3 Districts

The R6 zoning district allows a maximum FAR from 0.78 to 2.43 for residential use; the required open space ratio (OSR) ranges from 27.5 to 37.5 percent. R6 is a residential district widely mapped in built-up, medium-density areas in Brooklyn. The height factor regulations for R6 districts encourage small apartment buildings on small zoning lots, and tall, narrow buildings that are set back from the street on larger lots. The R6/C1-3 and R6/C2-3 zoning districts indicate commercial overlays within residence districts. C1-3 and C2-3 overlays both have FARs of 2.0 when mapped in R6 districts, with an overlay district depth of 150 feet.



Project Site

Rezoning Area

Empire Boulevard Rezoning EAS

Figure C-2
Existing Zoning

Future without the Proposed Action

This section describes conditions that are expected to exist in the project's build year (2016) absent the proposed action.

Land Use

Rezoning Area/Primary Study Area

Without the proposed action, the project site would continue to be occupied by the current structures and uses: a two-story building on Lot 66, one two-story and one three-story building on Lot 74, and an accessory parking lot on Lots 75 and 76. No changes are anticipated within the rezoning area since no potential development sites were identified[3].

Secondary Study Area

Three known and expected residential development projects are anticipated to be completed within the secondary study area by 2016. These are described in more detail in Table C-3. As shown in the table, a total of 157 DUs and approximately 369 new residents would be added to the secondary study area by 2016.

Table C-3
Development Projects in the Future Without the Proposed Action Within an Approximate Half-Mile Radius

Project Name	Number of Units	Number of Residents
Providence House I (329 Lincoln Road)[1]	26	26
393 Lefferts Avenue[2]	33	96[3]
The Plex (301 Sullivan Place)[4]	98	257[3]
Total	**157**	**369**

Notes:
[1] The Providence House I project is a NYC Housing Preservation and Development (NYCHPD) project that will be comprised of 25 single-occupancy supportive housing units and one unit for a building superintendant. As such, one person per unit is assumed for this development. Source: NYCDCP, NYCDOB.
[2] Source: NYCDOB, Curbed (ny.curbed.com)
[3] The anticipated number of new residents was determined by multiplying the number of units to be developed by the average household size of Bronx Community District 9 (2.62 persons per household). For conservative analysis purposes, full housing occupancy was assumed.
[4] Source: Curbed (ny.curbed.com)

[3] As shown in Table A-3 in Attachment A, "Project Description", 18 other tax lots within the rezoning area could be developed to 50 percent or less of the maximum allowable FAR under the proposed R7A/C2-4 and R7-1 zoning districts. As also indicated in the table, the majority of those lots have very small lot areas, typically less than 3,000 sf, and are in single ownership, with mostly one- and two-family residential developments. Although it is possible that some of these lots could be assembled into a site with single ownership, such assemblage is considered unlikely to occur within the analysis timeframe, given the active uses currently on these lots, the many owners, and the expense and uncertainty that would be involved in assembling those multiple properties.

Zoning

No changes to zoning on the project site, rezoning area, or in the secondary study area are expected in the future without the proposed action. The existing zoning would remain unchanged. The majority of the rezoning area would continue to be zoned R5/C1-3, and a small portion of the rezoning area would continue to be zoned R7-1/C1-3. Both zoning districts would continue to accommodate the same residential and local retail and/or commercial uses that currently exist. There are no known rezoning proposals within 400 feet of the project site expected by 2016.

Future with the Proposed Action

Land Use

Rezoning Area/Primary Study Area

The RWCDS would alter the land use on the project site, and is expected to lead to positive changes for the area. The RWCDS would create new land uses on the project site that are consistent with uses already present in the surrounding area. In the 2016 future with the proposed action, within the portion of the rezoning area that is proposed to be rezoned R7A/C2-4, it is anticipated that a total of 80 DUs (81,357 gsf) in a 7-story mixed-use building would be developed on the project site (Block 1311, Lots 66, 74, 75, 76). In addition, the building would also contain 27,958 gsf of retail space, 28,930 gsf of community facility space (use has not yet been determined), for a total of 138,244 gsf of new development. In addition, 66 accessory parking spaces would be provided on the cellar level of the proposed building. The existing three buildings that are currently located on the project site would be demolished, and one new 7-story building would be constructed on the project site. Also, in order to fulfill the requirements for the Quality Housing Program, the building would include two accessory roof gardens on the third and top floor (roof floor) of the building. No land use changes are expected as a result of the C1-3 commercial overlay removal from the underlying R7-1 zoning district (refer to Figure C-3).

Compared to the No-Action condition, the With-Action condition results in a net change of 81,357 gsf of residential space (80 DUs), 13,133 gsf of retail space, 28,930 gsf of community facility space, and a negative net change of 17,175 sf of storage space. The RWCDS would be pursuant to a zoning map amendment changing the rezoning area from a R5/C1-3 district to a R7A/C2-4 district (as discussed in the zoning section below). The RWCDS building on the project site would consist of new construction.

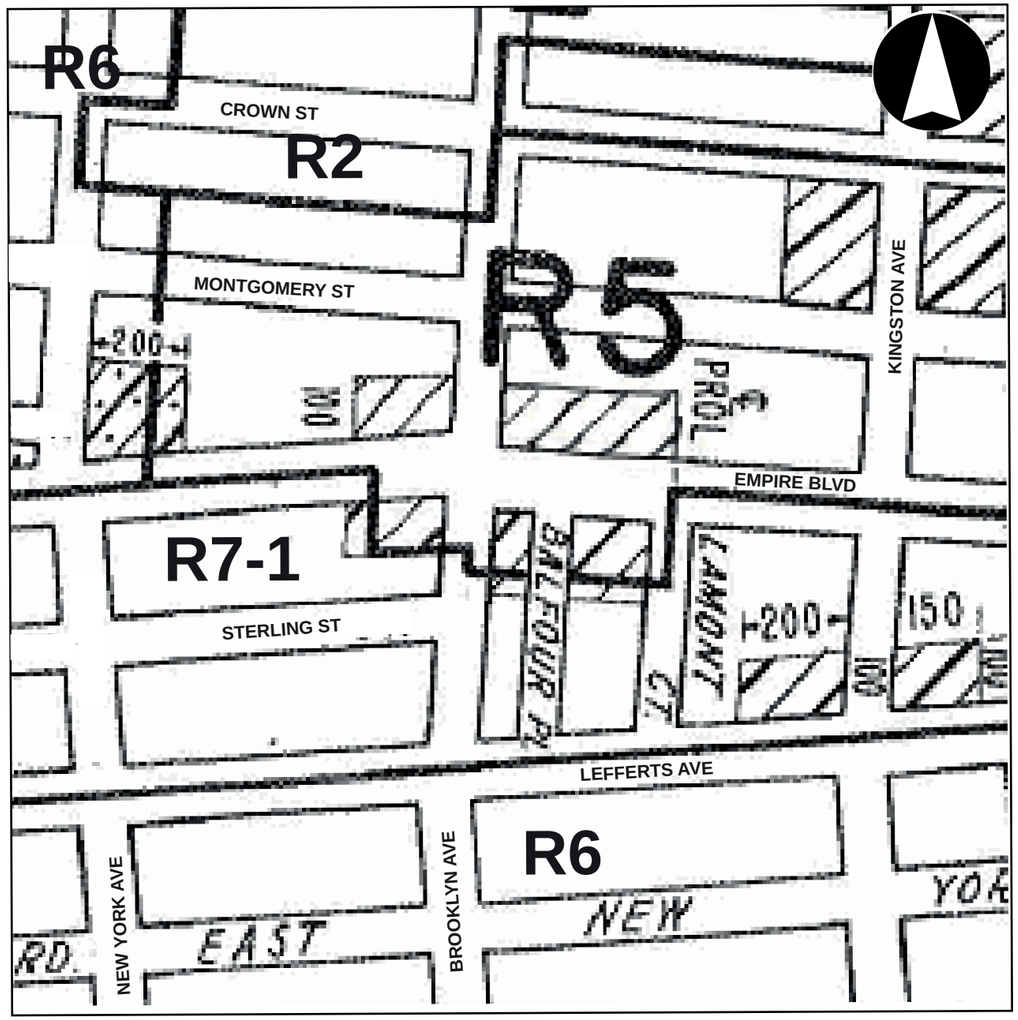
The RWCDS would add approximately 210 new residents[4] in 80 DUs. The RWCDS would also add a total of approximately 171 new jobs (84 retail employees and 87 community facility employees[5]) to the project site. The incremental change in employees comparing the No-Action

[4] Source: Demographic Profile - New York City Community Districts, Brooklyn Community District 9, 2010, U.S. Census 2010.

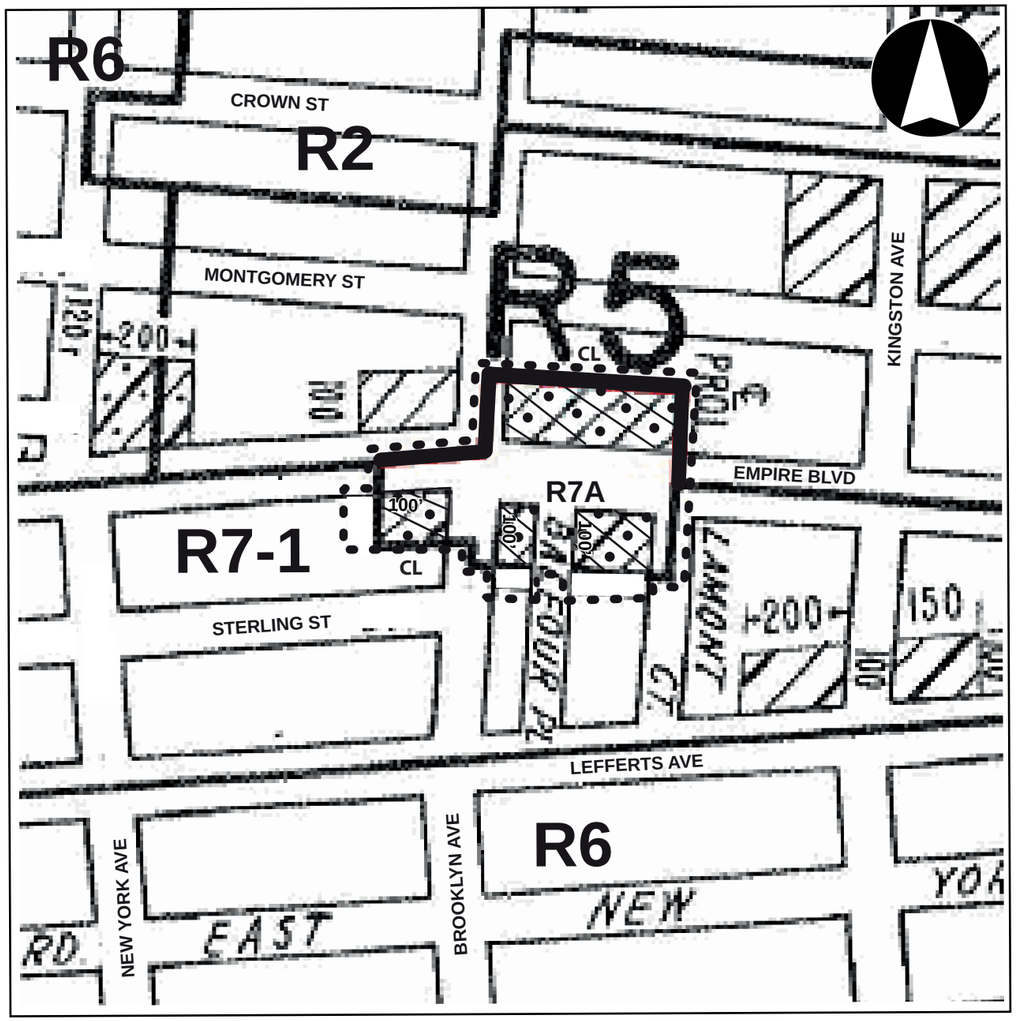
[5] Assumption for retail and generic community facility use: 3 employees per 1,000 sf (84 employees/27,958 gsf of retail space; 87 employees/28,930 gsf of community facility space).

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.



CURRENT ZONING MAP



PROPOSED ZONING MAP - Area being rezoned is outlined with dotted lines.

Changing a R5/C1-3 district to a R7A/C2-4 and removing the existing C1-3 commercial overlay from the underlying R7-1 district.

condition to the With-Action condition is 126 employees[6] (39 retail employees and 87 community facility employees).

The proposed action would not generate land uses on the in the rezoning area that would be incompatible with surrounding uses, nor would it displace land uses in such a way as to adversely affect surrounding land uses. Therefore, the RWCDS would support land use trends in the primary study area. No significant adverse land uses impacts are expected as a result of the proposed action.

Secondary Study Area

The secondary study area would not undergo any development as a result of the proposed action. The proposed action would have no direct effect on land uses in the secondary study area. As noted above, blocks immediately surrounding the project site primarily support residential and ground floor retail uses. The RWCDS is expected to be compatible with the existing uses of the surrounding area. The proposed action is intended to develop an approximately 28,725 sf underutilized site into a productive mixed-use residential, commercial and community facility development that would add residential space and retail as well as community facility services to the neighborhood. Therefore, the proposed action would not introduce new land uses that would be incompatible with their surroundings, and is not expected to result in significant adverse land use impacts in the secondary study area.

Zoning

As described above, the proposed action is a zoning map amendment for portions of a four-block area in Brooklyn's Wingate area, located in Community District 9. The proposed action affects an area of approximately 97,498 sf that is generally bounded by Brooklyn Avenue in the northwest, Lamont Court in the east, and the mid-block line of Block 1311 in the north. To the south, the area extends along Empire Boulevard from Brooklyn Avenue to Lamont Court, where it includes 150-foot deep portions of Blocks 1324, 1323 as well as a 150 x 100 foot portion of Block 1317. The applicant, 529 Empire Realty Corporation, is proposing to rezone the majority of this area from R5/C1-3 to R7A/C2-4, while the C1-3 commercial overlay in a small portion of the rezoning area would be removed from the underlying R7-1 district (see Figure C-3). The blocks and lots affected by the rezoning are listed in Table C-2 above.

The R7A zoning district is a contextual zoning district. Contextual zoning districts regulate the height, bulk, and setback of new buildings. The goal of contextual zoning is to create new buildings that are consistent with the existing neighborhood character. The proposed R7A zoning district is a contextual district that allows a maximum FAR of 4.0 for residential use; the maximum allowable lot coverage is 65 percent for an interior lot. The minimum building base height is 40 feet, the maximum building base height is 65 feet, and the maximum building height is limited to 80 feet. The R7A zoning district is a medium-density apartment house district mapped throughout Brooklyn.

[6] Based on net square footage numbers (39 employees/13,133 gsf for retail; 87 employees/28,930 gsf of community facility space.

The R7A/C2-4 zoning district indicates commercial overlay within residence districts. The commercial FAR for a C2-4 overlay mapped within an R7A district is 2.0, with an overlay district depth of 150 feet. R7A zoning districts require parking for 50 percent of the building's DUs.

Table C-4 provides a comparison of the uses and bulk regulations permitted under the existing and proposed zoning districts. As indicated in Table C-4, the proposed R7A/C2-4 zoning designation would permit new residential and community facility development to a maximum permitted FAR of 4.0, and new commercial development to a maximum permitted FAR of 2.0. This would represent a higher permitted maximum FAR than is allowed under the existing R5/C1-3 districts, which have a maximum permitted residential and community facility FAR of 1.25 and 2.0, respectively. The allowable use groups would be the same under the existing R5/C1-3 and the proposed R7A/C2-4 zoning. As for the lots that would be affected by the proposed C1-3 commercial overlay removal from the underlying R7-1 zoning district, there would be no change in FAR for residential and community facility uses, and therefore, the proposed action would not result in any changes to bulk, height, and setback regulations.

In addition, the proposed C1-3 commercial overlay removal from the underlying R7-1 zoning district would not result in non-conforming uses, as there are currently no commercial uses in those areas.

Table C-4
Comparison of Zoning Regulations: R5/C1-3 with R7A/C2-4

	Existing - R5/C1-3	**Proposed - R7A/C2-4**
Maximum FAR	Residential: 1.25 Community Facility: 2.0 Commercial: 1.0 (in overlay)	Residential: 4.0 Community Facility: 4.0 Commercial: 2.0 (in overlay)
Use Groups	1-4 in Residential District 1-6 in C1-3 Commercial Overlay	1-4 in Residential District 1-9 in C2-4Commercial Overlay
Streetwall Height	30' maximum	40' minimum 65' maximum (base height)
Height & Setback	Regular height & setback and sky exposure plane [(1)]; 40' max building height	80' max. building height Contextual Envelope [(2)]

[(1)] *Sky exposure plane* - an imaginary inclined plane beginning above the street line at a height set forth in the district regulations and which rises over a zoning lot at a ratio of vertical distance to horizontal distance set forth in the district regulations, which a building may not penetrate.

[(2)] *Contextual Envelope* - term used to describe mandatory streetwall, setback, and maximum building heights requirements in certain zoning districts as an alternative to sky exposure plane or tower regulations to maintain the continuity of existing streetwall and a harmonious relationship with existing buildings in the area.

As noted in Attachment A, "Project Description", the residential component would be developed in accordance with the mandatory Quality Housing Program. The Quality Housing Program was established in the 1980s to provide an optional set of contextual bulk regulations for residential development in non-contextual moderate- and higher-density (R6-R10) districts. The bulk regulations (e.g., height and setback, floor area, lot coverage) mirror those of the contextual districts to promote building forms in keeping with specific neighborhood characteristics. The program also sets certain quality standards for building safety, landscaping, recreation space and other amenities. Quality Housing buildings must have amenities relating to the planting of trees, landscaping and recreation space. The Quality Housing program is mandatory in contextual districts, but optional in non-contextual districts.

In the proposed R7A district, Quality Housing regulations are mandatory and produce high lot coverage buildings, with a maximum residential of 4.0 FAR. Also, the Quality Housing Program requires the planting of one street tree per 25 feet of building street frontage. For the proposed development, this means that 10 street trees would be planted. Recreation space has to be accessible from the residential areas of mixed-use buildings. The minimum requirements for outdoor recreation space are 225 sf or 3.3 percent of the residential floor area.

The plans for the proposed RWCDS on the project site include a total of approximately 8,005 sf of paved accessory open space, located in two roof gardens (one on the third floor, one on the roof floor; the total planted and paved roof garden area would be 24,015 sf[7]), which would exceed the requirements of the Quality Housing Program.

As described above, the zoning changes proposed in the rezoning area, which will lead to land use changes on the project site, would be compatible with the existing zoning and uses in the secondary study area. Therefore, no significant adverse zoning impacts would occur.

V. ASSESSMENT/CONCLUSION

Land Use

The proposed rezoning to R7A/C2-4 and the proposed removal of the C1-3 commercial overlay from the underlying R7-1 zoning district would not result in a significant change of land use in the rezoning area as the uses allowed by the proposed zoning districts would be identical to uses that are currently allowed, except for the removal of the C1-3 commercial overlay in the portion of the rezoning area that is currently zoned R7-1/C1-3. However, the land uses resulting from the rezoning would be consistent with existing land use patterns and trends in both the rezoning area and the surrounding area. Under the RWCDS, the proposed rezoning to R7A/C2-4 would add a total of approximately 80 DUs (81,357 gsf of residential floor area) to the neighborhood. In addition, 27,958 gsf of retail space, and 28,930 gsf of community facility space (use to be determined) would be included in the building, and therefore increase the space available for these neighborhood institutions and services. The proposed C1-3 removal and therefore R7-1 zoning would better reflect existing uses in the respective portions of the rezoning area since the current use of these lots does not include any commercial use.

[7] 10,161 sf on the 3rd floor roof and 13,854 sf on the roof.

The proposed rezoning to R7A/C2-4 would create opportunities for new residential uses on underutilized sites in an area where a demand for affordable and market-rate housing exists. The proposed development would complement existing residential and commercial uses in the neighborhood. This would reinforce and enhance the emerging character of the area. The proposed development on the project site, which would be developed in accordance with the mandatory Quality Housing Program, would be contextual to and in scale with many existing buildings in the area, particularly the area south of Empire Boulevard. The RWCDS would also create a street wall connecting to the existing residential building west of the project site.

The action-generated development would not introduce a substantial new or incompatible land use to the rezoning area and secondary study area's mix of uses. In addition, the proposed action would not adversely affect any of the existing buildings in the remainder of the rezoning area. Accordingly, the proposed action would not result in significant adverse land use impacts.

Zoning

The proposed rezoning would facilitate a new 7-story mixed-use development on the project site. The new contextual zoning would be more reflective of the existing built character of the rezoning area, which is characterized by higher density residential development. None of the existing uses would become nonconforming as a result of the proposed action.

The proposed R7A/C2-4 zoning would be consistent with similar residential zoning classifications in the surrounding area. The proposed R7A/C2-4 rezoning would permit residential development at a scale and density consistent with the existing and anticipated built form and character of the surrounding area. No change in zoning regulations regarding residential and community facility uses would occur as a result of the C1-3 commercial overlay removal. Therefore, no redevelopment of these lots is expected as a result of the removal of the C1-3 commercial overlay.

The proposed contextual R7A district would allow for bulk regulations that set height limits and allow high lot coverage buildings that are set at or near the lot line. This would ensure the future development within the rezoning area would be consistent with the built character of the surrounding area. No change in the character of the existing R7-1 zoning district is expected as only the C1-3 commercial overlay is proposed to be removed.

With the R7A/C2-4 zoning expected to generate development compatible with existing uses in the area, the proposed action is not expected to result in any significant adverse impact to zoning.

Public Policy

As there are no public policies of concern applicable to the rezoning area, the proposed action is not expected to result in any significant adverse impacts to public policies.

ATTACHMENT D
OPEN SPACE

I. INTRODUCTION

An open space assessment may be necessary if a proposed action could potentially have a direct or indirect effect on open space resources in the project area. A direct effect would "physically change, diminish, or eliminate an open space or reduce its utilization or aesthetic value". An indirect effect may occur when the population generated by a proposed development would be sufficient to noticeably diminish the ability of an area's open space to serve the existing or future population. Typically, an assessment of indirect effects may occur when a project would add 200 or more residents or 500 or more employees, or a similar number of other users to an area, according to *2012 CEQR Technical Manual* guidelines.

The reasonable worst case development scenario (RWCDS) associated with the proposed action would facilitate a mixed-use development on the project site, which would introduce approximately 80 residential units that would add approximately 210 residents to the area. As such, the RWCDS exceeds the CEQR threshold of 200 residents for an initial quantitative analysis of open space[1]. The RWCDS would also result in approximately 28,930 gsf of community facility space and 27,958 gsf of local ground floor retail, 26,347 gsf of which would be a FRESH supermarket. These uses would add an estimated 39 retail employees and 87 community facility employees to the study area, resulting in a net increase of 126 employees compared to No-Action condition. As the number of net additional workers added by the proposed action is well below 500, it does not trigger the CEQR threshold for analysis for workers and daytime users. In addition, the proposed action would not remove or alter any existing publicly accessible open spaces and therefore, it would not result in a direct effect on existing open space resources. Therefore, the analysis of open space will focus exclusively on the RWCDS's potential effects on residential uses of the area's open space resources.

II. METHODOLOGY

The analysis of open space resources has been conducted in accordance with the guidelines established in the *2012 CEQR Technical Manual.*

Study Area

In accordance with the guidelines established in the *2012 CEQR Technical Manual,* the open space study area is generally defined by a reasonable walking distance that users would travel to reach local open space and recreational resources. This distance is typically a half-mile radius for residential uses and a quarter-mile radius for considerable worker populations. Because the worker population generated by the proposed action falls below the CEQR

[1] Pursuant to the 2012 CEQR Technical Manual, if a project is located in an underserved area (less than 2.5 acres per 1,000 residents), the open space analysis threshold is 50 or more residents or 125 or more workers. If the project is located in a well-served area (open space ratio above 2.5, the open space analysis threshold is 350 or more residents or 750 or more workers. If a project is not located within an underserved or well-served area, such as the proposed development on the project site, an open space assessment should be conducted if that project would generate more than 200 residents or 500 employees.

threshold of 500 additional employees, a half-mile radius is the appropriate study area boundary for the proposed action.

Therefore, the study area was determined by identifying a half-mile radius around the boundaries of the project site (Block 1311, Lots 66, 74, 75, and 76), which is the only projected development site within the proposed rezoning area. Per *2012 CEQR Technical Manual* guidelines, census tracts with an area of 50 percent or greater located within the half-mile radius were included in the calculation of population and open space; those with less than 50 percent of their area in the half-mile radius were excluded.

As shown in Figure D-1, the open space study area includes the following twelve census tracts in their entirety: 319, 321, 329, 331, 333, 335, 337, 339, 804, 806, 810, and 874.01.

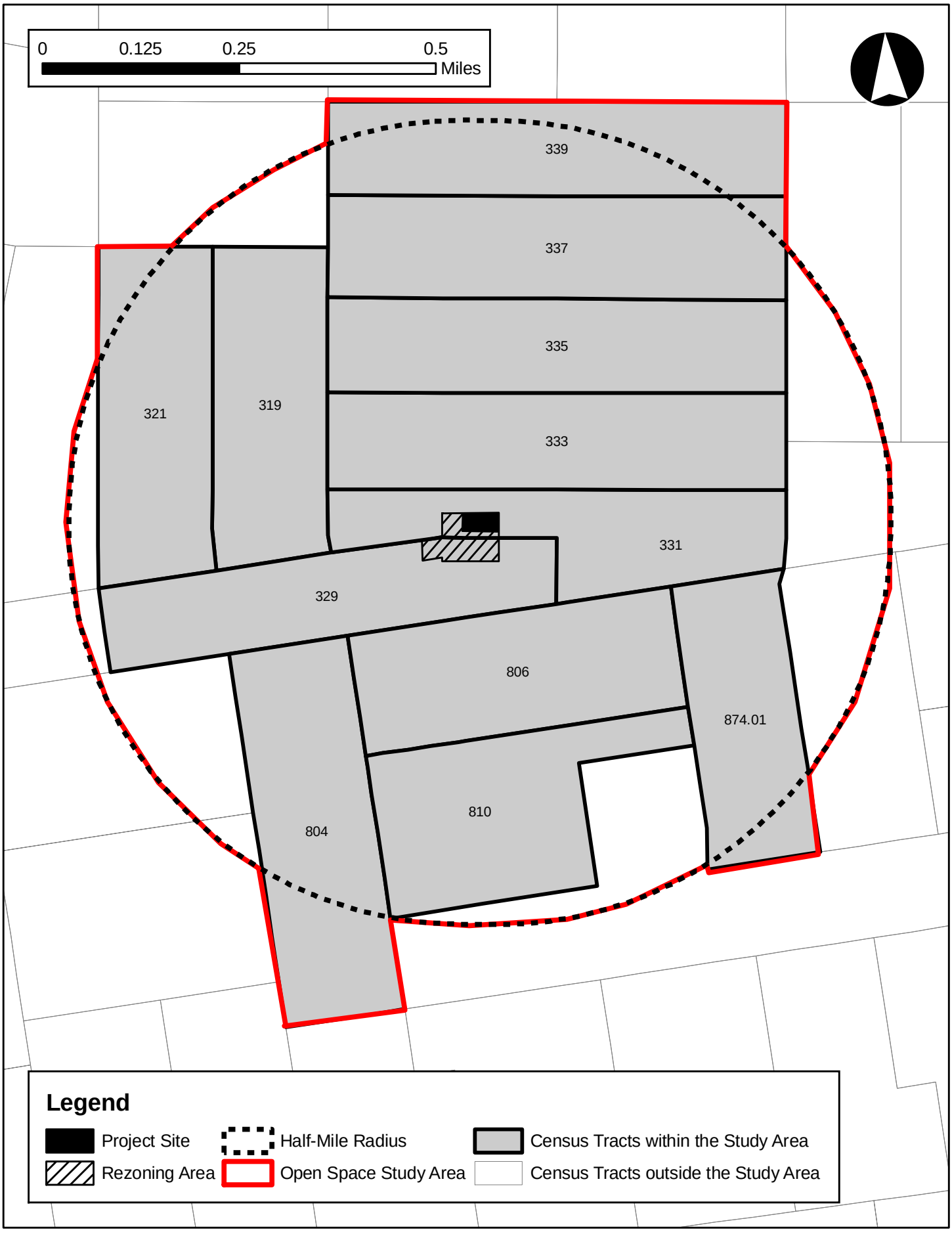
Analysis Framework

Residents use both active and passive open spaces and are assumed to walk half a mile, thus, for a project that would add a substantial residential population, there should be an analysis of the project's effects on active and passive open spaces within a half-mile of the project area.

With an inventory of available resources and potential users, the adequacy of open space in the study area can be assessed both quantitatively and qualitatively. The quantitative approach computes the ratio of open space acreage to the population in the study area and compares this ratio with certain guidelines. The qualitative assessment examines other factors that can affect conclusions about adequacy, including proximity to additional resources beyond the study area, the availability of private recreational facilities, and the demographic characteristics of the study area's population. Specifically, the analysis in this attachment includes:

- Characteristics of the open space user group. To determine the number of residents in the study area, 2010 census data have been compiled for census tracts comprising the open space study area.
- An inventory of all publicly accessible passive and active recreational facilities in the study area.
- An assessment of the quantitative ratio of open space in the study area by computing the ratio of open space acreage to the population in the study area and comparing this open space ratio with certain guidelines. For the residential population, there are generally two guidelines that are used to evaluate residential open space ratios. The New York City Department of City Planning (NYC DCP) generally recommends a comparison to the median ratio for community districts in New York City, which is 1.5 acres of open space per 1,000 residents. Alternately, NYC DCP has established an optimal level, or planning goal, of 2.5 acres of open space per 1,000 residents (80 percent active and 20 percent passive) for large-scale plans and proposals. However, this goal is often not feasible for many areas of the City (especially higher density ones), but serves as a benchmark that represents an area that is well-served by open spaces.

Open Space Study Area



- An evaluation of qualitative factors affecting open space use, including barriers to access, description of active and passive uses, and characteristics of user groups.
- A final determination of the adequacy of open space in the study area.

III. PRELIMINARY ASSESSMENT

Pursuant to the guidelines of the *2012 CEQR Technical Manual,* a preliminary open space assessment of the proposed action's indirect effects on open space was conducted to determine the need for a detailed analysis. The preliminary assessment provides a comparison of the total open space ratios for existing conditions and in the future with the proposed action. As the study area exhibits a low open space ratio (i.e., below the citywide average of 1.5 acres per 1,000 residents) under existing conditions and in the future with the proposed action, a detailed open space assessment is warranted and is provided below[2].

IV. DETAILED ASSESSMENT

Existing Conditions

To determine the residential population served by existing open space resources, 2010 Census data were compiled for the census tracts comprising the study area. With an inventory of available open space resources and the number of potential users, open space ratios were calculated and compared with existing citywide averages and planning goals set forth by the NYC DCP.

Demographic Characteristics of the Study Area

Table D-1 shows the 2010 Census total population figures for the twelve census tracts in the study area, as well as for the study area as a whole. As shown in Table D-1, Census data indicate that the study area had a residential population of approximately 46,394 people in 2010. People between the ages of 20 and 64 make up the majority (approximately 60 percent) of the residential population. Children and teenagers (0 to 19 years old) account for approximately 28 percent of the entire residential population, and persons 65 years and over account for approximately 12 percent of the residential study area population. The median age of residents for the individual census tracts ranges from a high of 40.8 years (census tract 874.01) to a low of 26.3 (census tract 333). According to the 2010 census, the residents in the open space study area have an average median age of approximately 32.7 years.

Given the range of age groups present in the population, there is a need for various kinds of active and passive recreation facilities, including those with amenities that can be used by children and adults, in the study area. 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

[2] The preliminary open space assessment showed that in the future with the proposed action the open space ratio would be 0.387 acres per 1,000 residents, which is less than the citywide average of 1.5 acres per 1,000 residents.

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 activities such 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 20 and 64 continue to use court game facilities and fields for sports, as well as more individualized recreation such as rollerblading, biking, and jogging, requiring 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 tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

Table D-1
Residential Population and Age Distribution in the Half-Mile Study Area

Census Tract	Total Population	Under 5 Years		5 to 9 Years		10 to 14 Years		15 to 19 Years		20 to 64 Years		65+ Years		Median Age
		#	%	#	%	#	%	#	%	#	%	#	%	
319	3,508	264	7.5	258	7.4	22	6.5	256	7.3	2039	58.1	463	13.2	33.0
321	5,001	308	6.2	276	5.5	283	5.7	325	6.5	3173	63.4	636	12.7	35.8
329	5,582	424	7.6	314	5.6	329	5.9	377	6.8	3437	61.6	701	12.6	35.1
331	4,520	469	10.4	344	7.6	345	7.6	348	7.7	2535	56.1	479	10.6	27.4
333	4,085	421	10.3	348	8.5	334	8.2	374	9.2	2212	54.1	396	9.7	26.3
335	3,139	213	6.8	229	7.3	256	8.2	300	9.6	1797	57.2	344	11.0	27.3
337	4,105	368	9.0	288	7.0	269	6.6	344	8.4	2441	59.5	395	9.6	29.8
339	4,376	274	6.3	262	6.0	237	5.4	247	5.6	2632	60.1	724	16.5	37.6
804	3,250	224	6.9	189	5.8	202	6.2	228	7.0	2070	63.7	337	10.4	33.5
806	3,386	326	9.6	289	8.5	219	6.5	211	6.2	2039	60.2	302	8.9	30.7
810	2,300	137	6.0	141	6.1	147	6.4	133	5.8	1437	62.5	305	13.3	36.2
874.01	3,142	175	5.6	171	5.4	155	4.9	192	6.1	1846	58.8	603	19.2	40.8
Total	***46,394***	***3,603***	***7.8***	***3,109***	***6.7***	***3,004***	***6.5***	***3,335***	***7.2***	***27,658***	***59.6***	***5,685***	***12.3***	***32.7***

Source: 2010 US Census Data

Study Area Open Space Inventory

According to the *2012 CEQR Technical Manual,* open space may be public or private and may be used for active or passive recreational purposes. Public open space is defined as facilities open to the public at designated hours on a regular basis and is assessed for impacts under CEQR guidelines. Private open space is not accessible to the general public on a regular basis and should only be considered qualitatively.

An open space is determined to be active or passive by the uses that the design of the space allows. Active open space is the part of a facility used for active play such as sports or exercise, and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses, lawns, and paved areas for active recreation. Passive open space is used for sitting, strolling, and relaxation with benches, walkways, and picnicking areas. However, some passive spaces can be used for both passive and active recreation, such as a lawn or promenade with benches, which can also be used for ball playing, jogging or rollerblading.

All publicly accessible open space facilities within the study area were inventoried and identified by their location, size, owner, type, utilization, equipment, hours, and condition of open space. Pursuant to the *2012 CEQR Technical Manual*, the overall condition and cleanliness of each open space facility was categorized as acceptable or unacceptable, based on the most recent evaluation of the New York City Department of Parks and Recreation[3].

The intensity of use of the open spaces are subjective and based on an observed degree of activity or utilization. Open spaces were observed on a Wednesday and Thursday from 11:00 am until 3:00 pm, which for the purposes of this analysis was considered the weekday peak utilization period. If a facility seemed to be at 75 percent or greater capacity utilization during this period, i.e. the majority of benches or equipment was in use, utilization was considered heavy. If the facility or equipment was at 25 to 75 percent capacity utilization during this period, but could accommodate additional users, utilization was considered moderate. If a playground or sitting area was at 25 percent capacity or less utilization during this period, usage was considered low.

Table D-2 identifies the address, ownership, hours, acreage of active and passive open spaces in the study area, and their condition and utilization. Figure D-2 maps their location in the study area.

The study area has several publicly accessible open spaces that can be categorized into two main types: large athletic fields, and playgrounds of varying sizes. In total, eight open space resources are located in the study area, seven of which are publicly-accessible, and are therefore included in the open space analysis. St. Francis Assisi Community Garden, a gated garden and open space owned by the St. Francis of Assisi - St. Blaise Parish, is excluded from the quantitative open space analysis, as per CEQR methodology. The seven open space resources included in the quantitative analysis comprise a total of 18.2 acres, as shown in Table D-2. Approximately 81 percent (14.8 acres) of the open space acreage is estimated to be devoted to active recreation and the remaining 19 percent (3.4 acres) is used for passive recreation.

All seven open spaces include passive recreational amenities, including benches for sitting, tables, drinking fountains, and trees. Except for one playground and the Eastern Parkway Mall, all open spaces include a comfort station. Of the seven publicly-accessible open space resources in the study area, five include playground equipment, and all of them provide recreational facilities for young children, teens, and adults.

As shown in Figure D-2, the nearest open space resources to the rezoning area are the Marc and Jason's Playground and the Hamilton-Metz Field. Marc and Jason's Playground is a 1.33-acre facility that provides benches, trees, playground equipment, a drinking fountain, sprinkler system, flagpole, basketball/tennis court, and comfort station. The playground is in good condition and is moderately utilized. Marc and Jason's Playground first opened to the public in 1958 when the adjacent Junior High School 61 was built. Since then, the playground has been jointly operated by NYC Department of Parks and Recreation (DPR) and the NYC Department of Education (DOE).

[3] Source: 2012 CEQR Technical Manual, Page 7-10 (link to NYC DPR Park Inspection Data).

Table D-2
Open Space Inventory: Publicly Accessible Open Spaces in the Study Area

Map Key	Name	Address	Owner	Description	Hours of Access	Total Acres	Active		Passive		Condition, Cleanliness| & Utilization
							%	Acres	%	Acres	
1	Marc and Jason's Playground	Sterling St., Empire Blvd. & New York Ave.	NYC DPR / NYC BOE	Basketball/tennis court, playground, comfort station, water fountain flagpole, sprinklers, benches, trees	8 AM to dusk	1.33	75%	1.00	25%	0.33	C: acc. CL: acc. U: moderate
2	Dodger Playground	Sullivan St. between Nostrand and Rogers Aves.	NYC DPR	Playground, water fountain, spray shower, benches, trees	N/A	0.29	75%	0.22	25%	0.07	C: unac. CL: unacc. U: moderate
3	Rolf Henry Playground	Corner of Clarkson & New York Aves.	NYC DPR	Playground, water fountains, comfort station, sundial, benches, trees	8 AM to dusk	0.21	66%	0.14	34%	0.07	C: unacc. CL: unacc. U: moderate
4	Wingate Park	Winthrop St., Rutland St., Brooklyn & Kingston Aves.	NYC DPR	Baseball/soccer field, basketball court, handball court, sprinklers, fitness equipment, running track, water fountain, playground, comfort station, benches, bleachers, trees, murals	N/A	5.89	80%	4.71	20%	1.18	C: acc. CL: acc. U: heavy
5	Hamilton-Metz Field	Albany, East New York, and Lefferts Aves.	NYC DPR	Baseball/football/soccer field, playgrounds, basketball/handball court, water fountains, comfort station, benches, trees	N/A	2.11	75%	1.58	25%	0.53	C: acc. CL: acc. U: moderate to heavy
6	Athletic Field	Maple St., Rutland St. (entrance), Troy & Schenectady Aves.	Public-private partnership Owner: NYC BOE	Grass field, wooden seats for spectators, tennis courts, baseball fields, hop scotch, and a comfort station	N/A	7.17	90%	6.45	10%	0.72	C: acc. CL: acc. U: heavy
7	Eastern Parkway Mall	Eastern Parkway between Troy & New York Aves.	NYC DPR	Two pedestrian malls with bike lanes, benches, trees	Open 24/7	1.17	57%	0.67	43%	0.50	C: unacc. CL: unacc. U: light
					TOTAL	**18.17**	**81.13**	**14.77**	**18.71**	**3.4**	

Sources: Oasis, PLUTO data, DPR website

Notes:

DPR = NYC Department of Parks and Recreation
DOE = NYC Department of Education

Legend
C: Condition
CL: Cleanliness
U: Utilization

Open Space Resource Map



Hamilton-Metz Field (2.11 acres) includes a playground and a grass field. The field honors US founding father Alexander Hamilton and an early 1900s legislator, Herman A. Metz, and his wife Laura. The playground, which comprises approximately one quarter of the area, offers benches, picnic tables, trees, playground equipment, a drinking fountain, and comfort station, is in good condition and heavily utilized. The grass field, which comprises approximately three quarters of the area, is in good condition and is moderately to heavily used, depending on the day and the hour. The NYC DPR evaluation from August 2, 2012, showed acceptable overall condition and cleanliness.

Dodger Playground is a small 0.29-acre space that offers benches, trees, playground equipment, a drinking fountain, and spray shower. The playground is bordered on three sides by residential buildings' facades and is elevated in relation to Sullivan Street. It is in fair condition with moderate utilization. The NYC DPR evaluation from September 4, 2012, stated unacceptable overall condition and cleanliness.

Rolf Henry Playground is a small 0.21-acre space that contains benches, trees, playground equipment, a drinking fountain, comfort station, and a flower garden. The flower garden is visible but not accessible for the public. The playground is in fair condition and is moderately utilized. The NYC DPR evaluation from December 27, 2011, showed unacceptable overall condition and cleanliness.

Wingate Park is the second largest open space in the study area, at 5.89 acres. It provides benches, trees, playground and fitness equipment, sprinkler system, a drinking fountain, basketball and handball court, large grass field and running track, and a comfort station. The park is in good condition and is heavily utilized. The NYC DPR evaluation from July 24, 2012, stated acceptable overall condition and cleanliness.

The Athletic Field is the largest open space in the study area, with 7.17 acres. It includes a grass field accompanied by wooden seats for spectators, baseball fields, tennis courts, hop scotch, and a comfort station. The facilities are in excellent condition with generally moderate utilization, and more heavy utilization during peak hours when the large fields are used by sport teams (as opposed to individuals). No NYC DPR evaluation was available for this open space resource. The Athletic Field is located three blocks to the east and four blocks to the south of the project site.

Eastern Parkway Mall is a linear open space that was constructed between 1870 and 1874, extending from its original starting point at Grand Army Plaza to Evergreen Cemetery. The part of the Eastern Parkway Mall that is included in the open space analysis extends between Troy Avenue and New York Avenue. The linear open space includes both active and passive space, with a central pedestrian and bicycle path and rows of trees and benches on each side. The NYC DPR evaluation from August 7, 2012, showed unacceptable overall condition and cleanliness.

Adequacy of Open Space

Quantitative Assessment

The following analysis of the adequacy of existing open space resources within the study area takes into consideration the ratio of active, passive, and total open space resources per 1,000 residents. The NYCDCP has established quantitative measures for determining the adequacy of open and recreational space within a neighborhood. As 1.5 acres of total open space per 1,000 residents is the median community district ratio in New York City, it generally represents adequate open space conditions and is used as the CEQR standard for this project.

In calculating the open space ratio per 1,000 user population for the study area, all of the resources listed in Table D-2 were included. As shown in Table D-3, the open space study area contains approximately 18.2 acres of public open space, of which an estimated 14.8 acres are for active use and 3.4 acres are for passive use. With an existing study area residential population of approximately 46,394 people, the existing total open space ratio in the study area is approximately 0.392 acres of open space per 1,000 residents. The study area has 0.318 acres of active open space per 1,000 residents, and 0.07 acres of passive open space per 1,000 residents.

Table D-3
Existing Adequacy of Open Space Resources in the Study Area

Total Population		Open Space Acreage			Open Space Ratios Per 1,000 People			NYC DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residents	46,394	18.17	3.4	14.77	0.392	0.073	0.318	2.50	0.50	2.00

Qualitative Assessment

The apparent deficiency of open space resources within the defined study area may be ameliorated by several factors. First, four open space resources are considered to be in acceptable condition. Additionally, the study area contains a mix of recreational facilities that feature playgrounds and athletic fields as well as passive open space. Approximately 81 percent of the study area's total open space acreage is dedicated to active uses and 19 percent to passive uses, close to the City's recommended proportion of 80 percent active and 20 percent passive, and ideal for a predominantly residential neighborhood.

In addition, other open space resources that are not included in the quantitative analysis somewhat alleviate the existing low residential open space ratio by providing additional open space resources to the study area population. As mentioned previously, St. Francis of Assisi - St. Blair's Parish Community Garden has a passively-programmed open space with benches, trees, and plantings. In addition, there are park areas and playgrounds that are located just beyond the open space study area that add considerable accessible active and passive open space for the residential population. One such resource is Lincoln Terrace Park, which is located between Eastern Parkway, Buffalo, Rochester and East New York Avenues, near the eastern boundary of the open space study area. The park is 6.87 acres and offers benches, two

playgrounds, tennis courts, fencing, basketball and handball courts, a baseball field, water fountains, open lawns, trees, and a comfort station. Another resource is Parkside Playground, which is located on Parkside Avenue between Bedford and Rogers Avenues, adjacent to a school building (P.S. 92), approximately 2 blocks to the west of the study area. The playground is 1.41 acres and features basket and handball courts. The playground is jointly operated by NYC DPR and NYC Department of Education (NYC DOE).

The Future Without the Proposed Action (No-Action Condition)

Study Area Population

As discussed in Attachment C, "Land Use, Zoning and Public Policy", three known and expected residential development projects are anticipated to be completed within the half-mile study area by 2016. These new developments would increase the residential population within the study area, and are therefore included in this analysis. As shown in Table D-4, the projects are expected to introduce an additional 369 residents to the study area. Thus, by 2016, it is expected that the residential population in the half-mile study area would increase from 46,394 to 46,763.

Table D-4
Development Projects in the Future Without the Proposed Action Within an Approximate Half-Mile Radius

Project Name	Number of Units	Number of Residents
Providence House I (329 Lincoln Road)[1]	26	26
393 Lefferts Avenue	33	96[3]
The Plex (301 Sullivan Place)	98	257[3]
Total	**157**	**369**

Notes:

[1] The Providence House I project is a NYC Housing Preservation and Development (NYCHPD) project that will be comprised of 25 single-occupancy supportive housing units and one unit for a building superintendant. As such, one person per unit is assumed for this development.

[2] The anticipated number of new residents was determined by multiplying the number of units to be developed by the average household size of Bronx Community District 9 (2.62 persons per household). For conservative analysis purposes, full housing occupancy was assumed.

Sources: NYCDCP, NYCDOB, ny.curbed.com

Open Space Resources

The existing open space resources in the study area are expected to remain essentially unchanged in the 2016 future without the proposed action. Therefore, the open space acreage in the study area is conservatively assumed to remain at 18.17 acres (approximately 14.77 acres of active recreation, and 3.4 acres of passive recreation) in the No-Action condition.

Adequacy of Open Space

Quantitative Assessment

As shown in Table D-5, for the projected population of 46,763 persons in build year 2016, the study area's available open space ratio would decrease from 0.392 acres per 1,000 residents under existing conditions to 0.389 acres per 1,000 residents. The available active open space ratio would decrease to 0.316 acres per 1,000 residents (from 0.318 acres/1,000 under existing conditions), whereas the passive open space ratio would remain the same as existing conditions, with 0.073 acres per 1,000 residents.

Table D-5
No-Action Adequacy of Open Space Resources in the Study Area

Total Population		Open Space Acreage			Open Space Ratios Per 1,000 People			NYC DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residents	46,763	18.17	3.40	14.77	0.389	0.073	0.316	2.50	0.50	2.00

Qualitative Assessment

The open space ratios would remain substantially below the guideline of adequacy in the future without the proposed action. As under existing conditions, larger park areas that are located just beyond the open space study area (such as Lincoln Terrace Park and Parkside Playground) would add considerable accessible active and passive open space for the residential population. In addition, two of the three anticipated residential developments in the study area are expected to include accessory open space for the residents. Providence House I (at 329 Lincoln Road) will have a 1,600 sf outdoor recreation space, and The Plex (at 301 Sullivan Place) will have landscaped terraces and a playground for the residents. While not included in the quantitative assessment, these amenities help alleviate the deficiency of available public open space to area residents.

The Future With the Proposed Action (With-Action Condition)

Study Area Population

As discussed in Attachment A, "Project Description", the RWCDS for the proposed action would consist of a total of 80 DUs (81,357 gsf of residential floor area) on the project site, as well as 28,930 gsf of community facility uses and 27,958 gsf of ground floor commercial space, 26,347 gsf of which would be a FRESH supermarket. Based on the average household size of 2.62 for Brooklyn Community District 9 (which encompasses the project site), the RWCDS would increase the study area's population by approximately 210 residents over the No-Action condition, from 46,763 to a total of 46,973 residents.

Open Space Resources

No new publicly-accessible open space resources would be introduced in the 2016 future with the proposed action. However, it should be noted that the RWCDS building on the project site would be developed in accordance with the mandatory Quality Housing Program guidelines, which would require the planting of street trees, landscaping and accessory recreation space at the project site. The RWCDS on the project site is expected to provide two rooftop accessory gardens, which would satisfy the recreational space requirement of the Quality Housing program and introduce approximately 24,015 sf of accessory open space to the project site. The lower roof garden would be approximately 10,161 sf, and accessible from the third floor. The upper roof garden would be approximately 13,854 sf and accessible from the seventh floor. Both spaces would be accessory to the proposed development and available exclusively to the development's residents.

Adequacy of Open Space Resources

Quantitative Assessment

The RWCDS associated with the proposed rezoning would result in an increase of approximately 210 residents. Therefore, the projected study area population by build year 2016 in the study area would be 46,973 people. As shown in Table D-6, open space ratios would remain substantially the same in the future with the proposed action as compared to the future without the proposed action. The total open space ratio in the future with the proposed action would be 0.387 acres per 1,000 residents, a decrease of 0.002 acres (0.45 percent) compared to the future No-Action ratio. The active open space ratio with the proposed action would be 0.314 acres per 1,000 residents (a decrease of 0.002 or 0.45 percent from the No-Action condition), and the passive open space ratio with the proposed action would be 0.072 acres per 1,000 residents (a decrease of 0.001 acres or 0.45 percent from No-Action conditions).

Table D-6
With-Action Adequacy of Open Space Resources in the Study Area

Total Population		Open Space Acreage			Open Space Ratios Per 1,000 People			NYC DCP Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
No-Action Condition										
Residents	46,763	18.17	3.40	14.77	0.389	0.073	0.316	2.50	0.50	2.00
With-Action Condition										
Residents	46,973	18.17	3.40	14.77	0.387	0.072	0.314	2.50	0.50	2.00

Qualitative Assessment

In the future with the proposed action, the open space ratio would continue to fall short of the City's open space guidelines. However, the decreases in the ratios would be small and not be considered a substantial change. It is recognized that these guidelines are not feasible in many areas of the City and they are not impact thresholds.

Moreover, some of the open space needs of the study area population would be met by open spaces just outside of the study area. In addition, the RWCDS will include accessory open space for the residents of the building.

As a result, the open space resources in the future with the proposed action would be generally suitable to meet the needs of the user population.

V. CONCLUSION

According to the *2012 CEQR Technical Manual*, a proposed action may result in a significant impact on open space resources if (a) there would be direct displacement/alteration of existing open space within the study area that has a significant adverse effect on existing users; or (b) it would reduce the open space ratio and consequently result in overburdening existing facilities or further exacerbate deficiency in open space. The *2012 CEQR Technical Manual* also states that "if the area exhibits a low open space ratio indicating a shortfall of open space, even a small decrease in the ratio as a result of the action may cause an adverse effect". A 5 percent or greater decrease in the open space ratio is considered to be "substantial," and a decrease of less than 1 percent is generally considered to be insignificant unless open space resources are extremely limited.

The RWCDS would not result in a significant adverse open space impact. As noted above, the proposed rezoning would not result in any direct displacement or alteration of public spaces in the study area. However, it would result in a 0.45 percent decrease in the residential open space ratio from the No-Action condition. The reduction of the total open space ratio resulting from the proposed action, which is an incremental decrease of approximately 0.002 acres per 1,000 residents, is not expected to noticeably diminish the ability of the study area's open spaces to serve its residential population in the future with the proposed action.

Moreover, as described above, the RWCDS on the project site would be developed in accordance with the Quality Housing Program, which mandates the provision of recreation space. The RWCDS is expected to provide two roof gardens, with a combined total of approximately 24,015 sf (approximately 0.55 acres), which would be for the exclusive use of the RWCDS development's residents. These private accessory open spaces would serve the RWCDS development's residents and would help meet their open space needs. Although these private accessory open spaces are not included in the quantitative analysis of open space resources, they would help to partially offset the effect of the increase in population in the study area resulting from the RWCDS.

ATTACHMENT E
URBAN DESIGN AND VISUAL RESOURCES

I. INTRODUCTION

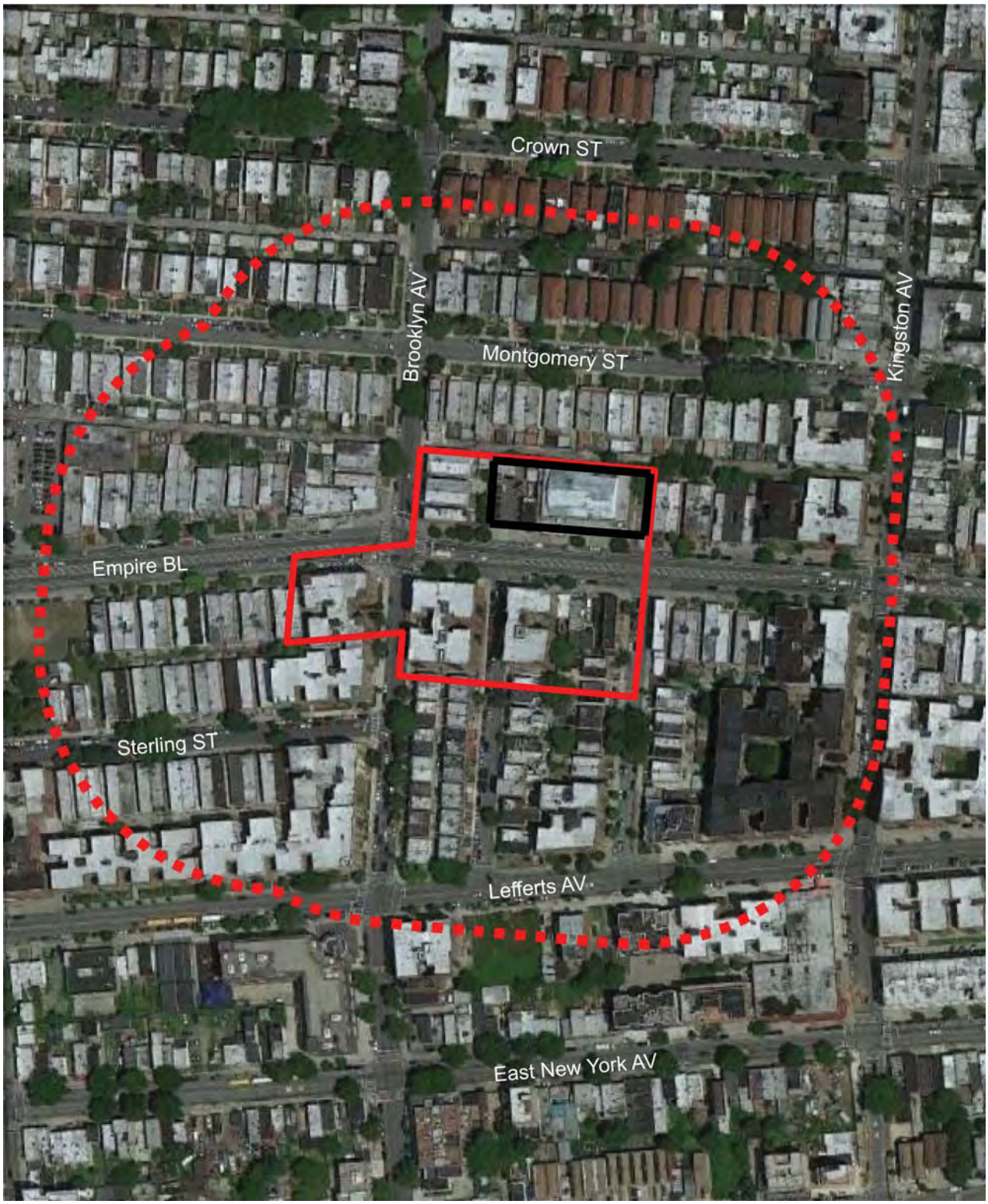
Together, the urban design components and visual resources of an area define the distinctive identity of a neighborhood. In an urban design assessment under the 2012 *CEQR Technical Manual* guidelines, one considers whether and how a project may change the experience of a pedestrian in the project area. The assessment focuses on the components of a proposed project that may have the potential to alter the arrangement, appearance, and functionality of the built environment, as experienced by pedestrians in the study area. These components include building bulk, use, and type; building arrangement; block form and street pattern; streetscape elements; street hierarchy; and natural features. The concept of bulk is created by the size of a building and the way it is massed on a project site. Height, length and width define a building's size; volume, shape, setbacks, lot coverage, and density define its mass.

This attachment assesses the potential effects on urban design and visual resources that could result from the proposed action. As described in Attachment A, "Project Description", this application is for a zoning map amendment affecting portions of four City tax blocks in the Wingate neighborhood of Brooklyn Community District 9 (see **Figure E-1**). The proposed action affects an area of approximately 97,498 square feet (sf) of lot area that is generally bounded by Brooklyn Avenue in the northwest, Lamont Court in the east, and the mid-block line of Block 1311 in the north. To the south, the area extends along Empire Boulevard from Brooklyn Avenue to Lamont Court, where it includes 150-foot deep portions of Blocks 1324, 1323 as well as a 150 x 100 foot portion of Block 1317 (see **Figure A-2** in Attachment A, "Project Description"). The applicant, 529 Empire Realty Corporation, is proposing to rezone the majority of this area from R5/C1-3 to R7A/C2-4, and to remove the existing C1-3 commercial overlay from the underlying R7-1 district in the remaining portion of the rezoning area ("the proposed action").

In the portion of the rezoning area that is proposed to be rezoned from R5/C1-3 to R7A/C2-4, the proposed action would enable a proposal by the applicant to develop a mixed-use building, with accessory, below-grade parking, on four lots fronting on Empire Boulevard and owned by 529 Empire Realty Corporation. The development as proposed by the applicant would include a 7-story mixed-use residential, commercial, and community facility building to be constructed on Lots 66, 74, 75, and 76 on Block 1311 (the "project site"). The proposed building would have 68 dwelling units (DUs) (68,727 gsf), 24,289 gsf of commercial space, and 21,572 gsf of community facility space, for a total of 114,588 gsf of new development.

In addition, the existing C1-3 commercial overlay would be removed from a small portion of the rezoning area that is currently zoned R7-1/C1-3. Through the removal of the C1-3 commercial overlay from the underlying R7-1 district the zoning map would better reflect the existing exclusively residential uses on these lots.

Figure E-1
Urban Design Study Area



Legend

Project Site **Rezoning Area** **400-Foot Radius**

In the case of the proposed action, as explained in Attachment A, "Project Description", under the reasonable worst case development scenario (RWCDS) the project site (Block 1311, Lots 66, 74, 75, 76) would be redeveloped with a new 7-story mixed-use residential, commercial, and community facility building, located within the rezoned R7A/C2-4 district. In the RWCDS, the incremental (net) change that would result from the proposed development at the project site compared to No-Action conditions is 80 DUs (81,357 gsf), 27,958 gsf of local retail space, 28,930 gsf of community facility space, and a negative incremental (net) change of 17,175 sf of storage space. The analysis year for the RWDCS is 2016.

Whereas the RWCDS is typically used for analyzing impacts, as the applicant has developed a detailed proposal for the project site which would be enabled by the proposed action. As such, the proposed development will be analyzed in the urban design and visual resource analysis.

The following analysis addresses each of the urban design characteristics for existing conditions and the future without and with the proposed action for the year 2016. As detailed below, the preliminary assessment indicated that the changes to the pedestrian environment as a result of the proposed action would not be significant and a detailed analysis is not warranted.

II. METHODOLOGY

Determining Whether an Urban Design Analysis is Necessary

Urban design is the totality of components that may affect a pedestrian's experience of public space. These components include streets, buildings, visual resources, open space, natural features, and wind and sunlight conditions. These elements, as defined in the 2012 *CEQR Technical Manual*, are described below:

- *Streets.* The arrangement and orientation of streets define the location and flow of activity in an area, set street views, and create the blocks on which buildings and open spaces are organized. The apportionment of street space between cars, bicycles, transit, and sidewalk is critical to making a successful streetscape, as is the careful design of street furniture, grade, materials used, and permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, or newsstands.
- *Buildings.* Buildings support streets. A building's street walls form the most common backdrop in the city for public space. A building's size, shape, setbacks, lot coverage, placement on the zoning lot and block, the orientation of active uses, and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape. The public realm also extends to building façades and rooftops, offering more opportunity to enrich the visual character of an area.
- *Visual Resources.* A visual resource is the connection from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

- *Open Space.* For the purpose of urban design, open space includes public and private areas such as parks, yards, cemeteries, parking lots and privately owned public spaces.
- *Natural Features.* Natural features include vegetation and geologic, topographic, and aquatic features. Rock outcroppings, steep slopes or varied ground elevation, beaches, or wetlands may help define the overall visual character of an area.
- *Wind.* Channelized wind pressure from between tall buildings and downwashed wind pressure from parallel tall buildings may cause winds that jeopardize pedestrian safety.

In general, an assessment of urban design is needed when the project may have effects on one or more of the elements that contribute to the pedestrian experience, which are described above. Pursuant to the 2012 *CEQR Technical Manual* projects that permit modification of yard, height, and setback requirements, and 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, require preliminary analysis.

As the proposed action would involve a rezoning, which would allow for increased floor area density for residential, commercial, and community facility uses, it could have the potential to result in changes of pedestrian experiences in the project area. As a result, a preliminary analysis is warranted. The following urban design analysis follows the guidelines of the 2012 *CEQR Technical Manual.*

Per criteria of Section 230 of the 2012 *CEQR Technical Manual*, a wind condition analysis is not warranted for the proposed action. The project site is not located in a high wind location, such as along the waterfront, nor is it in a location where wind conditions from the waterfront are not attenuated by existing buildings or natural features. The project site, located in the Wingate neighbourhood of Brooklyn, is more than four miles from the Jamaica Bay waterfront and the Gowanus Bay. The proposed action would not result in the construction of a development of a substantial size. More specifically, it would result in a 7-story mixed-use development with a total of 138,244 gsf (81,357 gsf of residential space, 27,958 gsf of local retail space, and 28,930 gsf of community facility space), which is not expected to alter wind conditions in the vicinity of the project site. Therefore no wind analysis is warranted.

Study Area

As defined in the 2012 *CEQR Technical Manual*, the urban design and visual resources study area consists of the area where the project may influence land use patterns and the built environment. For the purpose of this assessment, the study area consists of the area within an approximate 400-foot radius of the rezoning area. As shown in **Figure E-1**, the study area is roughly bounded by Crown Street to the north, Kingston Avenue to the east, Lefferts Avenue to the south, and New York Avenue to the west.

The following analysis is based on field visits, aerial views, photographs, and other graphic images of the project site and the surrounding study area. Zoning calculations, including floor

area calculations, building heights and lot coverage information are also provided for the project site.

III. PRELIMINARY ASSESSMENT

The purpose of the preliminary assessment is to determine whether any physical changes proposed by the project may raise the potential to significantly and adversely affect elements of urban design. Pursuant to the 2012 *CEQR Technical Manual* guidelines, as the proposed action might potentially result in development components that could change the experience of a pedestrian passing by the project site and immediate vicinity, a preliminary assessment is required. As described above, the proposed action would result in higher density for residential, commercial, and community facility use on the project site. Therefore, a preliminary analysis of urban design has been conducted and is provided below.

Existing Conditions

Rezoning Area

Project Site
The project site is located on a block in the Wingate neighborhood of Brooklyn which is bounded by Montgomery Street to the north, Kingston Avenue to the east, Empire Boulevard to the south, and Brooklyn Avenue to the west (see **Figure E-1**). The project site is comprised of Tax Lots 66, 74, 75, and 76 on Block 1311, and includes an area of approximately 28,725 sf.

The project site, which has one street frontage on Empire Boulevard, is currently occupied by two 2-story buildings and one 3-story building. Two of these buildings front on Empire Boulevard, and are built to the street lot line (refer to **Figure E-2**). The 2-story building located at 527-545 Empire Boulevard (Lot 66) has approximately 160 feet of frontage along Empire Boulevard. It includes 12,000 sf of ground floor retail space that is occupied by Empire Kosher Supermarket, and 6,000 sf of vacant space (former Kingsbrook Jewish Medical Center). The second floor of the building includes 17,175 sf of storage space that is occupied by Hachai Publishing Inc. and Lambda Publishers Inc., and 825 sf that are occupied by CH Cycles, a bicycle store and repair workshop. The mezzanine level of the building, which is comprised of 1,104 sf is currently vacant.

The 3-story building at 525 Empire Boulevard (Lot 74) has approximately 20 feet of frontage along Empire Boulevard. It includes 2,000 sf of ground floor retail space, which is occupied by a DM Pharmacy, and former residential spaces on the second and third floors, which are currently vacant. A 2-story building is located in the back of the same lot, without street frontage. It includes former residential spaces, but is currently vacant. Lots 75 and 76, with a total lot area of 6,767 sf and a frontage of approximately 60 feet along Empire Boulevard, provide accessory parking associated with the retail uses on Lots 66 and 74 (refer to **Figure E-2**).

The project site does not include any open space, natural or visual resources, or view corridors. Along the project site frontage, there are four street trees. Empire Boulevard is a two-way east-



1 View north across Empire Blvd. towards the 2- and 3-story buildings on the project site (located on Lots 74 and 66, respectively).



2 View north across Empire Blvd. towards the 2-story building on the project Site (located on Lot 66).



3 View of the 2-story former residential building (vacant) in the rear of Lot 74.



4 View north across Empire Blvd. towards the parking lot on Lots 75 and 76.

west street mapped 100 feet wide, including one travel lane, one bike lane, and one parking lane on both sides of the street.

The project site is located across the street from B43 bus stop at Balfour Place and Lamont Court (northbound). The closest B43 station in the southbound direction is at Empire Boulevard and Brooklyn Avenue. The B43 bus route also connects the site with the B, Q and S subway lines at Prospect Park station. The B44, which connects Sheepshead Bay with southern Williamsburg, travels along New York Avenue to the north and along Nostrand Avenue to the south.

Remainder of the Rezoning Area

In addition to the project site, the rezoning area includes multiple tax lots which are located on the same and three additional blocks in the vicinity of the project site. On the project site block, there are an additional five lots and portions of two lots included in the rezoning area (Block 1311, Lots 1, 2, 3, 4, 5, and portions of Lot 25 and 64). Lot 1, which has a 100-foot frontage along Empire Boulevard, is occupied by a 3-story mixed-use building with a chinese restaurant (Hing Yit) on 505 Empire Boulevard on the ground floor (refer to photo #1 in **Figure E-3**). The adjacent ground floor spaces in the same building are currently vacant. Lots 2 to 5 are occupied by 2-story two-family walk-up buildings that front on Brooklyn Avenue. The portion of Lot 25 that is included in the rezoning area includes a very small area of the property's rear yard. The building on Lot 25 fronts on Montgomery Street. Lot 64, a portion of which is included in the rezoning area, is located adjacent to the east of the project site, and currently vacant.

A 6-story multi-family building with ground floor commercial uses is located on Block 1317, Lot 41, on the southwest corner of Empire Boulevard and Brooklyn Avenue. The ground floor uses include Pace Plumbing and Hardware on 492-498 Empire Boulevard, and a deli on 504 Empire Boulevard. The ground floor space in the same building is currently vacant (refer to photo #2 in **Figure E-3**).

Located across Brooklyn Avenue on the south side of Empire Boulevard is another 6-story multi-family building with ground floor commercial uses (Block 1323, Lot 17) which include a children shoe store (Little Feet) on 506 Empire Boulevard, a dry cleaner (Ellis Cleaners) on 508 Empire Boulevard, CHYE Crown Heights Young Entrepreneurs on 510 Empire Boulevard, and a hair salon on 512 Empire Boulevard, while the other ground floor spaces in this building are currently vacant (refer to photos #3 in **Figure E-3**).

Another 6-story multi-family building with ground floor commercial uses is located on Empire Boulevard between Balfour Place and Lamont Court (Block 1324, Lots 18 and 35). The ground floor uses include a beauty and nail salon on 522 Empire Boulevard, a Jewish book shop (Sosover Sefrom) on 524 Empire Boulevard, a real estate office (B.H. TAL Real Estate) on 526 Empire Boulevard, Bed Star Car Service on 528 Empire Boulevard, a multi service center specializing in immigration and naturalization on 530 Empire Boulevard, and Jey By Inc. Communication Electronics on 536 Empire Boulevard (refer to photo #4 in **Figure E-3**; a detailed list of ground floor uses in the rezoning area is provided in **Table A-1** in Attachment A, "Project Description").



1 View northeast across Brooklyn Ave./Empire Blvd. towards Block 1311, Lots 1, 2, 3, 4, 5,



2 View south across Empire Blvd. towards the 6-story building on Block 1317, Lot 41.



3 View of the 6-story building on Block 1323, Lot 17



4 View of the 6-story building on Block 1324, Lots 18 and 35.

Study Area

Besides the rezoning area, the remainder of the study area is predominantly residential with mixed uses along Empire Boulevard, Lefferts Avenue, and Kingston Avenue, some institutional uses, and a few vacant lots. The study area includes a mix of both attached and detached 1- to 3-story residential walk-up buildings (refer to photo #1 in **Figure E-4**). Many of these buildings located along Empire Boulevard, Lefferts Avenue, and Kingston Avenue have ground floor retail and/or commercial uses. In addition to the small-scale residential building types, there are also several 4- and 6-story multi-family elevator buildings within the study area. A 5-story mixed-use building with ground floor commercial uses is located on the northwest corner of Empire Boulevard and Kingston Avenue (refer to photo #2 in **Figure E-4**). The study area also includes 6-story multi-family elevator buildings to the south of Empire Boulevard, along Kingston Avenue. On the same block (Block 1325), fronting on Lefferts Avenue, is a 7-story mixed-use building. Even though the current zoning map shows a C1-3 commercial overlay with a depth of 150 feet to the south of Empire Boulevard, no retail and/or commercial uses are located in buildings that front on either Brooklyn Avenue, Balfour Place, or Lamont Court.

Institutional uses in the study area include the 71st Precinct of New York City's Police Department (refer to photo #3 in **Figure E-4**), which is located at the west border of the 400-foot radius (Block 1310, Lot 1). Brooklyn M.S. 61 is located beyond the study area on Empire Boulevard, to the west of New York Avenue (refer to photo #4 in **Figure E-4**). The Brooklyn Hospital Center, Woman Infant Child (WIC) Program Office (Crown Heights Site) is located at 495 Empire Boulevard, close to Brooklyn Avenue. A house of worship (Community Tabernacle) of the Seventh-Day Adventist Mission is located at 426 Empire Boulevard (corner of Empire Boulevard and New York Avenue). Synagogues are located at 489 Empire Boulevard, 440 and 456 Crown Street (Beth David of Crown Heights, and Agudath Israel of Crown Heights), and 390a and 394 Kingston Avenue (Beth Din of Crown Heights, and Bais Eliezer Yitzchok). There are no public open spaces within the study area.

Adjacent to Police Precinct 71, there is the only lot designated for industrial and manufacturing use in the study area. This lot is owned by A-One Merchandising Corporation, a company that manufactures paper goods.

Major north-south thoroughfares within the study area are Brooklyn and Kingston Avenues. Brooklyn Avenue, which is a two-lane, one-way street with parking lanes on both sides of the street runs southbound, while Kingston Avenue, which is also a two-lane, one-way street with parking lanes on both sides of the street runs northbound. Empire Boulevard, which is the southern boundary of the project site, is a mapped 100 feet wide major east-west thoroughfare. The street is comprised of two travel lanes and one parking lane in each direction, and includes bike lanes in east- and westbound directions.



1 Looking north across Empire Blvd. close to Brooklyn Ave.: typical detached residential buildings



2 Looking north across Empire Blvd. along Kingston Ave.



3 View of the NYPD 71st Precinct on Empire Blvd. and New York Ave.



4 View southeast across New York Ave. towards Brooklyn M.S. 61

Future without the Proposed Action (No-Action Condition)

Rezoning Area

Project Site/ Remainder of the Rezoning Area
In the future without the proposed action, no land use changes would occur on the project site. The project site would remain in its current condition, with the existing 2- and 3-story buildings on Lot 74, the existing 2-story building on Lot 66, and the accessory parking lot on Lots 75 and 76. No land use changes are expected to occur in the rezoning area in the future without the proposed action.

Study Area

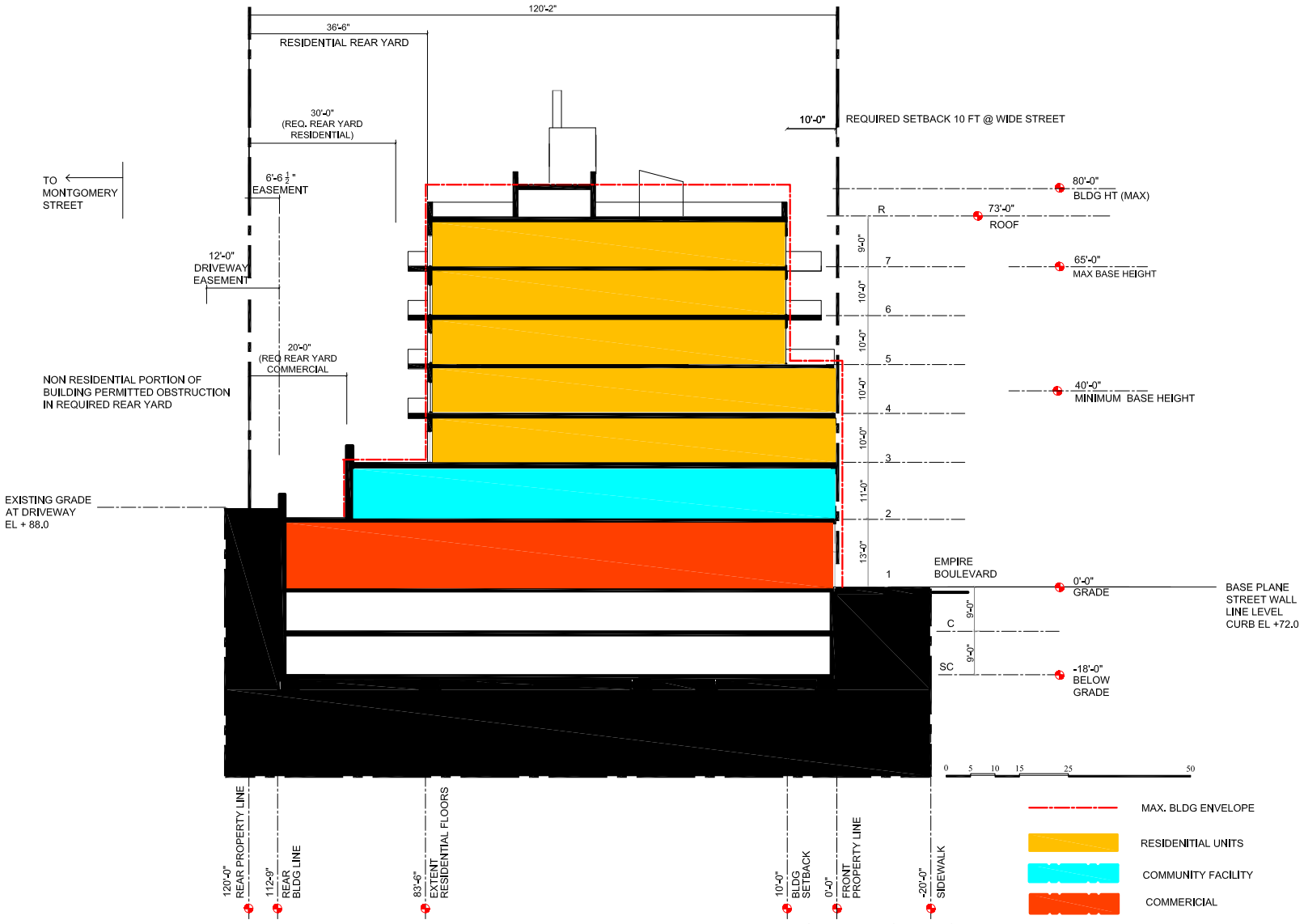
As discussed in Attachment A, "Project Description," it is expected that in the absence of the proposed action, no major change in land use would occur in the surrounding area, nor would there be any changes in zoning. Current land use trends and general development patterns in the area would continue to exhibit predominantly residential uses and mixed-use buildings with ground floor retail along Empire Boulevard, Lefferts Avenue, and Kingston Avenue.

Within the 400-foot study area, no new developments are planned in the near future and the existing street hierarchy, block form, and streetscape of the study area are expected to remain unchanged by the analysis year of 2016. In addition, no open space resources would be created in the study area by 2016. Therefore, the overall urban design and visual character of the study area is anticipated to remain similar to existing conditions.

Future with the Proposed Action (With Action Condition)

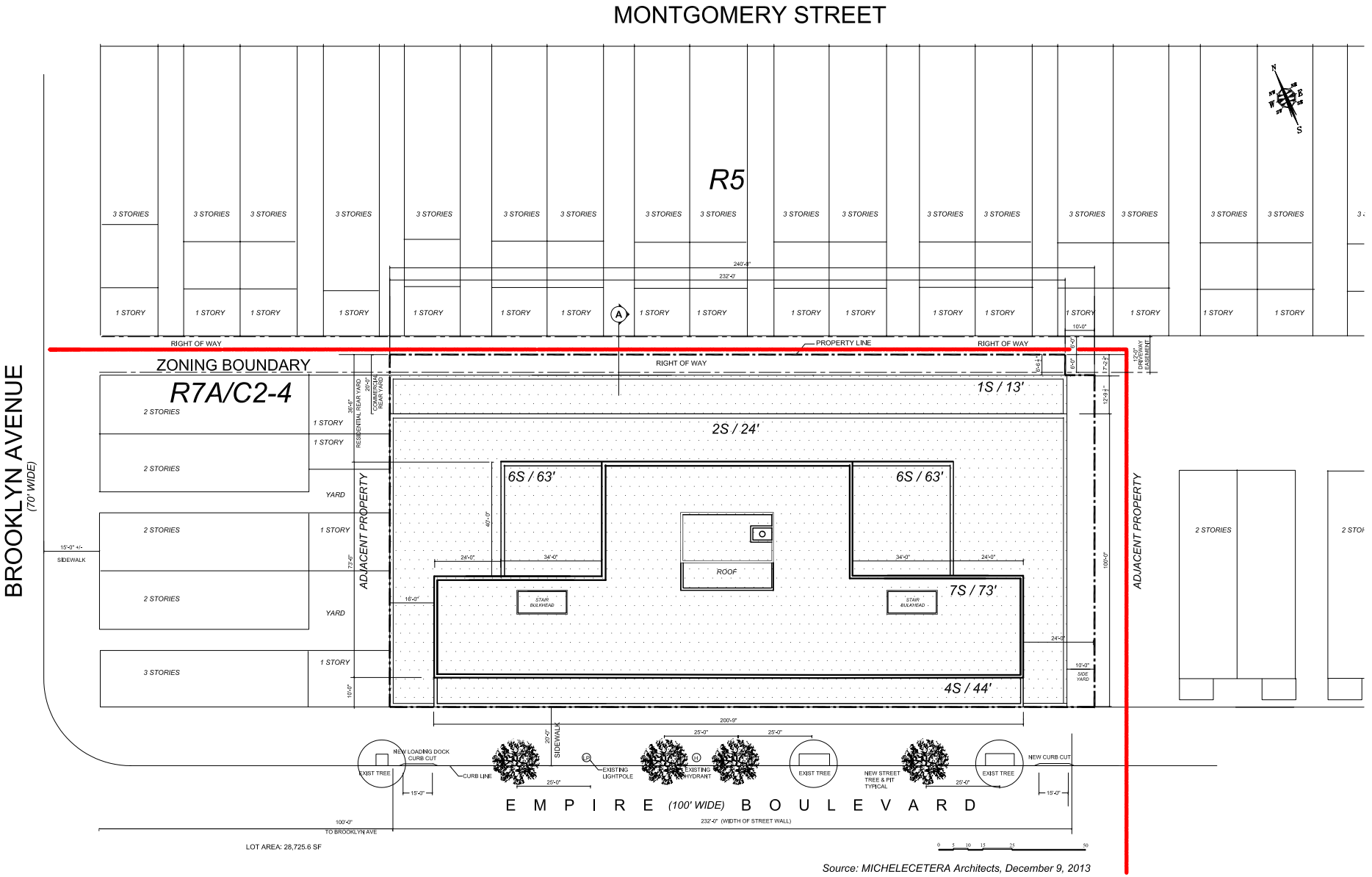
The proposed action would allow the applicant to build a larger density than permitted under the current zoning in order to construct the proposed mixed-use 7-story building on the project site. The existing R5/C1-3 zoning would permit residential uses at a maximum density of 1.25 FAR, while the commercial overlay would have a maximum allowable FAR of 1.0. R5 zoning districts are low-density districts, with maximum building heights of 40 feet. Under the proposed R7A zoning, the maximum allowable FAR would be 4.0, with a maximum building height of 80 feet.

The proposed action would facilitate a 7-story mixed-use residential, commercial, and community facility building with approximately 80 DUs (approximately 81,357 gsf), approximately 27,958 gsf of retail space, and approximately 28,930 gsf of community facility space, for a total of approximately 138,244 gsf of new development. As shown in the building section provided in **Figure E-5**, the seventh floor roof of the building would be 73 feet tall (79.5 feet including the building parapet), and the third floor would be set back in the rear of the building by 36.5 feet. The second floor space and the roof top would be utilized as accessory open space. Both the street and rear façade of the building would include balconies. The building base would be set on the street lot line, and provide a continuous street wall along the southern project site boundary for 240 feet (refer to the site plan in **Figure E-6**).



Source: MICHELECETERA Architects, December 9, 2013

For illustrative purposes only



Source: MICHELECETERA Architects, December 9, 2013

For illustrative purposes only

The proposed action would not generate land uses in the rezoning area that would be incompatible with surrounding uses, nor would it displace land uses in such a way as to adversely affect surrounding land uses. Therefore, the proposed project would support land use trends in the rezoning area. No significant adverse land uses impacts are expected as a result of the proposed action.

The proposed action would not change or adversely affect any of the urban design components defined in the 2012 *CEQR Technical Manual*. The proposed action would not result in changes in block form, the demapping of streets or the mapping of new streets, nor would it affect the street hierarchy. The proposed development would be constructed within an existing block and would not block any significant view corridors, or affect any public views of visual resources. Although the proposed action would allow a taller building, the resulting structure would not be out of scale with the surrounding structures. The proposed 7-story building on the project site would be similar in height, bulk and scale to existing buildings in the vicinity.

The proposed development is expected to complement existing residential uses and mixed-use buildings in the vicinity of the project site. The proposed development is expected to enhance the vitality of the surrounding streets by introducing residential, commercial, and community facility uses to the project site. The proposed development would also contribute to the streetscape aesthetic with a continuous street wall along the southern boundary line of the project site. The proposed development is not anticipated to adversely affect the pedestrian experience of the public space along the project site frontage. As shown in **Figure E-7**, as compared to existing buildings on the development site, the proposed building would not represent an adverse change. The proposed building would maintain a two-story street wall along Empire Boulevard. From a pedestrian perspective, the proposed building would not be dissimilar from surrounding buildings in the area from pedestrian vantage points on adjacent sidewalks. While pedestrian views from greater distances would be somewhat changed, there are existing buildings in the area of similar heights. Therefore, the proposed action would not result in significant adverse impacts on urban design or visual resources in the study area, and a detailed analysis is not warranted.

IV. CONCLUSION

The proposed action and the associated 7-story development would positively affect urban design by facilitating a development on four currently underused lots, which are located in proximity to bus and subway transit. The bulk and scale of the proposed development is similar to existing multi-family 6-story buildings that front along Empire Boulevard. Therefore, the proposed development would not adversely affect the pedestrian experience in the vicinity of the project site.

Further, the proposed development would not block any significant view corridors, views of visual resources, or limit access to any visual resources in the study area. Therefore, the proposed action would not result in significant adverse impacts on urban design in the study area, and no significant adverse impacts on visual resources are anticipated as a result of the proposed action.

No-Action and Proposed With-Action Views of the Site from a Pedestrian Perspective



1. View of the site from the southeast under existing and No-Action conditions.



2. View of the site from the southeast under proposed With-Action conditions.

ATTACHMENT F
TRANSPORTATION

I. INTRODUCTION

This application is for a zoning map amendment affecting portions of four City tax blocks in the Wingate neighborhood of Brooklyn Community District 9. The proposed action affects an area of approximately 97,498 square feet (sf) of lot area that is generally bounded by Brooklyn Avenue in the northwest, Lamont Court in the east, and the mid-block line of Block 1311 in the north. To the south, the area extends along Empire Boulevard from Brooklyn Avenue to Lamont Court, where it includes 150-foot deep portions of Blocks 1324, 1323 as well as a 150 x 100 foot portion of Block 1317. The applicant, 529 Empire Realty Corporation, is proposing to rezone the majority of this area from R5/C1-3 to R7A/C2-4, and to remove the existing C1-3 commercial overlay from the underlying R7-1 district in the remaining portion of the rezoning area ("the proposed action").

In the portion of the rezoning area that is proposed to be rezoned from R5/C1-3 to R7A/C2-4, the proposed action would enable a proposal by the applicant to develop a mixed-use building, with accessory, below-grade parking, on four lots fronting on Empire Boulevard and owned by 529 Empire Realty Corporation (refer to Figure F-1). The development as proposed by the applicant would include a 7-story mixed-use residential, commercial, and community facility building to be constructed on Lots 66, 74, 75, and 76 on Block 1311 (the "project site"). The proposed building would have approximately 68 dwelling units (DUs) (approximately 58,727 gsf), approximately 24,289 gsf of commercial space, and approximately 21,572 gsf of community facility space, for a total of approximately 114,588 gsf of new development.

In the case of the proposed action, as explained in Attachment A, "Project Description", under the reasonable worst case development scenario (RWCDS) the project site (Block 1311, Lots 66, 74, 75, 76) would be redeveloped with a new 7-story mixed-use residential, commercial, and community facility building, located within the rezoned R7A/C2-4 district. In the RWCDS, the incremental (net) change that would result from the proposed development at the project site compared to No-Action conditions is 80 DUs (81,357 gsf), 27,958 gsf of local retail space, 28,930 gsf of community facility space, and a negative incremental (net) change of 17,175 sf of storage space. The analysis year for the RWDCS is 2016.

The RWCDS building would also include an underground parking garage with 66 accessory parking spaces on the cellar level. The parking garage ingress would be located close to the western project site boundary line, and would be accessible via a curb cut. The location of the garage ingress would be across from where Balfour Place, a one-way southbound street, intersects with Empire Boulevard. The parking garage egress would be located close to the eastern project site boundary line, also with a curb cut on Empire Boulevard. The garage egress would be located across from where Lamont Court, a one-way northbound street, intersects with Empire Boulevard. The adjacent property to the east of the project site includes a driveway along the shared lot line.



Source: NYC Dept. of City Planning, ZoLa, 2013

Existing Street Network in Proximity of the Project Site

In addition, the existing C1-3 commercial overlay would be removed from a small portion of the rezoning area that is currently zoned R7-1/C1-3. Through the removal of the C1-3 commercial overlay from the underlying R7-1 district the zoning map would better reflect the existing exclusively residential uses on these lots.

Based on the following preliminary analysis, the level of new transportation demand generated by the RWCDS is not expected to result in any significant adverse impacts to traffic, parking, transit or pedestrian conditions in the vicinity of the project site.

II. PRELIMINARY ANALYSIS METHODOLOGY

The *2012 CEQR Technical Manual* describes a two-level screening procedure for the preparation of a preliminary analysis to determine if quantified operational analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the number of person and vehicle trips attributable to the proposed project. According to the *2012 CEQR Technical Manual*, if the proposed project is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are to be performed to estimate the incremental trips that could be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the proposed project would generate 50 or more bus passengers being assigned to a single bus line (in one direction), or if it would result in an increase of 200 or more passengers at a single subway station or on a single subway line, or 200 or more peak hour pedestrian trips traversing a sidewalk, corner area or crosswalk, then further quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

III. LEVEL 1 SCREENING ASSESSMENT

In zone 3 areas (areas located within a half-mile of subway stations) such as the project site and rezoning area, the development threshold applicable to the proposed action is 200 DUs, 20,000 gsf retail space, and 25,000 gsf community facility space, and 80 spaces in off-street parking facilities[1]. As the RWCDS would add 80 DUs to the area, the proposed action does not trigger the threshold for residential use. However, the RWCDS would also add 27,958 gsf of retail space (which represents a net change of 13,133 gsf, compared to No-Action conditions) and introduce 28,930 gsf of community facility space (which represents a net change of 28,930 gsf) to the project site. Both these floor areas would exceed the applicable thresholds for retail and community facility uses. According to the *2012 CEQR Technical Manual*, if an action would result in development greater than these minimum development density thresholds, a Level 1 Screening Assessment (Project Trip Generation) should be prepared.

[1] Refer to Table 16-1 in the *2012 CEQR Technical Manual*.

A Level 1 Screening Assessment was conducted to estimate the number of person and vehicle trips by mode expected to be generated by the RWCDS during the weekday AM, midday, and PM peak hours. The travel demand assumptions and a detailed travel demand forecast are shown in Tables F-1 and F-2, respectively.

Transportation Planning Factors

Table F-1 shows the transportation planning factors used for the travel demand forecast generated by the RWCDS in the weekday AM, midday, PM, and Saturday midday peak hours. These include trip generation rates, temporal and directional distributions, mode choice factors, and vehicle occupancies for the RWCDS, taking into account that the local retail portion of the building (addition of 27,958 gsf, net change of 13,133 gsf, compared to No-Action conditions) would be a FRESH supermarket[2].

Travel Demand Forecast

Table F-2 summarizes the results of the travel demand forecast for the RWCDS based on the factors shown in Table F-1. Table F-2 shows the incremental net change in weekday peak hour person trips, vehicle trips, transit trips, and walking trips for the proposed mixed-use development.

As shown in Table F-2, the RWCDS would generate a total of 218, 546, 365, and 371 person trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Of these 218 person trips in the AM peak hour 54 trips would occur by car, 45 by subway, 26 by bus, and 93 on foot. In the midday peak hour, 89 person trips would occur by car, 52 by subway, 46 by bus, and 359 on foot. In the PM peak period 66 person trips would occur by car, 55 by subway, 34 by bus, and 210 on foot. In the Saturday midday peak hour 60 person trips would occur by car, 49 by subway, 33 by bus, and 229 on foot.

As the anticipated subway and bus transit incremental forecast generated by the proposed RWCDS would include 45, 52, 55, and 49 subway trips, and 26, 46, 34, and 33 bus trips in the AM, midday, PM, and Saturday midday peak hours, respectively, the *CEQR* thresholds of 200 peak hour subway and bus transit trips and 50 peak hour single direction bus vehicles in a given intersection for detailed analysis would not be exceeded. The amount of additional subway and bus trips to and from the project site and rezoning area is therefore not expected to adversely burden existing subway and bus systems. Significant adverse impacts are unlikely on any portion of the transit system due to the RWCDS. As a result, no Level 2 transit screening and no detailed transit analysis are warranted.

As the number of pedestrian trips during the midday, PM and Saturday midday peak hours exceed the CEQR threshold of 200 pedestrians per peak hour, a Level 2 pedestrian screening assessment was required.

Table F-2 also shows that the RWCDS would generate a total of 51 vehicle trips in the AM peak hour, 80 vehicle trips in the midday peak hour, 59 vehicle trips in the PM peak hour, and

[2] For sources of the transportation planning factors refer to Table F-1.

53 vehicle trips in the Saturday midday peak hour. As the number of vehicle trips exceeds the *2012 CEQR Technical Manual* analysis threshold of 50 vehicle trips per peak hour, a Level 2 traffic and pedestrian screening assessment was undertaken to identify specific locations where additional detailed analyses may be warranted.

Table F-1
Transportation Planning Factors

Land Use:		Fresh Supermarket		Residential		Community Facility		Warehouse	
Size/Units:		13,133 sf *		80 DU		28,930 sf		-17,175 sf	
Trip Generation:		(1)		(1)		(5)		(7)	
	Weekday	205		8.075		48		4.87	
	Saturday	240		9.600		19.0		1.68	
		per 1,000 sf		per DU		per 1,000 sf		per 1,000 sf	
Temporal Distribution:		(2)		(1)		(5)		(7)	
	AM	3.0%		10.0%		7.1%		8.4%	
	MD	19.0%		5.0%		10.0%		10.6%	
	PM	10.0%		11.0%		7.2%		9.0%	
	SatMD	10.0%		8.0%		14.2%		10.6%	
		(2)		(4)		(6)		(6)	
Modal Splits:		AM/MD/PM/SAT		AM/MD/PM/SAT		AM/MD/PM/SAT		AM/PM	MD/SAT
	Auto	4.0%		21.4%		38.8%		38.8%	2.0%
	Taxi	3.0%		0.0%		0.9%		0.9%	1.0%
	Subway	5.0%		43.2%		15.0%		15.0%	7.0%
	Bus	5.0%		11.9%		16.5%		16.5%	7.0%
	Walk/Ferry/Other	83.0%		23.5%		28.8%		28.8%	83.0%
		100.0%		100.0%		100.0%		100.0%	100.0%
		(2)		(1)		(5)		(7)	
In/Out Splits:		In	Out	In	Out	In	Out	In	Out
	AM	45%	55%	20.0%	80.0%	61.0%	39.0%	79%	21%
	MD	46%	54%	51.0%	49.0%	55.0%	45.0%	64%	36%
	PM	47%	53%	65.0%	35.0%	29.0%	71.0%	25%	75%
	Sat MD	46%	54%	50.0%	50.0%	49.0%	51.0%	64%	36%
Vehicle Occupancy:		(3)		(4)		(4)		(7)	
	Auto	2.00		1.14		1.14		1.30	
	Taxi	2.00		1.40		1.40		1.30	
Truck Trip Generation:		(1)		(1)		(1)		(1)	
		0.35		0.06		0.32		0.35	
		0.04		0.02		0.01		0.04	
		per 1,000 sf		per DU		per 1,000 sf		per 1,000 sf	
		(1)		(1)		(1)		(1)	
	AM	8.0%		12.0%		10.0%		8.0%	
	MD	11.0%		9.0%		11.0%		11.0%	
	PM	2.0%		2.0%		2.0%		2.0%	
	Sat MD	11.0%		9.0%		11.0%		11.0%	
		In	Out	In	Out	In	Out	In	Out
	AM/MD/PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Sources :

(1) *2012 City Environmental Quality Review (CEQR) Technical Manual* .

(2) *The Food Retail Expansion to support Health (Fresh) Food Store Program,* NYCDCP, 2009.

(3) Based on Atlantic Yards Arena & Redevelopment Project EIS, November 2006.

(4) Modal split and vehicle occupancy data are based on 2007- 2011 American Community Survey data - means of transportation to work for tracts 329, 331, 333.

(5) Based on ITE (8th Edition) Land Use Code (495) Recreational Community Center.

(6) Based on 2000 Reverse-Journey-to-work data.

(7) Based on ITE (8th Edition) Land Use Code (150) Warehousing.

* Includes credit for existing uses on the site (estimated at 14,825 gsf of retail); total proposed commercial: 27,958 gsf.

Table F-2
Travel Demand Forecast

Land Use:		Fresh Supermarket		Residential		Community Facility		Warehouse			
Size/Units:		13,333	sf *	80	DU	28,930	sf	-17,175	sf		
Peak Hours Trips:											
AM		61		65		99		-7		218	
MD		384		32		139		-9		546	
PM		202		71		100		-8		365	
Sat MD		236		62		78		-3		373	
Person Trips:										**Total**	
		In	Out	In	Out	In	Out	In	Out	In	Out
AM	Auto	1	1	3	11	23	15	-2	-1	25	26
	Taxi	1	1	0	0	1	0	0	0	2	1
	Subway	1	2	6	22	9	6	-1	0	15	30
	Bus	1	2	2	6	10	6	-1	0	12	14
	Walk/Ferry/Other	23	28	3	12	18	11	-2	0	42	51
	Total	27	34	14	51	61	38	-6	-1	96	122
		In	Out	In	Out	In	Out	In	Out	In	Out
MD	Auto	7	8	4	3	30	24	0	0	41	35
	Taxi	5	6	0	0	1	1	0	0	6	7
	Subway	9	10	7	6	11	9	0	0	27	25
	Bus	9	10	2	2	13	10	0	0	24	22
	Walk/Ferry/Other	147	173	4	4	23	18	-6	-3	167	192
	Total	177	207	17	15	77	62	-6	-3	265	281
		In	Out	In	Out	In	Out	In	Out	In	Out
PM	Auto	4	4	10	5	11	28	-1	-2	24	35
	Taxi	3	3	0	0	0	1	0	0	3	4
	Subway	9	5	20	11	4	11	0	-1	29	26
	Bus	5	5	5	3	5	12	0	-1	15	19
	Walk/Ferry/Other	79	89	11	6	8	30	-3	-7	97	113
	Total	96	106	46	25	28	72	-2	-6	168	197
		In	Out	In	Out	In	Out	In	Out	In	Out
Sat MD	Auto	4	5	7	7	15	15	0	0	26	27
	Taxi	3	4	0	0	0	0	0	0	3	4
	Subway	5	6	13	13	6	6	0	0	24	25
	Bus	5	6	4	4	7	7	0	0	16	17
	Walk/Ferry/Other	90	106	7	7	11	11	-3	-1	106	121
	Total	107	127	31	31	39	39	-2	-1	175	196
Vehicle Trips:											
		In	Out	In	Out	In	Out	In	Out	In	Out
AM	Auto (Total)	1	1	3	10	20	13	-2	-1	22	23
	Taxi	1	1	0	0	1	0	0	0	2	1
	Taxi Balanced									2	2
	Truck	0	0	0	0	0	0	0	0	0	0
	Total	2	2	3	10	20	13	-1	-1	25	26
		In	Out	In	Out	In	Out	In	Out	In	Out
MD	Auto (Total)	4	4	4	3	26	21	0	0	34	28
	Taxi	3	3	0	0	1	1	0	0	4	4
	Taxi Balanced									3	3
	Truck	0	0	0	0	1	1	0	0	1	1
	Total	7	7	4	3	28	22	0	0	43	37
		In	Out	In	Out	In	Out	In	Out	In	Out
PM	Auto (Total)	2	2	9	4	10	25	-1	-2	20	29
	Taxi	2	2	0	0	0	1	0	0	2	3
	Taxi Balanced									2	2
	Truck	0	0	0	0	0	0	0	0	0	0
	Total	4	4	9	4	10	26	-1	-2	25	34
		In	Out	In	Out	In	Out	In	Out	In	Out
Sat MD	Auto (Total)	2	3	6	6	13	13	0	0	21	22
	Taxi	2	2	0	0	0	0	0	0	2	2
	Taxi Balanced									2	2
	Truck	0	0	0	0	1	1	0	0	1	1
	Total	4	5	6	6	14	14	0	0	26	27
	Total Vehicle	In	Out	Total Vehicle trips							
	AM	25	26	51							
	MD	43	37	80							
	PM	25	34	59							
	Sat MD	26	27	53							

* Includes credit for existing uses on the site (estimated at 14,825 gsf of retail); total proposed commercial: 27,958 gsf. 25% linked trip credit is applied to [illegible] Supermarket.

IV. LEVEL 2 SCREENING ASSESSMENT

A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network, pedestrian elements and transit facilities, and the identification of specific locations where the incremental increase in demand may potentially exceed *2012 CEQR Technical Manual* analysis thresholds and therefore require a quantitative analysis.

Traffic

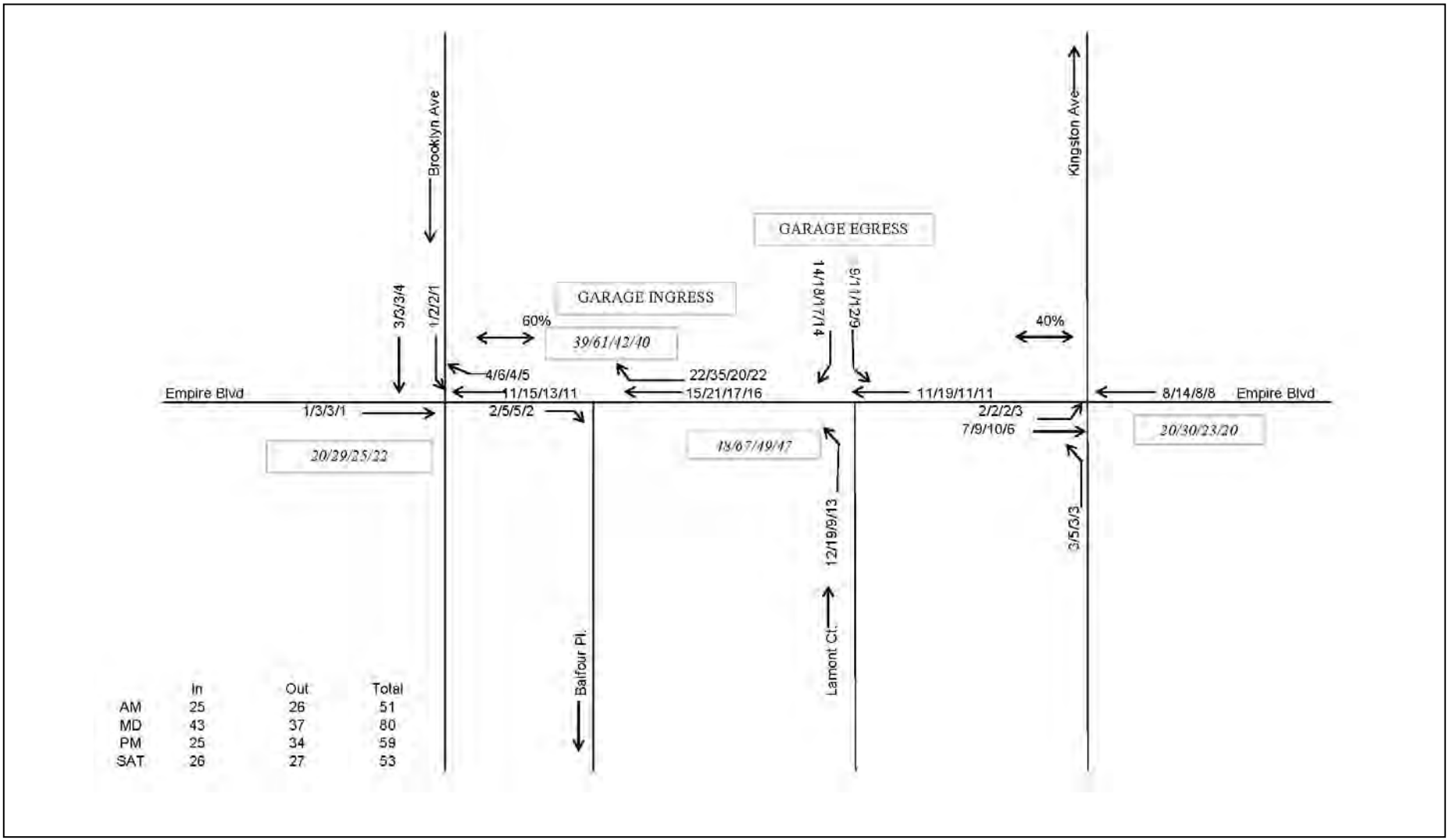
All auto and taxi trips were assigned to and from the project site. Figure F-2 shows the assignment of vehicle trips generated by the RWCDS during the weekday AM, midday, PM, and Saturday midday peak hours. As shown in Figure F-2, in the two intersections that are located closest to the project site, Empire Boulevard and Brooklyn Avenue, and Empire Boulevard and Kingston Avenue, the totals do not exceed the *CEQR* analysis threshold of 50 vehicle trips in a given peak hour during the weekday AM, midday, and PM peak hour. The assignment also shows that there would be 20, 29, 25, and 22 vehicle trips in the weekday AM, midday, PM, and Saturday midday peak hours on Empire Boulevard and Brooklyn Avenue, and 20, 30, 23, and 20 vehicle trips in the weekday AM, midday, PM, and Saturday midday peak hours.

As also illustrated above in Figure F-1, the RWCDS building's garage ingress would be located close to the western boundary of the project site, across from where Balfour Place, a one-way southbound street, intersects with Empire Boulevard. The proposed garage egress would be located close to the eastern boundary of the project site, across from where Lamont Court, a one-way northbound street, intersects with Empire Boulevard. The adjacent property to the east of the project site includes a driveway along the shared lot line.

As shown in Figure F-2, the assignment shows that there would be 39, 61, 42, and 40 vehicle trips in the weekday AM, midday, PM, and Saturday midday peak hours on Empire Boulevard and Balfour Place, where the proposed garage ingress would be located, and 48, 67, 49, and 47 vehicle trips in the weekday AM, midday, PM, and Saturday midday peak hours on Empire Boulevard and Lamont Court, where the proposed garage egress would be located. As the midday peak hour total exceeds the *CEQR* analysis threshold of 50 vehicle trips per peak hour, a Level 2 traffic screening is warranted in these two locations. As the AM, PM, and Saturday midday peak hours in these two locations show volumes that don't exceed the CEQR threshold of 50 vehicle trips per peak hour, no detailed traffic analysis is warranted for the AM, PM, and Saturday midday peak hours in these two locations.

Parking

The RWCDS on the project site would include 66 accessory parking spaces on the cellar level. Per the *2012 CEQR Technical Manual*, as the threshold of 80 parking spaces in off-street parking facilities is not exceeded by the proposed action, a detailed parking analysis is not warranted. As a result, a parking analysis is not warranted.


Brooklyn Ave
Kingston Ave
GARAGE EGRESS
GARAGE INGRESS
3/3/3/4
1/2/2/1
60%
39/61/42/40
14/19/17/14
9/11/14/29
40%
4/6/4/5
22/35/20/22
Empire Blvd
11/15/13/11
15/21/17/16
11/19/11/11
8/14/8/8
Empire Blvd
1/3/3/1
2/5/5/2
2/2/2/3
7/9/10/6
20/30/23/20
20/29/25/22
18/67/49/47
12/19/9/13
3/5/3/3
Balfour Pl.
Lamont Ct.
In Out Total
AM 25 26 51
MD 43 37 80
PM 25 34 59
SAT 26 27 53

In addition, as shown in Table F-3 below, the maximum anticipated project-generated parking demand would include 57 vehicles (from 3:00 PM to 4:00 PM), which is below the 66 accessory parking spaces that will be provided on the project site[3].

Table F-3
Parking Accumulation

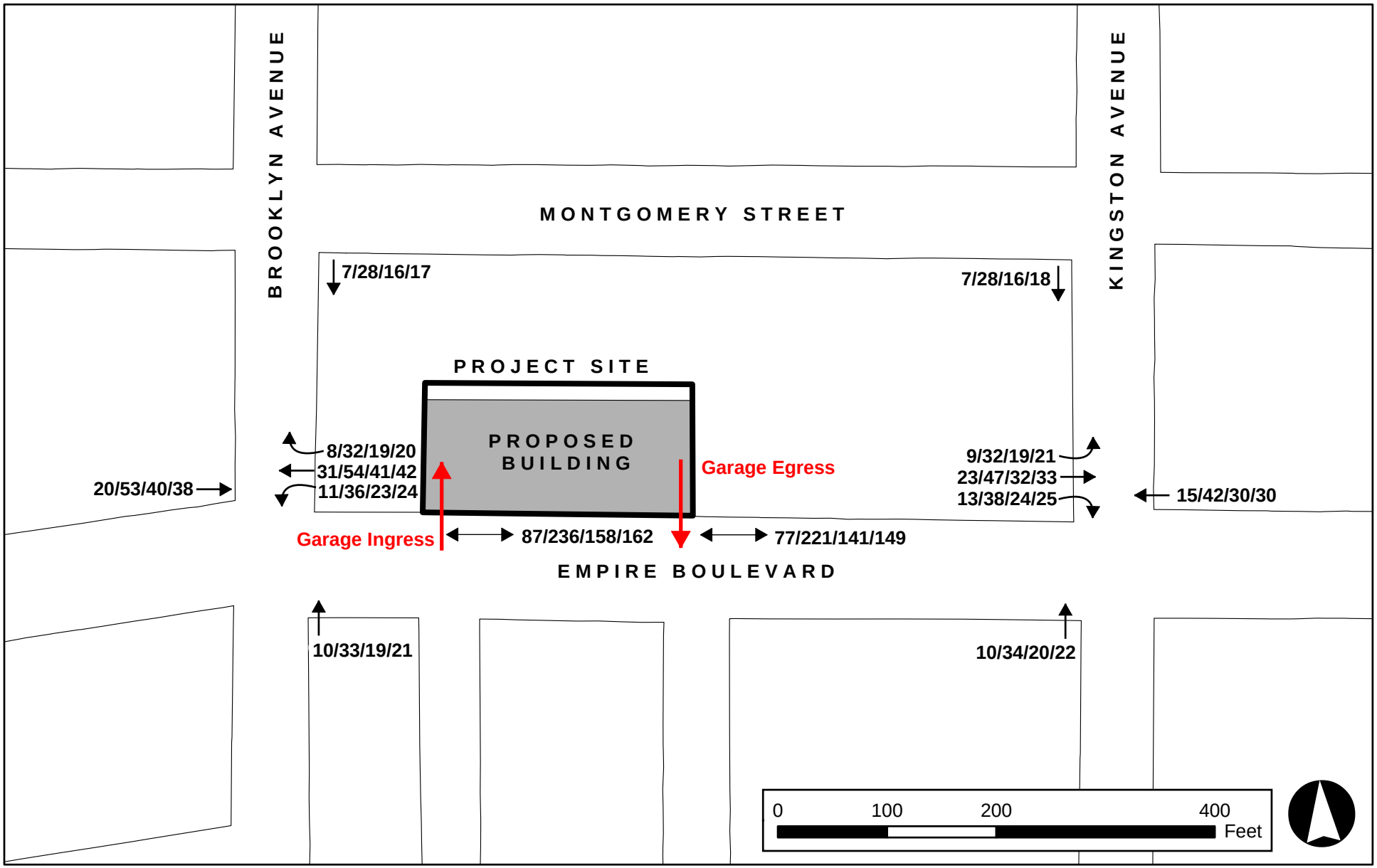
	Residential 80 DU 122 Total auto trips/day		Overnight demand	Local Retail 13,133 gsf 54 Total auto trips/day		Community Facility 28,930 gsf 474 Total auto trips/day		Total non-residential Accumulation	Total Project Accumulation
	In	Out		In	Out	In	Out		
12-1 AM	0	0	40	0	0	0	0	0	40
1-2	0	0	40	0	0	0	0	0	40
2-3	0	0	40	0	0	0	0	0	40
3-4	0	0	40	0	0	0	0	0	40
4-5	0	0	40	0	0	0	0	0	40
5-6	0	1	39	0	0	0	0	0	39
6-7	1	4	36	0	0	0	0	0	36
7-8	1	4	33	0	0	13	5	8	41
8-9	3	10	26	1	1	20	13	15	41
9-10	2	4	24	1	0	21	21	16	40
10-11	2	4	22	2	1	16	20	13	35
11-12	2	3	21	2	2	17	18	12	33
12-1 PM	4	3	22	4	4	26	21	17	39
1-2	3	3	22	3	2	21	13	26	48
2-3	3	3	22	3	2	18	18	27	49
3-4	5	3	24	2	2	20	14	33	57
4-5	8	5	27	2	2	19	26	26	53
5-6	9	4	32	3	3	10	25	11	43
6-7	6	3	35	2	3	18	21	7	42
7-8	5	3	37	1	2	10	12	1	41
8-9	1	1	40	1	2	8	10	1	41
9-10	1	1	40	0	1	0	0	0	40
10-11	1	1	40	0	0	0	0	0	40
11-12	1	1	40	0	0	0	0	0	40
	61	**61**		**27**	**27**	**237**	**237**		

Pedestrians

According to the *2012 CEQR Technical Manual* criteria, projected pedestrian volume increases of less than 200 pedestrians per hour at any pedestrian element would not typically be considered a significant impact, since that level of increase would not generally be noticeable and therefore would not require further analysis. As shown in Table F-2, the number of walk-only trips that would be generated by RWCDS would be 93 in the AM peak hour, 359 in the midday peak hour, 210 in the PM peak hour, and 229 in the Saturday midday peak hour. As the midday, PM, and Saturday midday peak hour totals exceed the *CEQR* analysis threshold of 200 pedestrian trips per peak hour, a Level 2 pedestrian screening is warranted. Therefore, a pedestrian assignment was conducted and is provided in Figure F-3.

Pedestrian trips added to the Empire Boulevard sidewalk (the only sidewalk adjacent to the proposed building) would include walk-only trips and trips to and from transit facilities, such as bus and subway stations in the vicinity of the project site. The project site is well connected to

[3] Pursuant to ZR Section 36-331, 48 accessory parking spaces are required (60 percent of the total number of DUs).



Legend

0/0/0/0 AM/MD/PM/Saturday MD

Empire Boulevard Rezoning EAS **Figure F-3**

Pedestrian Trip Assignment (Level 2 Pedestrian Screening)

subway and bus transportation. The nearest subway station to the project site is the IRT Sterling Street station for the #2 and #5 lines, located three blocks southwest at Nostrand Avenue between Sterling Street and Lefferts Avenue (approximately 0.4 miles). The IRT Kingston Avenue station on the #3 and #4 lines is located seven blocks to the northeast of the project site at Kingston Avenue and Eastern Parkway (approximately 0.5 miles).

In addition to subway transportation, two bus lines, B43 and B44, travel in the immediate vicinity of the project site. The B43, which connects Prospect Park with the northern tip of Greenpoint, travels along Empire Boulevard with bus stops across the project site at Balfour Place and Lamont Court (northbound), and turns north at Kingston Avenue. The closest B43 station in the southbound direction is at Empire Boulevard and Brooklyn Avenue. The B43 bus route also connects the site with the B, Q and S subway lines at Prospect Park station. The B44, which connects Sheepshead Bay with southern Williamsburg, travels along New York Avenue to the north and along Nostrand Avenue to the south.

As stated above, the RWCDS would generate 93 walk-only trips in the AM peak hour, 359 in the midday peak hour, 210 in the PM peak hour, and 229 in the Saturday midday peak hour. As shown in Figure F-3 when combined with trips to and from transit facilities, the total walk trips resulting from the proposed action in the northeast corner of Empire Boulevard and Brooklyn Avenue would be 87, 236, 158, and 162 in the weekday AM, midday, PM, and Saturday midday peak hours, respectively. In the northwest corner of Empire Boulevard and Kingston Avenue, the total walk trips resulting from the RWCDS would be 77, 221, 141, and 149 in the weekday AM, midday, PM, and Saturday midday peak hours, respectively (refer to Figure F-3). As the CEQR threshold of 200 walk trips would be exceeded in the midday peak period in these two locations, a detailed pedestrian analysis is warranted for this peak hour.

V. TRANSPORTATION ANALYSES METHODOLOGIES

Traffic

Analysis Methodology

To establish the existing conditions traffic network for the study area, manual turning movement counts were conducted during the weekday midday peak period in March 2013. Field surveys of lane configurations and other physical and operational characteristics of the street network were undertaken in March 2013.

Based on the results of the Level 1 and 2 Screening Assessments, this traffic analysis examines conditions only in the weekday midday peak hour when demand is expected to be greatest. Based on existing peak traffic volumes in the two intersections analyzed, the peak hour identified for the weekday midday is 12:00 PM to 1:00 PM.

The capacity analyses at study area intersections are based on the methodology presented in the *Highway Capacity Manual (HCM) Software HCS+ Version 5.5*. Traffic data required for these analyses include the hourly volumes on each approach and various other physical and operational characteristics. Field inventories were conducted to document the physical layout,

lane markings, curbside parking regulations, and other relevant characteristics needed for the analysis.

The HCM methodology provides a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the ratio of traffic volumes on an approach to the approach's carrying capacity. A ratio of less than 0.90 is generally considered indicative of non-congested conditions in dense urban areas; when higher than this value, the ratio reflects increasing congestion. At a v/c ratio of between 0.95 and 1.0, near-capacity conditions are reached and delays can become substantial. Ratios of greater than 1.0 indicate saturated conditions with queuing. The HCM methodology also expresses quality of flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. Levels of service range from A, with minimal delay (10 seconds or less per vehicle), to F, which represents long delays (greater than 80 seconds per vehicle).

For un-signalized intersections, the HCM methodology generally assumes that major street traffic is not affected by minor street flows. Left turns from the major street are assumed to be affected by the opposing, or oncoming major street flow. Minor street traffic is obviously affected by all conflicting movements. Similar to signalized intersections, HCM methodology expresses the quality of flow at un-signalized intersections in terms of level of service based on the amount of delay that a driver experiences. This relationship differs somewhat from the criteria used for signalized intersections, primarily because drivers expect different levels of performance from the two different kinds of transportation facilities. For un-signalized intersections, levels of service range from A, with minimal delay (10 seconds or less per vehicle), to F, which represents long delays (over 50 seconds per vehicle).

Table F-4 shows the LOS/delay relationship for signalized and un-signalized intersections using the HCM methodology. Levels of service A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E is considered to be the limit of acceptable delay, and LOS F is considered to be unacceptable to most drivers. In this study, a signalized lane grouping operating at LOS E or F or a v/c ratio of 0.90 or above is identified as congested.

Table F-4
Intersection Level of Service Criteria

Level of Service (LOS)	Average Delay per Vehicle (seconds)	
	Signalized Intersections	Un-signalized Intersections
A	0 - 10	0 - 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

Source: 2000 Highway Capacity Manual.

Significant Impact Criteria

The identification of significant adverse traffic impacts at analyzed intersections is based on criteria presented in the *2012 CEQR Technical Manual*. According to *2012 CEQR Technical Manual* criteria, if a lane group under the With-Action condition is within LOS A, B or C, or marginally acceptable LOS D (average control delay less than or equal to 45.0 seconds/vehicle for signalized intersections or less than or equal to 30.0 seconds/vehicle for un-signalized intersections), the impact is not considered significant. If the lane group LOS deteriorates from LOS A, B, or C in the No-Action condition to worse than mid-LOS D (i.e., delay greater than 45 seconds/vehicle at signalized intersections or 30.0 seconds/vehicle for un-signalized intersections) or to LOS E or F under the With-Action condition, then a significant traffic impact has occurred. For a lane group operating at LOS D under the No-Action condition, an increase of five or more seconds is considered significant if the With-Action delay exceeds mid-LOS D. For a lane group operating at LOS E under the No-Action condition, an increase in projected delay of 4.0 or more seconds is considered significant, and for a lane group operating at LOS F under the No-Action condition, an increase in projected delay of 3.0 or more seconds is considered significant.

Transit

As discussed above, the proposed action is not expected to result in any significant adverse impacts to subway and bus transit services based on *2012 CEQR Technical Manual* guidelines, and a detailed subway and bus analysis is not provided in this EAS.

Pedestrians

Analysis Methodology

Data on peak period pedestrian flow volumes was collected from 12:00 PM to 2:00 PM along the analyzed sidewalk and corner area that would experience peak hour project generated pedestrian volumes of 200 or greater as per the Level 2 Screening Analysis. Peak hours were determined by comparing rolling hourly averages, and the highest 15-minute volumes within the selected peak hours were used for analysis. Based on existing peak pedestrian volumes using the pedestrian elements to be analyzed, the peak hour selected for the weekday midday analysis is 1:00 PM to 2:00 PM.

Peak 15-minute pedestrian flow conditions during the weekday midday peak hours are analyzed using the *2000 Highway Capacity Manual* methodology and procedures outlined in the *2012 CEQR Technical Manual*. Using this methodology, the congestion level of pedestrian facilities is determined by considering pedestrian volume, measuring the sidewalk or crosswalk width, determining the available pedestrian capacity and developing a ratio of volume flows to capacity conditions. The resulting ratio is then compared with LOS standards for pedestrian flow, which define a qualitative relationship at a certain pedestrian traffic concentration level. The evaluation of street crosswalks and corners is more complicated as these spaces cannot be treated as corridors due to the time incurred waiting for traffic lights. To effectively evaluate these facilities, a "time-space" analysis methodology is employed which takes into consideration the traffic light cycle at intersections.

LOS standards are based on the average area available per pedestrian during the analysis period, typically expressed as a 15-minute peak period. LOS grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. Table F-5 defines the LOS criteria for pedestrian crosswalk/corner area and sidewalk conditions, as based on the *Highway Capacity Manual* methodology.

The analysis of sidewalk conditions includes a "platoon" factor in the calculation of pedestrian flow to more accurately estimate the dynamics of walking. "Platooning" is the tendency of pedestrians to move in bunched groups or "platoons" once they cross a street where cross traffic required them to wait. Platooning generally results in a level of service one level poorer than that determined for average flow rates.

Table F-5
Pedestrian Crosswalk/Corner Area and Sidewalk Levels of Service Descriptions

LOS	Crosswalk/Corner	Crosswalk/Corner Area Criteria (sf/ped)	Non-Platoon Sidewalk Criteria (pmf)	Platoon Sidewalk Criteria (pmf)
A	(Unrestricted)	≥ 60	≤ 5	≤ 0.5
B	(Slightly Restricted)	≥ 40	≤ 7	≤ 3
C	(Restricted but fluid)	≥ 24	≤ 10	≤ 6
D	(Restricted, necessary to continuously alter walking stride and direction)	≥ 15	≤ 15	≤ 11
E	(Severely restricted)	≥ 8	≤ 23	≤ 18
F	(Forward progress only by shuffling; no reverse movement possible)	≤ 8	> 23	> 18
Notes	Based on average conditions for 15 minutes sf/ped – square feet of area per pedestrian pmf – pedestrians per minute per foot of effective sidewalk width			

Source: 2000 Highway Capacity Manual

Impact Criteria

Sidewalks

Since the project site is not located within a Central Business District (CBD), *2012 CEQR Technical Manual* criteria define a significant adverse sidewalk impact to have occurred under platoon conditions if the average pedestrian flow rate under the No-Action condition is less than 3.5 pedestrians per minute per foot width (pmf) of effective sidewalk width, and the average flow rate under the With-Action condition is greater than 6.0 pmf (LOS D or worse). If the average flow rate under the With-Action condition is less than or equal to 6.0 pmf (LOS C or better), the impact should not be considered significant. If the No-Action pedestrian flow rate is between 3.5 and 19 pmf, an increase in average flow rate under the With-Action condition should be considered significant based on Table F-6, which shows a sliding-scale that identifies what increase in pedestrian flow is considered a significant impact for a given pedestrian flow value in the No-Action condition. If the increase in pedestrian flow rate is less than the value in Table F-7, the impact is not considered significant. If the average pedestrian flow rate under the No-Action condition is greater than 19 pmf, then an increase in pedestrian

flow rate greater than or equal to 0.6 pmf, under the With-Action condition, should be considered significant.

Table F-6
Significant Impact Criteria for Sidewalks with Platooned Flow in a Non-CBD Location

No-Action Condition Pedestrian Flow (pmf)	With-Action Condition Pedestrian Flow Increment to be Considered a Significant Impact (pmf)
< 3.5	With Action Condition > 6.0
3.5 to 3.8	Increment ≥ 2.6
3.9 to 4.6	Increment ≥ 2.5
4.7 to 5.4	Increment ≥ 2.4
5.5 to 6.2	Increment ≥ 2.3
6.3 to 7	Increment ≥ 2.2
7.1 to 7.8	Increment ≥ 2.1
7.9 to 8.6	Increment ≥ 2.0
8.7 to 9.4	Increment ≥ 1.9
9.5 to 10.2	Increment ≥ 1.8
10.3 to 11	Increment ≥ 1.7
11.1 to 11.8	Increment ≥ 1.6
11.9 to 12.6	Increment ≥ 1.5
12.7 to 13.4	Increment ≥ 1.4
13.5 to 14.2	Increment ≥ 1.3
14.3 to 15	Increment ≥ 1.2
15.1 to 15.8	Increment ≥ 1.1
15.9 to 16.6	Increment ≥ 1.0
16.7 to 17.4	Increment ≥ 0.9
17.5 to 18.2	Increment ≥ 0.8
18.3 to 19	Increment ≥ 0.7
> 19.0	Increment ≥ 0.6

Source: *2012 CEQR Technical Manual*

Table F-7
Significant Impact Criteria for Corners and Crosswalks in a Non-CBD Location

No-Action Condition Pedestrian Space (pmf)	With-Action Condition Pedestrian Space Reduction to be Considered a Significant Impact (sf/ped)
> 26.6	With Action Condition ≤ 24.0
25.8 to 26.6	Reduction ≥ 2.6
24.9 to 25.7	Reduction ≥ 2.5
24 to 24.8	Reduction ≥ 2.4
23.1 to 23.9	Reduction ≥ 2.3
22.2 to 23	Reduction ≥ 2.2
21.3 to 22.1	Reduction ≥ 2.1
20.4 to 21.2	Reduction ≥ 2.0
19.5 to 20.3	Reduction ≥ 1.9
18.6 to 19.4	Reduction ≥ 1.8
17.7 to 18.5	Reduction ≥ 1.7
16.8 to 17.6	Reduction ≥ 1.6
15.9 to 16.7	Reduction ≥ 1.5
15 to 15.8	Reduction ≥ 1.4
14.1 to 14.9	Reduction ≥ 1.3
13.2 to 14	Reduction ≥ 1.2
12.3 to 13.1	Reduction ≥ 1.1
11.4 to 12.2	Reduction ≥ 1.0
10.5 to 11.3	Reduction ≥ 0.9
9.6 to 10.4	Reduction ≥ 0.8
8.7 to 9.5	Reduction ≥ 0.7
7.8 to 8.6	Reduction ≥ 0.6
6.9 to 7.7	Reduction ≥ 0.5
6 to 6.8	Reduction ≥ 0.4
5.1 to 5.9	Reduction ≥ 0.3
< 5.1	Reduction ≥ 0.2

Source: *2012 CEQR Technical Manual*

Corner Areas and Crosswalks

For non-CBD areas, *2012 CEQR Technical Manual* criteria define a significant adverse corner area or crosswalk impact to have occurred if the average pedestrian space under the No-Action condition is greater than 26.6 square feet/pedestrian (sf/ped) and, under the With-Action condition, the average pedestrian space decreases to 24 sf/ped or less (LOS D or worse). If the pedestrian space under the With-Action condition is greater than 24 sf/ped (LOS C or better), the impact should not be considered significant. If the average pedestrian space under the No-Action condition is between 5.1 and 26.6 sf/ped, a decrease in pedestrian space under the With-Action condition should be considered significant based on Table F-7, which shows a sliding-scale that identifies what decrease in pedestrian space is considered a significant impact for a given amount of pedestrian space in the No-Action condition. If the decrease in pedestrian space is less than the value in Table F-7, the impact is not considered significant. If the average pedestrian space under the No-Action condition is less than 5.1 sf/ped, then a decrease in pedestrian space greater than or equal to 0.2 sf/ped should be considered significant.

Pedestrian and Vehicular Safety Evaluation

Under *2012 CEQR Technical Manual* guidelines, if a proposed project would not significantly redesign or reconfigure one or more streets as part of the proposed project, or be located near sensitive land uses, such as hospitals, schools, parks, nursing homes, elderly housing, or study intersections located in Safe Streets for Senior Focus Areas (SPFAs), a detailed analysis of safety impacts is not required. The proposed project would not include the redesign or reconfiguration of streets, nor is it located near sensitive land uses. In addition, the study intersections are not located in a SPFA. As a result, no detailed pedestrian and vehicular safety analysis is warranted.

Parking

As discussed above, all new parking demand will be accommodated on site and therefore the proposed action is not expected to result in any significant adverse parking impacts based on *2012 CEQR Technical Manual* guidelines, and a detailed parking analysis is not provided in this EAS.

VI. TRAFFIC

Existing Conditions

Study Area Network

As shown in Figure F-1, Empire Boulevard is a two-way street in an east-west direction, located to the south of the project site. Balfour Place, a one-way southbound street, and Lamont Court, a one-way northbound street, connect Empire Boulevard and Lefferts Avenue. Brooklyn and Kingston Avenues are south- and northbound thoroughfares in proximity of the project site. The adjacent property to the east of the project site includes a driveway along the shared lot line.

As discussed above in Section IV, "Level 2 Screening Assessment," the traffic study area includes a total of two intersections that were selected for analysis based on the anticipated numbers of new project-generated vehicle trips. Figure F-4 shows existing 2013 peak hour traffic volumes on the study area street network during the weekday midday peak hour.

Intersection Capacity Analysis

As shown in Table F-2, the proposed project would generate 50 or more peak hour vehicle trips at an intersection in only the weekday midday peak hour. According to the *2012 CEQR Technical Manual*, if the trip assignments show that the proposed project would generate 50 or more peak hour vehicle trips at an intersection, then further quantified operational analyses of an intersection may be warranted to assess the potential for significant adverse impacts on traffic. The *CEQR* analysis threshold is exceeded at two intersections.

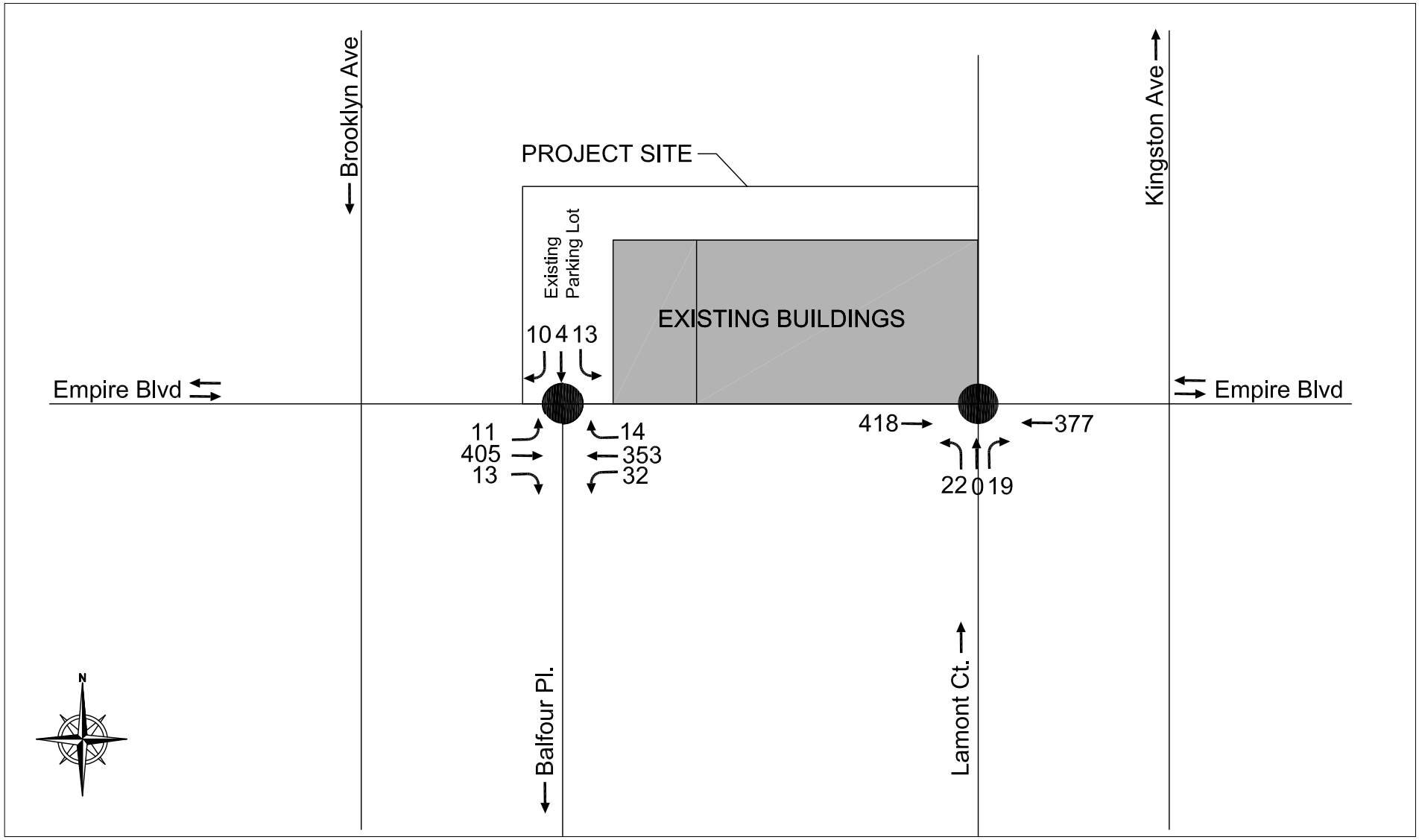
The un-signalized intersections of Empire Boulevard and Balfour Place, and Empire Boulevard and Lamont Court would incur incremental weekday midday peak hour vehicle trips of 61 and 67 vehicles, respectively (refer to Figure F-2). The *CEQR* analysis threshold is not exceeded in the weekday AM, PM, and Saturday midday peak hours at any intersection in the vicinity of the project site. Thus, further analyses of intersections in the weekday AM, PM, and Saturday midday peak hours are not warranted.

Table F-8 provides an overview of the levels of service that characterize existing "overall" intersection conditions during the weekday midday peak hour. The overall level of service of an intersection represents a weighted average of the individual traffic movements' levels of service. "Overall" LOS E or F indicates that serious congestion exists – either one specific traffic movement at the intersection has severe delays, or two or more traffic movements at the intersection are at LOS E or F with substantial delays. As shown in Table F-8, no analyzed intersection currently operates at LOS E or F in the analyzed midday peak hour. All intersections and lane group movements operate at LOS C or better.

Table F-8
Existing Intersection Level of Service Summary

	Weekday Midday Peak Hour
Overall LOS A/B/C	2
Overall LOS D	0
Overall LOS E	0
Overall LOS F	0
Total movements at LOS E or F	0

Table F-9 shows the existing volume-to-capacity ratios, delays and levels of service by movement at each analyzed intersection in the weekday midday peak hour. All analyzed movements operate at LOS C or better in the weekday midday peak hour and are not considered congested (i.e., movements operating at LOS E or F and/or with a high v/c ratio – 0.90 and above).



Legend:

Analyzed Intersection

2013 Existing Weekday Midday Peak Hour Traffic Volumes

Table F-9
Existing Conditions Level of Service Analysis

		WEEKDAY MIDDAY PEAK HOUR		
Intersection	**Lane Group**	**V/C Ratio**	**Delay (seconds)**	**LOS**
1. Empire Boulevard (EW) @ Balfour Place (NS) (Unsignalized)	EB-LTR	0.01	8.5	A
	WB-LTR	0.04	8.7	A
	SB-LTR	0.14	18.6	C
2. Empire Boulevard (EW) @ Lamont Court (NS) (Unsignalized)	NB-LTR	0.13	15.7	C

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, Dfl-Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume to capacity ratio
LOS - level of service

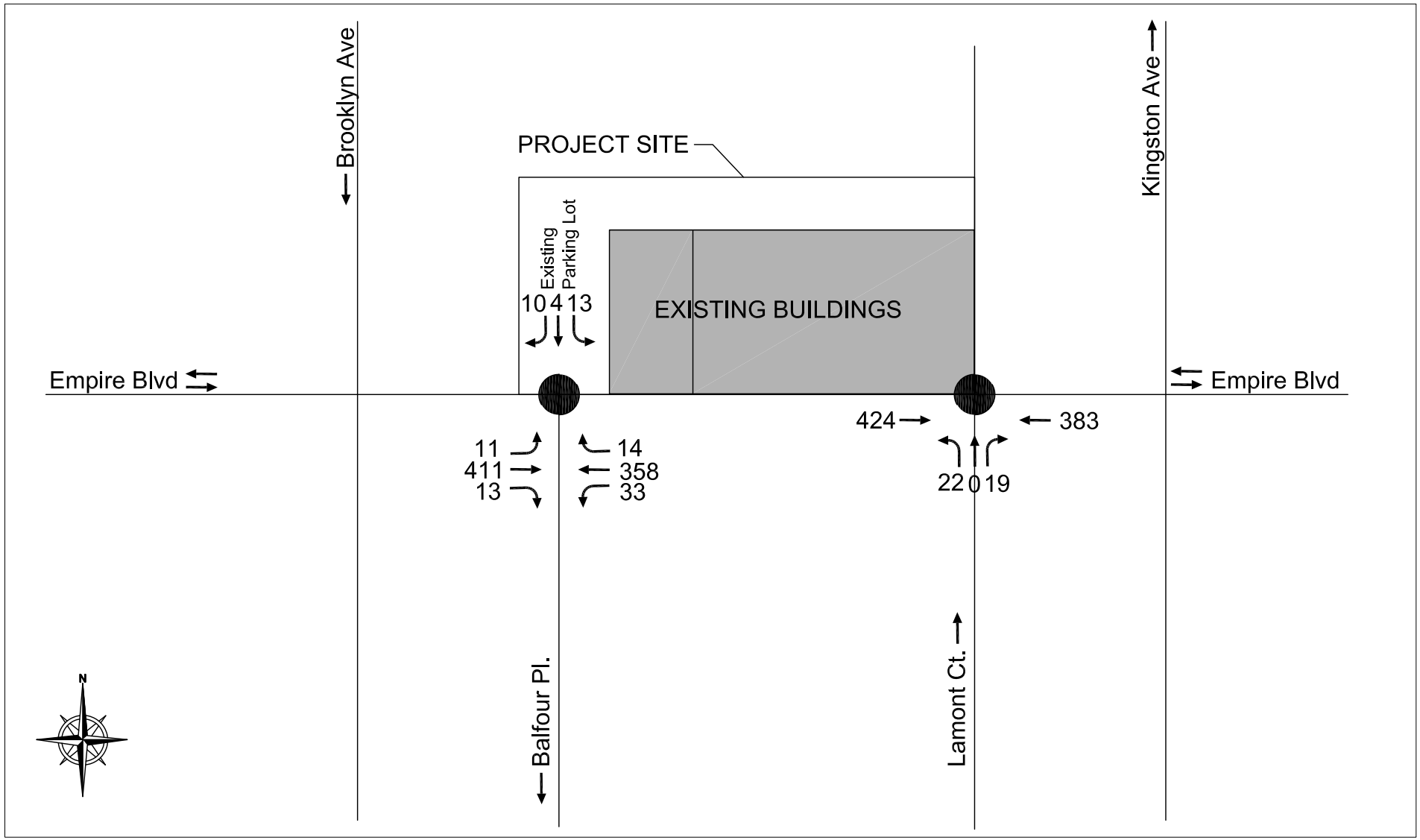
The Future Without the Proposed Action (No-Action Condition)

Between 2013 and 2016, it is expected that traffic demand in the study area will increase due to background growth. There are no expected major developments in the study area that would contribute to the increase in traffic demand. No-Action condition traffic volumes were developed by applying the annual background growth rates recommended in the *2012 CEQR Technical Manual* to existing volumes. An annual compounded background growth rate of 0.5 percent was applied for years 2013 through 2016[4].

Intersection Capacity Analysis

Figure F-5 shows the expected No-Action weekday midday peak hour traffic volumes at the analyzed intersections within the study area, while Table F-10 shows a summary comparison of intersection levels of service for existing and future No-Action conditions during the weekday midday peak hour. As shown in Table F-10, all analyzed intersections and lane group movements would continue to operate at LOS C or better during the weekday midday peak hour. No intersection is analyzed for the weekday AM, PM, and Saturday midday peak hours since the project increment would generate less than the CEQR analysis threshold of 50 vehicles at an intersection.

[4] Source: Table 16-4 in the *2012 CEQR Technical Manual*.



Legend:

Analyzed Intersection

2016 No-Action Weekday Midday Peak Hour Traffic Volumes

Table F-10
Intersection Level of Service Summary Comparison
Existing vs. No-Action

	Weekday Midday Peak Hour	
	Existing	No-Action
Overall LOS A/B/C	2	2
Overall LOS D	0	0
Overall LOS E	0	0
Overall LOS F	0	0
Total movements at LOS E or F	0	0

Table F-11 shows the detailed volume-to-capacity ratios, delays and levels of service by movement at each analyzed intersection in the weekday midday peak hour in the No-Action condition. As shown in Table F-11, the analyzed intersections would experience insignificant changes in the No-Action condition. All analyzed movements would continue to operate at LOS C or better in the weekday midday peak hour and would not be considered congested.

Table F-11
No-Action Level of Service Analysis

		WEEKDAY MIDDAY PEAK HOUR					
		EXISTING			NO-ACTION		
Intersection	Lane Group	V/C Ratio	Delay (seconds)	LOS	V/C Ratio	Delay (seconds)	LOS
1. Empire Boulevard (EW) @	EB-LTR	0.01	8.5	A	0.01	8.5	A
Balfour Place (NS)	WB-LTR	0.04	8.7	A	0.05	8.8	A
(Unsignalized)	SB-LTR	0.14	18.6	C	0.15	18.9	C
2. Empire Boulevard (EW) @ Lamont Court (N) (Unsignalized)	NB-LTR	0.13	15.7	C	0.13	15.9	C

Notes:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, Dfl-Analysis considers a defacto left-turn lane on this approach

V/C ratio - volume to capacity ratio

LOS - level of service

The Future with the Proposed Action (With-Action Condition)

As presented earlier in this attachment, the proposed action would facilitate the construction of a mixed-use development on the project site, which is located in the Wingate neighborhood of Brooklyn. The RWCDS would have approximately 80 DUs (approximately 81,357 gsf), approximately 27,958 gsf of retail space, and approximately 28,930 gsf of community facility space, for a total of approximately 138,244 gsf of new development. The RWCDS building

would also include an underground parking garage with 66 accessory parking spaces on the cellar level. As also discussed above in Section IV, "Level 2 Screening Assessment", vehicle trips generated by the RWCDS were assigned to the project site. The assignment of project increment vehicle trips generated by the proposed development during the weekday midday peak hour is shown in Figure F-2.

Intersection Capacity Analysis

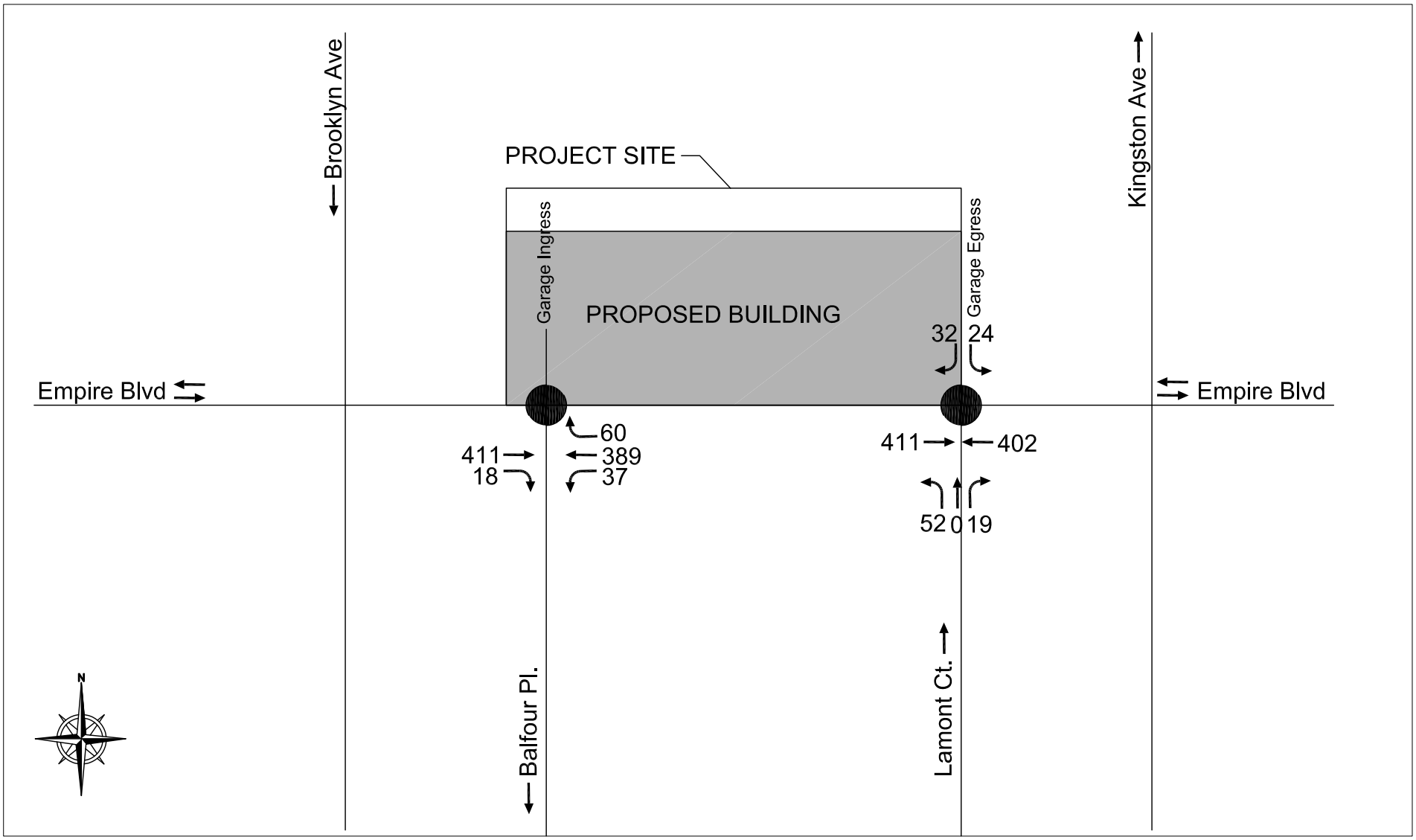
Figure F-6 shows the weekday midday peak hour traffic networks in the 2016 RWCDS. The volumes shown are the combination of the net incremental traffic generated by the proposed action and the No-Action traffic network. No physical or operational changes to the study area street network are planned as part of the proposed action.

Table F-12 shows a summary comparison of intersection levels of service for future No-Action and With-Action conditions. As shown in Table F-12, all analyzed intersections would continue to operate at LOS C or better during the weekday midday peak hour. As noted earlier, no intersection is analyzed for the weekday AM, PM, and Saturday midday peak hours since the project increment generated would be less than the CEQR analysis threshold of 50 vehicles at an intersection, and no significant impacts are expected.

Table F-12
Intersection Level of Service Summary Comparison
No-Action vs. With-Action

	Weekday Midday Peak Hour	
	No-Action	**With-Action**
Overall LOS A/B/C	2	2
Overall LOS D	0	0
Overall LOS E	0	0
Overall LOS F	0	0
Total movements at LOS E or F	0	0

Table F-13 shows the volume-to-capacity ratios, delays and levels of service by movement at each analyzed intersection in the weekday midday peak hour in the With-Action condition. As shown in Table F-13, the northbound lane in the intersection of Empire Boulevard and Lamont Court would operate at LOS D in the With-Action condition. The delay for the northbound movements would be 27.2 seconds, which is below the impact threshold of 30 seconds, and therefore, no significant adverse impacts are anticipated at this intersection. All other analyzed movements in both intersections would experience insignificant changes in the With-Action condition. All other analyzed movements would continue to operate at LOS C or better in the weekday midday peak hour and would not be considered congested.



Legend:

Analyzed Intersection

Table F-13
With-Action Level of Service Analysis

		WEEKDAY MIDDAY PEAK HOUR					
		NO-ACTION			WITH-ACTION		
Intersection	Lane Group	V/C Ratio	Delay (seconds)	LOS	V/C Ratio	Delay (seconds)	LOS
1. Empire Boulevard (EW) @ Balfour Place (NS) (Unsignalized)	EB-LTR	0.01	8.5	A	-	-	-
	WB-LTR	0.05	8.8	A	0.05	8.8	A
	SB-LTR	0.15	18.9	C	-	-	-
2. Empire Boulevard (EW) @ Lamont Court (NS) (Unsignalized)	NB-LTR	0.13	15.9	C	0.35	27.2	D
	SB-LR	-	-	-	0.22	19.1	C

Notes: EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, Dfl-Analysis considers a defacto left-turn lane on this approach

V/C ratio - volume to capacity ratio; LOS - level of service

VII. PEDESTRIANS

Existing Conditions

As discussed above, a detailed pedestrian analysis is required for the midday peak hour. The Level 2 pedestrian screening showed that a detailed pedestrian analysis is not warranted for the AM, PM, and Saturday midday peak hours (refer to Figure F-3). Data on midday peak period pedestrian flow volumes was collected along the analyzed sidewalk and corner areas that would experience midday peak hour project generated pedestrian volumes of 200 or greater as per the Level 2 Screening Analysis. The midday peak hour was assumed to be from 1:00 PM to 2:00 PM. The pedestrian counts were conducted on Thursday, March 14 and 20, 2013.

As shown in Figure F-3 and discussed previously above in Section IV, "Level 2 Screening Assessment," two sidewalks and two corner reservoir areas where project-generated pedestrian trips are expected to exceed the 200-trip *CEQR* analysis threshold in the weekday midday peak hour have been selected for analysis. These pedestrian elements are along the north side of Empire Boulevard, adjacent to the project site. Existing peak 15-minute pedestrian flow volumes and levels of service along the analyzed sidewalk during the weekday midday peak hour are shown in Table F-14. As shown in Table F-14, the analyzed sidewalk currently operates at an acceptable platoon adjusted LOS A in the weekday midday peak period. Existing levels of service at analyzed corner reservoir areas are shown in Table F-15. As shown in Table F-15, both analyzed corner areas operated at LOS A in the midday peak hour.

Table F-14
2013 Existing Sidewalk Conditions

Sidewalk No.	Location	Total Width (ft)	Effective Width (ft)	Peak 15-Min. Volume MIDDAY	Flow Rate (persons/foot/min) MIDDAY	LOS	
						Average Flow MIDDAY	Platoon Adjusted MIDDAY
S1	Empire Blvd. betw. Brooklyn Ave. and Balfour Pl. – North Side	20.0	11.5	36	0.2	A	A
S2	Empire Blvd. betw. Kingston Ave. and Lamont Ct. – North Side	12.0	5.0	43	0.6	A	B

Table F-15
2013 Existing Conditions Corner Analysis

No.	Intersection	Corner	SFP MIDDAY	Level of Service MIDDAY
C1	Empire Blvd. and Brooklyn Ave.	Northeast	1,271.3	A
C2	Empire Blvd. and Kingston Ave.	Northwest	587.1	A

Notes:
Methodology based on *2012 CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.

The Future without the Proposed Action (No-Action Condition)

Estimates of peak hour trips on the analyzed sidewalk in the No-Action condition were developed by applying the annual background growth rates recommended in the *2012 CEQR Technical Manual* to existing volumes. An annual compounded background growth rate of 0.5 percent was applied for years 2013 through 2016.

Table F-16 shows the forecasted No-Action peak 15-minute pedestrian flow volumes and levels of service along this sidewalk during the weekday midday peak hour. As shown in Table F-16, the analyzed pedestrian facility is projected to continue to operate at an acceptable platoon adjusted LOS A in both weekday peak periods in the No-Action condition. As shown in Table F-17, both analyzed corner areas are expected to operate at LOS A in the midday peak hour in the No-Action condition.

Table F-16
2016 No-Action Sidewalk Conditions

Sidewalk No.	Location	Total Width (ft)	Effective Width (ft)	Peak 15-Min. Volume MIDDAY	Flow Rate (persons/foot/min) MIDDAY	LOS	
						Average Flow MIDDAY	Platoon Adjusted MIDDAY
S1	Empire Blvd. betw. Brooklyn Ave. and Balfour Pl. – North Side	20.0	11.5	37	0.2	A	A
S2	Empire Blvd. betw. Kingston Ave. and Lamont Ct. – North Side	12.0	5.0	44	0.6	A	B

Table F-17
2016 No-Action Conditions Corner Analysis

No.	Intersection	Corner	SFP MIDDAY	Level of Service MIDDAY
C1	Empire Blvd. and Brooklyn Ave.	Northeast	1,284.3	A
C2	Empire Blvd. and Kingston Ave.	Northwest	594.7	A

Notes:
Methodology based on *2012 CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.

The Future with the Proposed Action (With-Action Condition)

The proposed action would generate new pedestrian demand on the analyzed sidewalk by 2016. This new demand would include trips made solely by walking, as well as pedestrian trips en route from the local bus stop. Pedestrian trips generated by the proposed action are expected to be concentrated on the sidewalk and corners closest to the project site.

As shown in Table F-2, the RWCDS is expected to generate a total of 93 incremental walk-only trips in the weekday AM peak hour, 359 in the midday peak hour, 210 in the PM peak hour, and 229 in the Saturday midday peak hour. Trips generated by the RWCDS en route to and from the subway would account for 45 pedestrian trips in the weekday AM peak hour, 52 in the midday weekday peak hour, 55 in the PM weekday peak hour, and 49 in the Saturday midday peak hour. Project-generated trips en route to and from the local bus would account for 26 pedestrian trips in the weekday AM peak hour, 46 in the weekday midday peak hour, 34 in the weekday PM peak hour, and 33 in the Saturday midday peak hour. The assignment of these trips to the study area sidewalks, corner areas and crosswalks in each peak hour is shown in Figure F-3 in Section IV, "Level 2 Screening Assessment". Based on the peak hour project-generated pedestrian trips presented in Figure F-3, peak 15-minute incremental pedestrian volumes were developed. These pedestrian volumes were added to the projected No-Action volumes to generate With-Action pedestrian volumes. These volumes were then applied to the analyzed sidewalk segments located on the north sidewalk on Empire Boulevard at Balfour Place and Lamont Court.

Table F-18 shows the forecasted With-Action peak 15-minute pedestrian flow volumes and levels of service along the analyzed sidewalk during the weekday midday peak hour. As shown, the analyzed pedestrian facility is projected to operate at an acceptable platoon adjusted LOS B in the weekday midday peak period in the With-Action condition. Therefore, pursuant to *2012 CEQR Technical Manual* criteria, the RWCDS would not result in any significant adverse pedestrian impacts. As shown in Table F-19, both analyzed corner areas are expected to operate at LOS A in the midday peak hour in the With-Action condition.

Table F-18
2016 With-Action Sidewalk Conditions

Sidewalk No.	Location	Total Width (ft)	Effective Width (ft)	Peak 15-Min. Volume MIDDAY	Flow Rate (persons/foot/min) MIDDAY	LOS	
						Average Flow MIDDAY	Platoon Adjusted MIDDAY
S1	Empire Blvd. betw. Brooklyn Ave. and Balfour Pl. – North Side	20.0	11.5	104	0.2	A	**A**
S2	Empire Blvd. betw. Kingston Ave. and Lamont Ct. – North Side	12.0	5.0	115	0.6	A	**B**

Table F-19
2016 With-Action Conditions Corner Analysis

No.	Intersection	Corner	SFP MIDDAY	Level of Service MIDDAY
C1	Empire Blvd. and Brooklyn Ave.	Northeast	536.8	A
C2	Empire Blvd. and Kingston Ave.	Northwest	326.6	A

Notes:
Methodology based on *2012 CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.

VIII. VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

Under *CEQR Technical Manual* guidelines, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high accident locations. These are defined as locations where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. (Reportable accidents are defined as those involving injuries, fatalities, and/or $1,000 or more in property damage.)

Table F-20 shows summary accident data for the years 2009 through 2011 that were obtained from the New York City Department of Transportation. This is the most recent three year period for which data are available. The table shows the total number of crashes each year and the numbers of crashes each year involving pedestrians and cyclists at intersections in proximity to the project site where the majority of new vehicular and pedestrian trips would be

concentrated. As shown in **Table F-20**, no intersections were found to have experienced a total of 48 or more crashes or experienced five or more pedestrian and/or bicyclist injury crashes in one or more years; therefore, none of the intersections are considered high accident locations.

Table F-20
Accident Data Summary 2009-2011

Intersection		Pedestrian Injury Crashes			Bicyclist Injuries Crashes			Pedestrian/Bicyclist Injury Crashes			Total Crashess (Reportable + Non-Reportable)		
East-West Roadway	**North-South Roadway**	**2009**	**2010**	**2011**	**2009**	**2010**	**2011**	**2009**	**2010**	**2011**	**2009**	**2010**	**2011**
Empire Blvd	Balfour Pl	0	0	0	0	0	0	0	0	0	1	1	0
	Lamont Ct	0	0	0	0	0	0	0	0	0	1	1	4
	Brooklyn Av	2	2	0	1	0	0	3	2	0	7	4	4
	Kingston Av	1	2	3	1	0	0	2	2	3	6	12	3

Source: NYSDMV/DOT

X. CONCLUSION

As described in Attachment A, "Project Description", the RWCDS would result in a building with approximately 80 DUs (approximately 81,357 gsf), approximately 27,958 gsf of retail space, and approximately 28,930 gsf of community facility space, for a total of approximately 138,244 gsf of new development. The RWCDS building would also include an underground parking garage with 66 accessory parking spaces on the cellar level. Traffic and pedestrian conditions are not expected to significantly worsen. Additionally, the project-generated parking demand would be accommodated on the project site. As shown above, the proposed action is not expected to result in any significant adverse impacts on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, or parking.

ATTACHMENT G
NOISE

I. INTRODUCTION

This application is for a zoning map amendment affecting portions of four City tax blocks in the Wingate neighborhood of Brooklyn Community District 9. The proposed action affects an area of approximately 97,498 square feet (sf) of lot area. The applicant is proposing to rezone the majority of this area from R5/C1-3 to R7A/C2-4, and to remove the existing C1-3 commercial overlay from the underlying R7-1 district in the remaining portion of the rezoning area ("the proposed action"). In the portion of the rezoning area that is proposed to be rezoned from R5/C1-3 to R7A/C2-4, the proposed action would enable a proposal by the applicant to develop a mixed-use building, with accessory, below-grade parking, on four lots fronting on Empire Boulevard ("the project site"). The development as proposed by the applicant would include of a 7-story building comprised of approximately 68 dwelling units (approximately 68,727 gsf of residential space), approximately 24,289 gsf of commercial space, and approximately 21,572 gsf of community facility space, for a total of approximately 114,588 gsf of new development.

In the case of the proposed action, as explained in Attachment A, "Project Description", under the reasonable worst case development scenario (RWCDS) the project site (Block 1311, Lots 66, 74, 75, 76) would be redeveloped with a new 7-story mixed-use residential, commercial, and community facility building, located within the rezoned R7A/C2-4 district. In the RWCDS, the incremental (net) change that would result from the proposed development at the project site compared to No-Action conditions is 80 DUs (81,357 gsf), 27,958 gsf of local retail space, 28,930 gsf of community facility space, and a negative incremental (net) change of 17,175 sf of storage space. The analysis year for the RWDCS is 2016.

The proposed action is expected to change traffic volumes in the general vicinity of the project site, as discussed in Attachment F, "Transportation". Under existing conditions, Empire Boulevard, the street which is located adjacent to the south of the project site, is the main source of existing noise along the project site's boundary. To the north, east, and west, the project site abuts residential properties. Any change in future traffic characteristics could lead to changes in existing noise levels. An increase of 3 dBA or more between the future without the proposed action (No-Action condition) and the future with the proposed action (With Action condition) would constitute a significant impact.

A noise analysis was conducted in compliance with the guidelines in the *2012 CEQR Technical Manual* to identify and quantify any such impacts, and to determine the level of building attenuation necessary to ensure that interior noise levels of the proposed development satisfy applicable interior noise criteria for residential, local retail, and community facility use[1].

[1] Pursuant to *2012 CEQR Technical Manual* standards.

Based on a survey of land uses in the area, it was determined that no other stationary noise sources contribute significantly to noise levels in the area, and a stationary noise source analysis would not be necessary.

II. NOISE FUNDAMENTALS

Quantitative information on the effects of airborne noise on people is well documented. If sufficiently loud, noise may adversely affect people in several ways. For example, noise may interfere with human activities such as sleep, speech communication, and tasks requiring concentration or coordination. It may also cause annoyance, hearing damage, and other physiological problems. Although it is possible to study these effects on people on an average or statistical basis, it must be remembered that all the stated effects of noise on people vary greatly with the individual. Several noise scales and rating methods are used to quantify the effects of noise on people. These scales and methods consider factors such as loudness, duration, time of occurrence, and changes in noise level with time.

"A"-Weighted Sound Level (dBA)

Noise is typically measured in units called decibels (dB), which are ten times the logarithm of the ratio of the sound pressure squared to a standard reference pressure squared. Because loudness is important in the assessment of the effects of noise on people, the dependence of loudness on frequency must be taken into account in the noise scale used in environmental assessments. Frequency is the rate at which sound pressures fluctuate in a cycle over a given quantity of time, and is measured in Hertz (Hz), where 1 Hz equals 1 cycle per second. Frequency defines sound in terms of pitch components. In the measurement system, one of the simplified scales that accounts for the dependence of perceived loudness on frequency is the use of a weighting network - known as A-weighting - that simulates the response of the human ear. For most noise assessments, the A-weighted sound pressure level in units of dBA is used due to its widespread recognition and its close correlation to perception. In this analysis, all measured noise levels are reported in dBA or A-weighted decibels. Common noise levels in dBA are shown in Table G-1.

Table G-1
Common Noise Levels

Sound Source	(dBA)
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
Soft Whisper at 5 meters	30
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0

Source: *2012 CEQR Technical Manual* / Cowan, James P. Handbook of Environmental Acoustics. Van Nostrand Reinhold, New York, 1994. Egan, M. David, Architectural Acoustics. McGraw-Hill Book Company, 1988.

Note: A 10 dBA increase appears to double the loudness, and a 10 dBA decrease appears to halve the apparent loudness.

Community Response to Changes in Noise Levels

Table G-2 shows the average ability of an individual to perceive changes in noise. Generally, changes in noise levels less than 3 dBA are barely perceptible to most listeners. However, as illustrated in Table G-2, 5 dBA changes are readily noticeable. 10 dBA changes are normally perceived as doublings (or halvings) of noise levels. These guidelines permit direct estimation of an individual's probable perception of changes in noise levels.

Table G-2
Average Ability to Perceive Changes in Noise Levels

Change (dBA)	Human Perception of Sound
2-3	Barely perceptible
5	Readily noticeable
10	A doubling or halving of the loudness of sound
20	A dramatic change
40	Difference between a faintly audible sound and a very loud sound

Source: Bolt Beranek and Neuman, Inc., Fundamentals and Abatement of Highway Traffic Noise, Report No. PB-222-703. Prepared for Federal Highway Administration, June 1973.

Noise Descriptors Used In Impact Assessment

Because the sound pressure level unit, dBA, describes a noise level at just one moment, and very few noises are constant, other ways of describing noise over extended periods have been developed. One way of describing fluctuating sound is to describe the fluctuating noise heard over a specific time period as if it had been a steady, unchanging sound. For this condition, a descriptor called the "equivalent sound level", L_{eq}, can be computed. L_{eq} is the constant sound

level that, in a given situation and time period (e.g., 1 hour, denoted by $L_{eq(1)}$, or 24 hours, denoted as $L_{eq(24)}$), conveys the same sound-energy as the actual time-varying sound. Statistical sound level descriptors such as L_1, L_{10}, L_{50}, L_{90}, and L_x, are sometimes used to indicate noise levels that are exceeded 1, 10, 50, 90 and x percent of the time, respectively. Discrete event peak levels are given as L_1 levels. L_{eq} is used in the prediction of future noise levels, by adding the contributions from new sources of noise (i.e., increases in traffic volumes) to the existing levels and in relating annoyance to increases in noise levels.

For the purposes of this analysis, the maximum 1-hour equivalent sound level ($L_{eq(1)}$) has been selected as the noise descriptor to be used in the noise impact evaluation. $L_{eq(1)}$ is the noise descriptor used in the *2012 CEQR Technical Manual* for noise impact evaluation, and is used to provide an indication of highest expected sound levels. $L_{10(1)}$ is the noise descriptor used in the *2012 CEQR Technical Manual* for building attenuation. Hourly statistical noise levels (particularly L_{10} and L_{eq} levels) were used to characterize the relevant noise sources and their relative importance at each receptor location.

Applicable Noise Codes and Impact Criteria

New York City Noise Code

The New York City Noise Control Code, amended in December 2005, contains prohibitions regarding unreasonable noise and specific noise standards, including plainly audible criteria for specific noise sources. In addition, the amended code specifies that no sound source operating in connection with any commercial or business enterprise may exceed the decibel levels in the designated octave bands at specified receiving properties.

New York 2012 CEQR Technical Manual Noise Standards

The New York City Department of Environmental Protection (NYCDEP) has set external noise exposure standards. These standards are shown in Table G-3.

Table G-3
Noise Exposure Guidelines for Use in City Environmental Impact Review

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	---------- Ldn ≤ 60 dBA ----------		---------- 60 < Ldn ≤ 65 dBA ----------		(1) 65 < Ldn ≤ 70 dBA, (II) 70 ≤ Ldn		---------- Ldn ≤ 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	

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

Notes:

(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA 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 an 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 old-age 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).

Noise Exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable. The standards shown are based on maintaining an interior noise level for the worst-case hour L_{10} of less than or equal to 45 dBA. Attenuation requirements are shown in Table G-4.

Table G-4
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. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.

[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 / *2012 CEQR Technical Manual*, Table 19-3

In addition, the *2012 CEQR Technical Manual* uses the following criteria to determine whether a proposed residential development would be subject to a significant adverse noise impact. The impact assessments compare the projected future With-Action condition $L_{eq(1)}$ noise levels to those calculated for the No-Action condition. If the No-Action levels are less than 60 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period, the threshold for a significant impact would be an increase of at least 5 dBA $L_{eq(1)}$. For the 5 dBA threshold to be valid, the resultant With-Action condition noise level would have to be equal to or less than 65 dBA. If the No-Action noise level is equal to or greater than 62 dBA $L_{eq(1)}$, or if the analysis period is a nighttime period (defined in the *CEQR* standards as being between 10:00 PM and 7:00 AM), the incremental significant impact threshold would be 3 dBA $L_{eq(1)}$ (if the No-Action noise level is 61 dBA $L_{eq(1)}$, the maximum incremental increase would be 4 dBA, since an increase higher than this would result in a noise level higher than the 65 dBA $L_{eq(1)}$ threshold).

III. NOISE PREDICTION METHODOLOGY

Proportional Modeling

Proportional modeling was used to determine No-Action and With-Action noise levels at one receptor location on Empire Boulevard, which is discussed in more detail below. Proportional modeling is one of the techniques recommended in the New York City *2012 CEQR Technical Manual* for mobile source analysis.

Using this technique, the prediction of future noise levels, where traffic is the dominant noise source, is based on a calculation using measured existing noise levels and predicted changes in traffic volumes to determine No-Action and With-Action noise levels. Vehicular traffic volumes, which are counted during the noise recording, are converted into Passenger Car Equivalent (PCE) values, for which one medium-duty truck (having a gross weight between 9,900 and 26,400 pounds) is assumed to generate the noise equivalent of 13 cars, and one heavy-duty truck (having a gross weight of more than 26,400 pounds) is assumed to generate the noise equivalent of 47 cars, and one bus (vehicles designed to carry more than nine passengers) is assumed to generate the noise equivalent of 18 cars. Future noise levels are calculated using the following equation:

FNA NL =10 log (NA PCE/E PCE) + E NL

where:

FNA NL = Future No-Action Noise Level
NA PCE = No-Action PCEs
E PCE = Existing PCEs
E NL = Existing Noise Level

Sound levels are measured in decibels and therefore increase logarithmically with sound source strength. In this case, the sound source is traffic volumes measured in PCEs. For example, assume that traffic is the dominant noise source at a particular location. If the existing traffic volume on a street is 100 PCE and if the future traffic volume were increased by 50 PCE to a total of 150 PCE, the noise level would increase by 1.8 dBA. Similarly, if the future traffic were increased by 100 PCE, or doubled to a total of 200 PCE, the noise level would increase by 3.0 dBA.

Analyses for the proposed development were conducted for three typical weekday time periods: the AM peak hour (8:00 AM to 9:00AM), the midday peak hour (12:00 PM to 1:00 PM), and the PM peak hour (5:00 PM to 6:00 PM). These time periods are the hours when the maximum traffic generation is expected and, therefore, the hours when future conditions with the proposed action are most likely to result in maximum noise impacts for the receptor locations.

For the purpose of this analysis, during the noise recording vehicles were counted and classified. To calculate the No-Action PCE values in Brooklyn, an annual background growth rate of 0.5 percent for the Build-Year of 2016 was added to the PCE noise values based on counted vehicles[2]. In order to obtain the necessary future With-Action noise PCE values to calculate the With-Action noise levels, the travel demand forecast discussed in Attachment F, "Transportation" (refer to Table F-2) was used. The total vehicle trips generated per hour were estimated at 45 vehicles for the AM peak hour (, 75 vehicles (73 autos and two trucks) for the midday peak hour, and 56 autos for the PM peak hour.

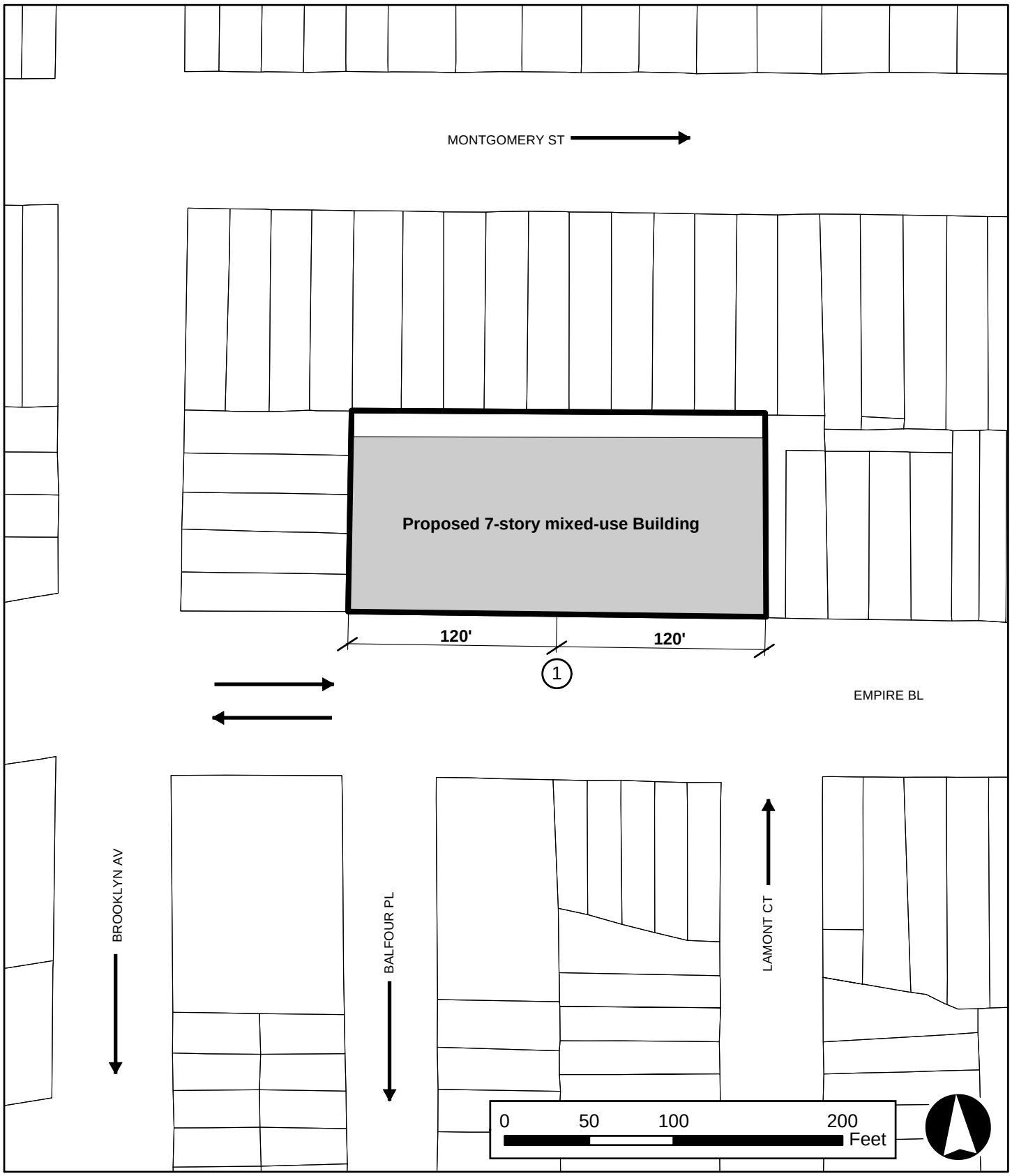
IV. EXISTING CONDITIONS

The project site is located in the Wingate neighborhood of Brooklyn, on the westerly portion of a block bounded by Montgomery Street to the north, Kingston Avenue to the east, Empire Boulevard to the south, and Brooklyn Avenue to the west (Block 1311, Lots 66, 74, 75, and 76). The project site is currently occupied by three buildings, all of which would be demolished to clear the project site for redevelopment.

As shown in Figure G-1, Empire Boulevard is a major two-way, east-west street with one travel lane, a bike lane, and a parking lane in each direction. The rezoning area includes the Empire Boulevard/Brooklyn Avenue and the Empire Boulevard/Lamont Court bus stops of the eastbound B43, across the street from the project site, and the westbound Empire

[2] Calculation according to Table 16-4 in the *2012 CEQR Technical Manual*.

Noise Receptor Location



Legend

Project Site

1 Noise Receptor Location

Street Direction

Boulevard/Brooklyn Avenue bus stop on the northwest corner of Empire Boulevard and Brooklyn Avenue.

Highly trafficked thoroughfares in the surrounding area include several north-south bound thoroughfares, such as the southbound Nostrand Avenue, located one block to the west of the project site, the northbound Rogers Avenue, located two blocks to the west of the project site, as well as Bedford and Utica Avenues, which both are two-way arteries, located in a distance of three and five blocks to the west and east of the project site, respectively. Six blocks to the north and ten blocks to the south of the project site are Eastern Parkway and Clarkson Avenue, two major two-way east-west thoroughfares.

Selection of Noise Receptor Locations

As discussed in Attachment A, "Project Description", the RWCDS associated with the proposed action only identified one projected development site to be constructed at the project site. As mentioned above, traffic is the dominant noise source in the vicinity of the project site. The proposed 7-story development would have one street frontage, located on Empire Boulevard. As a result, one noise receptor location was selected which is located at the halfway point of the proposed building's future street frontage, a distance of approximately 120 feet from the southwest corner of the project site (refer to Figure G-1). The assumption was made that all windows of the proposed development will be operable.

Noise Monitoring

At the receptor location, 20-minute spot measurements of existing noise levels were performed for each of the three weekday noise analysis time periods - AM peak hour (8:00 AM to 9:00 AM), midday peak hour (12:00 PM to 1:00 PM), and PM peak hour (5:00 PM to 6:00 PM). The weather was sunny, with temperatures in the mid-40s.

Equipment Used During Noise Monitoring

The instrumentation used for the measurements was a Brüel & Kjær Type 4189 ½-inch microphone connected to a Brüel & Kjær Model 2250 Type 1 (as defined by the American National Standards Institute) sound level meter. This assembly was mounted at a height of 5 feet above the ground surface on a tripod and at least 6 feet away from any sound-reflecting surfaces to avoid major interference with source sound level that is being measured. The meter was calibrated before and after readings with a Brüel & Kjær Type 4231 sound-level calibrator using the appropriate adaptor. Measurements at each location were made on the A-scale (dBA). The data were digitally recorded by the sound level meter and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_{max}, L_{min}, L_1, L_{10}, L_{50}, and L_{90}. A windscreen was used during all sound measurements except for calibration. Only traffic-related noise was measured; noise from other sources (e.g., emergency sirens, aircraft flyovers, etc.) was excluded from the measured noise levels. Weather conditions were noted to ensure a true reading as follows: wind speed under 12 mph; relative humidity under 90 percent; and temperature above 14°F and below 122°F (pursuant to ANSI Standard S1.13-2005).

Existing Noise Levels at Noise Receptor Location

Measured Noise Levels

Noise monitoring results are shown in Table G-5. Table G-6 shows the existing one-hour equivalent traffic and PCE volumes for the receptor location. Traffic was the dominant noise source at the receptor location, and the values shown reflect the level of vehicular activity on Empire Boulevard during each peak period.

As shown in Table G-5, the highest existing L_{10} value was measured in the AM peak hour (74.7 dBA). The PM peak hour reading was 74.4 dBA, while the MD peak hour reading was the lowest with 73.7 dBA. These values place all three peak hours in the marginally unacceptable exposure category II under existing conditions (pursuant to the *2012 CEQR Technical Manual*).

Table G-5
Existing Noise Levels (in dBA) at the Receptor Location

#	Noise Receptor Location	Time	L_{eq}	L_{max}	L_{min}	L_1	L_{10}	L_{50}	L_{90}	*CEQR* Noise Exposure Category
1	Halfway point of proposed building façade at Empire Boulevard	AM	72.3	91.3	52.4	83.3	**74.7**	67.3	59.1	**Marginally unacceptable II**
		MD	71.3	87.3	51.0	79.1	**73.7**	70.5	59.7	
		PM	71.0	96.2	51.1	79.7	**74.4**	67.3	58.4	

Notes: Field measurements were performed by Philip Habib & Associates on Tuesday, January 8, 2013.
Refer to Figure G-1 for noise monitoring receptor location.

Table G-6
Existing 1-Hour Equivalent Traffic and PCE Volumes for Noise Receptor Locations

Receptor Location: Halfway point of proposed building façade at Empire Boulevard	Cars	Light Trucks	Medium Trucks	Heavy Trucks	Bus	Total # of Vehicles	PCEs
AM Peak Hour	275	21	14	2	2	**314**	**608**
MD Peak Hour	197	28	12	1	1	**239**	**446**
PM Peak Hour Boulevard	302	14	7	0	2	**325**	**443**

Source: Philip Habib & Associates, Count and Vehicle Classification, Tuesday, January 8, 2013.

V. THE FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION)

Using the methodology previously described, future noise levels in the No-Action condition were calculated for the three analysis peak periods in the Build Year 2016. To calculate the future No-Action PCE levels, an annual traffic background growth rate of 0.5 percent was added to the traffic count numbers in order to reflect the 2016 Build Year (refer to Table 16-4 in the *2012 CEQR Technical Manual*). Table G-7 shows the measured existing noise level and

calculated future without the proposed action noise levels at the Empire Boulevard monitoring site.

Comparing future No-Action noise levels with existing noise levels, there would be slight increases of 0.1 dBA in $L_{eq(1)}$ noise levels in each of the peak hours. Increases of less than 3.0 dBA would be barely perceptible, and based upon *2012 CEQR* impact criteria, would not be significant. In terms of *2012 CEQR* noise criteria, the No-Action noise levels would remain in the same noise exposure category as under existing conditions (marginally unacceptable exposure category II).

Table G-7
Future No-Action Noise Levels and total PCE Values at Receptor Location (in dBA)

Time	No-Action PCEs	Existing Leq($_1$)	2016 No-Action $L_{eq(1)}$	Change	2016 No-Action $L_{10(1)}$	*CEQR* Exposure Category
AM	617	72.3	72.4	0.1	**74.8**	**Marginally unacceptable II**
MD	453	71.3	71.4	0.1	**73.8**	
PM	450	71.0	71.1	0.1	**74.5**	

Note: All PCE and noise value are shown for a weekday.

VI. THE FUTURE WITH THE PROPOSED ACTION (WITH-ACTION)

Using the methodology previously described, noise levels in the future with the proposed action were calculated for the three peak analysis periods in the Build Year 2016. To calculate the future With-Action PCE levels, based on the transportation demand forecast shown in Table F-2 in Attachment F, "Transportation", 45 vehicles were added to the AM peak hour, 75 (73 autos and 2 trucks) trips to the MD peak hour, and 56 auto trips to the PM peak hour no-action traffic count numbers for the receptor location. Table G-8 shows noise levels in the RWCDS in Build Year 2016.

Table G-8
Future With-Action Noise Levels and total PCE Values at Receptor Location (in dBA)

Time	With-Action PCEs	2016 No-Action Leq($_1$)	2016 With-Action $L_{eq(1)}$	Change	2016 With-Action $L_{10(1)}$	*CEQR* Exposure Category
AM	662	72.4	72.6	0.1	**75.0**	**Marginally unacceptable II**
MD	554	71.4	72.2	0.7	**74.6**	
PM	506	71.1	71.5	0.4	**74.9**	

Note: All PCE and noise value are shown for a weekday.

Comparing the future With-Action noise levels with No-Action noise levels, the maximum increase in $L_{eq(1)}$ noise level would be 0.7 dBA in the MD peak hour (refer to Table G-8). In the PM peak hour, the increase in $L_{eq(1)}$ would be 0.4 dBA, and in the AM peak hour would be the lowest increase of 0.1 dBA. Increases of this magnitude would not be perceptible, and based upon *2012 CEQR* impact criteria would not be significant. In terms of *2012 CEQR* noise

criteria, future With-Action noise levels would remain in the same noise exposure category as they are under the future No-Action condition (marginally unacceptable exposure category II).

VII. ATTENUATION REQUIREMENTS

As discussed previously, recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower for residential and community facility uses, and 50 dBA or lower for retail and office uses, and are determined based on exterior $L_{10(1)}$ noise levels. The results of the building attenuation analysis are summarized in Table G-9.

To ensure that acceptable interior noise levels are provided at the proposed mixed-use building, the building designs for all building frontages would be required to provide at least the level of building attenuation specified in Table G-9.

Table G-9
Attenuation Values to Achieve Interior Noise Levels of 45 and 50 dBA

Building Facade at Empire Boulevard	With-Action Max. L_{10} (dBA)	Attenuation Required*
Residential and Community Facility Use (second through seventh floors)	**75.0 dBA**	**31 dBA**
Local Retail Use/FRESH Supermarket (ground floor)		**26 dBA**

* Attenuation level for commercial uses requires 5 dBA less than for residential and community facility uses to ensure an interior noise environment of 50 dBA in a closed window condition.

To ensure the implementation of the specified attenuation requirements, an (E) designation for noise would be applied to the project site (Block 1311, Lots 66, 74, 75, and 76), specifying the appropriate minimum amount of window/wall attenuation required (refer to Table G-9).

Several noise window/wall attenuation features will be included in the building designs to ensure that acceptable interior noise levels are provided. These include standard well-sealed double-glazed windows and closed windows with alternate means of ventilation. Alternate means of ventilation include, but are not limited to central air conditioning or air conditioning sleeves containing air conditioners.

To implement the specified attenuation requirements shown in Table G-9, an (E) designation for noise would be required for the project site, specifying the appropriate minimum amount of window/wall attenuation required for the façades of the proposed building. The text for the (E) designation for the project site (Block 1311, Lots 66, 74, 75, and 76) requiring attenuation of 31 dBA for residential and community facility uses, and 26 dBA for local retail uses for all four building facades is as follows:

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed window condition with a minimum of 31 dB(A) window/wall attenuation in all façades in order to maintain an interior noise level of 45 dB(A) for residential use. In order to maintain a closed-window condition, an alternate means of ventilation must

also be provided. Alternate means of ventilation include, but are not limited to, central air conditioning. The required window/wall attenuation for future commercial uses would be 5 dB(A) less than that for residential uses.

These measures would ensure that an acceptable exterior to interior noise attenuation is achieved based on expected With-Action noise conditions at the project site. Therefore, no significant adverse noise impacts are expected to occur as a result of the proposed action.

VIII. OTHER NOISE CONCERNS

Mechanical Equipment

No detailed designs of the buildings' mechanical systems (i.e., heating, ventilation, and air conditioning systems) are available at this time. However, those systems will be designed to meet all applicable noise regulations and requirements, and would be designed to produce noise levels which would not result in any significant increases in ambient noise levels.

Aircraft Noise

An initial aircraft noise impact screening analysis would be warranted if the new receptor would be located within one mile of an existing flight path, or cause aircraft to fly through existing or new flight paths over or within one mile of a receptor. Since the rezoning area is not within one mile of an existing flight path, no initial aircraft noise impact screening analysis is warranted.

Train Noise

An initial train noise impact screening analysis would be warranted if the new receptor would be located within 1,500 feet of an existing rail facility and generally having a direct line of sight to the rail facility. Since the rezoning area is not within 1,500 feet of a rail facility, no initial train noise impact screening analysis is warranted.

IX. CONCLUSION

Under the With-Action condition, the peak period L_{10} values at the receptor location would range from a minimum of 74.6 dBA to a maximum of 75.0 dBA. Since the relative increases of L_{eq} values are below 3.0 dBA when compared to the No-Action condition (refer to Tables G-7 and G-8 for No-Action and With-Action L_{eq} values), no significant adverse impacts due to project-generated traffic would occur.

Attenuation of Project Site

Proposed Building Facades

The maximum With-Action L_{10} value falls within the 73 to 76 dBA range (75.0 dBA). According to the *2012 CEQR Technical Manual*, this would place the Empire Boulevard frontage of the RWCDS building within the marginally unacceptable exposure category II (refer to Tables G-3 and G-4). As the RWCDS development on the project site would introduce residential and community facility uses into an area where With-Action exterior noise levels would exceed 73 dBA, the proposed development would need to provide window-wall attenuation of at least 31 dBA in order to achieve a 45 dBA interior noise level for residential and community facility uses (second through seventh floor façade portions), and 26 dBA to achieve a 50 dBA interior noise level for local retail uses (ground floor façade portions).

Implementation

To implement the specified attenuation requirements shown in Table G-9, an (E) designation for noise would be required for the project site, specifying the appropriate minimum amount of window/wall attenuation required for each building façade. The (E) designation text would be as follows:

In order 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 in all façades in order to maintain an interior noise level of 45 dBA for residential use. In order to maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation include, but are not limited to, central air conditioning. The required window/wall attenuation for future commercial uses would be 5 dBA less than that for residential uses.

With the above mentioned controls in place, no significant adverse impacts related to noise would result from the RWCDS.

APPENDIX 1
NYC LPC ENVIRONMENTAL REVIEW LETTER

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 10DCP020K
Project: EMPIRE BOULEVARD REZONING
Date received: 9/23/2013

Comments:

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 529 EMPIRE BOULEVARD, BBL: 3013110066
2) ADDRESS: 525 EMPIRE BOULEVARD, BBL: 3013110074
3) ADDRESS: 523 EMPIRE BOULEVARD, BBL: 3013110075
4) ADDRESS: 521 EMPIRE BOULEVARD, BBL: 3013110076



9/23/2013

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 24029_FSO_GS_09232013.doc

THE CITY OF NEW YORK LANDMARKS PRESERVATION COMMISSION
1 Centre Street, 9N, New York, NY 10007 (212) 669-7700 www.nyc.gov/landmarks

RECEIVED
OCT 24 2007
Philip Habib & Assoc.

ENVIRONMENTAL REVIEW

NLA/NL-CEQR-K 10/9/2007

Project number **Date received**

Project: 523 EMPIRE BOULEVARD 3013110075

Properties with no Architectural or archaeological significance:

529 EMPIRE BOULEVARD
525 EMPIRE BOULEVARD
523 EMPIRE BOULEVARD
521 EMPIRE BOULEVARD
EMPIRE BOULEVARD
549 EMPIRE BOULEVARD

24029_FSO_DNP_10122007.doc

10/11/2007

SIGNATURE DATE

APPENDIX 2
PHASE I ENVIRONMENTAL SITE ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT
OF

EMPIRE BOULEVARD REZONING PROJECT
521-529 EMPIRE BOULEVARD
BROOKLYN, NEW YORK 11225

CARDNO ATC PROJECT NO. 15.42645.0002

MAY 3, 2013

Prepared by:

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TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 1
1.1 General Information 1
1.2 Findings and Conclusions Summary 2
1.3 Significant Data Gap Summary 3
1.4 Recommendations 3

2.0 INTRODUCTION 3
2.1 Purpose 4
2.2 Scope 4
2.3 Significant Assumption 5
2.4 Limitations and Exceptions 5
2.5 Special Terms and Conditions (User Reliance) 7

3.0 SITE DESCRIPTION 8
3.1 Location and Legal Description 8
3.2 Surrounding Area General Characteristics 8
3.3 Current Use of the Property 8
3.4 Description of Property Improvements 8
3.5 Current Uses of Adjoining Properties 9

4.0 USER PROVIDED INFORMATION 11
4.1 Title Records 11
4.2 Environmental Liens or Activity and Use Limitations (AULs) 11
4.3 Specialized Knowledge 11
4.4 Significant Valuation Reduction for Environmental Issues 11
4.5 Owner, Property Manager and Occupant Information 11
4.6 Reason for Performing Phase I ESA 11
4.7 Other User Provided Documents 11

5.0 RECORDS REVIEW 12
5.1 Standard Environmental Records 12
5.1.1 Federal Agency Database Findings 13
5.1.2 State and Tribal Database Findings 13
5.1.3 Local Environmental Records Sources 14
5.2 Physical Setting Sources 16
5.2.1 Topography 16
5.2.2 Geology 16
5.2.3 Soils 16
5.2.4 Hydrology 16
5.2.5 Other Physical Setting Sources 16
5.3 Historical Records Sources 17
5.3.1 Aerial Photographs 18
5.3.2 Fire Insurance Maps 19
5.3.3 Property Tax Files 20
5.3.4 Recorded Land Title Records 20
5.3.5 Historical USGS Topographic Quadrangles 20
5.3.6 City Directories 20

5.3.7 Building Department Records 22
5.3.8 Zoning/Land Use Records 23
5.3.9 Prior Reports 23
5.3.10 Other Historical Sources 24

6.0 SITE RECONNAISSANCE 25
6.1 Methodology and Limiting Conditions 25
6.2 Hazardous Substance Use, Storage, and Disposal 25
6.3 Underground Storage Tanks (USTs) 25
6.4 Aboveground Storage Tanks (ASTs) 25
6.5 Other Petroleum Products 25
6.6 Polychlorinated Biphenyls (PCBs) 25
6.7 Unidentified Substance Containers 26
6.8 Nonhazardous Solid Waste 26
6.9 Wastewater 26
6.10 Waste Pits, Ponds and Lagoons 26
6.11 Sumps 26
6.12 Septic Systems 26
6.13 Stormwater Management System 26
6.14 Wells 26

7.0 INTERVIEWS 27

8.0 OTHER ENVIRONMENTAL CONDITIONS 28
8.1 Asbestos-Containing Material (ACM) 28
8.2 Radon 28
8.3 Lead in Drinking Water 28
8.4 Lead-Based Paint (LBP) 28
8.5 Mold Screening 29
8.6 Additional User Requested Conditions 29

9.0 REFERENCES 30

10.0 APPENDICES 31

APPENDIX A SITE VICINITY MAP
APPENDIX B SITE PLAN
APPENDIX C SITE PHOTOGRAPHS
APPENDIX D USER PROVIDED DOCUMENTATION
APPENDIX E REGULATORY DATABASE REPORT
APPENDIX F AERIAL PHOTOGRAPHS
APPENDIX G HISTORICAL RESEARCH DOCUMENTATION
APPENDIX H PRIOR REPORTS
APPENDIX I RESUMES
APPENDIX J RECORDS OF COMMUNICATION
APPENDIX K LABORATORY REPORTS
APPENDIX L OTHER SUPPORTING DOCUMENTATION
APPENDIX M TERMINOLOGY

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Empire Boulevard Rezoning Project
521-529 Empire Boulevard
Brooklyn, New York

1.0 EXECUTIVE SUMMARY

1.1 General Information

Project Information:
Empire Boulevard Rezoning Project
15.42645.0002

Consultant Information:
Cardno ATC
104 East 25th Street, 10th Floor
New York, New York, 10010
Telephone: 212-353-8280
Fax: 212-979-8447
Reconnaissance Date: January 21, 2013
Site Assessor: Jed Myers
Senior Reviewer: Matthew Mankovich
Environmental Professional: Jed Myers

Site Information:
Empire Boulevard Rezoning Project
521-529 Empire Boulevard
Brooklyn, New York 11225
Kings County

Site Access Contact:
Alberto Forbes
Building Superintendent

Client Information:
529 Empire Realty Corporation
Mr. Joseph Douek
298 Fifth Avenue
New York, New York 10001

Environmental Professional Statement:
I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in § 312.10 part of 40 CFR 312. We have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Jed A. Myers, Senior Project Manager
Environmental Professional



Matthew Mankovich, Senior Project Manager
Senior Reviewer



Jed A. Myers, Senior Project Manager
Site Assessor

1.2 Findings and Conclusions Summary

Cardno ATC has performed this Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Standard Practice E 1527-05. Any exceptions to, or deletions from, this practice are described in Section 2.0 of this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the property.

FINDINGS AND CONCLUSIONS SUMMARY

Report Section		Further Action?	De Minimis Condition	Recognized Environmental Condition (REC)	Historical REC	ASTM Non-Scope Condition	Description
4.0	User Provided Information	No					
5.1.1	Federal Database Findings	No					
5.1.2	State and Tribal Database Findings	No					
5.1.3	Local Environmental Record Sources	No					
5.3	Historical Records Sources	No					
6.2	Hazardous Substance Use, Storage and Disposal	No					
6.3	Underground Storage Tanks	Yes					Potential presence of historic fuel oil tank(s) at the property. Refer to note (1) below.
6.4	Aboveground Storage Tanks	No					
6.5	Other Petroleum Products	No					
6.6	Polychlorinated Biphenyls (PCBs)	Yes				X	See Note 2
6.7	Unidentified Substance Containers	No					
6.8	Nonhazardous Solid Waste	No					
6.9	Wastewater	No					
6.10	Waste Pits, Ponds and Lagoons	No					
6.11	Sumps	No					
6.12	Septic Systems	No					
6.13	Stormwater Management System	No					
6.14	Wells	No					
7.0	Interviews	No					
8.1	Asbestos-Containing Material (ACM)	Yes				X	See Note 3
8.2	Radon	No					
8.3	Lead in Drinking Water	No					
8.4	Lead-Based Paint (LBP)	Yes				X	See Note 4
8.5	Mold Screening	No					
8.6	Additional User Requested Conditions	No					

1. The review of the certificates of occupancy available for the lot 66 of the property identified a fire department approval for installation of fuel oil tank(s) in 1955. The characteristics of the tank(s) are not provided and the property was not listed on the aboveground storage tank (AST) or underground storage tank (UST) databases included in the Environmental Data Resources, Inc. (EDR) database report reviewed. In an attempt to obtain more information on status and characteristic of the fuel oil tank(s), Cardno ATC submitted a Freedom of Information Law (FOIL) request to the New York City Fire Department; however a response was not received by the time this draft report was issued. The potential presence of a historic tank at the property is considered to represent an environmental concern.

2. Cardno ATC observed fluorescent lights throughout the property buildings. Fluorescent light ballasts manufactured prior to 1979 may contain small quantities of polychlorinated biphenyls (PCBs). Inspection of light ballasts was beyond the scope of this assessment. However, no indications or staining or leaking associated with the ballasts were noted. Given the pre-1940 construction data of the property buildings, the ballasts may contain PCBs.

3. Suspect asbestos containing materials (ACM) observed during the course of the assessment included acoustical ceiling tiles, cove base molding, mastic and vinyl floor tiles, wallboard and some roofing components. All suspect materials were observed in good condition. Based on the observed condition of the suspect ACM, Cardno ATC did not identify any immediate exposure concerns.

4. The property building's interior painted surfaces were generally found to be in good condition with no evidence of damage or disrepair. Therefore, based on observations no immediate concerns were identified pertaining to lead based paint (LBP). However given the fact that the buildings were constructed prior to 1978, LBP is likely present.

1.3 Significant Data Gap Summary

Data gaps may have been encountered during the performance of this Phase I ESA and are discussed within the section of the report where they were encountered. However, according to ASTM Standard Practice E 1527-05, data gaps are only significant if "other information and/or professional experience raise reasonable concerns involving the data gap." The following is a summary of *significant data gaps* identified in this report.

SIGNIFICANT DATA GAP SUMMARY

Report Section		Description
3.5	Current Uses of Adjoining Properties	No *significant data gap* identified.
4.2	Environmental Liens or Activity and Use Limitations (AULs)	Lien search not available.
5.1	Standard Environmental Records	No *significant data gap* identified.
5.2	Physical Setting Sources	No *significant data gap* identified.
5.3	Historical Records Sources	No *significant data gap* identified.
6.1	Methodology and Limiting Conditions	No *significant data gap* identified.
7.0	Interviews	No *significant data gap* identified.

1.4 Recommendations

Based on information collected from the Phase I ESA, Cardno ATC offers the following recommendations for further action:

- A follow up with the New York Fire Department in order to obtain information pertaining to the historical fuel oil tank(s) identified as a result of the buildings records review.
- Areas scheduled for future renovation or demolition should be thoroughly surveyed for suspect ACM materials that may be impacted, pursuant to applicable federal, state and local regulations. In addition, Cardno ATC recommends that the suspect ACM that will not be affected by future renovation or demolition activities be managed under an asbestos Operation and Maintenance (O&M) Plan developed for the property.
- Areas scheduled for future renovation or demolition should be thoroughly surveyed for suspect LBP materials that may be impacted. If future activities impact suspect LBP that has not been previously tested, the suspect materials should be assumed to be lead-containing until future testing determines otherwise. All work activities, waste management, and work protection should be undertaken in accordance with all applicable regulations relating to potential LBP.
- If leaking light ballasts are identified in the future and/or ballasts are removed during renovations, they should be inspected for labeling regarding the PCB-classification and disposed of in accordance with applicable regulations.

2.0 INTRODUCTION

2.1 Purpose

The purpose of this Phase I ESA was to identify *recognized environmental conditions* and certain potential environmental conditions outside the scope of ASTM Standard Practice E 1527-05 in connection with the property at the time of the site reconnaissance. This report documents the findings, opinions and conclusions of the Phase I ESA.

2.2 Scope

This Phase I ESA was conducted in general accordance with the ASTM Standard Practice E 1527-05, consistent with a level of care and skill ordinarily practiced by the environmental consulting profession currently providing similar services under similar circumstances. Significant additions, deletions or exceptions to ASTM Standard Practice E 1527-05 are noted below or in the corresponding sections of this report. The scope of this assessment included an evaluation of the following:

- Physical setting characteristics of the property through a review of referenced sources such as topographic maps and geologic, soils and hydrologic reports.
- Usage of the property, adjoining properties and surrounding area through a review of referenced historical sources such as land title records, fire insurance maps, city directories, aerial photographs, prior reports and interviews.
- Observations and interviews regarding current property usage and conditions including: the use, treatment, storage, disposal or generation of hazardous substances, petroleum products, hazardous wastes, nonhazardous solid wastes and wastewater.
- Usage of adjoining and surrounding area properties and the likely impact of known or suspected releases of hazardous substances or petroleum products from those properties on the property.
- Information in referenced environmental agency databases and local environmental records, within the specified approximate minimum search distance from the property.

The scope of the assessment also included consideration of the following environmental issues or conditions that are beyond the scope of ASTM Standard Practice E 1527-05:

- The scope of work for the Mold Screening was intended to be consistent with ASTM E 2418-06: Standard Guide for Readily Observable Mold and Conditions Conducive to Mold in Commercial Buildings: Baseline Survey Process. The scope of work, including potential deviations from the Standard Guide, is described as follows. The interview was limited to at least one knowledgeable person from property management or engineering staff. The document review was limited to only those relevant documents made readily available to Cardno ATC in a timely manner. The physical observations were limited to certain Heating, Ventilation and Air Conditioning (HVAC) system areas and other readily accessible building areas likely to become subject to water damage, plumbing leaks, and flooding. Unless noted otherwise herein, Cardno ATC observed the HVAC equipment room(s) and accessible mechanical rooms and, in buildings with package units in the ceiling, at least one unit per floor. Also, unless noted otherwise, Cardno ATC observed accessible areas of the basement (or lowest level), the top floor, the roof (including any penthouse areas) and at least one mid-level floor (if applicable). For multi-story buildings, the total number of floors observed (inclusive of those already mentioned) was intended to be up to 10% of the total number of floors (if readily accessible). For hotel and multi-family buildings, Cardno ATC targeted the lowest and highest levels and roof as described above and up to 10% of units, including one per floor if readily accessible. The Mold Screening did not include destructive methods of observation. No sampling or laboratory analyses were conducted. The Mold Screening service as described herein was limited in scope and by the time and cost considerations typically associated with performing a Phase I ESA. No method can guarantee that a hazard will be discovered if evidence of the hazard is not encountered within the performance of the Mold Screening as authorized and that opinions and conclusions must, out of necessity, be extrapolated from limited information and discrete, non-continuous data points. Unidentified mold or other microbial conditions may exist on the property.
- Visual observation of suspect asbestos-containing materials (ACM), consisting of providing an opinion on the condition of suspect ACM on the property based upon visual observation during the site reconnaissance. No sampling of suspect ACM was conducted.
- Radon document review, consisting of the review of published radon data with regard to the potential for elevated levels of radon gas in the surrounding area of the property. No radon sampling was conducted.
- Lead in Drinking Water Data review, consisting of contacting the water supplier for information regarding whether or not the potable water provided to the property meets the drinking water standards for lead.
- Visual observation of Lead-based paint (LBP), consisting of providing an opinion on the potential for suspect LBP based on the construction date of buildings on the property and visual observation of the condition of suspect LBP.
- Wetlands document review, consisting of a review of a current National Wetlands Inventory map of the surrounding area to note if the property is identified as having a wetland.
- Flood plain document review, consisting of a review of a reasonably ascertainable flood plain map of the surrounding area to note if the property is identified as being located within a flood plain.

2.3 Significant Assumption

The assumptions in this report were not considered as having significant impact on the determination of *recognized environmental conditions* associated with the property.

2.4 Limitations and Exceptions

Cardno ATC has prepared this Phase I ESA report using reasonable efforts to identify *recognized environmental conditions* associated with hazardous substances or petroleum products at the property. Findings contained within this report are based on information collected from observations made on the day(s) of the site reconnaissance and from reasonably ascertainable information obtained from certain public agencies and other referenced sources.

The ASTM Standard Practice E 1527-05 recognizes inherent limitations for Phase I ESAs, including, but not limited to:

- *Uncertainty Not Eliminated* – A Phase I ESA cannot completely eliminate uncertainty regarding the potential for *recognized environmental conditions* in connection with any property.
- *Not Exhaustive* – A Phase I ESA is not an exhaustive investigation of the property and environmental conditions on such property.

- *Past Uses of the Property* – Phase I requirements only require review of standard historical sources at five year intervals. Therefore, past uses of property at less than five year intervals may not be discovered.

Users of this report may refer to ASTM Standard Practice E 1527-05 for further information regarding these and other limitations. This report is not definitive and should not be assumed to be a complete and/or specific definition of all conditions above or below grade. Current subsurface conditions may differ from the conditions determined by surface observations, interviews and reviews of historical sources. The most reliable method of evaluating subsurface conditions is through intrusive techniques, which are beyond the scope of this report. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other property construction purposes. Any use of this report by any party, beyond the scope and intent of the original parties, shall be at the sole risk and expense of such user.

Cardno ATC makes no representation or warranty that the past or current operations at the property are, or have been, in compliance with all applicable federal, state and local laws, regulations and codes. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated. Regardless of the findings stated in this report, Cardno ATC is not responsible for consequences or conditions arising from facts not fully disclosed to Cardno ATC during the assessment.

An independent data research company provided the government agency database referenced in this report. Information on surrounding area properties was requested for approximate minimum search distances and is assumed to be correct and complete unless obviously contradicted by Cardno ATC's observations or other credible referenced sources reviewed during the assessment. Cardno ATC shall not be liable for any such database firm's failure to make relevant files or documents properly available, to properly index files, or otherwise to fail to maintain or produce accurate or complete records.

Cardno ATC makes no warranty, guarantee or certification regarding the quality, accuracy or reliability of any prior report provided to Cardno ATC and discussed in this Phase I ESA report. Cardno ATC expressly disclaims any and all liability for any errors or omissions contained in any prior reports provided to Cardno ATC and discussed in this Phase I ESA report.

Cardno ATC used reasonable efforts to identify evidence of aboveground and underground storage tanks and ancillary equipment on the property during the assessment. "Reasonable efforts" were limited to observation of accessible areas, review of referenced public records and interviews. These reasonable efforts may not identify subsurface equipment or evidence hidden from view by things including, but not limited to, snow cover, paving, construction activities, stored materials and landscaping.

Any estimates of costs or quantities in this report are approximations for commercial real estate transaction due diligence purposes and are based on the findings, opinions and conclusions of this assessment, which are limited by the scope of the assessment, schedule demands, cost constraints, accessibility limitations and other factors associated with performing the Phase I ESA. Subsequent determinations of costs or quantities may vary from the estimates in this report. The estimated costs or quantities in this report are not intended to be used for financial disclosure related to the Financial Accounting Standards Board (FASB) Statement No. 143, FASB Interpretation No. 47, Sarbanes/Oxley Act or any United States Securities and Exchange Commission reporting obligations, and may not be used for such purposes in any form without the express written permission of Cardno ATC.

Cardno ATC is not a professional title insurance or land surveyor firm and makes no guarantee, express or implied, that any land title records acquired or reviewed in this report, or any physical descriptions or depictions of the property in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Empire Boulevard Rezoning Project
521-529 Empire Boulevard
Brooklyn, New York

The Environmental Professional Statement in Section 1.1 of this report does not "certify" the findings contained in this report and is not a legal opinion of such *Environmental Professional*. The *Environmental Professional* Statement is intended to document Cardno ATC's opinion that an individual meeting the qualifications of an Environmental Professional was involved in the performance of the assessment and that the activities performed by, or under the supervision of, the *Environmental Professional* were performed in conformance with the standards and practices set forth in 40 CFR Part 312 per the methodology in ASTM Standard Practice E 1527-05 and the scope of work for this assessment.

Per ASTM Standard Practice E 1527-05, Section 6, User Responsibilities, the User of this assessment has specific obligations for performing tasks during this assessment that will help identify the possibility of *recognized environmental conditions* in connection with the property. Failure by the User to fully comply with the requirements may impact their ability to use this report to help qualify for *Landowner Liability Protections* (LLPs) under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Cardno ATC makes no representations or warranties regarding a User's qualification for protection under any federal, state or local laws, rules or regulations.

In accordance with the ASTM Standard Practice E 1527-05, this report is presumed to be valid for a six month period. If the report is older than six months, the following information must be updated in order for the report to be valid: (1) regulatory review, (2) site visit, (3) interviews, (4) specialized knowledge and (5) environmental liens search. Reports older than one year may not meet the ASTM Standard Practice 1527-05 and therefore, the entire report must be updated to reflect current conditions and property-specific information.

Other limitations and exceptions that are specific to the scope of this report may be found in corresponding sections.

2.5 Special Terms and Conditions (User Reliance)

This report is for the use and benefit of, and may be relied upon by, 529 Empire Realty Corporation, and any of its affiliates and their respective successors and assigns, in connection with a commercial real estate transaction involving the property. No third party is authorized to use this report for any purpose. Any use by or distribution of this report to third parties, without the express written consent of Cardno ATC, is at the sole risk and expense of such third party.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The property consists of four (4) parcels of land identified as 521 Empire Boulevard, 523 Empire Boulevard, 525 Empire Boulevard and 529 Empire Boulevard in Brooklyn, Kings County, New York. The Site Vicinity Map is located in Appendix A. The Site Plan is located in Appendix B. Site Photographs are provided in Appendix C. According to information obtained from the New York City Department of Finance, the Site is identified as Block 1311, Lot 66 (529 Empire Boulevard), Lot 74 (525 Empire Boulevard), Lot 75 (523 Empire Boulevard) and Lot 76 (521 Empire Boulevard). According to the New York City Department of Building (NYCDOB) records, the following additional addresses are listed for Lot 66: 527 – 547 Empire Boulevard.

3.2 Surrounding Area General Characteristics

The property is located within the borough of Brooklyn in New York City which is mainly developed with mixed commercial/retail and residential usage. Specific adjacent and abutting properties are summarized in Section 3.5. General topography of the property area slopes downward to the south; the elevation of the northern adjoining properties is at the level of the second floor of the buildings on the property.

3.3 Current Use of the Property

The property is currently depicted with the following improvements:

- Lots 75 and 76 (521-523 Empire Boulevard) are occupied with an exterior parking lot; a storage shed and awning is present in the northwest corner of the parking lot.
- Lot 74 (525 Empire Boulevard) is occupied with a three-story residential building with a basement and a two-story family house located in the backyard; the first floor of the three-story building was formerly occupied with a pharmacy, but is currently vacant; the second and third floors are occupied with residential units and the basement is used for mechanical equipment. The two-story family house is occupied with a residence. No access was granted to the interior of the two-story family house.
- Lot 66 (529 Empire Boulevard) is occupied with a two-story building with a partial basement; the first floor is occupied with a supermarket and a former medical center that is currently vacant; the second floor is used as a book storage warehouse and offices; a bike shop is present on a portion of both the 1st and 2nd floors; and a partial basement is present that is used for mechanical equipment.

3.4 Description of Property Improvements

The following table provides general descriptions of the property improvements.

PROPERTY IMPROVEMENTS	
Size of Property (approximate)	28,700 square feet
General Topography of Property	General topography of the property slopes downward to the south
Adjoining and/or Access/Egress Roads	Access to the property is available through Empire Boulevard
Paved or Concrete Areas (including parking)	Asphalt paved parking lot and concrete sidewalks along front exterior of the property.
Unimproved Areas	None
Landscaped Areas	None
Surface Water	No surface water was observed on the property.

PROPERTY IMPROVEMENTS	
Potable Water Source	New York City Department of Environmental Protection (NYCDEP)
Sanitary Sewer Utility	NYCDEP
Storm Sewer Utility	NYCDEP
Electrical Utility	Con Ed
Natural Gas Utility	Con Ed
Current Occupancy Status	Approximately 75% occupied
Unoccupied Buildings/Spaces/Structures	Lots 75 and 76 are currently a parking lot
Number of Occupied Buildings	3

Building Name or General Building Description	Lot 66 - One two-story commercial building. Lot 74 - One two-story dwelling and one three-story building.
Number of Floors	two and three floors
Total Square Feet of Space (approximate)	27,700 gross square feet (estimated), according to information provided on the New York City GIS website
Construction Completion Date (year)	Lot 66 in approximately 1935 Lot 74 in approximately 1920
Construction Type	Lot 66 is concrete block. Lot 74 is brick and wood frame.
Interior Finishes Description	Lot 66 -Concrete floors, wood floors, vinyl sheet flooring and ceiling tiles. Plaster and sheetrock walls. Lot 74 – Wood floors, vinyl sheet flooring, plaster and sheetrock walls
Exterior Finishes Description	Lot 66 - Concrete block/ /brick masonry Lot 74 – Brick masonry and vinyl siding
Cooling System Type	Lot 66 - HVAC package units within the medical center. Lot 74 – Tenant window units
Heating System Type	Lot 66 and 74 – Natural gas fired furnaces
Emergency Power	None

3.5 Current Uses of Adjoining Properties

Current uses of the adjoining properties were observed to be as follows:

Direction from Property	Address	Occupant(s) Name	Current Use	Potential Environmental Conditions
North	598-626 Montgomery Street	Multiple one-family houses	Residential	None
South	7 Balfour Place (across from Empire Boulevard)	Multifamily residential building with retail on ground floor (including a book store, a real estate office, a car service office, immigration service office, and laser beauty and skin care)	Residential and commercial	This facility was identified in the aboveground storage tank (AST) database (Refer to section 5.1.2)
South	534-540 Empire Boulevard (across from Empire Boulevard)	Multiple one and two family houses, with retail on first floor (television and radio service and repair)	Residential and commercial	None

Direction from Property	Address	Occupant(s) Name	Current Use	Potential Environmental Conditions
Southwest	441 Brooklyn Avenue (across from Empire Boulevard)	Multifamily residential building with retail on ground floor. One of the retail stores is occupied by a Dry Cleaner "Ellis Cleaners"	Residential and commercial	This adjoining facility is also listed in the AST database (Refer to section 5.1.2)
East	549 Empire Boulevard	Multifamily walk-up building	Residential	None
West	425-439 Brooklyn Avenue	Multifamily residential buildings, with retail stores on the first floor of 439 Brooklyn Avenue	Residential and commercial	None

4.0 USER PROVIDED INFORMATION

The following section summarizes information (if any) provided by 529 Empire Realty Corporation (User) with regard to the Phase I ESA. Documentation may be found in Appendix D or where referenced in this report.

4.1 Title Records

The User provided no title records information.

4.2 Environmental Liens or Activity and Use Limitations (AULs)

The User provided no information regarding property environmental liens or activity and use limitations (AULs). Cardno ATC contracted Environmental Data Resources (EDR) to perform an environmental lien search for the property. As of the writing of this report, Cardno ATC had not yet received the search results from EDR. Should a response change the conclusions of this report, Cardno ATC will notify the user. A lack of response from this source represents a data gap; however, considering historical data retrieved and interviews indicating past and current use of the property, coupled with the information observed during the Site reconnaissance, the data gap is not considered to be *significant*.

4.3 Specialized Knowledge or Experience of the User

The User provided no specialized knowledge regarding *recognized environmental conditions* associated with the property.

4.4 Significant Valuation Reduction for Environmental Issues

The User provided no information regarding a significant valuation reduction for environmental issues associated with the property.

4.5 Owner, Property Manager and Occupant Information

The User provided no specific information identifying the property owner, or occupants. The property manager was identified at Mr. Alberto Forbes.

4.6 Reason for Performing Phase I ESA

According to information provided by the User, this Phase I ESA will be used in connection with property redevelopment to identify *recognized environmental conditions* associated with the property.

4.7 Other User Provided Documents

The User provided no other documents as described in the ASTM Standard Practice E 1527-05.

5.0 RECORDS REVIEW

5.1 Standard Environmental Records

The regulatory agency database report discussed in this section, provided by Environmental Data Resources, Inc. (EDR) of Milford, Connecticut, was reviewed for information regarding reported releases of hazardous substances and petroleum products on or near the property. Cardno ATC also reviewed the "unmappable" (also referred to as "orphan") listings within the database report, cross-referencing available address information and facility names. Unmappable sites are listings that could not be plotted with confidence, but are potentially in the general area of the property based on the partial street address, city, or zip code. Any unmappable site that was identified by Cardno ATC as a being within the approximate minimum search distance from the property based on the site reconnaissance and/or cross-referencing to mapped listings, is included in the discussion within this section. The complete regulatory agency database report may be found in Appendix E.

The following is a summary of the findings of the database review.

SUMMARY OF FEDERAL, STATE AND TRIBAL DATABASE FINDINGS

Regulatory Database	Approx. Minimum Search Distance	Property Listed?	# Sites Listed
Federal National Priority List (NPL)	1 mile	No	0
Federal Delisted NPL	½ mile	No	0
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list	½ mile	No	0
Federal CERCLIS No Further Remedial Action Planned (NFRAP)	½ mile	No	0
Federal Resource Conservation and Recovery Act (RCRA), Corrective Action facilities (CORRACTS)	1 mile	No	0
Federal RCRIS non- CORRACTS Treatment, Storage, and Disposal Facilities (TSD)	½ mile	No	0
Federal RCRA Generators	Property & Adjoining	No	0
Federal Institutional Control/Engineering Control Registry	Property	No	0
Federal Emergency Response Notification System (ERNS) list	Property	No	0
State and Tribal CERCLIS	½ mile	No	0
State and Tribal Landfill or Solid Waste Disposal Sites	½ mile	No	0
State and Tribal Leaking Underground Storage Tanks (LTANKS)	½ mile	No	32
State and Tribal Registered Underground Storage Tanks (UST)	Property & Adjoining	No	40
State and Tribal Registered Aboveground Storage Tanks (AST)	Property & Adjoining	No	2
New York State Spills (NY Spills) Site	Site & Adjoining	**Yes**	2
State and Tribal Institutional Control/Engineering Control Registry	Property	No	0
State and Tribal Voluntary Cleanup Site	½ mile	No	0
State and Tribal Brownfield Sites	½ mile	No	0
New York City E Designations	1/8 mile	No	0
State Registered Dry Cleaners	¼ mile	No	5
Manufactured Gas Plants	1 mile	No	2

5.1.1 Federal Agency Database Findings

The property is not listed on the federal agency databases that were reviewed.

Based on distance, topography, assumed groundwater gradient, current regulatory status, and/or the absence of reported releases, none of the sites listed in the federal agency databases are considered to represent a likely past, present or material threat of release on the property.

5.1.2 State and Tribal Database Findings

The following listing(s) with a known or significant potential for release and impact on the property were identified in the state and tribal databases searched:

Service Box #23470
537 Empire Boulevard
Brooklyn, NY
Databases: NY Spills
Approximate Distance from the Site: Target Property
Assumed Groundwater Gradient: N/A
Regulatory Data Summary: According to the EDR database, the property is identified on the NY Spills database with one closed case. Reportedly, New York State Department of Environmental Conservation (NYSDEC) case number 0008455 was generated on October 19, 2000 due to less than one gallon of oil on 25 gallons of water identified in a service box belonging to ConEd. The structure was cleaned out and the case closed on December 17, 2001.
Discussion: Based on the closed status and reported limited amount spilled, this on-property NY Spills listing is not considered to represent a *recognized environmental condition* to the property.

7 Baltour Place
7 Baltour Place
Brooklyn, NY
Databases: Aboveground Storage Tank (AST)
Approximate Distance from the Site: Adjacent to the south
Assumed Groundwater Gradient: Down-gradient
Regulatory Data Summary: According to the EDR database, this adjoining property is listed on the AST database (Petroleum Bulk Storage (PBS) number 2-319546) with one active 5,000-gallon #6 fuel oil AST. No spills or releases have been reported for this adjoining facility.
Discussion: Based on the lack of reported releases and down-gradient position, this AST listing is not considered to represent a *recognized environmental condition* to the property.

Brooklyn Management
441 Brooklyn Place
Brooklyn, NY
Databases: AST
Approximate Distance from the Site: Adjacent to the southwest
Assumed Groundwater Gradient: Down-gradient/Cross-gradient
Regulatory Data Summary: According to the EDR database, this adjoining property is listed on the AST database (PBS number 2-245933) with one active 3,000-gallon #2 fuel oil AST. No spills or releases have been reported for this adjoining facility.
Discussion: Based on the lack of reported releases, this AST listing is not considered to represent a *recognized environmental condition* to the property.

MH 778
Brooklyn Ave/Empire Avenue
Brooklyn, NY
Databases: NY Spills
Approximate Distance from the Site: Approximately 80 feet to the west
Assumed Groundwater Gradient: Cross-gradient
Regulatory Data Summary: According to the EDR database, this nearby ConEd transformer is identified on the NY spills database with one closed case. Reportedly, NYSDEC case number 0202255 was attributed to this facility on June 2, 2002 due to approximately 200-gallons of transformer oil being released onto a concrete vault. Reportedly, there were no releases onto the soil or sewer system. The spill was cleaned up and the spill case was closed on August 21, 2002.
Discussion: Based on the closed status and distance, this NY Spills listing is not considered to represent a *recognized environmental condition* to the property.

Based on distance, topography, assumed groundwater gradient, current regulatory status, and/or the absence of reported releases, none of the other sites listed in the state and tribal databases are considered to represent a likely past, present or material threat of release on the property.

5.1.3 Local Environmental Records Sources

New York City Department of Health and Mental Hygiene (NYCDOHMH)

The NYCDOHMH maintains files of health-related environmental incidents in the City of New York. These incidents may include spills of hazardous chemicals, citizen complaints regarding asbestos issues, lead-based paint violations, or reports of chemical odors or fumes. NYCDOHMH information concerning the property was requested in a Freedom of Information Letter (FOIL). As of the writing of this report, Cardno ATC had not yet received a response from the NYCDOHMH. Should a response change the conclusions of this report, Cardno ATC will notify the Client.

New York City Department of Environmental Protection (NYCDEP)

NYCDEP information concerning the property was requested in a FOIL request. As of the writing of this report, Cardno ATC had not yet received a response from the NYCDEP. Should a response change the conclusions of this report, Cardno ATC will notify the Client.

New York City Fire Department (FDNY)

The FDNY, Bureau of Fire Prevention maintains information pertaining to gasoline and petroleum bulk storage tanks. FDNY information concerning the property was requested in a Record Search Request Application. As of the writing of this report, Cardno ATC had not yet received a response from the FDNY. Should a response change the conclusions of this report, Cardno ATC will notify the Client.

New York City Department of City Planning (NYCDCP)

Cardno ATC reviewed the NYCDCP Zoning Map quadrangle 17b, dated April 6, 2011, from the New York City Department of City Planning (NYCDCP) website (http://www.nyc.gov/html/dcp/home.html), which indicated that the property is located in an area that is currently zoned as "R-5," which designates residential use, with a "C1-3" commercial overlay. The property was not identified as having a City Environmental Quality Review (CEQR) Declaration (also known as an "E" designation). An "E" designation is assigned to certain blocks or lots by a New York City agency (i.e., City Planning Commission) as a result of an environmental assessment performed in conjunction with a zoning map amendment.

New York City Department of Buildings (NYCDOB)

Cardno ATC reviewed available building department information, provided by the NYCDOB via the on-line Building Information System website (http://a810-bisweb.nyc.gov/bisweb/bispi00.jsp#property). The property is designated as Block 1311 Lots 66, 74, 75 and 76. There are no open Environmental Control Board (ECB) violations for the property buildings, but there are 10 open Department of Buildings (DOB) violations for Lot 66. The violations are related to construction and boiler. Further discussion of NYCDOB records is discussed in 5.3.7.

New York City Department of Finance

Cardno ATC reviewed available tax files at the New York City Department of Finance website (http://www.nyc.gov/html/dof/html/home/home.shtml) for information on the property. The current owner of the Site's Block 1311 Lots 66, 75 and 76 is identified as "529 Empire Realty Corp.". The current owner of Lot 74 is identified as "Viceroy 525 Realty LLC". The review of tax files did not identify conditions indicating *recognized environmental conditions* at the property.

Water Utility

Within the City of New York, potable water is supplied to Brooklyn primarily from upstate New York reservoirs. Cardno ATC reviewed New York City's most recent Drinking Water Supply and Quality Report made available through the NYCDEP website (http://www.nyc.gov/html/dep/home.html) for the year 2011. Review of the analytical data provided in the report confirmed that the municipally supplied water meets all drinking water standards established by the United States Environmental Protection Agency Safe Water Drinking Act, including those for lead. No drinking water supply wells exist at the property.

Sewer Utility

The NYCDEP is responsible for the municipal combined sanitary and stormwater sewer system. This system is operational in all five boroughs of New York City, with the exception of certain remote areas of the City, namely Queens and Staten Island, which have separate operating systems for sewage and stormwater. The New York City sewer infrastructure consists of a 6,000-mile grid of sewers beneath the streets, from which a daily 1.3-billion gallon wastewater effluent travels to 14 separate water pollution control plants (WPCPs) throughout the City to be processed. This system enables the City's sewage and stormwater, pursuant to various municipal, state and federal regulations, to be treated to near drinking water-quality standards.

Electrical and Natural Gas Utility Companies

The local utility, Consolidated Edison, provides electric service and natural gas to the property.

Other Local Environmental Records Sources

No additional local environmental records sources were reviewed.

5.2 Physical Setting Sources

5.2.1 Topography

Cardno ATC reviewed the United States Geological Survey (USGS) 7.5 Minute Series *Brooklyn, NY* Quadrangle produced in 1995 as provided in the EDR regulatory database report. According to the topographic map, the elevation of the property is approximately 82 feet above mean sea level. The topography in the general area of the property slopes downwards to the south-southeast. No on-site surface water bodies are depicted on the property on the topographic map.

A copy of the topographic map is included in Appendix A.

5.2.2 Geology

According to the New York Department of Environmental Conservation, Water Power and Control Commission report titled *Ground Water in Bronx, New York, and Richmond Counties, with Summary Data on Kings and Queens Counties, New York City, New York*, the Property area's geology is expected to consist of Pleistocene age glacial till and moraine deposits and glaciofluvial sediments derived from melt-water of the retreating glaciers, which overlies southward dipping bedrock.

5.2.3 Soils

According to EDR, soils beneath the Site are classified as Urban Land, with variable soil textures. Urban Land refers to soils that have been altered by urban development such as buildings and streets, where at least 85 percent of the surface is covered with asphalt, concrete or other impervious building material. Typically, these soils have been mixed with other materials, such as brick and concrete, and characteristics can only be determined by on-site investigation.

5.2.4 Hydrology

In general, regional groundwater flow direction is controlled by regional topography with groundwater flow from higher to lower elevations. For the purposes of this report, the current topographic slope has been used to estimate groundwater flow direction. Generally, groundwater flow typically mimics surface topography and will also tend flow towards nearby bodies of water. Based on this, groundwater at the property is expected to flow in a south-southeast direction.

Estimated groundwater levels and/or flow direction(s) may vary due to seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or dewatering operations.

5.2.5 Other Physical Setting Sources

Flood Plain Map

Cardno ATC reviewed a Flood Insurance Rate Map (FIRM) depicted in the EDR Radius Map regulatory agency database report. According to FIRM map (Community Panel # 360497) shown on the EDR Report, the property is not located within either a 100- and 500-year floodplain zone.

Wetlands Map

ATC determined through a review of the United States Fish and Wildlife Service (USFWS) *National Wetlands Inventory* map, available online (http://www.fws.gov/wetlands/Data/Mapper.html) and the information provided in the EDR report that there are no federally designated wetlands on the property.

Furthermore, no obvious wetland areas were observed on or adjacent to the property during the reconnaissance.

A copy of the National Wetlands Inventory map is included in Appendix L. Please note that this investigation did not include a formal determination relating to the presence of possible wetlands areas.

5.3 Historical Records Sources

The following table summarizes the findings of the research presented below pertaining to historical property and surrounding area uses.

HISTORICAL USE SUMMARY

Period	Identified Historical Uses		Source(s)	Intervals/Comments
	Property	Surrounding Area		
Prior to 1940	Commercial, residential, and vacant	Commercial and residential	Topographic Map (1900, 1924), Sanborn Maps (1888, 1908, 1932), Aerial photograph (1924) and City Directories (1928, 1934)	Data gaps exist between 1900 to 1908, 1908 to 1924, and 1924 to 1932.
1940-1960	Commercial, residential, and vacant	Commercial and residential	Topographic Maps (1947, 1956), Sanborn Map (1951), City Directories (1940, 1945, 1949), and Aerial photograph (1954)	None
1961-1980	Commercial and residential	Commercial, and residential	Topographic Maps (1967, 1979), Sanborn Maps (1963, 1965, 1978, 1979, 1980), Aerial photographs (1966, 1975) and City Directories (1965, 1970, 1973, 1976, 1980)	None
1981 to 2001	Commercial and residential	Commercial, and residential	Topographic Map (1995), Sanborn Maps (1982, 1987, 1988, 1989, 1991, 1992, 1993, 1994, 1995), Aerial photographs (1984, 1994), City Directories (1985, 1992, 1997, 2000)	None
2002-present	Commercial, residential, and vacant	Commercial and residential	Sanborn Maps (2007, 2006, 2005, 2004, 2003, 2002, 2001), Aerial photographs (2006), City Directories (2005, 2007, 2012), and interviews	None

In general, the property was developed with dwellings by at least 1888, with the addition of some sheds by 1908. By 1932, the property is developed similar to the present day configuration, with a commercial retail building, a movie theater, dwellings, and vacant lots. Lot 66 of the property was depicted with a 2-story building occupied by a movie theater from at least 1932 to 1950, a synagogue in 1963, manufacturing on 2nd floor from 1965 to 1993, and commercial on ground floor from 1965 until at least 2007. A medical center has been present on the ground floor of the lot 66 building since at least 1989 through 2007. Lots 75 and 76 were vacant from 1932 until 1980. A used auto sales facility was present on these lots from at least 1982 until 1995. Lot 74 has been depicted with two building (a commercial building and a dwelling) since 1932 until the present.

Surrounding properties in all directions were primarily depicted with commercial retail, apartment buildings with stores and dwellings. A school was depicted at a southern adjacent property in 1932. A manufacturing tenant space was identified on the southern adjoining apartment building from 1987 to 1995.

Available historical information sources researched in this assessment allowed uses of the property to be traced from the present back to 1888 (Sanborn Map). The 1888 map indicated residential development. Since the property was occupied by buildings in 1888 and; therefore, the requirement to research historical uses to the first developed use was not met. However, given that the property use prior to 1888 was likely residential, the use is not considered a likely source of hazardous substance or petroleum product release to the property. Therefore, the data failure does not impact the *recognized environmental condition* determination for the property and the data gap is not considered *significant*. Further, despite the other data gaps noted in the Historical Use Summary table, the property usage appeared unchanged over the period in which the gaps were identified, and; therefore, the data gaps are not s*ignificant data gaps*.

5.3.1 Aerial Photographs

Cardno ATC reviewed available aerial photographs of the property and surrounding areas provided by EDR. Photographs were available for the years 1924, 1954, 1966, 1975, 1984, 1994 and 2006. The 1924 aerial photograph depicts the property with at least six small residential size structures with the remaining portion vacant. The surrounding area to the north and west is developed with residential size structures. The adjoining area to the east is vacant, and the area to the south is mostly vacant with a few small structures. The 1954 aerial photograph shows the property as developed with the current structures. In addition, the surrounding parcels in all directions are developed similar to the current configurations. However, due to the poor resolution of some of the aerial photographs, it is difficult to determine exact development on both the property and surrounding properties.

The review of aerial photographs did not identify past uses indicating *recognized environmental conditions* at the property or surrounding area. Copies of reproducible aerial photographs are included in Appendix F.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Empire Boulevard Rezoning Project
521-529 Empire Boulevard
Brooklyn, New York

5.3.2 Fire Insurance Maps

Cardno ATC reviewed available historical Sanborn fire insurance maps of the property and surrounding areas in order to identify historical land use that may have involved hazardous substances and petroleum products. Historical fire insurance maps from the years 1888 through 2007 were reviewed to determine historical uses of the property. The following table summarizes the descriptions and interpretations from the fire insurance map reviews. Documentation is included in Appendix G.

FIRE INSURANCE MAP SUMMARY

Year	Comments
1888	**Property**: The property is depicted with two dwellings and vacant lots. **Surrounding Area**: Surrounding parcels are depicted with vacant lots and dwellings.
1908	**Property**: The property is depicted with dwellings, sheds, and vacant lots. **Surrounding Area**: Surrounding parcels are depicted with dwellings, sheds, and vacant lots.
1932	**Property**: The property is depicted with a movie theater, commercial retail, dwellings, and vacant lots. **Surrounding Area**: Northern adjacent parcels are labeled as dwellings with garages. Eastern and western adjacent parcels are depicted as commercial retail and dwellings (some with garages). Southern surrounding parcels are depicted with two apartment buildings with stores on the ground floor, dwellings and a school.
1951	**Property**: The property remains relatively unchanged from the 1932 Sanborn map. **Surrounding Area**: Surrounding parcels remain relatively unchanged from the 1932 Sanborn map, with the exception of the school now being labeled as a store.
1963	**Property**: The property is depicted with a synagogue on the 2nd floor of Lot 66, commercial retail, dwellings, and vacant lots. **Surrounding Area**: Surrounding parcels remain relatively unchanged from the 1950 Sanborn map, with the exception of a shoe manufacturer now labeled at an eastern surrounding property.
1965	**Property**: The property remains relatively unchanged from the 1963 Sanborn map, with the exception of the former synagogue now being labeled as manufacturing on the 2nd floor. **Surrounding Area**: Surrounding parcels remain relatively unchanged from the 1963 Sanborn map.
1978, 1979, 1980	**Property**: The property remains relatively unchanged from the 1965 Sanborn map. **Surrounding Area**: Surrounding parcels remain relatively unchanged from the 1965 Sanborn map, with the exception of one of the stores of the southern adjacent apartment building is now labeled as manufacturing.
1982	**Property**: The property remains relatively unchanged from the 1980 Sanborn map, with the exception of the formerly vacant lots at 521-523 Empire Boulevard now being depicted as used auto sales. **Surrounding Area**: Surrounding parcels remain relatively unchanged from the 1980 Sanborn map.
1987, 1988	**Property:** The property remains relatively unchanged from the 1982 Sanborn map. **Surrounding Area:** Surrounding parcels remain relatively unchanged from the 1982 Sanborn map, with the exception of the former shoe manufacturer at an eastern surrounding property now being depicted as a shade manufacturer.
1989, 1991, 1992, 1993, 1994, 1995, 2001, 2002, 2003	**Property:** The property remains relatively unchanged from the 1988 Sanborn map, with the exception of a medical center now being depicted at 541-545 Empire Boulevard by 1989 and manufacturing is no longer identified by 1993. **Surrounding Area:** Surrounding properties remain relatively unchanged from the 1988 Sanborn map.
2004, 2005, 2006, 2007	**Property:** The property remains relatively unchanged from the 2003 Sanborn map, with the exception that the vacant lot is no longer identified as “used car sales”. **Surrounding Area:** Surrounding properties remain relatively unchanged from the 2003 Sanborn map.

The review of fire insurance maps identified manufacturing on the 2nd floor of Lot 66 from 1963 through 1993. Given the fact that the manufacturing operations appeared to occur on the 2nd floor of the building, that there are no drywells or sumps present on the property, and that the area is connected to the municipal sewer system; the past use is not considered a *recognized environmental condition* at the property.

5.3.3 Property Tax Files

Cardno ATC reviewed reasonably ascertainable tax files at the New York City Department of Finance website (http://www.nyc.gov/html/dof/html/home/home.shtml) for historical ownership information pertaining to the property from 2006 through 2012. The table below presents the results of the historical ownership information.

The review of tax files did not identify past uses indicating *recognized environmental conditions* at the property.

TAX RECORDS OWNERSHIP SUMMARY		
Year	**Lot # (of Block 1311 of New York City)**	**Listing**
2006 - 2012	66	529 Empire Realty Corporation
	74	Viceroy 525 Realty LLC
	75	529 Empire Realty Corporation
	76	529 Empire Realty Corporation

5.3.4 Recorded Land Title Records

The acquisition of recorded land title records was not required by the scope of work for the Phase I ESA.

5.3.5 Historical USGS Topographic Maps

ATC reviewed six (6) historical USGS topographic quadrangles of the property and surrounding area dated 1900, 1924, 1947, 1956, 1967, 1979, and 1995. All the maps depict the property and surrounding area as urban land with no structures. The review of historical topographic maps did not identify past uses to indicate any *recognized environmental conditions* for the Site. Copies of the historical topographic maps are included in Appendix G.

5.3.6 City Directories

Research regarding the availability of historical city directories was conducted by EDR. The following are descriptions and interpretations from the historical city directory review. Documentation is included in Appendix G.

CITY DIRECTORY SUMMARY	
Year	**Comments**
1928	**Property**: The property is listed as a movie theater, a construction company, a nut shop, a window cleaning company, and residences. **Surrounding Area**: The surrounding parcels are listed with commercial retail and residences.
1934	**Property:** The property is listed as a movie theater, a barber, and a car service. **Surrounding Area:** The surrounding parcels are listed with multiple residences, a pharmacy (Balfour Pharmacy at 522 Empire Boulevard) and a barber shop.

CITY DIRECTORY SUMMARY	
Year	**Comments**
1940	**Property:** The property is listed with a residence. **Surrounding Area:** Surrounding parcels are listed with multiple residences and a cleaning facility.
1945	**Property**: The property is listed as an interior decorator, an upholsterer, and the Crown theater. **Surrounding Area**: Surrounding parcels are listed with commercial retail and residences.
1949	**Property:** The property is listed as Noble Jewelers, an interior decorator, an upholsterer, a theater, and a corset shop. **Surrounding Area:** Surrounding parcels are relatively unchanged from the 1945 listings.
1960	**Property**: The property is listed with a residence and the Bernstein Bros Supermarket. **Surrounding Area**: Surrounding parcels are listed with food stores, commercial retail, and residential listings.
1965	**Property:** The property is listed with a supermarket, a jeweler, two (2) unspecified companies, and residences. **Surrounding Area:** Surrounding parcels are relatively unchanged from the 1961 listings, with the exception of a jewelry store now being listed.
1970, 1973	**Property:** The property is listed as Crown Heights Taxpayers Civic Association, a lamp company, an importer, a jeweler, and residential. **Surrounding Area:** Surrounding parcels are listed with a carpentry and cabinet making company, a lamp company, commercial retail and various professional/residential listings.
1976	**Property:** The property is listed as Crown Heights Taxpayers Civic Association, a supermarket, a lamp company, an importer, and a jeweler. **Surrounding Area:** Surrounding parcels are listed with commercial retail and various professional/residential listings.
1980	**Property:** The property is listed as Bernstein Bros Supermarket. **Surrounding Area:** Surrounding parcels are relatively unchanged from the 1976 listings.
1985	**Property:** The property is listed as Ideal Store Fixt Inc., a furniture company, and Zep Food Market. **Surrounding Area:** Surrounding parcels are listed with a furniture company, an importer, commercial retail, and residences.
1992	**Property:** The property is listed as Associated Food Store, a trading company, a medical center, and residences. **Surrounding Area:** Surrounding parcels are listed with a car service, a construction company, and residences.
1997	**Property:** The property is listed as Associated Food Store, an auto sales facility, a church, and a medical center. **Surrounding Area:** Surrounding parcels are listed with a car service, a realty company, and residences.
2000	**Property:** The property is listed as Crown Height Maintenance Corp, a shipping company, and a medical center. **Surrounding Area:** Surrounding parcels are listed with a taxi service, a realtor, a barber and residences.
2005	**Property:** The property is listed with Compass Shipping Corp., residential listings, New York Luthern and Empire & Brooklyn Avenue Meat **Surrounding Area:** Surrounding parcels are listed with VIT LLC, Baba Unisex, Beauty Effects, Hyymac Trading Inc, Future Now Realty, Andrews Multi Service and residences.
2007	**Property:** No listings **Surrounding Area:** Surrounding parcels are listed with an upholstery company, Bedstar Car Service, and Future Now Realty.
2012	**Property:** The property is listed with D M Pharmacy Inc., Calperks Trading Company Limited, Lambda Publishers Inc., Hachai Publishing Inc. and Empire Kosher Incorporated **Surrounding Area:** Surrounding parcels are listed with Advanced Laser, upholstery company, Seforimsets Com, Bedstar Car Service, Future Now Realty, and Andrews Multi Service.

The review of city directories did not identify past uses indicating *recognized environmental conditions* at the property or surrounding areas.

5.3.7 Building Department Records

Cardno ATC reviewed available building department information provided by the NYCDOB via the on-line Building Information System website (http://a810-bisweb.nyc.gov/bisweb/bsqpm01.jsp). The property is designated as Block 1311, Lot 76, Lot 75, Lot 74 (525 Empire Boulevard), and Lot 66 (527 – 547 Empire Boulevard). Certificates of Occupancy were available for review for lot 66 of the property. The following table summarizes descriptions and interpretations from the Department of Buildings records review. Copies of the Certificates of Occupancy are included in Appendix G.

LEGAL DESCRIPTION	BUILDING RECORDS REVIEW	ENVIRONMENTAL CONCERNS
Block 1311, Lot 76 Address: 521 Empire Boulevard	No building records were available.	None
Block 1311, Lot 75 Address: 521 Empire Boulevard	No building records were available.	None
Block 1311, Lot 74 Address: 523 Empire Boulevard	One certificate of occupancy is available however due to the poor resolution of document, no information can be obtained.	None
Block 1311, Lot 66 Address: 529 Empire Boulevard	Certificates of occupancy available for 1928, 1935, 1940, 1956, 1997, 1998, 1999 and 2000. The 1928 certificate identifies the building occupied with offices on the second floor and a theater and stores on the ground floor. The 1935 and 1940 certificate identifies the building as occupied with a theater and stores on the ground floor and a school and office on the second floor. The 1956 certificate identifies the building as occupied with offices and manufacturing on the second floor and with retail stores, a public market and a restaurant on the ground floor. This certificate indicates that a fuel oil installation permit was approved by the Fire Department on 03/16/1955. The 1997, 1998 and 1999 certificates identify the Site building occupied with a banquet hall and offices on second floor. These certificates were issued only for the second floor. The 2000 certificate identifies the Site building occupied with a medical center and a supermarket on the ground floor and offices and banquet hall on the second floor. This certificate also refers to the fire department fuel oil installation permit.	Potential presence of historic fuel oil tank(s) at the property.

The review of the certificates of occupancy available for the lot 66 of the property identified a fire department approval for installation of fuel oil tank(s) in 1955. The characteristics of the tank(s) are not provided. In an attempt to obtain more information on status and characteristic of the fuel oil tank, Cardno ATC submitted a FOIL request to the New York City Fire Department; however a response was not received by the time this draft report was issued. The potential presence of a historic tank at the property is considered to represent an environmental concern for the property.

5.3.8 Zoning/Land Use Records

Cardno ATC reviewed available historical zoning/land use records at the NYCDCP website (http://www.nyc.gov/html/dcp/home.html), which indicated that the property is located in an area that is currently zoned as "R-5," which designates residential use, with a "C1-3" commercial overlay. The property was not identified as having a City Environmental Quality Review (CEQR) Declaration (also known as a Little "E" designation). The property has been zoned R-5 with the C1-3 overlay from at least 1961 through 2011. The review of historical zoning/land use records did not identify past uses indicating *recognized environmental conditions* at the property or surrounding area. Documentation is included in Appendix G.

5.3.9 Prior Reports

Cardno ATC reviewed the following previous environmental report for the property: Phase I Environmental Site Assessment of 521-547 Empire Boulevard, Brooklyn, New York; conducted by ATC Associates and dated October 19, 2007. A copy of the prior report is included in Appendix H.

Review of the prior environmental report reflected the same property and nearby property history, and the same use of the property for office, retail and commercial purposes in 2007. The following environmental conditions and recommendations were identified.

- Reference was made to a 1955 Certificates of Occupancy for Lot 66 of the property that identified fire department approval for installation of fuel oil tank(s). The characteristics of the tank(s) were not provided and the property was not listed on the aboveground storage tanks (AST) or underground storage tank (UST) databases included in the EDR database report reviewed. An attempt was made to obtain more information on status and characteristic of the fuel oil tank(s) through a foil request to the New York City Fire Department; however no response was received at the time of the report. The potential presence of the historic tank at the property was considered to represent an environmental concern. ATC recommended a follow up with the New York Fire Department in order to obtain information pertaining to the historical fuel oil tank(s) identified as a result of the building records review.

- ATC observed water-stained ceiling plaster on one wall of the second floor of building on lot 66. The water source appears to be water infiltration originating from the roof; however no mold growth was observed. ATC recommends the repair of the area affected with water intrusion and the repair of the source of the water leak. In addition, it would be prudent to periodically monitor the area of the water leak for future mold growth. Furthermore, ATC suggests management of water intrusion and mold growth under an O&M plan.

- ATC observed various building materials and architectural finishes that are typically considered suspect asbestos containing material (ACM) such as plaster walls, drywall board, terrazzo floors, floor mastics, ceiling tiles and vinyl tiles. ATC observed these materials to be in fair to good condition. Although no testing of these materials was conducted, for purposes of the report, they were assumed to be ACM. Based on observations no immediate concerns were identified. However, ATC recommended that prior to any demolition or construction a thorough inspection of the building be conducted.

- Given that the property was constructed prior to 1978, ATC concluded it is possible that lead based paint (LBP) is present.

The review of the prior report did not identify past uses indicating *recognized environmental conditions* at the property or surrounding area and no recommendations, beyond obtaining documentation regarding the potential fuel oil tanks, and the development of O&M plans for the management of water intrusion/mold and ACM, were offered.
Notwithstanding the qualifications presented below, Cardno ATC concurs with the major findings and conclusions of the prior report, based on the presented report research and represented field findings.

Cardno ATC makes no warranty, guarantee or certification regarding the quality, accuracy or reliability of any prior report provided to Cardno ATC and discussed in this Phase I ESA report. Cardno ATC expressly disclaims any and all liability for any errors or omissions contained in any prior reports provided to Cardno ATC and discussed in this Phase I ESA report.

5.3.10 Other Historical Sources

No other historical sources were reviewed.

6.0 SITE RECONNAISSANCE

The following is a summary of visual and/or physical observations of the property on the day of the site visit. Photographs can be found in Appendix C.

6.1 Methodology and Limiting Conditions

Jed Myers, with Cardno ATC, conducted the site reconnaissance on January 21, 2013 and was escorted by Mr. Alberto Forbes, property superintendent. The site reconnaissance consisted of visual and/or physical observations of: the property and improvements; adjoining sites as viewed from the property; and, the surrounding area based on visual observations made during the trip to and from the property. Unimproved portions of the property (if any) were observed along the perimeter and in a general grid pattern in safely accessible areas, if accessible and possible. Building exteriors (if any) were observed along the perimeter from the ground, unless described otherwise. Building interiors (if any) were observed as they were made safely accessible, unless described otherwise.

6.2 Hazardous Substance Use, Storage, and Disposal

Cardno ATC observed seven 5-gallon containers of paint and water sealer within the basement of 525 Empire Boulevard, and ten 50-pound bags of ice melt on the 1st floor of 525 Empire Boulevard (Lot 74). No spills, stains or evidence of a release were observed in the area of the stored materials. The stored materials are not considered to represent a *recognized environmental condition* to the property.

6.3 Underground Storage Tanks (USTs)

Cardno ATC did not observe evidence of USTs on the property.

6.4 Aboveground Storage Tanks (ASTs)

Cardno ATC did not observe evidence of ASTs on the property.

6.5 Other Petroleum Products

Cardno ATC observed evidence of the use, storage or disposal of other petroleum products on the property as summarized below.

OTHER PETROLEUM PRODUCTS				
Type of Material	**Quantity & Container Type**	**Location**	**Use**	**Condition of Containers & Area**
hydraulic fluid	Approximately 5-gallon metal container	Supermarket rear storage area	Cardboard compactor	Good, no leaks or spills

Given the small quantity and lack of any evidence of spills or leaks, the presence of the hydraulic cardboard compactor is not considered to represent a *recognized environmental condition* to the property.

6.6 Polychlorinated Biphenyls (PCBs)

Cardno ATC did not observe evidence of the use, storage or disposal of PCB-containing transformers, hydraulic lifts, or other equipment on the property. However, fluorescent lights were observed within the property buildings and inspection of light ballast was beyond the scope of this assessment. If leaking ballasts are identified in the future and/or ballasts are removed during renovations, they should be inspected for labeling regarding the PCB-classification and disposed of in accordance with applicable regulations.

6.7 Unidentified Substance Containers

Cardno ATC did not observe the presence of unidentified substance containers on the property.

6.8 Nonhazardous Solid Waste

Cardno ATC observed a 5-yard, non-hazardous, solid waste dumpster and bailed cardboard within an exterior alley on the eastern portion of lot 66. The solid waste and cardboard is collected on a routine basis by a private waste/recycling contractor. No evidence of spillage, staining, or material mismanagement was observed in the identified waste storage area.

6.9 Wastewater

Cardno ATC did not observe evidence of wastewater generated, treated or discharged (including sanitary sewage) on the property or to adjoining properties.

6.10 Waste Pits, Ponds and Lagoons

Cardno ATC did not observe evidence of waste pits, ponds or lagoons on the property.

6.11 Drains and Sumps

Cardno ATC did not observe evidence of drains or sumps on the property.

6.12 Septic Systems

Cardno ATC did not observe evidence of a septic system on the property.

6.13 Stormwater Management System

Cardno ATC did not observe any evidence of surface water, surface impoundments, retention ponds, dry wells, or other stormwater management systems at the property.

Stormwater which gathers on the property is directed to storm water catch basins within Empire Boulevard that are connected to the municipal stormwater management system.

6.14 Wells

Cardno ATC did not observe evidence of wells on the property.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Empire Boulevard Rezoning Project
521-529 Empire Boulevard
Brooklyn, New York

7.0 INTERVIEWS

The following persons were interviewed to obtain information regarding *recognized environmental conditions* in connection with the property:

INTERVIEW SUMMARY

Role	Name	Title/Company	Years Assoc. With Property	Interview Type
Site Manager	Mr. Alberto Forbes	Superintendent of the Site	20 years	In-person
Adjoining property to the southwest	Ellis Drycleaners	Store owner	Unknown	In-person
Local Govt. Official	New York City Fire Department	New York City Fire Department	N/A	FOI letter
Local Govt. Official	New York City Department of Environmental Protection	New York City Department of Environmental Protection	N/A	FOI letter
Local Govt. Official	New York City Department of Health and Mental Hygiene	New York City Department of Health and Mental Hygiene	N/A	FOI letter

Pertinent information from the interviews is discussed in applicable sections of this report with details (including failed attempts to interview) documented on Record of Communication forms in Appendix J.

8.0 OTHER ENVIRONMENTAL CONDITIONS

8.1 Asbestos-Containing Materials (ACM)

Cardno ATC conducted a limited visual survey for the presence of suspect asbestos-containing materials (ACM) within the property buildings. The intent of the building survey was to identify suspect ACM. For the purpose of this survey no destructive means were utilized to gain access to hidden or inaccessible areas such as pipe chases, wet-columns, wall voids and ceiling cavities.

As part of this Phase I ESA, Cardno ATC visually surveyed accessible areas of the building for suspect asbestos-containing materials. In general, Cardno ATC observed various building materials and architectural finishes that are typically considered suspect ACM such as plaster walls, drywall board, floor mastics, ceiling tiles and vinyl tiles throughout the property. Cardno ATC observed these materials to be in fair to good condition. Although no testing of these materials was conducted, for purposes of this report, they have been assumed to be ACM. Based on observations no immediate concerns were identified. However, Cardno ATC did not have access to the 2-story residence on Lot 74. A current O&M plan for asbestos is not present at the property. Based on the criteria included in the scope of work for this assessment, an O&M plan for ACM is recommended.

8.2 Radon

Radon is a naturally occurring colorless, odorless gas that is a by-product of the decay of radioactive materials potentially present in bedrock and soil. The EPA guidance action level for annual residential exposure to radon is 4.0 picoCuries per liter of air (pCi/L). The guidance action level is not a regulatory requirement for private owners of commercial real estate, but is commonly used for comparison purposes to suggest whether further action at a building may be prudent.

Cardno ATC's review of published radon data indicates that the property is located in U.S. EPA Radon Zone 3, an area of low propensity with regard to the potential for elevated levels of radon gas. According to the New York State Department of Health (NYSDOH) only 1.3% of the tested homes within Brooklyn had long-term living areas with radon levels greater than 4.0 pCi/l, and 7% of the basement areas with short-term levels greater than 4.0 pCi/l. Based on this information, Cardno ATC concludes that radon does not represent an environmental concern for the property.

8.3 Lead in Drinking Water

Drinking water is supplied to the property by the City of New York which derives it from surface impoundments in the Croton, Catskill, and Delaware watersheds. Cardno ATC reviewed New York City's most recent Drinking Water Supply and Quality Report made available through the New York City Department of Environmental Protection (NYCDEP) website for the year 2011. Review of the analytical data provided in the report confirmed that the municipally supplied water meets all drinking water standards established by the United States Environmental Protection Agency Safe Water Drinking Act, including those for lead. Based on the aforementioned, Cardno ATC concludes that lead in drinking water does not represent an environmental concern for the property. Lead in drinking water testing was not conducted for this Phase I ESA.

8.4 Lead-Based Paint (LBP)

In 1978, the U.S. Product Safety Commission issued a ban on paints or surface coatings that contain greater than 0.06 percent lead. Given that the property was constructed prior to 1978, ATC concludes it is possible that LBP is present.

During the property inspection, a limited visual assessment of all accessible painted surfaces was performed. No sampling or intrusive work was performed, as this is outside the scope of this Phase I

ESA. The property building's interior painted surfaces were generally found to be in good condition with no evidence of damage or disrepair. Therefore, based on observations no immediate concerns were identified pertaining to LBP. However any interior paint that is damaged or in disrepair in occupied units, or that may be disturbed in any way during construction activities, must be handled in accordance to all rules and procedures (local laws, health and safety laws and school authorities policies and procedures).

8.5 Mold Screening

During the site reconnaissance, Cardno ATC conducted a physical observation of certain HVAC system areas and other representative building areas as described in Section 2.2. Cardno ATC was escorted by Alberto Forbes, the property superintendent, who provided access and answered questions.

Cardno ATC did not observe any evidence of moisture intrusion during the reconnaissance. However, Mr. Forbes reported water damage on the second floor of lot 66 that originated from previous roof leaks. Based on the results of the interview and physical observation, Cardno ATC found no evidence indicating potential mold impact at the property. However, no access was provided to the two-story residence located on Lot 74.

8.6 Additional User Requested Conditions

No additional User requested services were included in the scope of work for this ESA.

9.0 REFERENCES

ASTM International, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, ASTM Designation E 1527-05. November 2005.

ASTM International, *Standard Guide for Readily Observable Mold and Conditions Conducive to Mold in Commercial Buildings: Baseline Survey Process*, ASTM Designation E 2418-06. March 2006.

ASTM International, *Standard Guide for Limited Asbestos Screens of Buildings*, ASTM Designation E 2308-05. August 2005.

Environmental Data Resources, Inc. (EDR), The EDR Radius Map with GeoCheck, Inquiry Number 3491355.2s, dated January 9, 2013.

EDR, Sanborn Maps, Inquiry Number 3491355.3, dated January 10, 2013.

EDR, City Directory Abstract, Inquiry Number 3491355.6, dated January 11, 2013.

NYCDEP Drinking Water Supply and Quality Report dated 2011
(http://www.nyc.gov/html/dep/html/drinking_water/wsstate.shtml).

New York City Department of Buildings (http://a810-bisweb.nyc.gov/bisweb).

New York City Department of Finance (http://www.nyc.gov/html/dof/html/home/home.shtml).

New York City Department of City Planning
(http://www.ci.nyc.ny.us/html/dcp/html/zone/zonetext.shtml).

New York City Governmental (http://gis.nyc.gov/doitt/nycitymap/).

New York State Department of Environmental Conservation, *Water Power and Control Commission report titled Ground Water in Bronx, New York, and Richmond Counties, with Summary Data on Kings and Queens Counties, New York City*, New York, Perlmutter, N. M. and Theodore Arnow (1953).

New York City Municipal Departments

- New York City Department of Environmental Protection (NYCDEP).
- New York City Fire Department (FDNY).
- New York City Department of Health and Mental Hygiene (NYCDOHMH).
- New York State Department of Environmental Conservation (NYSDEC)

APPENDIX 3
NYC DEP PHASE I ENVIRONMENTAL SITE ASSESSMENT
REVIEW LETTER

Environmental Protection

Carter H. Strickland, Jr.
Commissioner

Angela Licata
Deputy Commissioner
of Sustainability
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Flushing, NY 11373
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August 24, 2012

Mr. Robert Dobruskin
Director, Environmental Assessment and Review
New York City Department of City Planning
22 Reade Street, Room 4E
New York, New York 10007

Re: Empire Boulevard Rezoning
521-46 Empire Boulevard
Block 1311, Lots 66, 74, 75, 76
Project # 13DEPTECH010K/12DCP020K
Brooklyn, New York

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Environmental Planning and Analysis (DEP) has reviewed the November 2011 Revised Environmental Assessment Statement prepared by Phillip A. Habib and Associates and the October 2007 Phase I Environmental Site Assessment prepared by ATC Associates Inc., (ATC) on behalf of 529 Empire Realty Corporation (applicant) for the above project. It is our understanding that the applicant is seeking a zoning map amendment from the New York City Department of City Planning to rezone portions of four City tax blocks (Blocks 1311, 1324, 1323 and Block 1317) from R5/C1-3 to R7A/C2-4 and to remove the existing C1-3 commercial overlay from the underlying R7-1 district, which is bounded by Brooklyn Avenue in the northwest, Lamont Court in the East and along Empire Boulevard to the South in Wingate Neighborhood of Brooklyn, Community district 9. As currently proposed, the rezoning action would facilitate the development of a seven-story mixed-use residential, commercial and community building on Block 1311, Lots 66, 74, 75, and 76 (project site). The proposed building would have approximately 56 dwelling units; approximately 25,512 square feet of retail, and approximately 25,189 square feet of community facility space. In addition, the proposed building would also include an underground garage with 66 accessory parking spaces. It should be noted that Block 1311, Lots 66, 74, 75, and 76 (project site) are owned or under the control of the applicant.

The October 2007 Phase I report (Block 1311, Lots 66, 74, 75, and 76) revealed that historical on-site and surrounding area land uses were typically residential, commercial and manufacturing uses including a movie theater, dry cleaner facility, commercial retail facilities, garage, school, synagogue, church, vacant lots, parking lots, manufacturing facilities (manufacturing uses unknown), used auto sales, shoe manufacturer, shade manufacturer, construction company, window cleaning company, car service company, pharmacy, jewelers, interior decorator company, an upholsterer company, supermarket, food stores, lamp company, importer

company, furniture company, a medical center, realty company, apartment dwellings, residences etc. It should be noted that there is a potential presence of historic fuel oil tanks at the site and also the presence of aboveground storage tanks (ASTs) on adjoining properties. Based on the age of the on-site building, asbestos containing material and lead paint could be present in the on-site structure. The New York State Department of Environmental Conservation (NYSDEC) database revealed 40 leaking tanks (LTANKS) within half a mile radius from the subject property. Additionally, the subject property along with an adjacent property is identified in the NYSDEC Spills database due to previous on-site spills. It should be noted that the Phase 1Environmental Assessment was conducted October 2007.

Based on upon our review of the submitted documents, we have the following comments/ recommendations to DCP:

Block 1311, Lots 66, 74, 75, and 76 (Applicant controlled Sites)

- DCP should inform the applicant that past on-site and or surrounding area land uses may have been impacted the soil and groundwater at this site. Therefore, a Phase II Environmental Site Assessment Investigation (Phase II) is necessary to adequately identity/characterize the surface and subsurface soils prior to the proposed development. A Phase II Investigative Protocol/Work Plan summarizing the proposed drilling, soil/groundwater and soil vapor sampling activities should be submitted to DEP for review and approval. The Work Plan should include blueprints and/or site plans displaying the current surface grade and sub-grade elevations and a site map depicting soil boring locations and groundwater sampling locations. Soil, groundwater and soil vapor samples should be collected and analyzed by a New York State Department of Health Environmental Laboratory Approval Program-CERTIFIED laboratory for the presence of Volatile Organic Compounds (VOCs) by United States Environmental Agency (EPA) Method 8260, Semi-Volatile Organic Compounds (SVOCs) by EPA method 8270, Pesticides/Polychlorinated Biphenyls by EPA Method 8081/8082 and Target Analyte List (TAL) metals (filtered and unfiltered for groundwater samples). The soil vapor sampling will be conducted in accordance with the New York State Department of Health's (NYSDOH) October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York and analyzed for VOCs by EPA Method TO-15. An investigative Health and Safety Plan (HASP) should also be submitted to DEP for review and approval.

- DCP should inform the applicant that the Phase 1 Environmental Site Assessment (Phase 1) was conducted in 2007. Therefore a Supplemental Phase1 should be conducted and submitted to DEP for review.

Sites not owned or under the control of the applicant.

Please note that the above comments regard Block 1311, Lots 66, 74, 75, and 76, the applicant's development site. The November 2011 Revised Environmental Assessment Statement does not clarify whether any other parcels would be likely to be developed as a result of the subject action. In the event that other lots are identified as potential development sites, the potential for hazardous materials impacts and the need for (E) designations should be considered at that time.

DCP should inform the applicant that the Phase 1, Phase II Work plan and HASP should be submitted to DEP for review and approval prior to start of any fieldwork. Future correspondence and submittal related to this project should include the following tracking number **13DEPTECH010K**. If you have any questions, you may contact Mohammad Khaja-Moinuddin at (718) 595-4445.

Sincerely,

Maurice S. Winter
Deputy Director, Site Assessment

c: E. Mahoney
M. Winter
M. Khaja-Moinuddin
W. Yu
T. Estesen
M. Wimbish
E. Seims- DCP
C. Evans- DCP
File