203-205 East 92nd Street
Environmental Assessment Statement

CEQR No. 13DCP121M

Prepared for:
Carnegie Park Land Holding

Prepared by:
AKRF, Inc.

Originally Filed: May 3, 2013
Revised: August 20, 2013

Table of Contents

City Environmental Quality Review

ENVIRONMENTAL ASSESSMENT STATEMENT FULL FORM

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

PART I: GENERAL INFORMATION

PROJECT NAME 203-205 East 92nd Street

1. *Reference Numbers*

CEQR REFERENCE NUMBER (To Be Assigned by Lead Agency)	BSA REFERENCE NUMBER (If Applicable)
13DCP121M	
ULURP REFERENCE NUMBER (If Applicable)	OTHER REFERENCE NUMBER(S) (If Applicable) (e.g., Legislative Intro, CAPA, etc.)
N 130263 ZRM, N 130264 ZCM, M 860259 (A)ZAM	

2a. *Lead Agency Information*

NAME OF LEAD AGENCY: **New York City Department of City Planning**

NAME OF LEAD AGENCY CONTACT PERSON: **Robert Dobruskin**

ADDRESS: **22 Reade Street, Room 4E**

CITY **New York** STATE **NY** ZIP **10007**

TELEPHONE **212-720-3423** FAX **212-720-3495**

EMAIL ADDRESS **rdobrus@planning.nyc.gov**

2b. *Applicant Information*

NAME OF APPLICANT: **Carnegie Park Land Holding**

NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON: **Jerald Johnson, Wachtel, Masyr & Missry, LLP**

ADDRESS: **1 Dag Hammasrkjold Plaza, 885 Second Avenue, 47th Floor**

CITY **New York** STATE **NY** ZIP **10017**

TELEPHONE **212-909-9629** FAX

EMAIL ADDRESS **johnson@wmllp.com**

3. *Action Classification and Type*

SEQRA Classification

☒ UNLISTED ☐ TYPE I; SPECIFY CATEGORY *(see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended):*

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

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

4. *Project Description:*

The proposed project is the development of the project site with a mixed-use building. The proposed building would include approximately 33,448 gross square feet (gsf) of health club use; a K-8 private school approximately 61,559 gsf in size; approximately 80 accessory parking spaces; approximately 1,007 gsf of retail use; and approximately 351,203 gsf (no more than 290 units) of residential use. Approximately 20 percent of the proposed residential units would be designated as affordable. In total, the proposed building would be approximately 462,091 gsf (384,300) zoning floor area) and approximately 36 stories (426'9" feet) tall. The proposed private school would have approximately 350 seats and 125 faculty and staff members. It is expected that an approximately 10,679 gsf publicly accessible plaza and approximately 2,111 sf of additional open space would be developed on the site, and that the school would have an approximately 2,900-gsf playyard on a third-floor terrace. See also page 1a.[1]

4a. *Project Location: Single Site* *(for a project at a single site, complete all the information below)*

ADDRESS	NEIGHBORHOOD NAME	
203-205 East 92nd Street	**Upper East Side**	
TAX BLOCK AND LOT	BOROUGH	COMMUNITY DISTRICT
1538/10	**Manhattan**	**8**

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS

The project is a through-block site on the block bounded by East 92nd and 93rd Streets and Second and Third Avenues.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY: **C4-6** ZONING SECTIONAL MAP NO: **6B**

4b. *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.)*

5. *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

Board of Standards and Appeals: YES ☒ NO ☐

- ☒ SPECIAL PERMIT

EXPIRATION DATE MONTH DAY YEAR

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

ZONING SPECIAL PERMIT, SPECIFY TYPE

☒ MODIFICATION OF **Minor modification of a previously approved disposition and LSRD, CPC N860259ZAM (see Appendix A)**

☐ RENEWAL OF

☐ OTHER

SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION

ZR 73-36

[1] Appendix D presents a Technical Memorandum dated August 2013 that evaluates modifications to the proposed project, including the elimination of the proposed accessory parking and the reallocation of that square footage to the other proposed uses.

4. PROJECT DESCRIPTION

INTRODUCTION

The proposed project is the development of a mixed-use building on a through-block site (Block 1538, Lot 10) bounded by East 92nd and 93rd Streets and Second and Third Avenues on the Upper East Side of Manhattan. The proposed building would include approximately 33,448 gross square feet (gsf) of health club use on the first, fifth, and sixth floors; a K-8 private school approximately 61,559 gsf in size on the cellar through fourth floors; approximately 80 accessory parking spaces on the cellar level; approximately 1,007 gsf of retail use at grade; and approximately 351,203 gsf (no more than 290 units) of residential use above. Approximately 20 percent of the proposed residential units would be designated as affordable. In total, the proposed building would be approximately 462,091 gsf (384,300) zoning floor area) and approximately 36 stories (426'9" feet) tall. The proposed private school would have approximately 350 seats and 125 faculty and staff members. It is expected that an approximately 10,679 gsf publicly accessible plaza and approximately 2,111 sf of additional open space would be developed on the site, and that the school would have an approximately 2,900-gsf playyard on a third-floor terrace.

The project site is designated Site 4A in the Ruppert Brewery Large Scale Residential Development (LSRD) associated with the Ruppert Brewery Urban Renewal Plan, which expired in 2008. In the original LSRD plan, approved by the New York City Planning Commission in 1971, the project site was part of a tract of land reserved for a high school. When it was determined that a high school was no longer needed in the area, the LSRD was amended to convert this tract of land to "park-like open space" under private ownership for the use of the LSRD's residents, thus assigning the site with zero floor area.[1] The obligation to provide an open space amenity for the area on the project site (Site 4A) expired in July 2008, coterminous with the expiration of the Ruppert Brewery Urban Renewal Plan. While the URP is now expired, the LSRD continues to govern permitted floor area and minimum open space requirements within the LSRD. The project site is currently an unused former recreation facility permanently closed to the public, encircled by a high metal fence. To be developed as described, the project is seeking a zoning text amendment to allow the project applicant to apply for a minor modification of the LSRD that controls the site (see Appendix A). The minor modification of the LSRD would allow for the development of floor area consistent with the underlying C4-6 zoning of the project site.

The proposed health club (physical culture establishment) would have a daily average of approximately 850 patrons, with peak usage at 6:00 pm, when an average of approximately 200 patrons are expected. Activities at the facility are anticipated to include group fitness classes (i.e., spinning, Pilates) and personal training sessions. The facility would have up to 90 employees, with a maximum number of approximately 45 employees on site at any one time. Many of the employees are trainers and group fitness instructors who come in at varying times for short periods. The front desk and maintenance workers for the facility would work in shifts, with three shifts per day; the number of employees per shift would be 2, 1, and 2 for the front desk and 4, 3, and 4 for maintenance.

EXISTING CONDITIONS

The project site is currently is an unused former recreation facility permanently closed to the public, encircled by a high metal fence.

FRAMEWORK FOR THE ANALYSIS

The proposed development on the project site—which as described above is approximately 462,091 gsf in size, with approximately 351,302 gsf of residential use, 33,448 gsf of health club use, approximately 61,559 gsf of private school use, approximately 80 accessory parking spaces, and approximately 1,007 gsf of retail use, as well as 10,679 gsf of publicly accessible plaza and 2,111 sf of additional open space—is governed by the previously-approved LSRD. Per the LSRD, discretionary actions are required before any development can take place on the affected site. The LSRD site plans, zoning calculation tables, and related footnotes identify the maximum allowable FAR and gross square footage and land use categories allowed on the project site (see Appendix A, Table II). Therefore, the proposed project as described above reflects the maximum allowable development that could occur on the site.

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[1] CPC resolution, ULURP no. C810178 HUM (June 16, 1982, cal. No. 109)

No changes to the project site are anticipated in the No Action condition because of the various constraints that limit its development, including the LSRD and the need for discretionary approvals to develop for uses other than public open space. In the future without the proposed project, the project site would remain vacant.

PURPOSE AND NEED

To be developed as described, the project is seeking a zoning text amendment to allow the project applicant to apply for a minor modification of the LSRD that controls the site. The minor modification of the LSRD would allow for the development of floor area consistent with the underlying C4-6 zoning of the project site.

PROPOSED ACTIONS

As described above, the proposed project involves several discretionary actions: a zoning text amendment to allow the project applicant to apply for a minor modification of the LSRD that controls the site, and the minor modification of the LSRD (CPC C830262HPM) to allow for the development of floor area consistent with the underlying C4-6 zoning of the project site. The project may also seek to use New York City Housing Development Corporation (HDC) or New York State Housing Finance Agency (HFA) bonds and/or Low Income Housing Tax Credits. For the proposed health club use, the project is seeking a special permit pursuant to Zoning Resolution Section 73-36 from the Board of Standards and Appeals.

Department of Environmental Protection: YES ☐ NO ☒

Other City Approvals: YES ☐ NO ☒

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

6. ***State or Federal Actions/Approvals/Funding:*** YES ☒ NO ☐ IF "YES," IDENTIFY

Potential use of New York City Housing Development Corporation (HDC) or New York State Housing Financing Agency (HFA) bonds and/or Low Income Housing Tax Credits

7. ***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 11x17 inches in size and must be folded to 8.5x11 inches for submission.* **See Figures 1-8.**

- ☒ 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.):
±32,025	**N/A**	**±32,025**

Other, describe (sq. ft.):

8. ***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: **±462,091** (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: Total square feet of non-applicant owned development:

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: **±28,224** sq. ft. (width x length) Volume: **±492,500** cubic feet (width x length x depth)

Does the proposed project increase the population of residents and/or on-site workers? YES ☒ NO ☐ Number of additional residents? **±505** Number of additional workers? **±241**

Provide a brief explanation of how these numbers were determined:

1.74 (Average household size for track 154, 2010 Census)*290 dwelling units; 125 school faculty/staff; 350 K-8 school students; 32,726 sf/300 for health club workers; 1/400 sf retail; 1/50 spaces parking. (Staff and student estimates provided by anticipated school operator.)

Does the project create new open space? YES ☒ NO ☐ If Yes: **±2,900 sf private school playyard**
±10,679 sf publicly accessible plaza
±2,111 sf additional open space (sq. ft)

Using Table 14-1, estimate the project's projected operation solid waste generation, if applicable: **±21,243**[1] (pounds per week)

Using energy modeling or Table 15-1, estimate the project's projected energy use: **±67,390,399**[2] (annual BTUs)

9. ***Analysis Year*** *CEQR Technical Manual, Chapter 2*

ANTICIPATED BUILD YEAR (DATE THE PROJECT WOULD BE COMPLETED AND OPERATIONAL):	ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS:
2015	**24**

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

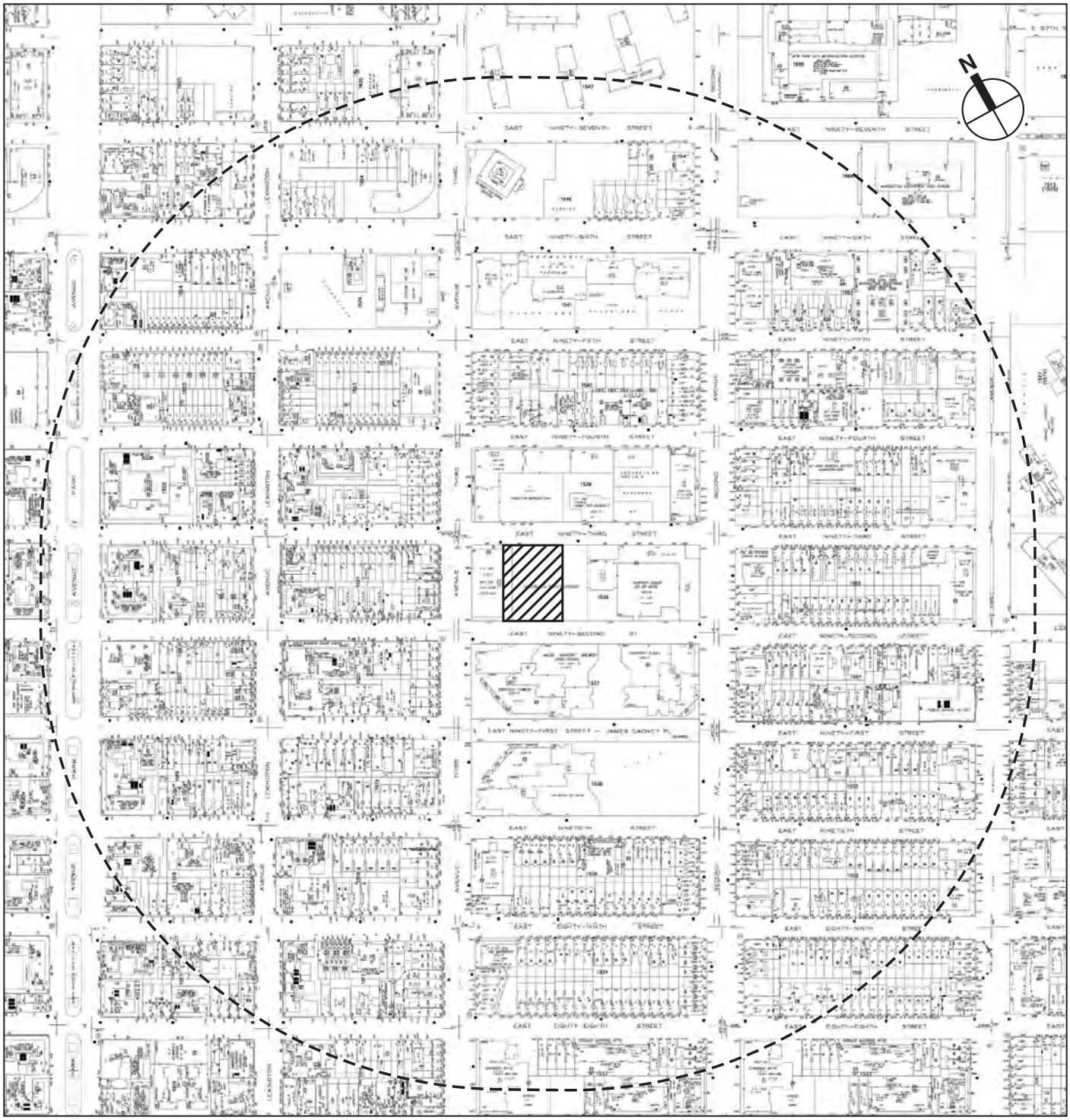
10. ***What is the Predominant Land Use in Vicinity of Project?*** *(Check all that apply)*

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

[1] Using the following generation rates: 41 lbs/household/week (residential); 79 lbs/employee/week (health club and retail); and 1 lb/pupil/week (private school).

[2] Using the following generation rates: 126.7 BTU/sf (residential); 216.3 BTU/sf (health club and retail); and 250.7 BTU/sf (school).

5.2.13



Project Site

Study Area Boundary (1/4-Mile Perimeter)

0 400 FEET

SCALE

Sanborn Map

Figure 1

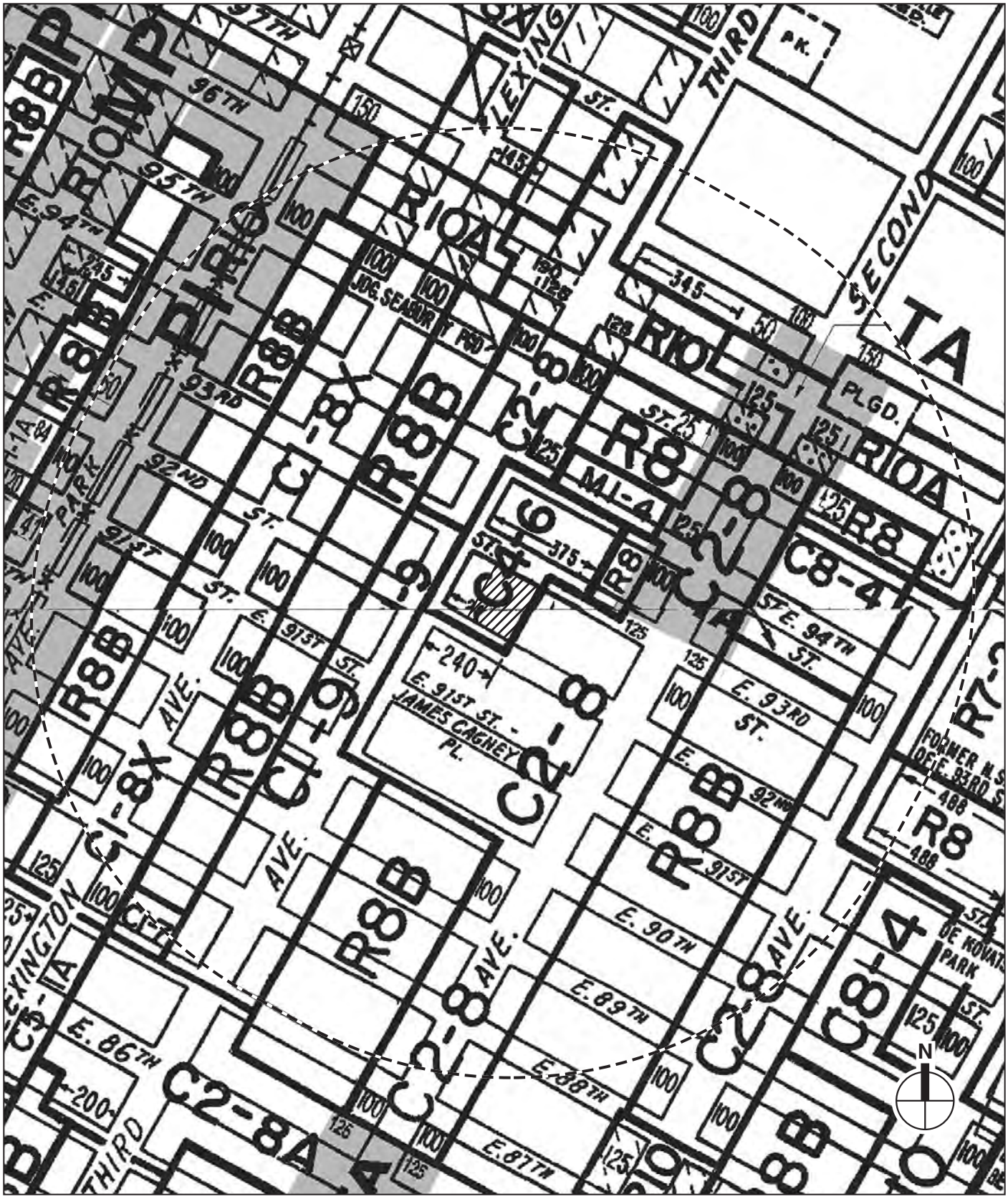
203-205 East 92nd Street

5.3.13

Aerial Map
Figure 2

203-205 East 92nd Street

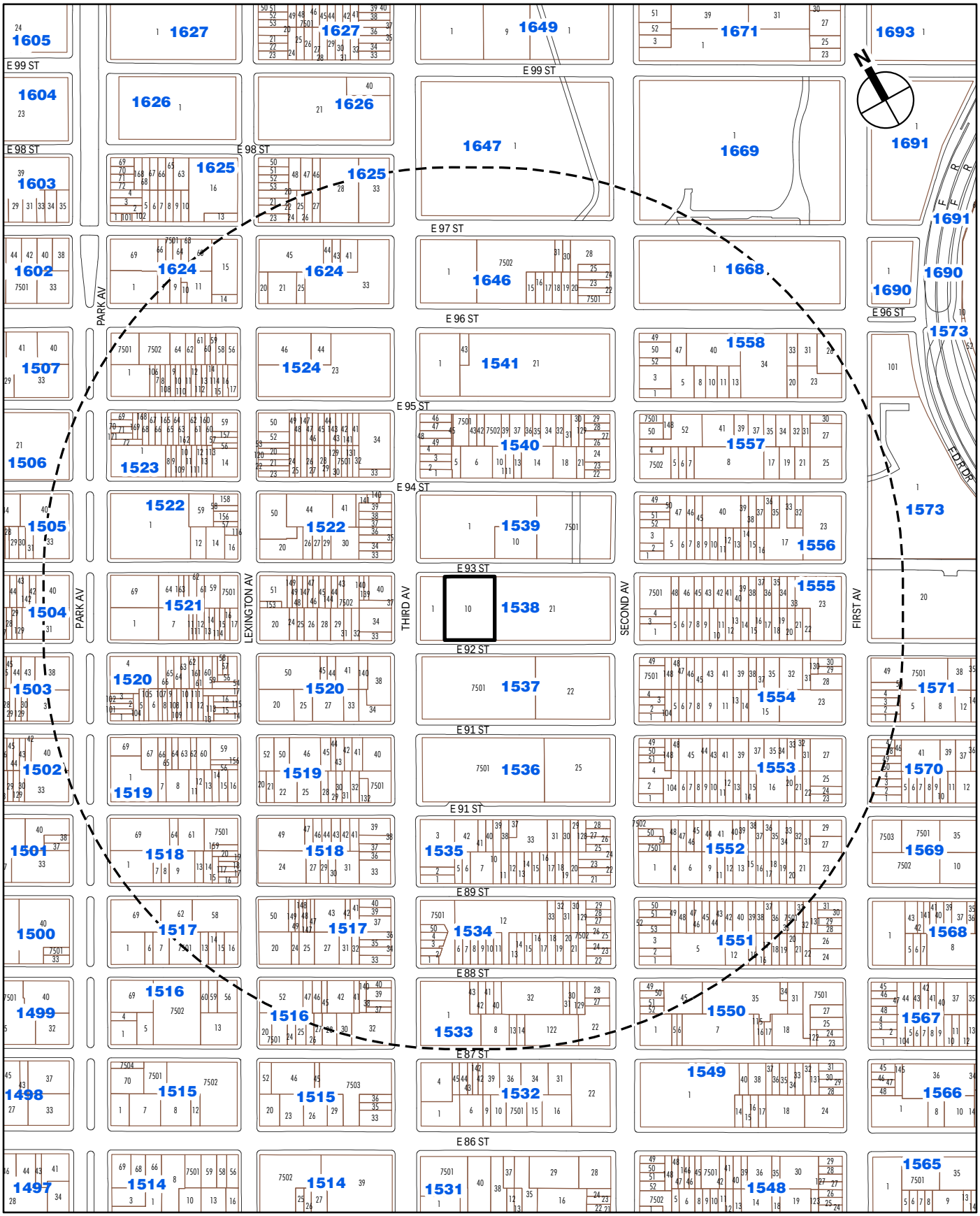
5.2.13



Zoning Map
Figure 3

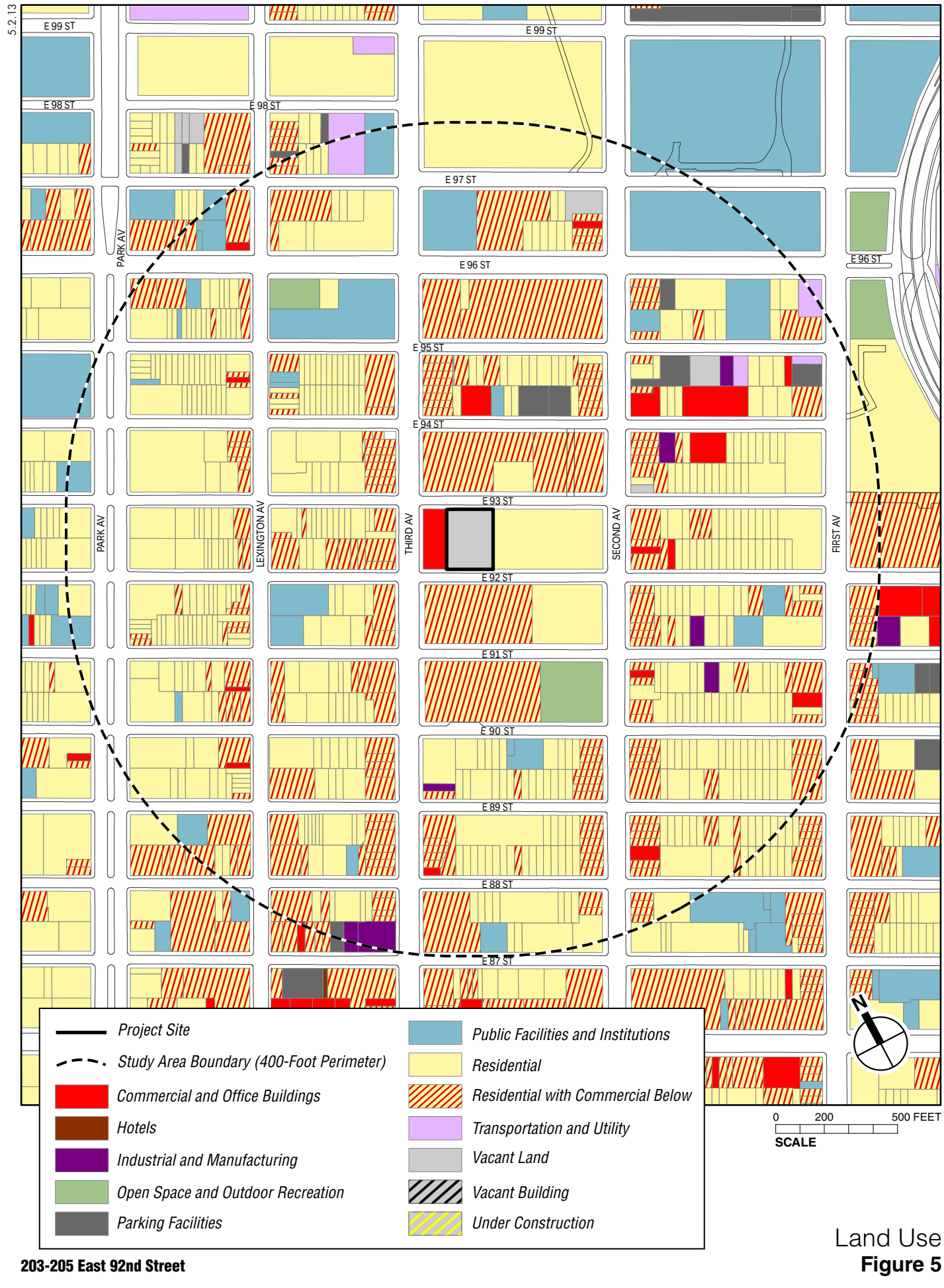
203-205 East 92nd Street

5.3.13



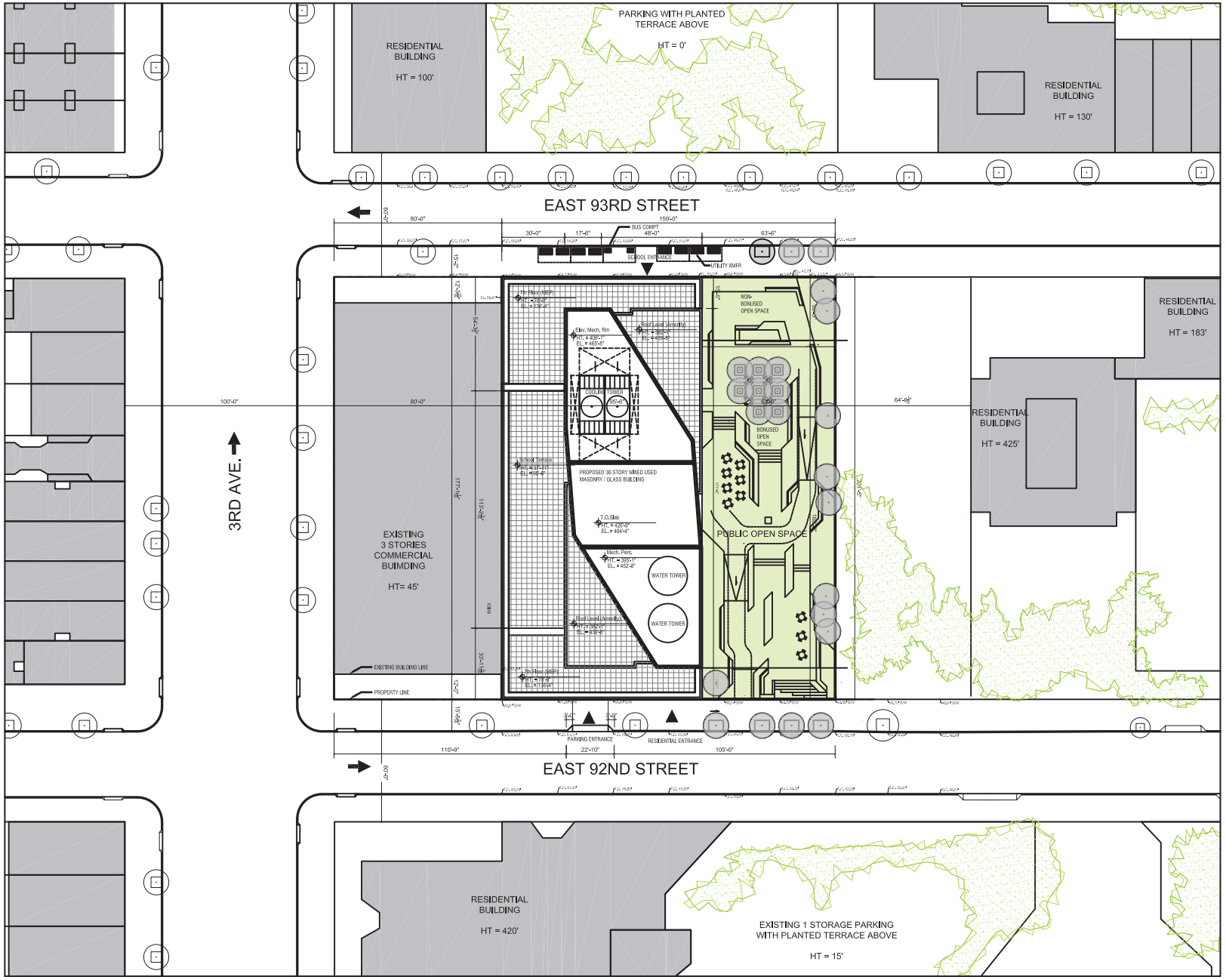
Tax Map
Figure 4

203-205 East 92nd Street



203-205 East 92nd Street

Land Use
Figure 5



Proposed Site Plan

Figure 6

View looking northeast from East 92nd Street **1**

View looking northwest from East 92nd Street **2**

Photographs of the Project Site

Figure 7

View looking southeast from East 93rd Street **3**

View looking southeast from East 93rd Street **4**

Photographs of the Project Site

Figure 8

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS[1]

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

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Land Use **See page 3a for description of existing/no action conditions.**				
Residential	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☒ No ☐	
If yes, specify the following				
No. of dwelling units			**±290**	**±290**
No. of low- to moderate-income units			**Approx. 20%**	**Approx. 20%**
No. of stories			**36**	**36**
Gross Floor Area (sq. ft.)			**±351,203**	**±351,203**
Describe Type of Residential Structures			**Mixed-use building**	
Commercial	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☒ No ☐	
If yes, specify the following:				
Describe type (retail, office, other)			**Health club (±33,448 gsf) and retail (±1,007 gsf) within mixed-use tower; retail at grade along plaza**	
No. of bldgs.			**1**	**1**
GFA of each bldg (sq. ft.)			**±34,455**	**±34,455**
Manufacturing/Industrial	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☐ No ☒	
If yes, specify the following:				
Type of use				
No. of bldgs.				
GFA of each bldg (sq. ft.)				
No. of stories of each bldg.				
Height of each bldg.				
Open storage area (sq. ft.)				
If any unenclosed activities, specify				
Community Facility	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☒ No ☐	
If yes, specify the following				
Type			**K-8 private school within mixed-use tower**	
No. of bldgs.			**1**	**1**
GFA of each bldg (sq. ft.)			**±61,589**	**±61,589**
No. of stories of each bldg.			**See above**	**See above**
Height of each bldg.			**±426'9"**	**±426'9"**
Vacant Land	Yes ☒ No ☐	Yes ☒ No ☐	Yes ☐ No ☒	
If yes, describe	**Unused former recreation facility, permanently closed to the public**			
Publicly Accessible Open Space	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☒ No ☐	
If yes, specify type (mapped City, State, or Federal Parkland, wetland—mapped or otherwise known, other)			**±10,679 sf publicly accessible plaza ±2,111 additional open space**	
Other Land Use	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☐ No ☒	
If yes, describe				
Parking				
Garages	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☒ No ☐	
If yes, specify the following:				
No. of public spaces			**0**	
No. of accessory spaces			**80**	**80**
Operating hours			**24-hour**	
Attended or non-attended			**Attended**	

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Parking *(continued)*				
Lots	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☐ No ☒	
If yes, specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Other (includes street parking)	Yes ☒ No ☐	Yes ☒ No ☐	Yes ☒ No ☐	
If yes, describe	**There is street parking on East 92nd and 93rd Streets adjacent to the project site.**			
Storage Tanks				
Storage Tanks	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☐ No ☒	
If yes, specify the following:				
Gas/Service stations:	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	
Oil storage facility:	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	
Other; identify:	Yes ☐ No ☐	Yes ☐ No ☐	Yes ☐ No ☐	
If yes to any of the above, describe:				
Number of tanks				
Size of tanks				
Location of tanks				
Depth of tanks				
Most recent FDNY inspection date				
Population				
Residents	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☒ No ☐	
If any, specify number			**±505**	**±505**
Briefly explain how the number of residents was calculated	**See page 2, question 8.**			
Businesses	Yes ☐ No ☒	Yes ☐ No ☒	Yes ☒ No ☐	
If any, specify the following:				
No. and type			**1 health club, 1 private school, 1 retail, 1 parking**	**1 health club, 1 private school, 1 retail, 1 parking**
No. and type of workers by business			**±111 health club, ±125 school, ±3 retail, ±2 parking**	**±111 health club, ±125 school, ±3 retail, ±2 parking**
No. and type of non-residents who are not workers			**±350 students**	**±350 students**
Briefly explain how the number of businesses was calculated	**See page 2, question 8.**			
Zoning*				
Zoning classification	**C4-6**	**No change**	**No change**	
Maximum amount of floor area that can be developed (in terms of bulk)	**3.4 (commercial); 10.0 (residential/community facility, 12.0 with plaza or inclusionary housing bonus)**	**No change**	**No change**	
Predominant land use and zoning classification within a 0.25-radius of proposed project	**Residential, institutional, commercial; R8, R8B, R10, R10A, C1-7, C1-8X, C1-9, C2-8, C4-6, C8-4, Special Park Improvement District**		**No change**	
Attach any additional information as may be needed to describe the project.				
If your project involves changes in regulatory controls that affect one or more sites not associated with a specific development, it is generally appropriate to include the total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

**This section should be completed for all projects, except for such projects that would apply to the entire city or to areas that are so extensive that site-specific zoning information is not appropriate or practicable.*

PART II: TECHNICAL ANALYSES

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

- If the proposed project can be demonstrated not to meet or exceed the threshold, check the 'NO' box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the 'YES' box.
- For each 'Yes' response, answer the subsequent questions for that technical area and consult the relevant chapter of the *CEQR Technical Manual* for guidance on providing additional analyses (and attach supporting information, if needed) to determine whether the potential for significant impacts exists. Please note that a 'Yes' answer does not mean that 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 to either provide additional information to support the Full EAS Form. For example, if a question is answered 'No,' an agency may request a short explanation for this response.

		YES	NO
1.	***LAND USE, ZONING AND PUBLIC POLICY:*** *CEQR Technical Manual, Chapter 4*		
(a)	Would the proposed project result in a change in land use 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. **See Attachment A.**	✓	
(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.		✓
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?		✓
(b)	If 'Yes' to any of the above, attach supporting information to answer the following questions, as appropriate. If 'No' was checked for each category above, the remaining questions in this technical area do not need to be answered. **See Screening Analyses**		
(1)	***Direct Residential Displacement***		
	If more than 500 residents would be displaced, would these displaced represent more than 5% of the primary study area population?		
	If 'Yes,' is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?		
(2)	***Indirect Residential Displacement*** **See Screening Analyses.**		
	Would the expected average incomes of the new population exceed the average incomes of the study area populations? **See Screening Analyses.**	✓	
	If 'Yes,' would the population increase represent more than 5% of the primary study area population or otherwise potentially affect real estate market conditions?		✓
	If 'Yes,' would the study area have a significant number of unprotected rental units?		
	Would more than 10 percent of all the housing units be renter-occupied and unprotected?		
	Or, would more than 5 percent of all the housing units be renter-occupied and unprotected where no readily observable trend toward increasing rents and new market rate development exists within the study area?		

		YES	NO
(3)	***Direct Business Displacement***		
	Do any of the displaced businesses provide goods or service that otherwise could not be found within the trade area, either under existing conditions or in the future with the proposed project?		
	Do any of the displaced businesses provide goods or services that otherwise could not be found within the trade area, either under existing conditions or in the future with the proposed project?		
	Or is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it?		
(4)	***Indirect Business Displacement***		
	Would the project potentially introduce trends that make it difficult for businesses to remain in the area?		
	Would the project capture the retail sales in a particular category of goods to the extent that the market for such goods would become saturated as a result, potential resulting in vacancies and disinvestment on neighborhood commercial streets?		
(5)	***Effects on Industry***		
	Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?		
	Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?		
3.	***COMMUNITY FACILITIES:*** *CEQR Technical Manual, Chapter 6*		
(a)	Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?		✓
(b)	Would the project exceed any of the thresholds outlines in Table 6-1 in Chapter 6? The proposed project would have no more than 290 units. Table 6-1 lists the minimum number of units that would trigger an analysis of elementary/intermediate school students as 310 for Manhattan. Therefore, the project does not warrant a schools analysis. The project also does not exceed any of the other thresholds outlined in Table 6-1.		✓
(c)	If 'No' was checked above, the remaining questions in this technical area do not need to be answered. If 'Yes' was checked, attach supporting information to answer the following, if applicable.		
(1)	***Child Care Centers***		
	Would the project result in a collected utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?		
	If 'Yes,' would the project increase the collective utilization rate by 5 percent from the No-Action scenario?		
(2)	***Libraries***		
	Would the project increase the study area population by 5 percent from the No-Action levels?		
	If 'Yes,' would the additional population impair the delivery of library services in the study area?		
(3)	***Public Schools***		
	Would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 105 percent?		
	If 'Yes,' would the project increase this collective utilization rate by 5 percent from the No-Action scenario?		
(4)	***Health Care Facilities***		
	Would the project affect the operation of health care facilities in the area?		
(5)	***Fire and Police Protection***		
	Would the project affect the operation of fire or police protection in the area?		
4.	***OPEN SPACE:*** *CEQR Technical Manual, Chapter 7*		
(a)	Would the project change or eliminate existing open space?		✓
(b)	Is the project located within an underserved area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?		✓
(c)	If 'Yes,' would the proposed project generate more than 50 additional residents or 125 additional employees?		
(d)	Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?		✓
(e)	If 'Yes,' would the project generate more than 350 additional residents or 750 additional employees?		
(f)	If the project is not located within an underserved or well-served area, would it generate more than 200 additional residents or 500 additional employees?	✓	
(g)	If 'Yes' to any of the above questions, attach supporting information to answer the following: **See Attachment B.** • Does the project result in a decrease in the open space ratio of more than 5%?		✓
	• If the project site is within an underserved area, is the decrease in open space between 1% and 5%?		
	• If 'Yes,' are there qualitative considerations, such as the quality of open space, that need to be considered?		

		YES	NO
5.	***SHADOWS:*** *CEQR Technical Manual, Chapter 8.*		
(a)	Would the proposed project result in a net height increase of any structure of 50 feet or more?	✓	
(b)	Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	✓	
(c)	If 'Yes' to either of the above questions, attach supporting information explaining whether the project's shadow reach any sunlight-sensitive resource at any time of the year. **See Attachment C.**		
6.	***HISTORIC AND CULTURAL RESOURCES:*** *CEQR Technical Manual, Chapter 9*		
(a)	Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for, or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; 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 proposed project would affect any of these resources. **See Screening Analyses.**		✓
7.	***URBAN DESIGN AND VISUAL RESOURCES:*** *CEQR Technical Manual, Chapter 10*		
(a)	Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	✓	
(b)	Would the proposed project result in obstruction of publicly accessible views to visual resources that is not currently allowed by existing zoning?		✓
(c)	If "Yes" to either of the questions above, please provide the information requested in Chapter 10. **See Attachment D.**		
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: Attach supporting information on whether the proposed project would affect any of these resources.		✓
9.	***HAZARDOUS MATERIALS:*** *CEQR Technical Manual, Chapter 12*		
(a)	Would the proposed 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 proposed 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)	Does 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)	Does 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 or unknown origin?	✓	
(e)	Does the project result in development where underground and/or aboveground storage tanks (e.g., gas stations) are or were on or near the site? **Historical 275-gallon gasoline UST on-site (no evidence of this UST identified by geophysical survey).**	✓	
(f)	Does 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)	Does 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: **See Attachment E.**	✓	
(i)	Based on a Phase I Assessment, is a Phase II Assessment needed? **Phase II conducted – see Attachment E.**	✓	
10.	***WATER AND SEWER INFRASTRUCTURE:*** *CEQR Technical Manual, Chapter 13*		
(a)	Would the project result in water demand of more than one million gallons per day?		✓
(b)	Is the proposed project located in a combined sewer area and result in at least 1,000 residential units or 250,000 sq. ft. or more of commercial space in Manhattan or at least 400 residential units or 150,000 sq. ft. 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 in Chapter 13?		✓
(d)	Does the proposed project involve development on a site five acres or larger where the amount of impervious surface would increase?		✓
(e)	Would the proposed 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)	Would the proposed project be located in an area that is partially sewered or currently unsewered?		✓
(g)	Is the project proposing an industrial facility or activity that would contribute industrial discharges to a 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?		✓
(i)	If "Yes" to any of the above, conduct the appropriate preliminary analyses and attached supporting documentation.		

		YES	NO
11. *SOLID WASTE AND SANITATION:* *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?		✓
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*			
(a)	Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	✓	
(b)	If "Yes," conduct the screening analyses, attach appropriate back up data as needed for each stage, and answer the following questions: **See Attachment F.**		
	(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 in Chapter 16 for more 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?		
	(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*			
(a)	*Mobile Sources:* Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?		✓
(b)	*Stationary Sources:* Would the proposed project result in the conditions outlined in Section 220 in Chapter 17? If 'Yes,' would the proposed project exceed the thresholds in 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?		✓
(f)	If "Yes," conduct the appropriate analyses and attach any supporting documentation. **See Attachment G.**		
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?		
(c)	If "Yes," attach supporting documentation to answer the following; Would the project be consistent with the City's GHG reduction goal?		
16. *NOISE:* *CEQR Technical Manual, Chapter 19*			
(a)	Would the proposed project generate or reroute the vehicular traffic?	✓	
(b)	Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of sight 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?		✓
(e)	If "Yes," conduct the appropriate analyses and attach any supporting documentation. **See Attachment H.**		
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.	✓	
(b)	If "Yes," explain here why or why not an assessment of neighborhood character is warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. **See Screening Analyses.**		

19. *CONSTRUCTION IMPACTS:* *CEQR Technical Manual, Chapter 22* Would the project's construction activities involve (check all that apply):	YES	NO
• 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 or any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.

See Screening Analyses.

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 or 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

Wachtel, Masyr & Missry, LLP, Land Use Counsel of **Carnegie Park Land Holding**
APPLICANT/SPONSOR NAME OF 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)

Jerald Johnson
APPLICANT/SPONSOR NAME:

LEAD AGENCY REPRESENTATIVE NAME:

SIGNATURE

5/3/13
DATE:

PLEASE NOTE THAT APPLICANT 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.

Screening Analysis

All analyses were performed in accordance with the 2012 *City Environmental Quality Review (CEQR) Technical Manual*.

SOCIOECONOMIC CONDITIONS

Responses to questions from page 5 of the EAS form.

(2) Indirect Residential Displacement
Would the expected average incomes of the new population exceed the average incomes of the study area populations?

This possibility cannot be ruled out. Based on 2005-2009 American Community Survey data as compiled by ESRI Business Analyst, the average household income within the ¼-mile area surrounding the project site is an estimated $153,294 per household, well above the average for Manhattan ($124,930 per household) and for New York City ($78,017). The proposed project would introduce approximately 290 units, which would be predominantly market rate; however, approximately 20 percent of the residential units are anticipated to be rented to tenants at or under 50 percent of AMI. Despite the high average incomes of existing residents and the project's affordable housing, given that the proposed project's new market rate units would likely be priced as the high end of the market, it is possible that the average income for the project population would exceed that of the surrounding ¼-mile area.

If 'Yes,' would the population increase represent more than 5% of the primary study area population or otherwise potentially affect real estate market conditions?

No. Based on data from the 2010 Census as compiled by ESRI Business Analyst, there are an estimated 17,967 households within a ¼-mile radius of the project site. The proposed project would introduce approximately 290 households, an amount representing approximately 1.6 percent of the existing households in the study area. The household size of the proposed project's households would not differ substantially from the surrounding area, and therefore, the project's population increase would not represent more than 5% of the primary study area population. The proposed project would be similar to other newly constructed residential uses in the study area, and would not otherwise potentially affect real estate market conditions.

HISTORIC AND CULTURAL RESOURCES

The study area for archaeological resources is defined as the area where subsurface disturbance would occur. In a letter dated October 16, 2012, LPC determined that the project site is not archaeologically sensitive (see Appendix B). Therefore, this analysis focuses on standing structures only.

To evaluate potential effects due to on-site construction activities, and also to account for visual or contextual impacts, the study area for architectural resources is defined as extending 400 feet from the project site. As defined in the New York City Department of Building's (DOB) *Technical Policy and Procedure Notice (TPPN) #10/88,* adjacent construction is defined as any construction activity that would occur within 90 feet of an architectural resource.[1] Consistent with the guidance of the 2012 *CEQR Technical Manual*, designated architectural resources ("known architectural resources") that were analyzed include: New York City Landmarks (NYCL), Interior Landmarks, Scenic Landmarks, New York City Historic Districts (NYCHD); resources calendared for consideration as one of the above by LPC; resources listed on or formally determined eligible for inclusion on the State and National Registers of Historic Places (S/NR), or contained within a district listed on or formally determined eligible for listing on the Registers; resources recommended by the New

[1] TPPN #10/88 was issued by DOB on June 6, 1988, to supplement Building Code regulations with regard to historic structures. TPPN #10/88 outlines procedures for the avoidance of damage to historic structures resulting from adjacent construction, defined as construction within a lateral distance of 90 feet from the historic resource.

York State Board for listing on the Registers; and National Historic Landmarks (NHL). Additionally, a survey was conducted to identify any previously undesignated properties in the study area that appear to be potentially eligible for NYCL designation or S/NR listing ("potential architectural resources").

Consistent with the guidance of the *CEQR Technical Manual*, in order to determine whether the proposed project could potentially affect architectural resources, this attachment considers whether the proposed project would result in a physical change to any resource, a physical change to the setting of any resource (such as context or visual prominence), and, if so, whether the change is likely to alter or eliminate the significant characteristics of the resource that make it important.

EXISTING CONDITIONS

The project site is an unused former recreation facility permanently closed to the public, encircled by a high metal fence. There are no architectural resources on the project site.

There is one known architectural resources in the study area. This is a 2½ story frame house at 160 East 92nd Street (NYCL). This small house was built between 1852-53 and is attributed to Albro Howell, a carpenter builder. The house has a porch that extends across the façade, supported by Corinthian columns which were rebuilt circa 1930. The house is located approximately 400 feet southwest of the project site.

One potential architectural resource has been identified in the study area, a former Con Edison substation at 215 East 94th Street. This 4-story brick building was constructed by Con Edison in 1924. The building is clad in multi-hued buff colored brick, and set on a high granite base. It is designed with a large central arched opening at the second story with a central keystone, and is capped with a modillioned cornice. A ground level entrance with a stone surround provides access at street level. The building serves as the gymnasium for the St. David's School, which purchased the building in 1995. It is located approximately 350 feet north of the project site.

Per a discussion with LPC, additional architectural resources were identified outside of the study area, but within the potential shadow sweep of the proposed building (see **Appendix B**). These are as follows: Church of the Holy Trinity and Parsonage, and St. Christopher House (316-332 East 88th Street, NYCL, S/NR-listed); and 146-156 East 89th Street Houses (NYCL, S/NR-listed). With the exception of the Church of the Holy Trinity, these resources are not sunlight sensitive.

THE FUTURE WITHOUT THE PROPOSED PROJECT

Absent the proposed project, the project site would remain in its current condition. There is one project in the study area that is currently under construction and expected to be completed by 2015; a five-story residential building will be built at 1676 Third Avenue on a corner lot. This project will have no direct impacts on known and potential architectural resources in the study area.

PROBABLE IMPACTS OF THE PROPOSED PROJECT

There are no known or potential architectural resources located within 90 feet of the project site. As described above, the frame house at 160 East 92nd Street and the potential architectural resource at 215 East 94th Street are over 350 feet from the project site. As such, the proposed project would have no adverse physical (construction-related) impacts on known and potential architectural resources.

The proposed project would also not result in adverse visual or contextual impacts on known and potential architectural resources. The frame house at 160 East 92nd Street and the former Con Edison substation at 215 East 94th Street exist in a mixed context of older and smaller buildings and more recently constructed residential tower complexes. The frame house at 160 East 92nd Street is separated from the project site by Third Avenue and a number of intervening buildings. The former Con Edison substation at 215 East 94th Street is separated from the project site by a full city block that is developed with Carnegie Park, a 30-story residential building built in the 1980s, as well as other structures. Therefore, the proposed construction of a 36-story residential tower would not adversely impact the historic context of these resources. Due to the distance of the architectural resources from the project site and presence of intervening buildings, the proposed project would also not obstruct or impair public views of the frame house at 160 East 92nd Street or the former Con

Edison substation at 215 East 94th Street. The proposed project also would not have any impacts to the additional architectural resources identified by LPC that are outside of the study area.

Overall, the project would have no significant adverse impacts on cultural and historic resources.

NEIGHBORHOOD CHARACTER

The *CEQR Technical Manual* states that an assessment of neighborhood character is generally needed when a proposed project has the potential to result in significant adverse impacts in any of the following technical areas: land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; or noise. Even if a project does not have the potential to result in a significant adverse impact in any of the technical areas listed above, an assessment may be required if the project would result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. According to the *CEQR Technical Manual*, a "moderate" effect is generally defined as an effect considered reasonably close to the significant adverse impact threshold for a particular technical analysis area.

As described in this EAS as well as Attachments A through H, the proposed actions would not have any significant adverse impacts on these CEQR analysis areas. It would also not result in effects considered reasonably close to the significant adverse impact thresholds in those technical areas. Therefore, the proposed actions would not significantly alter neighborhood character in the affected area as compared to the No Action condition, and no further analysis of impacts to neighborhood character is warranted.

CONSTRUCTION IMPACTS

As recommended in the *CEQR Technical Manual*, construction-related impacts are typically analyzed to determine if there are any disruptive or noticeable effects resulting from a proposed action. Construction activities associated with the proposed actions could result in temporary disruption to the surrounding community, including occasional noise and dust. However, this would be true of any construction project, and these effects would not be considered significant. All necessary measures would be implemented to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed. As a result, no significant air quality impacts from dust emissions would be expected as a result of the project.

The New York City Department of Buildings (DOB) regulates the permitted hours of construction, which apply in all areas of the city, and these hours are reflected in the collective bargaining agreements with major construction trade unions. In accordance with those regulations, work would begin at 7 AM on weekdays, although some workers would arrive and begin the prepare work areas between 6 and 7 AM. Normally, work would end by 6 PM. Construction activities associated with the proposed actions would normally take place Monday through Friday, although the delivery or installation of certain critical equipment could occur on weekend days or on an overtime basis; such work would be performed in coordination with conditions imposed by the agencies.

Increased noise levels created by construction activities related to the proposed actions could also occur. Construction noise is regulated by the New York City Noise Control Code and by the Environmental Protection Agency (EPA) noise emission standards for construction equipment. These federal and local requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards. Construction materials would be handled and transported in such a manner as to not create any unnecessary noise. Compliance with those noise control measures would be ensured by including them in the contract documents as materials specification and by directives to the construction contractors. No significant noise impacts are expected to occur as a result of the construction associated with the proposed actions.

The construction would include a rodent control program. Prior to the start of construction, the contractor would survey and bait the appropriate areas and provide for proper site sanitation.

Construction of the proposed building would take approximately 24 months. Overall, the construction effects would be temporary, and are not considered significant. By implementing the above management measures and controls, any effects associated with construction would be significantly minimized. Therefore, the proposed actions would not result in significant adverse impacts during construction, and further analysis is not required.

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

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

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

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

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

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

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

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

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

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

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

TITLE	LEAD AGENCY	
Deputy Director, EARD	New York City Department of City Planning	
NAME	SIGNATURE	DATE
Celeste Evans	Celeste Evans	5/3/13

Attachment A: Land Use, Zoning, and Public Policy

A. INTRODUCTION

The proposed project consists of a new mixed-use building with residential space, a health club, and a private school located on a property that is an unused former recreation facility permanently closed to the public, encircled by a high metal fence. Under the 2012 *City Environmental Quality Review (CEQR) Technical Manual* guidelines, a land use analysis evaluates the uses and development trends in the area that may be affected by a proposed action, and determines whether that proposed action is compatible with those conditions or may affect them. The analysis also considers the proposed action's compliance with, and effect on, the area's land use and other applicable public policies.

As described in detail below, this analysis concludes that the project would not have a significant adverse impact on land use, zoning or public policy.

B. METHODOLOGY

According to the *CEQR Technical Manual*, a preliminary land use assessment, which includes a basic description of existing and future land uses and public policy, should be provided for all projects that would affect land use or public policy on a site, regardless of the project's anticipated effects. If the preliminary assessment cannot succinctly describe land use conditions in the study area, or if a detailed assessment is required in the technical analyses of socioeconomic conditions, neighborhood character, traffic and transportation, air quality, noise, infrastructure, or hazardous materials, a detailed land use assessment is appropriate. A detailed assessment involves a more thorough analysis of existing land uses within the project site's boundaries and the broader study area in light of changes proposed with the project.

The study area for this analysis of land use, zoning, and public policy encompasses the area within 400 feet of the project site, the area in which the proposed project could reasonably be expected to generate significant adverse impacts. The 400-foot study area is roughly bounded by Lexington Avenue to the west, East 95th Street to the north, Second Avenue to the east, and East 90th Street to the south (see **Figure A-1**). Sources for this analysis include New York City Department of City Planning (DCP) MapPLUTO data, New York City Department of Buildings (DOB) data, and field surveys conducted by AKRF in September 2012.

C. EXISTING CONDITIONS

Existing land use conditions, patterns, and trends are described below for the project site and the study area. This is followed by a discussion of zoning and public policy for these areas.

LAND USE

PROJECT SITE

The project site is located on a through-block lot on the block bounded by Third Avenue to the west, East 93rd Street to the north, Second Avenue to the east, and East 92nd Street to the south (Block 1538, Lot 10). The project site is currently an unused former recreation facility permanently closed to the public, with a lot area of approximately 32,025 square feet (sf). The project lot is encircled by a high metal fence.

STUDY AREA

As shown in **Figure A-1**, the area within 400 feet of the project site consists primarily of multi-family apartment buildings. In addition to the project site, Block 1538 includes, on the eastern end of the block, the Ruppert Houses, a multi-family apartment complex consisting of three residential towers enclosing outdoor recreational space, and a 3-story office building with ground-level retail uses on the western end of the block. The blocks immediately to the south of the project site are occupied by two large residential complexes, Ruppert Yorkville Towers and Knickerbocker Plaza—comprising three40- to 42-story towers with ground level retail uses on the Second and Third Avenue frontages, and Ruppert Park. The block immediately to the north also contains large residential complexes, Carnegie Park (30 stories) and Astor Terrace (32 stories), with ground level retail on the Second and Third Avenue frontages. Both complexes feature private outdoor recreational space, including planting and seating areas. The blocks in the northern and eastern portions of the study area are also primarily residential, but lower-density in nature, consisting largely of 5- to 10-story apartment buildings. Most of the buildings with frontages on Second and Third Avenue also include ground-level retail uses.

ZONING

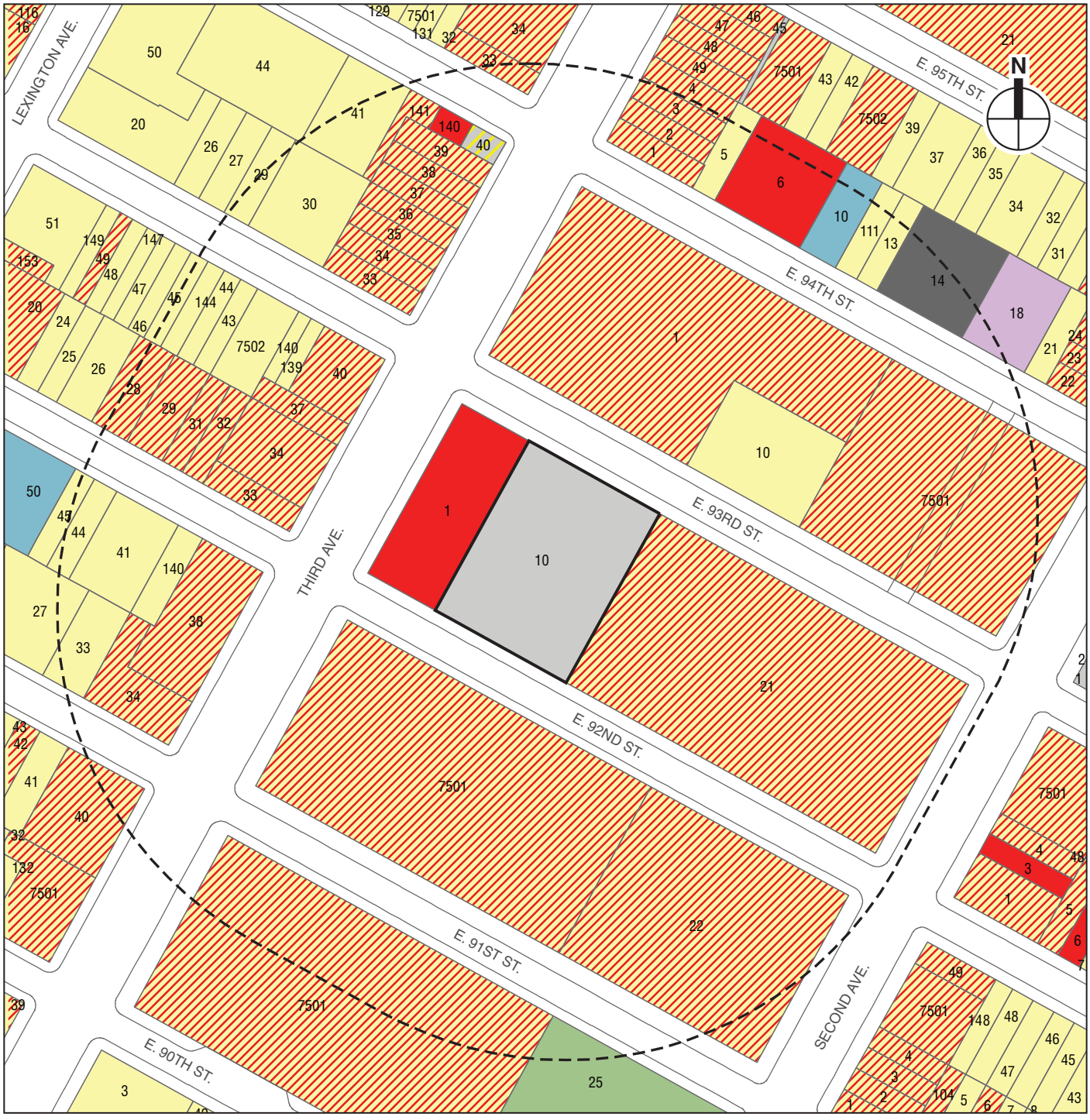
PROJECT SITE

The project site is located in a C4-6 zoning district (see **Figure A-2)**. C4-6 districts are primarily located in high-density areas of Manhattan, and allow for a mix of commercial and residential uses. Commercial development is allowed up to a Floor Area Ratio (FAR) of 3.4, while residential development is allowed up to an FAR of 10.0, with bonus FAR provided for projects that participate in the Inclusionary Housing (IH) program or provide a public plaza (see **Table A-1)**.

Ruppert Brewery Large Scale Residential Development Plan

The project site is included in a Large Scale Residential Development (LSRD) associated with the Ruppert Brewery Urban Renewal Plan.[1] LSRDs are projects in residence districts and limited commercial districts located on large zoning lots or on multiple zoning lots that are subject to individual review and approval by the New York City Planning Commission (CPC). Under provisions in the New York City Zoning Resolution (ZR), CPC may modify the underlying zoning regulations to allow for greater flexibility in the siting of bulk and open space within the LSRD.

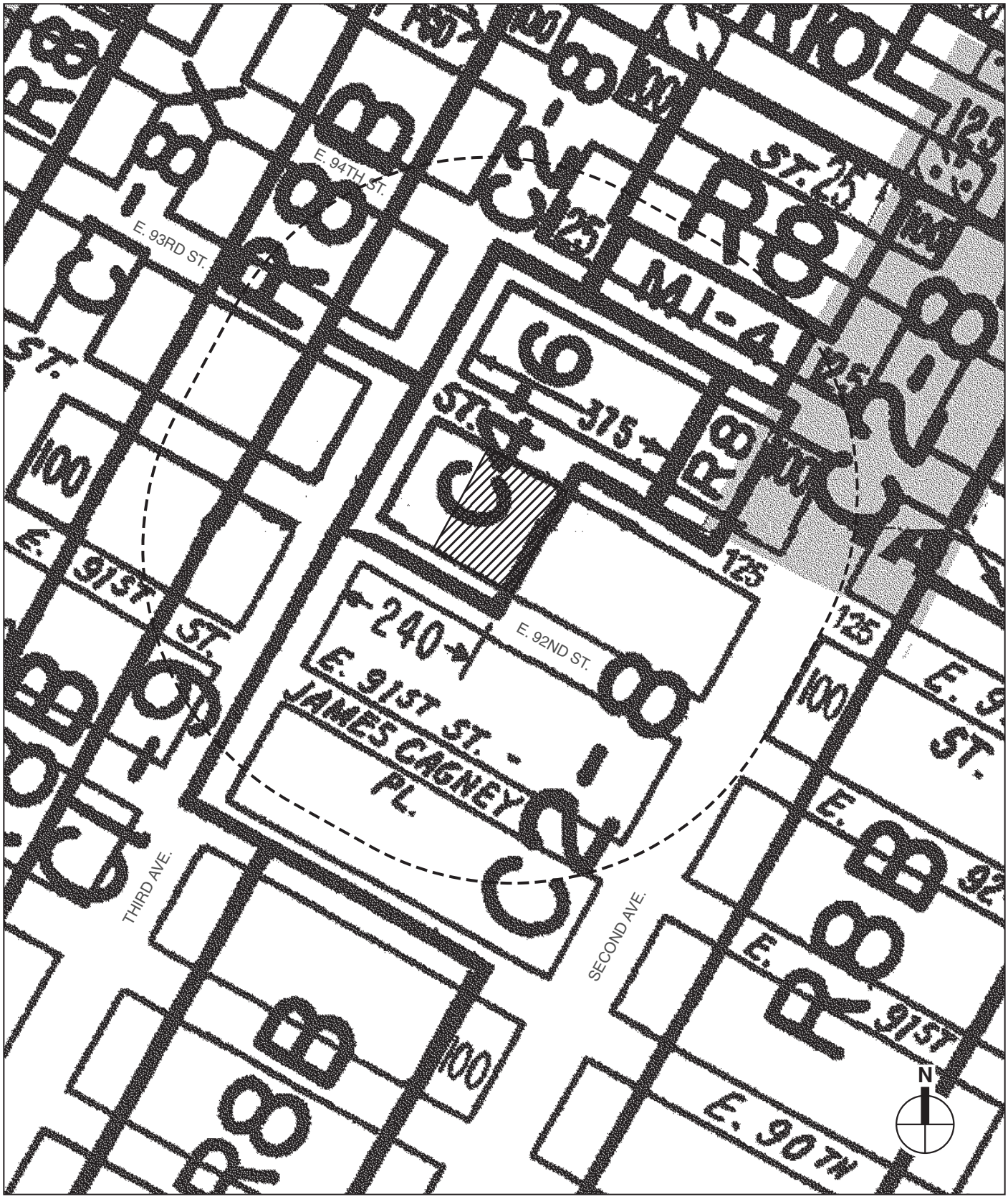
[1] The Ruppert Brewery Urban Renewal Plan expired in 2008 and is no longer in force.



203-205 East 92nd Street

Land Use
Figure A-1

5.3.13



Project Site

Study Area Boundary (400-Foot Perimeter)

Zoning District Boundary

Special Purpose District

0 200 FEET

SCALE

Zoning Map

Figure A-2

203-205 East 92nd Street

Table A-1
Zoning Districts in the Study Area

Zoning District	Maximum FAR[1]	Uses/Zone Type
C4-6	3.4 commercial 10.0 residential[2] 10.0 community facility	Mixed-use district
C1-9	2.0 commercial 10.0 residential[3] 10.0 community facility	Mixed-use district
C2-8	2.0 commercial 10.0 residential[3] 10.0 community facility	Mixed-use district
R8	0.94–6.02 residential 6.5 community facility	General residential district
R8B	4.0 residential 5.1 community facility[4]	Contextual residential district
M1-4	2.0 manufacturing or commercial 6.5 community facility	Light manufacturing and most commercial uses; residential uses not permitted.

Notes: 1. FAR is a measure of density establishing the amount of development allowed in proportion to the base lot area. For example, a lot of 10,000 sf with a FAR of 1 has an allowable building area of 10,000 sf. The same lot with an FAR of 10 has an allowable building area of 100,000 sf.
2. Increase in FAR allowed with IH bonus or public plaza bonus
3. Increase in FAR allowed with IH bonus
4. Maximum of 5.1 FAR for community facilities permitted for R8B districts in Manhattan Community Board 8 only**Sources:** New York City Zoning Resolution

The project site is designated Site 4A in the Ruppert Brewery LSRD, which consists of the four blocks located between East 90th Street and East 94th Street, from Third Avenue to Second Avenue. In the original LSRD plan, approved by CPC in 1971, the project site was part of a tract of land reserved for a high school. When it was determined that a high school was no longer needed in the area, the LSRD was amended to convert this tract of land to "park-like open space" under private ownership for the use of the LSRD's residents, thus assigning the site with zero floor area.[1] The obligation to provide an open space amenity for the area on the project site (Site 4A) expired in July 2008, coterminous with the expiration of the Ruppert Brewery Urban Renewal Plan. While the URP is now expired, the LSRD continues to govern permitted floor area and minimum open space requirements within the LSRD. Any modifications to Site 4A, including those that would result in a development that complies with the underlying zoning regulations, would require an amendment to the LSRD's floor area and other zoning data for Site 4A, as well as other corresponding adjustments to the zoning summary chart for the entire LSRD.

STUDY AREA

In addition to the C4-6 zoning district described above, the study area consists primarily of zoning districts that allow for similar mixed-use developments. This includes C1-9 and C2-8 districts located immediately to the west, south, and east. R8 and R8B districts, which allow a similar level of residential and community facility development but do not allow commercial use, are located further to the west and north of the project site. The northern portion of the study

[1] CPC resolution, ULURP no. C810178 HUM (June 16, 1982, cal. No. 109)

area also includes an M1-4 district along East 94th Street. M1-4 districts are intended for areas with light manufacturing uses such as warehouses or repair shops, and do not allow residential use (see **Table A-1**).

PUBLIC POLICY

No public policies are applicable to the project site or to the study area.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

LAND USE

PROJECT SITE

Without the proposed project, the project site would remain undeveloped and closed to the public.

STUDY AREA

There is one project in the 400-foot study area that is currently under construction and anticipated to be complete by 2015. The project, located at 1676 Third Avenue (Block 1522, Lot 40), is for a 5-story building with two residential units. No other changes are anticipated to the composition of the study area, which will remain a mix of large-scale mixed-use buildings to the north and south of the project site, with lower density residential buildings located to the west.

ZONING AND PUBLIC POLICY

No changes to zoning or applicable public policies are expected on the project site or in the 400-foot study area in the No Action condition. Existing zoning regulations, including the LSRD, and public policies are expected to remain in effect.

E. THE FUTURE WITH THE PROPOSED PROJECT

LAND USE

PROJECT SITE

With the proposed modification to the LSRD, the project site would be developed with a 36-story mixed-use building with residential units, a health club, a private school, accessory parking, and a small amount of retail. The proposed building would be located on the western portion of the project site, covering a footprint of approximately 18,950 gross square feet (gsf). The proposed project includes an approximately 10,679 gsf publicly accessible plaza and approximately 2,111 sf of additional open space located on the eastern portion of the project site. Through provisions in the underlying C4-6 zoning regulations, which allow for an increase in FAR with the addition of Inclusionary Housing or a public plaza, the proposed public plaza would generate an additional 64,050 zoning square feet (zsf) of space that would be included in the proposed building. The proposed building would have a total of approximately 462,091 gsf of space, of which 351,203 gsf would be residential space (approximately 290 residential units). The residential space would be accessible through an entrance lobby located on East 92nd Street. The health club would be accessible through a separate entrance on East 92nd Street.

The proposed building would include approximately 33,448 gsf of health club use on the first, fifth, and sixth floors; a K-8 private school approximately 61,589 gsf in size on the cellar through fourth floors; approximately 80 accessory parking spaces on the cellar level; approximately 1,007 gsf of retail use at grade, adjacent to the public p laza;and approximately 351,203 gsf (approximately 290 units) of residential use above. A portion of the proposed residential units would be designated as affordable. In total, the proposed building would be approximately 462,091 gsf (384,300 zoning floor area) and approximately 36 stories (426'9" feet) tall. The proposed private school would have approximately 350 seats and 125 faculty and staff members. It is expected that an approximately 10,679 gsf publicly accessible plaza and approximately 2,111 sf of additional open space would be developed on the site, and that the school would have an approximately 2,290 gsf playyard on a third-floor terrace.

The school in the proposed building would occupy space on the first through fourth floors as well as the cellar, totaling 61,589 gsf. The school would have approximately 350 student seats and 125 faculty and staff members. A separate entrance for the school would be located on East 93rd Street; the school would also have an approximately 2,290 gsf playyard on a third-floor terrace. The proposed building would also contain a garage with approximately 80 accessory parking spaces accessed through an entrance on East 92nd Street.

STUDY AREA

The proposed modification to the LSRD would be applicable to the project site only, and would not affect any other site in the study area. Land uses in the study area would remain a mix of large-scale mixed-use buildings to the north and south of the project site, with lower density residential buildings located to the west.

ZONING

PROJECT SITE

The zoning on the project site would remain a C4-6 district. The proposed building would be built to the maximum basic FAR of 10 and would utilize the maximum plaza bonus of 2, for a total of 12 FAR, and would fully comply with the regulations of the underlying C4-6 zoning district.

Ruppert Brewery Large Scale Residential Development Plan

The proposed action would amend the Ruppert Brewery LSRD to remove the project site's designation as privately owned "park-like open space" to allow for the proposed development as described above. Subject to the approval of CPC, the proposed amendment would designate the project site as a development parcel which would conform to the regulations of the underlying C4-6 zoning district; no modifications to the underlying zoning are required for the proposed project.

STUDY AREA

Zoning in the study area would not be affected, and would remain a combination of residential and mixed-use districts.

PUBLIC POLICY

The proposed project would require a modification to the LSRD Tables I, II, and II and to the General Site Plan for the LSRD. No other changes to public policy on the project site or in the study area would be made.

CONCLUSION

The proposed actions would allow for the redevelopment of vacant land formerly used as publicly accessible private open space with a mixed-use building that conforms to the land use patterns of the surrounding area. The proposed project would have no impact on land use, zoning, or public policy in the area. ✷

Attachment B: Open Space

A. INTRODUCTION

This attachment examines the proposed project's potential effects on open space resources. "Open space" is defined by the 2012 *City Environmental Quality Review (CEQR) Technical Manual* as "publicly or privately owned land that is publicly accessible and operates, functions, or is available for leisure, play, or sport, or set aside for the protection and/or enhancement of the natural environment." An open space analysis under CEQR focuses on officially designated existing or planned public open spaces, and is conducted to determine whether a proposed project would have a direct impact resulting from the elimination or alteration of open space, or an indirect impact resulting from overtaxing available open space. There are different thresholds for an open space assessment, depending on whether a project site is located in an area of the city that has been identified as underserved or well served by open space. For areas of the city that have not been identified as underserved or well served by open space, an assessment is conducted when a project would generate 200 or more residents or 500 or more workers. When a project meets or exceeds the threshold for analysis, the *CEQR Technical Manual* suggests that a preliminary assessment be used to determine the need for a more detailed open space analysis. If the preliminary assessment indicates the need for further analysis, then a detailed analysis of open space is performed.

The project site is not located in an area of the city that has been identified as underserved or well served by open space. The proposed project would result in approximately 290 residential units and approximately 505 new residents at the project site (based on the average household size of 1.74 persons per household for Manhattan census tract 154, which includes the project site).[1] Therefore, a preliminary assessment is provided below to examine the effects of the added population on the active and passive public open spaces in the study area and to determine whether the population increase would significantly affect local open spaces. The proposed project would generate fewer than 500 workers, and thus an assessment of potential effects on the non-residential (worker) population is not warranted. This chapter assesses existing conditions (both users and resources) and compares conditions in the future (by 2015) both with and without the proposed project, to determine the potential for open space impacts.

As described in greater detail below, while the amount of open space available to residents in the study area is and would remain below the City's planning guidelines, the open space ratios would not decrease by more than one percent and would not drop below 0.15 acres of passive open space per 1,000 residents. Furthermore, the proposed project would increase the ratio of total open space per 1,000 residents slightly (by less than one percent) with the inclusion of the proposed publicly accessible plaza, which would be approximately 10,679 gross square feet (gsf) in size, and the proposed approximately 2,111 sf of additional open space. In summary, the proposed project would not meet the *CEQR Technical Manual's* thresholds for a detailed

[1] U.S. Census Bureau, 2010 Census

analysis, and would not result in a significant adverse impact on open space resources in the study area.

B. METHODOLOGY

This analysis of potential open space impacts was conducted based on the methodology of the *CEQR Technical Manual*. According to CEQR guidelines, the first step in this analysis is to establish a study area. Study areas are generally delineated based on a reasonable travel distance a person would walk to reach a neighborhood open space. Residents are assumed to walk about 20 minutes (about a ½-mile distance) to reach their passive and active neighborhood open spaces. Therefore, a study area was established that includes all census tracts that have at least 50 percent of their area within ½-mile of the project site (Manhattan census tracts 144.02, 146.01, 146.02, 148.01, 148.02, 150.01, 150.02, 152, 154, 156.01, 156.02, 158.01, 158.02, 160.01, 160.02, 164, and 166). This study area is roughly bounded by East 105th Street on the north, East 84th Street on the south, the East River on the east, and Fifth Avenue on the west (see **Figure B-1**).

INVENTORY OF OPEN SPACE RESOURCES

Publicly accessible open spaces and recreational facilities in the study area were inventoried to determine their size, character, utilization, amenities, and condition. The inventory includes only open spaces that are accessible to the general public. The information used for this analysis was gathered through field studies conducted in October 2012 on weekdays and from the New York City Department of Parks and Recreation (DPR) website and other agency websites, as well as from New York City DoITT GIS data and planning studies.

The acreage of active and passive space is determined for each open space. In making this determination, active open space acreage is considered to be used for recreational pursuits such as jogging, field sports, and children's play. Active open space amenities include basketball courts, athletic fields, and play equipment. Passive open space is considered to be used for recreational pursuits such as strolling, reading, sunbathing, and people-watching. Some spaces, such as lawns and public esplanades, can provide both active and passive recreational opportunities, since they can be used for passive activities such as sitting or strolling, and active uses such as jogging or biking. Based on the methodologies of the *CEQR Technical Manual*, uses and the amount of space dedicated to each type of use at each open space were determined based on field observations. In some cases, assumptions were made following the guidelines in the *CEQR Technical Manual*.

For determining utilization, open spaces with less than 25 percent of the space or equipment observed as in use during the field investigation were categorized as low usage; spaces with 25 to 75 percent utilization were classified as moderate usage; and those with over 75 percent utilization were considered heavily used.

In addition to the open spaces located within the study area, open spaces falling outside the study area were considered qualitatively in this analysis. These spaces provide additional open space resources and are likely to be used by the study area residents.

ADEQUACY OF OPEN SPACE RESOURCES

COMPARISON TO GUIDELINES

The adequacy of the study area open space is quantitatively assessed using a ratio of usable open space acreage to the study area population—referred to as the open space ratio. To assess the

203-205 East 92nd Street

Open Space Study Area
Figure B-1

adequacy of open space resources, open space ratios are compared with planning goals set by the New York City Department of City Planning (DCP). Although these ratios are not meant to determine whether a proposed action might have a significant adverse impact on open space resources, they do provide a quantitative measure for determining potential impacts. For residential open space assessments, a ratio of 2.5 acres per 1,000 residents represents the City's open space planning goal. Ideally, this would consist of 0.50 acres of passive space and 2.0 acres of active open space per 1,000 residents. As noted above, these goals are often not feasible for many City neighborhoods and they do not constitute an impact threshold, but rather provide benchmarks for determining open space adequacy.

IMPACT ASSESSMENT

The significance of a proposed project's effects on an area's open spaces is determined using both qualitative and quantitative factors, as compared to conditions in the future without the project (the No-Action condition). With respect to quantified impact thresholds, the *CEQR Technical Manual* suggests that a project may result in a significant adverse open space impact if:

- There would be a direct displacement/alteration of existing open space within the study area that has a significant adverse effect on existing users, unless the proposed project would provide a comparable replacement (size, usability, and quality) within the study area; or
- The project would reduce open space ratios by more than 5 percent in areas that are currently below the City's median community district open space ratio of 1.5 acres per 1,000 residents. In areas that are extremely lacking in open space, a reduction as small as one percent may be considered significant.

The proposed project would not remove or alter any existing publicly accessible open spaces, and therefore would not result in any significant adverse direct open space impacts. Because the proposed project would introduce new residents to the study area, the quantitative analysis determines whether the proposed project would reduce the open space ratio for residents within the study area by more than 5 percent.

C. EXISTING CONDITIONS

STUDY AREA POPULATION

According to the 2010 census, the residential population of the 17 census tracts within the study area is 94,563 people.

STUDY AREA OPEN SPACES

There are 14 publicly accessible open spaces and recreational resources currently operating within the ½-mile open space study area.[1] **Table B-1** identifies these resources, and **Figure B-2** illustrates their locations in the study area. These open spaces include public open spaces, and privately-owned spaces that are open to the public. Altogether, the publicly accessible open space resources

[1] The project site was disposed of to the current owner in 1983 with the obligation of providing to an open space amenity for the area; this agreement expired in 2008 coterminous with the expiration of the Ruppert Brewery Urban Renewal Plan. Currently, the project site is an unused former recreation facility permanently closed to the public, encircled by a high metal fence.

in the residential study area total approximately 47.61 acres, of which approximately 24.39 acres are for passive recreation and approximately 23.44 acres are for active recreational activities. The study area contains the Park Avenue Malls, planting areas located on the median of Park Avenue between East 83rd Street and East 97th Street. Only one portion of the Park Avenue Malls contains recreational space (i.e. seating areas); therefore, per the guidelines of the *CEQR Technical Manual*, only this portion is included in the quantitative analysis. In addition, a portion of two larger open spaces, Central Park and the East River Esplanade, falls within the study area's boundaries. For these resources, only the portion that lies within the study area is accounted for in the available public open space acreage. These resources are also addressed in the qualitative assessment.

Table B-1
Existing Publicly Accessible Open Space Inventory

Fig. Ref.*	Name/Address	Owner/ Agency	Features	Total Acres	Active	Passive	Condition/ Utilization
1	Central Park	DPR	Conservatory, meadow, playing field, playground, planting areas, running/biking path, benches	18.82	9.41	9.41	Good/High
2	East River Esplanade	DPR	Benches, running/biking path	1.90	0.95	0.95	Fair/Moderate
3	DeKovats Playground	DPR	Benches, playground	0.70	0.61	0.09	Good/Moderate
4	Marx Brothers Playground	DPR	Benches, playing field	1.49	1.30	0.19	Fair/Low
5	Stanley M. Isaacs Playground	DPR	Seating, field house, playground, basketball & handball courts, inline skating rink	1.23	0.98	0.25	Good/Low
6	Blake Hobbs Playground	DPR	Benches, basketball & handball courts, playground	1.00	0.90	0.10	Fair/Low
7	Cherry Tree Park	DPR	Planting areas, benches, basketball courts, playground	0.95	0.71	0.24	Good/High
8	Samuel Seabury Playground	DPR	Playground, planting areas, benches, courts	0.79	0.71	0.08	Good/High
9	Carl Schurz Park	DPR	Gracie Mansion, benches, walkways, playground, dog run, planting areas, basketball court, inline skating rink	14.94	3.74	11.20	Good/Moderate
10	Asphalt Green	DPR	Playing fields, basketball courts, picnic area	4.35	3.81	0.54	Good/Moderate
11	Sunshine Playground	DPR	Gazebos, benches, playgrounds, planting areas	0.24	0.06	0.18	Fair/Low
12	Ruppert Park	DPR	Benches, seating areas, playground equipment, planting areas	1.00	0.25	0.75	Good/Moderate
13	Park Avenue Mall	DPR	Benches, seating ledges, planting areas	0.21	0	0.21	Good/Moderate
14	Monterey Public Garden	Related 96th Street Associates	Benches, planting areas, walkways	0.20	0	0.20	Excellent/Low
			Study Area Total	**47.82**	**23.44**	**24.39**	

Notes: *See **Figure B-1** for location of open spaces.
Sources: DPR open space data base; AKRF, Inc. field surveys, October 2012.

Existing Open Space Resources

Figure B-2

203-205 East 92nd Street

ADEQUACY OF OPEN SPACE RESOURCES

With a total of 47.82 acres of open space (of which 23.44 are for active use and 24.39 are for passive use) and a total residential population of 94,563, the study area has an overall open space ratio of 0.506 acres per 1,000 residents (see **Table B-3**). This is below DCP's planning guideline of 2.5 acres of open space per 1,000 residents. However, the project site is not located in an area identified by DPR as underserved by open space.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

STUDY AREA POPULATION

PROJECT SITE

No changes to the project site are anticipated in the No Action condition. In the future without the proposed project, the project site would remain vacant.

STUDY AREA

Six residential development projects are anticipated to be built within and adjacent to the 1/2–mile study area by 2015. These projects are listed in **Table B-2**, and **Figure B-3** shows their locations. These projects contain a total of 536 new dwelling units. Assuming a rate of 1.74 residents per dwelling unit, the projects will introduce approximately 933 new residents to the study area. Therefore, the residential population of the study area will increase to 95,496 people in the No Action condition.

Table B-2
Planned Projects Within or Near the 1/2-Mile Study Area

Figure Ref. No.	Location	Dwelling Units	Residents Generated[1]	Build Year
1	1676 Third Avenue	2	4	2013
2	301 East 99th Street (HHC)	176	306	2015
3	148 East 98th Street	11	19	2015
4	213 East 99th Street (PS 109)	90	157	2014
5	1918 1st Avenue (HHC Draper Hall)	168	292	2015
6	203 East 104th Street (Harlem RBI)	89	155	2015
		Total New Residents	**933**	

Notes: [1]Based on a rate of 1.74 residents per dwelling unit (average household size of Manhattan census tract 154, 2010 Census)
Sources: New York City Department of Buildings; New York City Department of City Planning

STUDY AREA OPEN SPACES

No changes to the existing open spaces in the study area or creation of new open spaces are anticipated in the No Action condition. Available open space in the study area will remain 47.82 acres as shown in **Table B-1** above, with 23.44 acres for active use and 24.39 acres for passive use.

ADEQUACY OF OPEN SPACE RESOURCES

The open space ratio in the study area will decrease incrementally in the No Action condition, and will remain below the City's planning goal. With a total residential population of 95,496 people and 47.82 acres of open space, the total open space ratio would decrease to 0.501 acres per 1,000 residents, below DCP's recommended 2.5 acres per 1,000 residents (see **Table B-3).**

E. THE FUTURE WITH THE PROPOSED PROJECT

STUDY AREA POPULATION

As described in the EAS project description, the proposed project would allow for the construction of an approximately 462,091 gross square feet (gsf) mixed-use building containing approximately 290 dwelling units. At a rate of 1.74 residents per dwelling unit, the proposed project would add approximately 505 residents to the study area. Therefore, combined with the projects described in the No Action condition, the residential population of the study area will increase to 96,001 persons in the future with the proposed project.

STUDY AREA OPEN SPACES

The proposed project includes the creation of an approximately 10,679 gsf public plaza and approximately 2,111 sf of additional open space (approximately 0.29 acres of passive open space) that would conform to DCP's design and operational standards for a privately-owned public plaza. Therefore, the total available open space in the study area would increase to 42.11 acres in the future with the proposed project.

ADEQUACY OF OPEN SPACE RESOURCES

With the proposed project, the open space ratio in the residential study area would increase slightly as compared to the No Action condition. While the active open space ratio would decrease slightly (by less than one percent), the passive open space ratio would increase slightly due to the provision of a public plaza as part of the proposed project. The total open space ratio will remain below DCP's planning guideline of 2.5 acres per 1,000 residents (see **Table B-3**).

Table B-3
Adequacy of Open Space Resources

Total Population	Open Space Acreage			Open Space Ratios Per 1,000 Residents			DCP Open Space Guidelines		
	Total	Active	Passive	Total	Active	Passive	Total	Active	Passive
Existing Conditions									
94,563	47.82	23.44	24.39	0.506	0.248	0.258	2.5	2.0	0.5
No Action Condition									
95,496	47.82	23.44	24.39	0.501	0.245	0.255	2.5	2.0	0.5
Future with Proposed Project									
96,001	48.11	23.44	24.68	0.501	0.244	0.257	2.5	2.0	0.5
Percent Change				**+0.08%**	**-0.53%**	**+0.66%**			

Open Space Study Area
No Build Projects
Figure B-3

203-205 East 92nd Street

QUALITATIVE ASSESSMENT

While the quantitative analysis indicates that the open space ratios in the study area are and would remain below the City's planning guidelines, those ratios do not account for the total recreational and open space available to residents in the study area, including residents introduced to the area with the proposed project. In particular, the ratios only include the portions of Central Park and the East River Esplanade that fall within the study area boundary. Both of these open space resources are extensive and include a large amount of space within a reasonable walking distance for study area residents and in particular offer considerable space for active recreational activities such as biking or running. Furthermore, the study area includes several residential complexes operated by the New York City Housing Authority (NYCHA), including the George Washington Houses, the Lexington Houses, and the Stanley M. Issacs Houses. These complexes include open space resources maintained by NYCHA that are not included in the quantitative analysis. These open space resources—which include walkways, seating areas, and playgrounds—serve the open space needs of the complexes' residents as well as residents of surrounding blocks. Similarly, the large residential complexes adjacent to the project site and on the blocks immediately north and south of the project site, feature private open space (including seating areas and playgrounds) that provide recreational space for those complexes' residents.

The proposed project includes a private school with approximately 350 students and approximately 125 faculty and staff members. An approximately 2,290 play yard would be developed for the school on the building's third-floor terrace. The play yard would not be available to the residents on the project site or to the public, but would serve the primary open space needs of the school's students, faculty, and staff members.

In summary, while the amount of open space available to residents in the study area is and would remain below the City's planning guidelines, the open space ratios would not decrease by more than one percent and would not drop below 0.15 acres of open space per 1,000 residents. Furthermore, the proposed project would increase the ratio of total open space per 1,000 residents slightly (by less than one percent) with the inclusion of the proposed public plaza, which would be approximately 10,679 gross square feet (gsf) in size, and the proposed additional approximately 2,111 sf of open space. The play yard to be developed for the proposed school would fulfill the open space needs of the school's students, faculty, and staff members. In summary, the proposed project would not meet the *CEQR Technical Manual's* thresholds for a detailed analysis, and would not result in a significant adverse impact on open space resources in the study area. ✷

Attachment C: Shadows

A. INTRODUCTION

This attachment examines whether the proposed project would cast new shadows on any sunlight-sensitive publicly accessible resources or other resources of concern, and assesses the potential effects of any such new shadows. Sunlight-sensitive resources of concern include publicly accessible open spaces, important natural features such as water bodies, and sunlight-dependent features of historic and cultural resources.

According to the 2012 *City Environmental Quality Review (CEQR) Technical Manual*, a shadows assessment is required if the proposed project would result in structures (or additions to existing structures) of 50 feet or more, or if the project site is located adjacent to, or across the street from, a sunlight-sensitive resource. The proposed building would reach a maximum height (including rooftop bulkhead) of approximately 426' 9" feet, and therefore, a shadow analysis is warranted.

The analysis showed that six sunlight-sensitive resources would receive project-generated incremental shadow at certain times of year. The analysis concluded that, given the limited frequency (with respect to season), brief durations and small extents of incremental shadow on these resources, no significant adverse shadow impacts would be expected to occur.

B. DEFINITIONS AND METHODOLOGY

This analysis has been prepared in accordance with New York City Environmental Quality Review (CEQR) procedures and follows the guidelines of the 2012 *CEQR Technical Manual*.

DEFINITIONS

Incremental shadow is the additional, or new, shadow that a structure resulting from a proposed project would cast on a sunlight-sensitive resource.

Sunlight-sensitive resources are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. Such resources generally include:

- *Public open space* (e.g. parks, beaches, playgrounds, plazas, schoolyards, greenways, landscaped medians with seating). Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources.
- *Features of architectural resources that depend on sunlight for their enjoyment by the public.* Only the sunlight-sensitive features need be considered, as opposed to the entire resource. Such sunlight-sensitive features might include: design elements that depend on the contrast between light and dark (e.g. recessed balconies, arcades, deep window reveals); elaborate, highly carved ornamentation; stained glass windows; historic landscapes and

scenic landmarks; and features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as a historic landmark.

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

Non-sunlight-sensitive resources include, for the purposes of CEQR:

- *City streets and sidewalks* (except Greenstreets);
- *Private open space* (e.g. front and back yards, stoops, vacant lots, and any private, non-publicly accessible open space);
- *Project-generated open space* cannot experience a significant adverse shadow impact from the project, according to CEQR, because without the project the open space would not exist. However, a qualitative discussion of shadows on the project-generated open space should be included in the analysis.

A significant adverse shadow impact occurs when the incremental shadow added by a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources. Each case must be considered on its own merits based on the extent and duration of new shadow and an analysis of the resource's sensitivity to reduced sunlight.

METHODOLOGY

Following the guidelines of the 2012 *City Environmental Quality Review (CEQR) Technical Manual*, a preliminary screening assessment must first be conducted to ascertain whether a project's shadow could reach any sunlight-sensitive resources at any time of year. The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the proposed building representing the longest shadow that could be cast. If there are sunlight-sensitive resources within this radius, the analysis proceeds to the second tier, which reduces the area that could be affected by project shadow by accounting for the fact that shadows can never be cast between a certain range of angles south of the project site due to the path of the sun through the sky at the latitude of New York City.

If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by project shadow by looking at specific representative days in each season and determining the maximum extent of shadow over the course of each representative day.

If the third tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow resulting from the project. The detailed analysis provides the data needed to assess the shadow impacts. The effects of the new shadows on the sunlight-sensitive resources are described, and their degree of significance is considered. The results of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text.

C. PRELIMINARY SCREENING ASSESSMENT

A base map was developed using Geographic Information Systems (GIS)[1] showing the location of the proposed project and the surrounding street layout (see **Figure C-1**). In coordination with the land use, open space, and historic and cultural resources assessments presented in other sections of this Environmental Assessment Statement, potential sunlight-sensitive resources were identified and shown on the map.

TIER 1 SCREENING ASSESSMENT

For the Tier 1 assessment, the longest shadow that the proposed structure could cast is calculated, and, using this length as the radius, a perimeter is drawn around the project site. Anything outside this perimeter representing the longest possible shadow could never be affected by project generated shadow, while anything inside the perimeter needs additional assessment.

According to the *CEQR Technical Manual*, the longest shadow that a structure can cast at the latitude of New York City occurs on December 21, the winter solstice, at the start of the analysis day at 8:51 AM, and is equal to 4.3 times the height of the structure.

Therefore, at a maximum height of approximately 426' 9" feet above curb level, including the rooftop bulkhead, the proposed building could cast a shadow up to 1,835 feet in length (426' 9" x 4.3). Using this length as the radius, a perimeter was drawn around the proposed building footprint (see **Figure C-1**). A number of sun-sensitive resources lay within the perimeter or longest shadow study area, and therefore the next tier of screening assessment was conducted.

TIER 2 SCREENING ASSESSMENT

Because of the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City this area lies between -108 and +108 degrees from true north. **Figure C-1** illustrates this triangular area south of the project site. The complementing area to the north within the longest shadow study area represents the remaining area that could potentially experience new project generated shadow.

Nineteen publicly accessible parks and plazas were located within the remaining longest shadow study area, as well as a very small portion of the East River, an important natural feature. There were no sunlight-dependent features of cultural or historic resources within the remaining study area.

Table C-1 lists the 20 sunlight-sensitive resources in the study area, as well as one historic resource with sunlight-dependent features that lies within the area south of the project site, where no shadow could be cast by the proposed project.

[1] Software: Esri ArcGIS 10.1; Data: New York City Department of Information Technology and Telecommunications (DoITT) and other City agencies, and AKRF site visits.

Table C-1
Sunlight-sensitive Resources

Fig. Ref.*	Name/Address	Features	Condition/ Utilization
OPEN SPACES			
1	Hunter College Campus School schoolyard	Playground, ball courts	Good/High
2	40 East 94th Street plaza	Planting areas, seating	Good/Moderate
3	Park Avenue Mall	Benches, seating ledges, planting areas	Good/Moderate
4	Samuel Seabury Playground	Playground, planting areas, benches, courts	Good/High
5	P.S. 198 schoolyard	Playground	Good/High
6	Monterey Public Garden	Benches, planting areas, walkways	Excellent/Low
7	182 East 95th St. (Highgate) residential plaza	Planting areas, seating	Good/Moderate
8	205 East 95th St. (Normandie Court) residential plaza	Planting areas, seating	Good/Low
9	NYCHA Washington Houses open spaces	Planting areas, benches	Good/Low
10	NYCHA Washington Houses playground	Playground	Good/Low
11	Cherry Tree Park	Planting areas, benches, basketball courts, playground	Good/High
12	235 East 95th St. (Normandie Court) residential plaza	Planting areas, seating, water feature	Inaccessible and obscured at site visit due to construction
13	Marx Brothers Playground	Benches, playing field	Fair/Low
14	301 East 94th St. (Marmara) residential plaza	None	Inaccessible and obscured at site visit due to construction
15	300 East 93rd St. plaza	Planting areas, seating, water feature	Good/Low
16	345 East 93rd St. plaza	Planting areas, seating	Good/Moderate
17	NYCHA Stanley M. Isaacs Houses open spaces	Benches, playground	Good/Low
18	Stanley M. Isaacs Playground	Seating, field house, playground, basketball & handball courts, inline skating rink	Good/Low
19	East River Esplanade	Benches, running/biking path	Fair/Moderate
NATURAL FEATURES			
20	East River	N/A	N/A
HISTORIC RESOURCES WITH SUNLIGHT-SENSITIVE FEATURES			
21	Church of the Holy Trinity	N/A	N/A

Notes: *See **Figure C-1** for location of open spaces.
Sources: DPR and Citywide GIS open space data base; AKRF, Inc. field surveys, October/November 2012

TIER 3 SCREENING ASSESSMENT

The direction and length of shadows vary throughout the course of the day and also differ depending on the season. In order to determine whether project-generated shadow could fall on a sunlight-sensitive resource, three-dimensional (3D) computer mapping software[1] is used in the Tier 3 assessment to calculate and display the proposed project's shadows on individual representative days of the year. A computer model was developed containing three-dimensional representations of the elements in the base map used in the preceding assessments, the

[1] MicroStation V8i (SELECTSeries 3)

Tier 1 and Tier 2 Assessment

Figure C-1

203-205 East 92nd Street

topographic information of the study area, and a reasonable worst-case three-dimensional representation of the proposed project.

REPRESENTATIVE DAYS FOR ANALYSIS

Following the guidance of the *CEQR Technical Manual*, shadows on the summer solstice (June 21), winter solstice (December 21) and spring and fall equinoxes (March 21 and September 21, which are approximately the same in terms of shadow patterns) are modeled, to represent the range of shadows over the course of the year. An additional representative day during the growing season is also modeled, generally the day halfway between the summer solstice and the equinoxes, i.e. May 6 or August 6, which have approximately the same shadow patterns.

TIMEFRAME WINDOW OF ANALYSIS

The shadow assessment considers shadows occurring between one and a half hours after sunrise and one and a half hours before sunset. At times earlier or later than this timeframe window of analysis, the sun is down near the horizon and the sun's rays reach the earth at very tangential angles, diminishing the amount of solar energy and producing shadows that are very long, move fast, and generally blend with shadows from existing structures until the sun reaches the horizon and sets. Consequently, shadows occurring outside the timeframe window of analysis are not considered significant under CEQR, and their assessment is not required.

TIER 3 SCREENING ASSESSMENT RESULTS

Figures C-2 to **C-5** illustrate the range of shadows that would occur, in the absence of intervening buildings, from the proposed building on the four representative days for analysis. As the shadows move east and clockwise over the landscape, they are shown occurring approximately every two hours from the start of the analysis day (one and a half hours after sunrise) to the end of the analysis day (one and a half hours before sunset).

On the March 21/September 21 analysis day would not reach any sunlight-sensitive resource in the morning or mid-day. In the afternoon it would be long enough to pass across a portion of the open-to-the-public plaza area of 235 East 95th Street (Normandie Court), absent intervening buildings. At the end of the analysis day, it could reach the plaza area in front of 301 East 94th Street (the Marmara) and the Marx Brothers Playground at East 96th Street and Second Avenue.

On the May 6/August 6 analysis day, the only sunlight-sensitive resource that could potentially be reached by project-generated shadow would be the plaza at 301 East 94th Street.

On June 21, no sunlight-sensitive resources could be affected until late in the afternoon, when the proposed building's shadow could be long enough to reach the residential plazas at 300 East 93rd Street and 345 East 93rd Street, in the absence of intervening buildings. At the end of the analysis day shadow would also be long enough to potentially reach the NYCHA Stanley Isaacs Houses complex, specifically the two benches near the First Avenue entrances and the internal playground.

On December 21, when shadows are longest, the proposed building's shadow would be long enough, absent intervening buildings, to reach a portion of the Hunter College Campus School schoolyard and two blocks of the Park Avenue Mall in the morning; the Samuel Seabury Playground, the P.S. 198 Playground, and the residential plazas at 182 East 95th Street and at 205 East 95th Street in the middle of the day; and the NYCHA Washington Houses complex in the afternoon which contains an area of plantings, and a playground.

In summary, the Tier 3 assessment concluded that the residential plaza at 301 East 94th Street could potentially be reached in the afternoons of two analysis days, five other resources could be reached on one analysis day—either March 21/September 21 or June 21—and eight other resources could be reached on December 21 only. Therefore a detailed analysis was required to determine the actual extent and duration of project-generated shadows on these resources given existing shadows from intervening buildings. The other six resources listed in **Table C-1** that could not be reached by project-generated shadow on any of the four analysis days as shown in the Tier 3 assessment required no further analysis.

D. DETAILED SHADOW ANALYSIS

For the detailed analysis, existing buildings were added to the 3D computer model to establish the baseline or No Action condition. Shadows with the proposed building could then be compared to shadows that already exist in the baseline condition, in order to identify any incremental project-generated shadows on sunlight-sensitive resources. The purposed of the detailed analysis is to determine the extent and duration of incremental shadows that fall on sunlight-sensitive resources and to assess the effects of any such new shadows.

Three-dimensional representations of the existing buildings in the study area were developed using data obtained from NYC DoITT, Sanborn maps, and photos taken during project site visits, and were added to the three-dimensional model used in the Tier 3 assessment. **Figure C-6** shows an overview of the 3D computer model used in the analysis.

Shadows are in constant movement. The computer simulation software produces an animation showing the movement of shadows over the course of each analysis period. The analysis determines the time when incremental shadow would enter each resource, and the time it would exit.

Shadow analyses were performed for each of the representative days and analysis periods indicated in the Tier 3 assessment.

Table C-2 summarizes the entry and exit times and total duration of incremental shadows on each affected sun-sensitive resource. **Figures C-7 to C-12** document the results of the detailed analysis by providing graphic representations from the computer animation of times when incremental shadow would fall on a sun-sensitive resource. The figures illustrate the extent of additional, incremental shadow at that moment in time, highlighted in red, and also show existing shadow and remaining areas of sunlight. The incremental shadows are described below for each analysis day, and the effects are then assessed by resource.

MARCH 21/SEPTEMBER 21

March is considered the beginning of the growing season in New York City, and September 21, which has the same shadow patterns as March 21, is also within the growing season. Shadows on March 21 and September 21 are of moderate length.

Shadow cast by the top of the proposed building would pass across a portion of the residential plaza at 235 East 95th street (Normandie Court), located at the northwest corner of East 95th Street and Second Avenue, between 3:10 PM and 3:40 PM. This plaza is large and open, and some areas of the plaza would remain in sun during the 30 minutes when the new shadow would pass across it (see **Figure C-7**). No other sunlight-sensitive resources would be affected by the proposed project on this analysis day.

5.3.13

Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Publicly-Accessible Open Space (see Figure C-1/Table C-1)

Shadow

This figure illustrates the range of shadows that would occur, absent intervening structures, from the proposed building on this representative day. The shadows are shown occurring approximately every two to three hours from the start of the analysis day (one and a half hours after sunrise) to the end of the analysis day (one and a half hours before sunset). The Tier 3 assessment serves to illustrate the daily path or "sweep" of the proposed building's shadow across the landscape, indicating which resources could potentially be affected on that analysis day, absent intervening buildings, by project-generated shadow.

Tier 3 Assessment - March 21/Sept. 21

203-205 East 92nd Street

Figure C-2

5.3.13

Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Publicly-Accessible Open Space (see Figure C-1/Table C-1)

Shadow

This figure illustrates the range of shadows that would occur, absent intervening structures, from the proposed building on this representative day. The shadows are shown occurring approximately every two to three hours from the start of the analysis day (one and a half hours after sunrise) to the end of the analysis day (one and a half hours before sunset). The Tier 3 assessment serves to illustrate the daily path or "sweep" of the proposed building's shadow across the landscape, indicating which resources could potentially be affected on that analysis day, absent intervening buildings, by project-generated shadow.

Tier 3 Assessment - May 6/August 6

203-205 East 92nd Street

Figure C-3

5.3.13

Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Publicly-Accessible Open Space (see Figure C-1/Table C-1)

Shadow

This figure illustrates the range of shadows that would occur, absent intervening structures, from the proposed building on this representative day. The shadows are shown occurring approximately every two to three hours from the start of the analysis day (one and a half hours after sunrise) to the end of the analysis day (one and a half hours before sunset). The Tier 3 assessment serves to illustrate the daily path or "sweep" of the proposed building's shadow across the landscape, indicating which resources could potentially be affected on that analysis day, absent intervening buildings, by project-generated shadow.

Tier 3 Assessment - June 21

203-205 East 92nd Street

Figure C-4

5.3.13

Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Publicly-Accessible Open Space (see Figure C-1/Table C-1)

Shadow

This figure illustrates the range of shadows that would occur, absent intervening structures, from the proposed building on this representative day. The shadows are shown occurring approximately every two to three hours from the start of the analysis day (one and a half hours after sunrise) to the end of the analysis day (one and a half hours before sunset). The Tier 3 assessment serves to illustrate the daily path or "sweep" of the proposed building's shadow across the landscape, indicating which resources could potentially be affected on that analysis day, absent intervening buildings, by project-generated shadow.

Tier 3 Assessment - December 21

203-205 East 92nd Street

Figure C-5

5.3.13

Publicly-Accessible Open Space (see Figure C-1/Table C-1)

3D Computer Model - View Northeast

203-205 East 92nd Street

Figure C-6

5.3.13

Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Proposed Building

Publicly-Accessible Open Space

Incremental Shadow

March 21/Sept. 21 - 3:20 PM

203-205 East 92nd Street

Figure C-7

5.3.13

Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Proposed Building

Publicly-Accessible Open Space

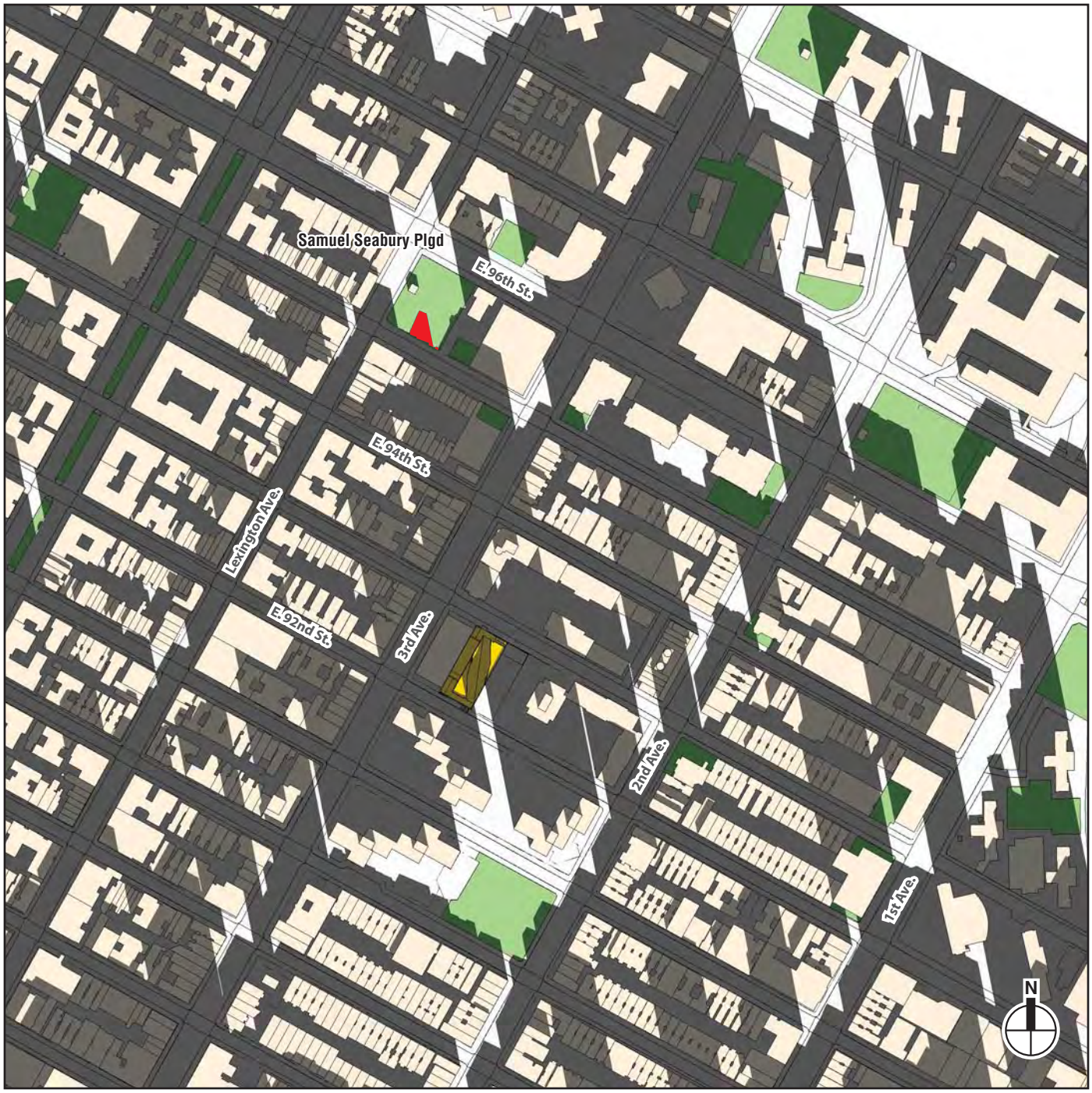
Incremental Shadow

May 6/August 6 - 4:00 PM

203-205 East 92nd Street

Figure C-8

5.3.13



Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Proposed Building

Publicly-Accessible Open Space

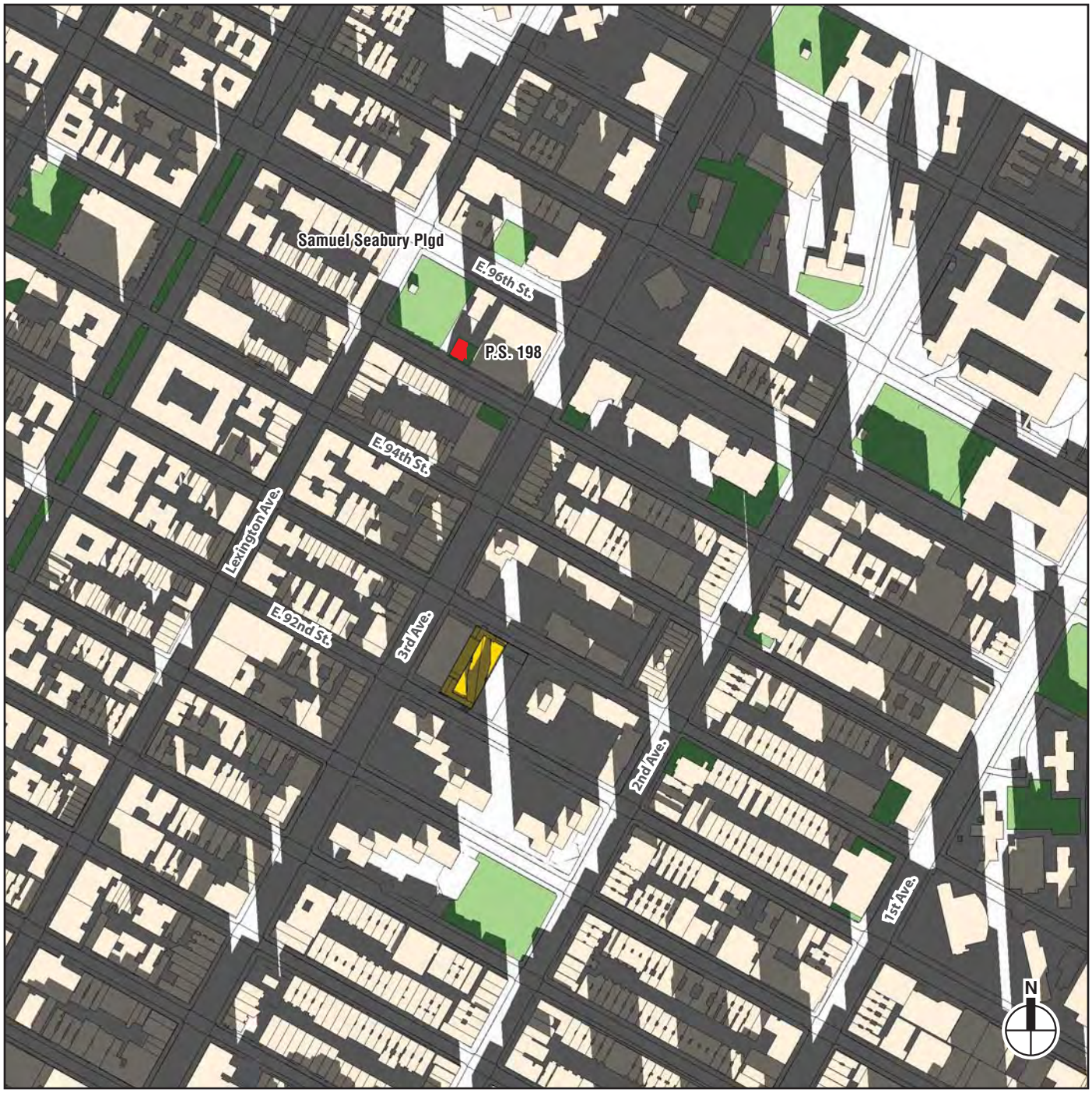
Incremental Shadow

December 21 - 11:10 AM

203-205 East 92nd Street

Figure C-9

5.3.13



Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Proposed Building

Publicly-Accessible Open Space

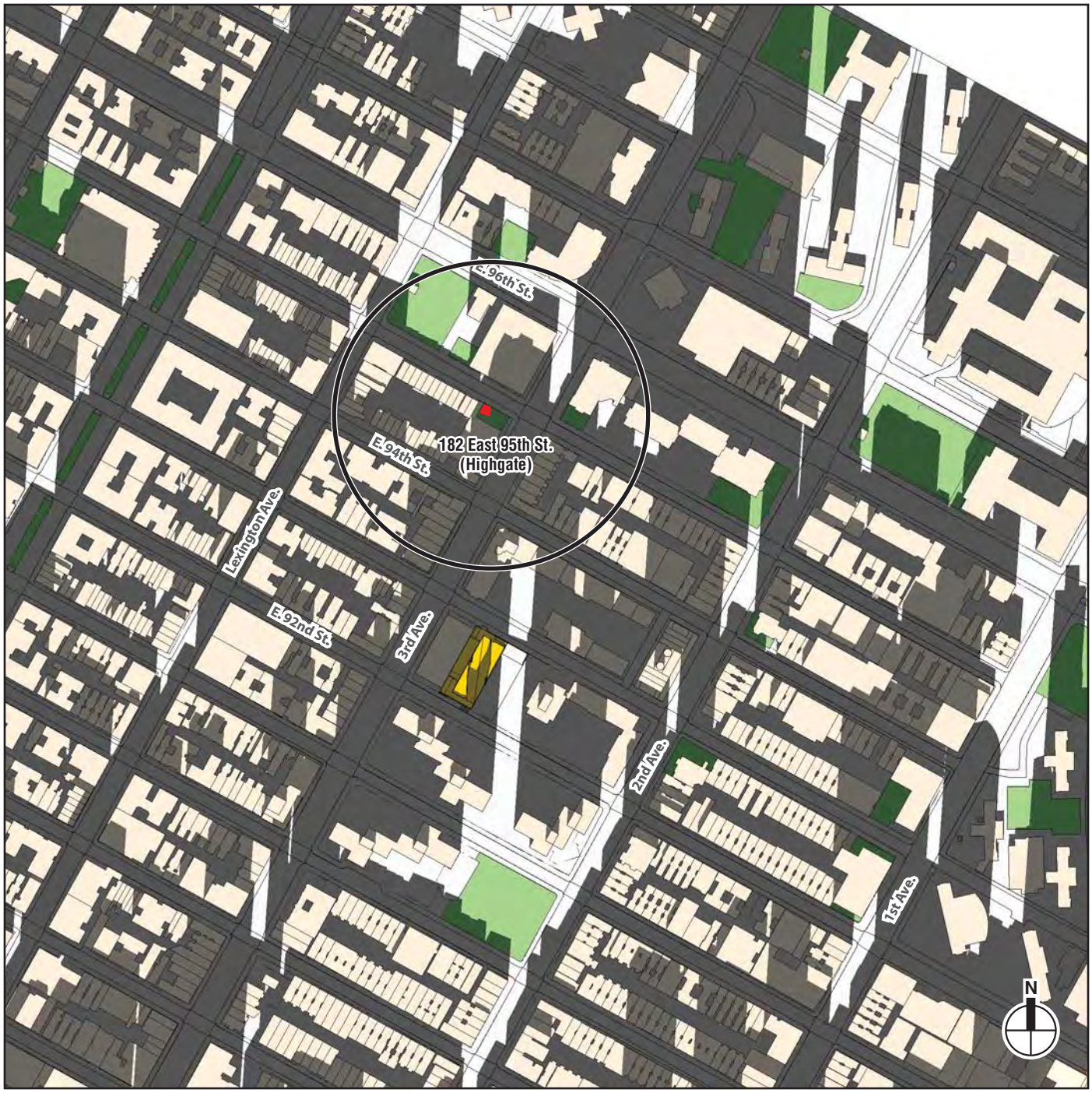
Incremental Shadow

December 21 - 11:40 AM

203-205 East 92nd Street

Figure C-10

5.3.13



Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Proposed Building

Publicly-Accessible Open Space

Incremental Shadow

December 21 - 12:10 AM

203-205 East 92nd Street

Figure C-11

5.3.13

Note: Daylight Saving Time not used.

0 200 1000 FEET

SCALE

Proposed Building

Publicly-Accessible Open Space

Incremental Shadow

December 21 - 2:00 PM

203-205 East 92nd Street

Figure C-12

Table C-2
Incremental Shadow Durations

Analysis day and timeframe window	March 21 / Sept. 21 7:36 AM-4:29 PM	May 6 / August 6 6:27 AM-5:18 PM	June 21 5:57 AM-6:01 PM	December 21 8:51 AM-2:53 PM
OPEN SPACES				
Samuel Seabury Playground	—	—	—	10:50 AM–11:30 PM Total: 40 min
P.S. 198 Playground	—	—	—	11:30 AM–11:50 PM Total: 20 min
182 East 95th Street (Highgate)	—	—	—	12:00 PM–12:30 PM Total: 30 min
NYCHA Washington Houses – planting area on East 97th Street	—	—	—	1:55 PM–2:05 PM Total: 10 min
235 East 95th Street (Normandie Court)	3:10 PM–3:40 PM Total: 30 min	—	—	—
301 East 94th Street (Marmara)	—	3:55 PM–4:05 PM Total: 10 min	—	—

Notes:
Table indicates entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource. Daylight saving time is not used—times are Eastern Standard Time, per *CEQR Technical Manual* guidelines. However, as Eastern Daylight Time is in effect for the March/September, May/August and June analysis periods, add one hour to the given times to determine the actual clock time.

MAY 6/AUGUST 6

May 6 falls halfway between the March 21 equinox and the June 21 summer solstice. August 6 falls halfway between June 21 and the September 21 equinox, and has the same shadow patterns as May 6. The May 6/August 6 analysis day is representative of the growing season in the city. Shadows on this day are shorter than on the equinoxes, and the length of the day is longer.

Late in the afternoon of this analysis day, incremental shadow would pass across the northern portion (fronting Second Avenue) of the small residential plaza area at 301 East 94th Street (Marmara). The duration of new shadow would be brief, approximately 10 minutes, and would occur around 4:00 PM. The new shadow would eliminate the small remaining area of sun for between five and 10 minutes at this time (see **Figure C-8**). No other sunlight-sensitive resources would be affected by the proposed project on this analysis day.

JUNE 21

June 21 has the longest amount of daylight of the year, with an analysis period of 12 hours. Shadows fall to the southwest early in the morning and to the southeast late in the afternoon, and shadows at mid-day on June 21 are shorter than at any other time of year. June 21 is also in the growing season.

No project-generated shadow would fall on any sunlight-sensitive resources on June 21.

DECEMBER 21

December 21, representing the winter months, does not fall within New York's growing season, according to the *CEQR Technical Manual*. Shadow falling on vegetation in winter is not generally considered to cause a significant adverse impact. However, winter shadow can adversely impact users of open space who may rely on sunlight for warmth.

Shadow cast by the top of the proposed building would pass across a portion of Samuel Seabury Playground, a well-used resource located on the east side of Lexington Avenue between East 95th and 96th Streets. The new shadow would pass across the southern portion of the playground over the course of about 40 minutes, from 10:50 AM to 11:30 AM, but large areas of the playground would remain in sun during this time (see **Figure C-9**).

The proposed building's shadow would then pass across the smaller playground associated with P.S. 198 between 11:30 AM and 11:50 AM. This playground is located on the same block as Samuel Seabury Playground, on the north side of East 95th Street between Samuel Seabury and the P.S. 198 school building. The new shadow would eliminate all remaining sun on the playground for about 10 minutes of the 20-minute total duration (see **Figure C-10**).

Continuing to move eastward, the proposed building's shadow would pass across the small residential plaza at 182 East 95th Street (the Highgate) from noon to 12:30 PM, removing the remaining area of sun for about 10 minutes during this half-hour duration (see **Figure C-11**).

For about 10 minutes around 2:00 PM, the proposed building's shadow would pass across a small portion of a planted or landscaped area associated with the NYCHA Washington Houses, on the north side of East 97th Street (see **Figure C-12**).

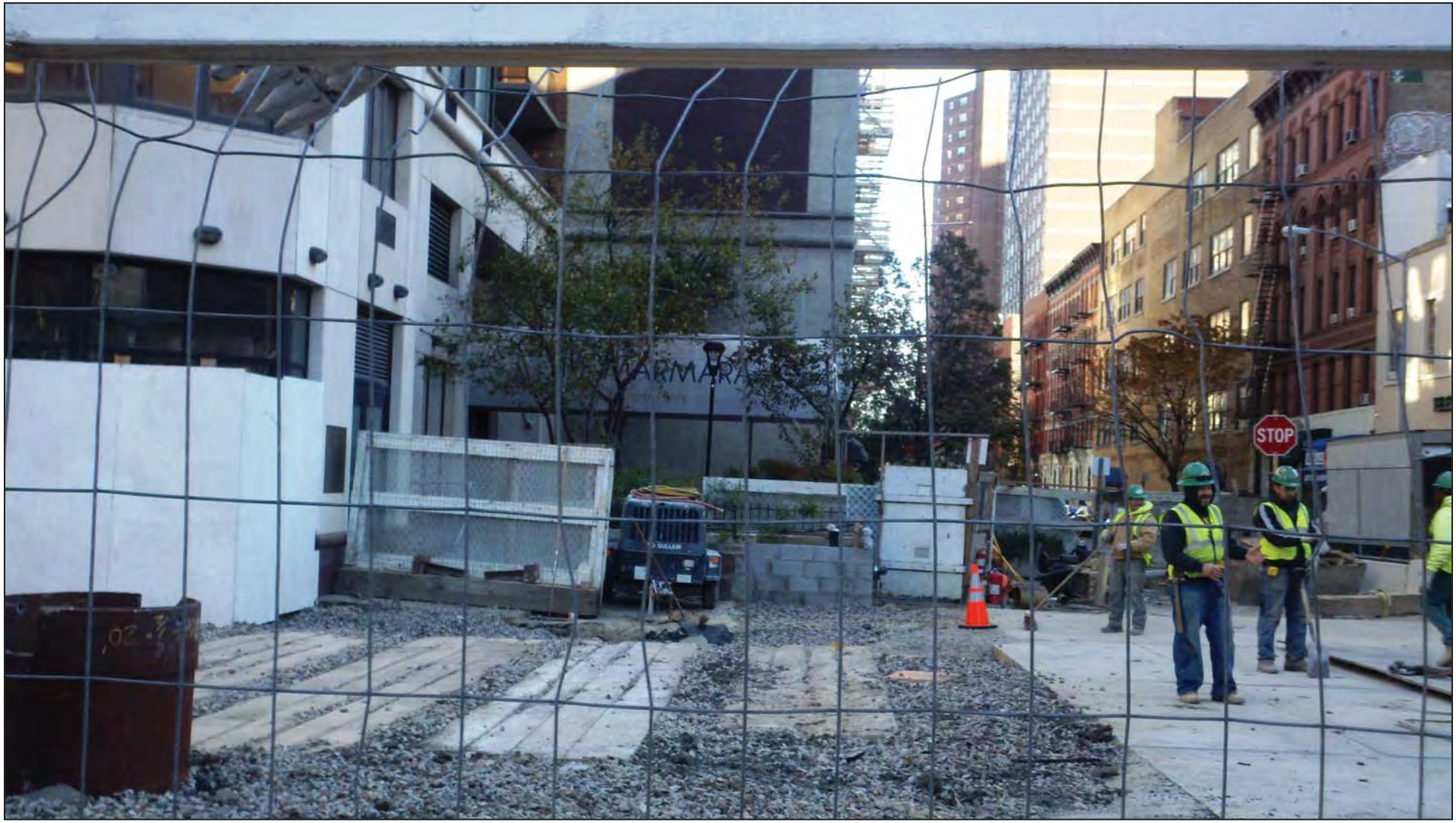
E. CONCLUSIONS

Given the brief durations and small extents of incremental shadow on sunlight-sensitive resources over the course of the year, no significant adverse shadow impacts are expect to occur.

The proposed project includes the creation of an approximately 10,679 gsf public plaza and approximately 2,111 sf of additional open space (approximately 0.29 acres of passive open space). In the spring, summer and fall, the proposed open space would be partially in sun and partially in shadow throughout the morning and into the early afternoon. Beginning at around 1:30 PM the space would be in shadow, until the end of the analysis day. In winter, the space would be in shadow throughout the day except for approximately two hours, from 10:45 AM to 12:45 PM. Therefore, it is anticipated that the design of the open space would incorporate shade-tolerant species of trees and plantings, as appropriate.

There would be three cases when project-generated shadow would remove the remaining sunlit area of a space, albeit for only 10 minutes or less in each case. As described in detail below, no significant adverse shadow impacts are expected to occur to the affected resources.

The residential plaza at 301 East 94th Street (the Marmara) does not currently exist, at the time of this writing in early 2013. The planters that were formerly at this location have been removed, and the space appears to have been re-purposed as a staging area for the Second Avenue Subway construction project (see **Figure C-13**). A plan for the future reconstruction of this plaza was not available. Incremental shadow would pass across this space for nearly 10 minutes at approximately 4:00 PM on May 6/August 6, shading the remaining small area of sun at the north end of the space. This brief duration of new shadow would not substantially change



301 East 94th Street (the Marmara) - View East

Figure C-13

the usage of the space, even conservatively assuming that the affected area would contain a sunlight-sensitive use or feature in the future when this area is returned to plaza use.

The P.S. 198 school playground (see **Figure C-14**) is entirely paved; its only feature is playground equipment in the southeast quarter of the space. There are no benches or other amenities. There is one mature tree at the southern edge of the playground, and a couple of smaller trees or shrubs in the south-center portion of this open space. This space would receive a total of 20 minutes of new shadow, from 11:30 AM to 11:50 AM, and for ten of the 20 minutes, the new shadow would remove the remaining sunlight in the west and center of the space. After this 20 minute period, the space would be mostly in direct sun until around 1:00 PM, and a small area in the north would stay in sun until nearly the end of the analysis day. Given the brief duration of incremental shadow, the fact that the new shadow would not affect the portion of the resource that has the play equipment, and the fact that during the relevant analysis period (December) the space would often not be used for lunch recess due to inclement weather, the incremental shadow would not cause significant impacts to this space.

The **residential plaza at 182 East 95th Street (the Highgate)** has a concrete surface throughout, concrete planters with metal spikes preventing seating on the ledges, and some benches. No site plan for this privately-owned space was available. The primary usable space is on the East 95th Street side; on the Third Avenue side the residual space contains only extra sidewalk and planters with metal spikes. In the primary section, the planters contain bushes and the occasional tree or small flower bed. There are several benches in the primary section of the space. From noon to 12:30 PM on the December analysis day, incremental shadow would move across the northwestern and north-central part of the plaza, falling mainly on planters and surface between them, and on one part of a bench. After 12:30 PM the northern part of the plaza would remain in sun until nearly the end of the analysis day. Given that most of the new shadow would fall on the planters, which are generally not sensitive to shadow in winter because the plants have no leaves to perform photosynthesis, and on the adjacent concrete, and also given that usage of the plaza for sitting and sunning would likely be low in the winter, and given the limited duration of incremental shadow, no significant adverse shadow impacts would occur. ✷

203-205 East 92nd Street

P.S. 198 Schoolyard
Figure C-14

182 East 95th Street (the Highgate) plaza
View from East 95th Street
Figure C-15

Attachment D: Urban Design and Visual Resources

A. INTRODUCTION

This chapter considers the effects of the proposed project on urban design and visual resources. The project site is currently an unused former recreation facility permanently closed to the public and encircled by a high metal fence. The proposed project would result in the redevelopment of the project site with a 36-story, approximately 462,091 gross square foot (gsf) mixed-use building.

Under the 2012 *City Environmental Quality Review (CEQR) Technical Manual*, urban design is defined as the totality of components that may affect a pedestrian's experience of public space. These components include streets, buildings, visual resources, open spaces, natural resources, and wind. An urban design assessment under CEQR must consider whether and how a project may change the experience of a pedestrian in a project area. The *CEQR Technical Manual* guidelines recommend the preparation of a preliminary assessment of urban design and visual resources, followed by a detailed analysis, if warranted based on the conclusions of the preliminary assessment. The analysis provided below addresses urban design characteristics and visual resources for existing conditions and the future without and with the proposed project.

As described below, the proposed project would not have any significant adverse impacts to the urban design or visual resources of the study area.

B. METHODOLOGY

According to the *CEQR Technical Manual*, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Examples include projects that permit the 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. The proposed project would require a minor modification to the Large Scale Residential Development (LSRD) to allow for the development of floor area consistent with the project site's underlying C4-6 zoning. The proposed project would therefore result in physical alterations beyond those allowed by existing zoning, meeting the threshold for a preliminary assessment of urban design and visual resources.

The study area for the urban design and visual resources analysis has been defined as the area within 400 feet of the project site, consistent with the study area for the analysis of land use, zoning, and public policy (see **Figure D-1**). This study area is roughly bounded by East 94th Street to the north, East 91st Street to the south, Second Avenue to the east, and Third Avenue to the west.

The *CEQR Technical Manual* recommends an analysis of pedestrian wind conditions for projects that would result in the construction of large buildings at locations that experience high wind conditions (such as along the waterfront, or other location where winds from the waterfront are not attenuated by buildings or natural features), which may result in an exacerbation of wind

conditions due to "channelization" or "downwash" effects that may affect pedestrian safety. The project site is not on the waterfront and is not in a location that experiences high wind conditions. Therefore, a pedestrian wind conditions analysis is not warranted.

C. EXISTING CONDITIONS

URBAN DESIGN

PROJECT SITE

The project site comprises a through-block lot on the block bounded by Second and Third Avenues and East 92nd and 93rd Streets (see **Figure D-2** and Photos 1 through 4 of **Figures D-3** and **D-4**). The project site has approximately 159 feet of frontage on both the north side of East 92nd Street and the south side of East 93rd Street and a lot area of approximately 32,025 square feet (sf). It was developed pursuant to a LSRD Plan as a publicly accessible private open space for a period of years which have since expired; it is currently fenced off and inaccessible to the public. As the project site does not include any built floor area, it is underbuilt relative to the floor area ratio (FAR) of 10 of its underlying C4-6 zoning; however, it complies with the regulations of the LSRD Plan.

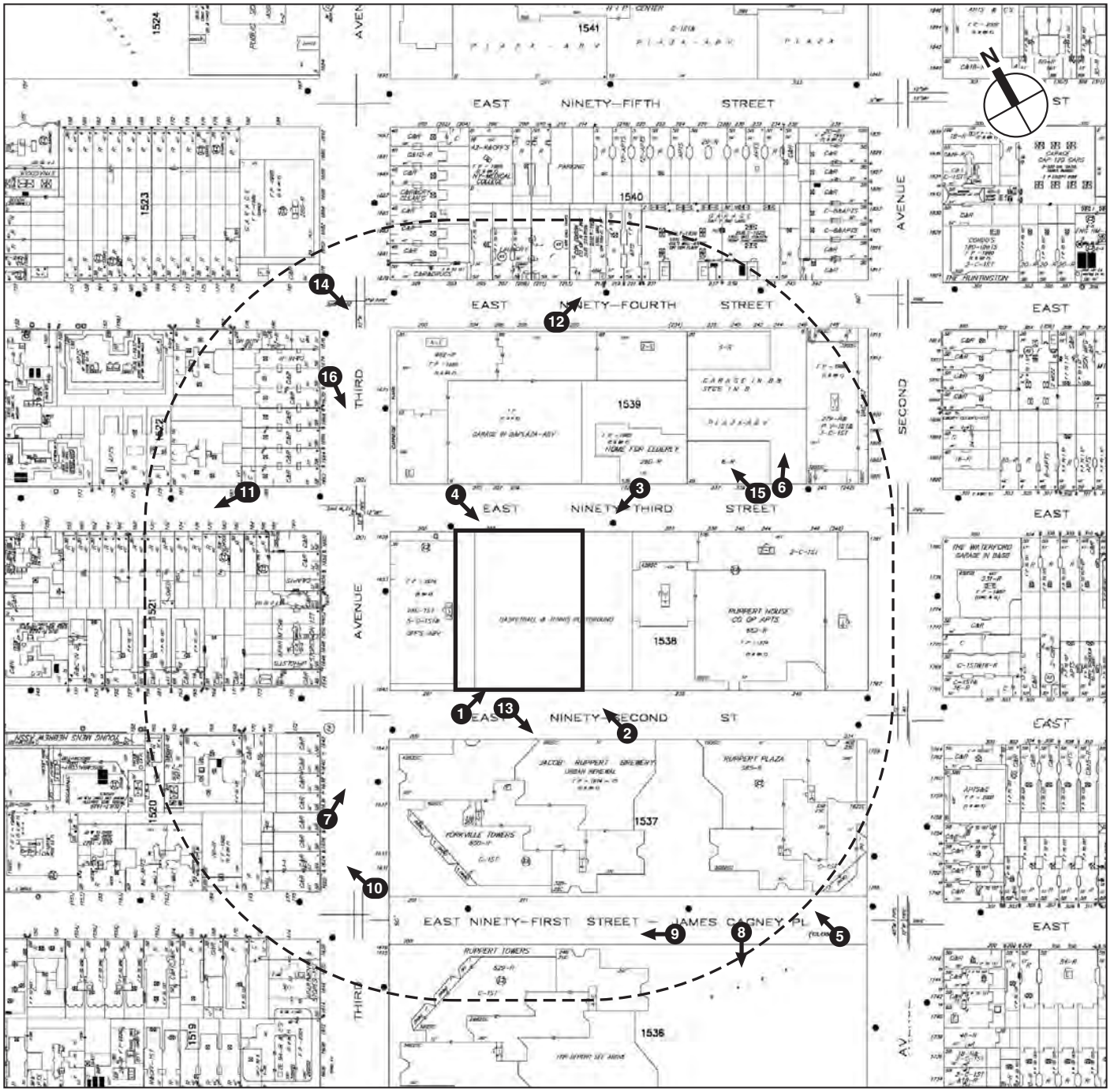
STUDY AREA

The street pattern in the study area follows the typical Manhattan grid, with wide avenues running north-south and narrow cross streets running east-west, creating long, wide blocks. This pattern is interrupted by a portion of East 91st Street between Second Avenue and Avenues, which is closed to auto traffic and reserved for pedestrian and bike traffic only. This portion of East 91st Street is the same width as the other east-west streets in the study area, but is blocked by a barrier on its western end and is distinguished by brick paving (see Photo 5 of **Figure D-5**). There is also a through-block driveway that extends between East 93rd and 94th Streets on the eastern portion of the block bounded by Second and Third Avenues, just north of the project block. This private drive provides access to a below-grade parking garage to the west and drive-up access to the residential building to the east (see Photo 6 of **Figure D-5**).

The major pedestrian and vehicular thoroughfares in the study area are Second Avenue and Third Avenue. Second Avenue carries one-way traffic traveling south, and Third Avenue carries one-way traffic traveling north (See Photo 7 of **Figure D-6)**. The east-west oriented streets in the area are one-way and narrower. Three New York City Transit (NYCT) bus routes run along Third Avenue, and one route runs along Second Avenue. As stated above, East 91st Street within the study area is closed to auto traffic. During field visits, very few pedestrians were observed along the east-west oriented streets, where there are few retail storefronts.

The topography of the area generally slopes downward from west to east, and has a slight downward slope from East 92nd Street to the north. There are no natural features in the study area; however, there are several public and private open spaces. A portion of Ruppert Park is located in the southeastern portion of the study area, south of the East 91st Street pedestrian plaza. Ruppert Park is a one-acre city park that contains play equipment, benches, walkways, trees and landscaping (see Photo 8 of **Figure D-6)**. There are also several privately-owned open spaces that are not publicly accessible in the study area. These spaces are associated with the large residential developments in the study area, and are generally slightly above grade and fenced.

5.3.13



Project Site Boundary

Study Area Boundary (400-Foot Perimeter)

Photograph View Direction and Reference Number

Urban Design and Visual Resources Study Area

203-205 East 92nd Street

Figure D-1

5.3.13

Project Site

Study Area Boundary (400-Foot Perimeter)

0 200 FEET

SCALE

203-205 East 92nd Street

Aerial Photo
Figure D-2

View looking northeast from East 92nd Street **1**

View looking northwest from East 92nd Street **2**

Photographs of the Project Site

Figure D-3

View looking southeast from East 93rd Street **3**

View looking southeast from East 93rd Street **4**

Photographs of the Project Site
Figure D-4

View northwest on East 91st Street **5**

View northeast from East 91st Street of through-block drive **6**

Photographs of the Study Area
Figure D-5

View looking northeast on Third Avenue **7**

Ruppert Park, from East 91st Street **8**

Photographs of the Study Area

Figure D-6

The study area is urban in character, with streets flanked by concrete sidewalks. Parallel parking spaces are available on most streets, and there is a bus shelter on Third Avenue between East 91st and 92nd Streets. Street furniture varies among the larger residential developments. The East 91st Street pedestrian plaza, which connects the northern and southern portions of the Ruppert Yorkville Towers development and the Knickerbocker Plaza development (described below), has distinct lampposts, garbage bins, and benches. The benches are concrete with a green finish on the seat and back, and the garbage bins and lampposts have matching green finishes (see Photo 9 of **Figure D-7**). The Ruppert Houses development, described below, is surrounded in places by a low metal fence and includes distinctive square-top lampposts. The streetscape elements surrounding the Astor Terrace townhouses include decorative wrought-iron fencing, planters, and globe lampposts. There are ample street trees throughout the study area, primarily along the east-west oriented streets and on the corners of Third Avenue lining public plazas associated with the Ruppert Yorkville Towers and Carnegie Park developments. Some of the large residential buildings have street-level signage on walls enclosing private open space, and many have awnings with signage to designate their residential entrances.

The study area is densely developed, and building heights, footprint sizes, and lot coverages vary. The west side of Third Avenue is lined with older mixed-use buildings with ground floor retail. These buildings are all tenements built in 1926 or earlier, and are between three and six stories tall. They are built to the lot line, presenting a uniform streetwall to the pedestrian. Their elevations vary slightly based on the number of floors as well as the topography. The building façades vary in material but generally include ornamented cornices (see Photo 10 of **Figure D-7**). The study area also includes small portions of the east-west streets west of Third Avenue. These streets contain housing stock similar to that on the west side of Third Avenue, with residential buildings of between three and six stories, some with ground floor retail. Many were built in 1925 or earlier and a few newly-constructed buildings are interspersed, designed to be contextual with the older architecture (See Photo 11 of **Figure D-8)**.

In the northern portion of the study area, the north side of East 94th Street between Second and Third Avenues contains building stock similar to the west side of Third Avenue (see Photo 12 of **Figure D-8**). These buildings are mix of parking garages, walk-up apartment buildings, an office building, and an athletic center for a private school. All of these buildings were built in 1926 or earlier, are between three and five stories tall, and are built to the lot line. The south side of the street contains residential and parking garage entrances to Carnegie Park and the Astor Terrace townhouses and residential tower, all described below.

The portion of the study area east of Third Avenue and south of East 94th Street contains taller mixed-use buildings that occupy large, through-block sites. These blocks were part of the former Ruppert Brewery Urban Renewal Area, and were developed as part of the LSRD Plan that includes the project site. The residential towers are generally rectilinear in massing, but their orientations on the lots vary. They generally have low lot coverage, with the remaining lot area developed as privately-accessible open space and public plazas. These developments are described below.

East of the project site is the Ruppert Houses, a residential development consisting of one 43-story (423-foot-tall) tower and two 18-story (181-foot-tall) towers. The shorter towers are built to the lot line; the taller tower is set back from the street on all sides and surrounded by a private open space. All three buildings have rectilinear massings, are clad in red brick, and are built around private open space. The open space is shielded from view on East 92nd Street by a low

red brick wall. West of the project site, the Ruppert Houses development also includes a three-story office building with ground-level retail that fronts Third Avenue and fully occupies its lot.

The blocks immediately south of the project site are also occupied by two large residential complexes: Knickerbocker Plaza and Ruppert Yorkville Towers. Knickerbocker Plaza, which consists of two red brick towers (42 stories/402 feet tall and 32 stories/322 feet tall, respectively) with ground floor retail, occupies the eastern portion of the block directly south of the project block. The Ruppert Yorkville Towers comprise a 42-story (422-foot-tall) tower and a 32-story (342-foot-tall) tower on the western end of this block, as well as two matching 32-story towers on the block to the south, separated by the East 91st Street pedestrian plaza. These two sets of towers are oriented diagonally on their lots, forming two triangular plazas that face Third Avenue. The Ruppert Yorkville Towers contain retail on the ground floors, and match the architectural style of Knickerbocker Plaza. The buildings are red brick and modern in style, with vertical strips of windows and chamfered corners with cantilevers at various heights. The Knickerbocker Plaza and Ruppert Yorkville Towers developments both have low lot coverage with ample private open space (see Photo 13 of **Figure D-9**). The eastern portion of the block containing the south tower of the Ruppert Yorkville Towers development is occupied by Ruppert Park.

Carnegie Park, a 30-story (282-foot-tall) residential building, is located north of the project site on Third Avenue between East 93rd and 94th Streets. Built in 1986, the L-shaped building has horizontal bands of windows and a curved northern facade, where its tower is located. The building is faced in red brick (see Photo 14 of **Figure D-9)**. The building is built to the lot line, with a nine-story base on the southern portion extending along Third Avenue to East 93rd Street and containing ground floor retail. The eastern portion of this block is occupied by Astor Terrace, a residential development that comprises a 32-story (329-foot-tall) tower fronting Second Avenue and three-story townhouses fronting East 93rd and 94th Streets (see Photo 15 of **Figure D-10)**. The tower and the townhouses are both clad in dark brick. The two components of the development are separated by a through-block driveway that provides access to a split-level, two-story parking garage topped with an above-grade private open space.

VISUAL RESOURCES

Visual resources are an area's unique or important public view corridors, vistas, or natural or built features. These can include historic structures, parks, natural features (such as rivers), or important views.

PROJECT SITE

As the project site is currently undeveloped, it is not particularly prominent or distinct in surrounding views, and is therefore not considered a visual resource. Views from the project site are limited by the presence of the large residential towers in the area. The site provides limited through-block views of the large residential towers to the north and the south.

STUDY AREA

Views north and south along Third Avenue continue for long distances but do not contain any distinctive features. The buildings that make up the Carnegie Park, Astor Terrace, Ruppert Houses, Ruppert Yorkville Towers, and Knickerbocker Plaza developments are visible throughout the study area and largely define this view corridor (see Photo 16 of **Figure D-10).**

Within the study area, views are limited on the east-west oriented streets due to topography. As previously mentioned, views along East 91st Street are distinct as the street is closed to auto

Street furniture on East 91st Street **9**

View north on Third Avenue from East 91st Street **10**

Photographs of the Study Area
Figure D-7

View of East 93rd Street looking southwest **11**

View east on East 94th Street **12**

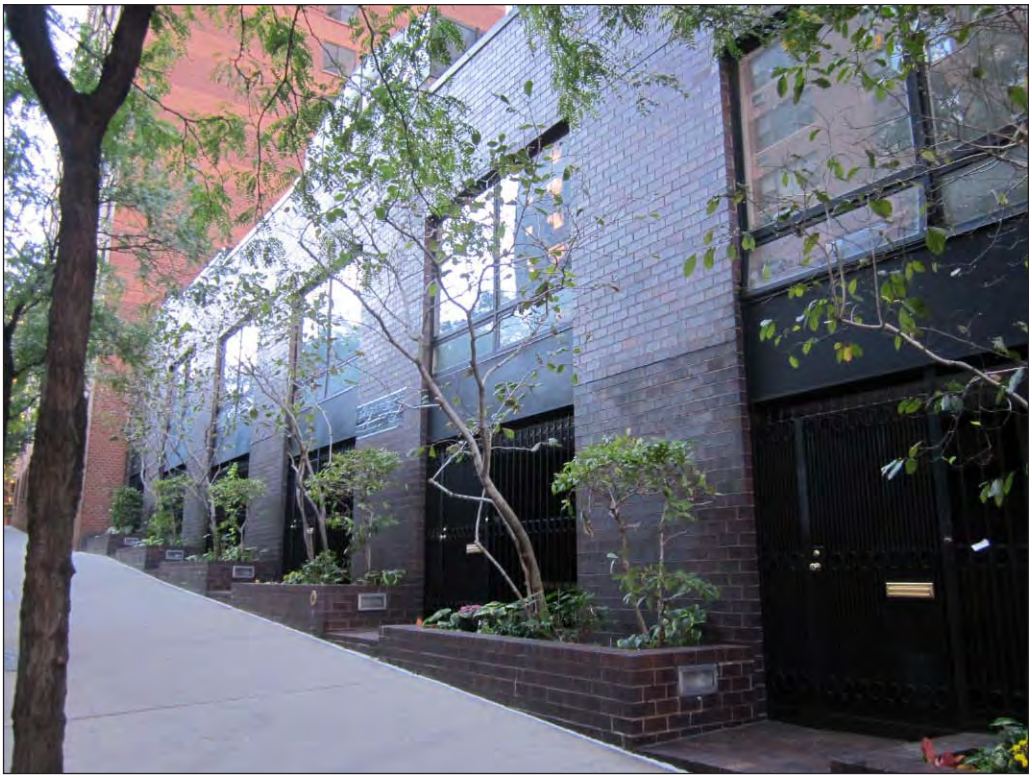
Photographs of the Study Area
Figure D-8

View of Ruppert Yorkville Towers and Knickerbocker Plaza from East 92nd Street **13**

Carnegie Park development from Third Avenue and East 94th Street **14**

Photographs of the Study Area

Figure D-9



Astor Terrace townhouses **15**

View south on Third Avenue **16**

Photographs of the Study Area
Figure D-10

traffic. This view is defined by the two pairs of the Ruppert Yorkville Towers to the east and Ruppert Park to the south, and is lined by trees, benches, and lampposts.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

Absent the proposed project, the project site would remain undeveloped, fenced off and inaccessible to the public.

There is one project in the study area that is currently under construction and expected to be completed by 2015. A five-story residential building will be built at 1676 Third Avenue on a corner lot. This building will be consistent with the urban design character of this portion of the study area, and will restore uniformity to the streetwall without altering views along Third Avenue. No other changes are anticipated to the composition of the study area, which will remain a mix of large-scale, mixed-use buildings in the LSRD area, with lower-density, mixed-use buildings located on the west side of Third Avenue and the north side of East 94th Street.

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

URBAN DESIGN

PROJECT SITE

The proposed project would result in the construction of a 36-story (426'9"-foot-tall), approximately 462,091 gsf mixed-use building on the project site. The building would consist of residential units, a health club, a private school, a small amount of at-grade retail, and accessory parking. The proposed building would be located on the western portion of the project site, covering a footprint of approximately 18,950 gsf. The eastern portion of the project site would be developed with an approximately 10,679-gsf publicly accessible plaza and approximately 2,111 sf of additional open space. The proposed building would have a floor area ratio (FAR) of 12. It would have a six-story base with a 30-story tower, with a typical floorplate of approximately 11,200 sf for the tower portion (See **Figures D-11** and **D-12**).

The entrance to the residential portion of the building would be on East 92nd Street. There would be a separate entrance on East 92nd Street for the health club, and an entrance for the school on East 93rd Street. The below-grade parking garage would be accessed from East 92nd Street. The proposed building would be built to the lot line on East 92nd and 93rd Streets. At the seventh floor, the building's tower would be set back approximately 15 feet on the north and south elevations, and 30 feet on the west elevation. There would be an additional setback at the 36th floor for a terrace. It is currently anticipated that the building could be clad in metal and glass.

While the proposed project would be different than what is currently allowed in the LSRD plan, which designated the project site for publicly accessible, privately-owned open space, it would comply with the underlying C4-6 zoning. The proposed project would improve the streetscape along East 92nd and 93rd Streets, by replacing an unused former recreation facility permanently closed to the public and encircled by a high metal fence with a new building with ground-floor commercial uses. It would also enhance the pedestrian experience by activating the streetscape with ground floor uses and entrances, and bringing new pedestrian activity to the project site and therefore throughout the LSRD area.

STUDY AREA

As in the future without the proposed project, the proposed project would not result in any changes to natural features, open spaces, or streets in the study area. The proposed building would be built to the lot line with a publicly accessible plaza to its east, which would contrast with some of the non-uniform streetwalls immediately surrounding the project site, but would be in keeping with the mix of open space and buildings in the area and would reflect streetwalls along the west side of Third Avenue and the north side of East 94th Street. While the rectangular footprint would be similar to some of the surrounding towers, such as Astor Terrace, the proposed building's lot coverage would be higher than in the immediate area.

The overall bulk and height of the proposed building would be in context with the taller buildings in the study area, including Astor Terrace (approximately 329 feet tall), Knickerbocker Plaza (approximately 402 feet tall), Ruppert Yorkville Towers (approximately 342 and 422 feet tall), and Ruppert Houses (approximately 423 feet tall). While the proposed building would be of a more contemporary design than the towers in the LSRD area, it is anticipated that the design of the proposed building would be compatible with surrounding towers.

The proposed project would introduce different uses to the project site compared with the future without the proposed project, but these uses would be compatible with existing and former uses on the project site and in the study area. Compared to the future without the proposed project, in which the project site would remain undeveloped, the proposed project would revitalize a dormant site and introduce new active uses, businesses and pedestrians.

The proposed project would not noticeably change the scale of buildings in the study area; would not involve an area-wide rezoning that includes an increase in permitted floor area or changes in height or setback requirements; and would not result in substantial changes to the built environment of a historic district or components of a historic building that contribute to the resource's historic significance. While the proposed project would involve a modification to a LSRD, this change is not considered to significantly alter any urban design characteristics of the surrounding area. Therefore, the proposed project would not be anticipated to significantly affect any urban design features of the project site or study area, or the general urban design character of the neighborhood.

Overall, the project would activate a an unused former recreation facility permanently closed to the public, improve the pedestrian experience of the study area, and would be in keeping with the mixed-use character of the study area.

VISUAL RESOURCES

PROJECT SITE

As described above, the project site is not considered to be a visual resource. Although the proposed building would limit the through-block views currently available on the project site, these views are not particularly prominent or distinct, and the proposed building would not block views of any specific visual resources.

STUDY AREA

In the future with the proposed project, views along the corridors noted above are expected to remain substantially the same, although views toward the project site would now include a new, tall building (See **Figures D-11** and **D-12**). From within the study area, the proposed new building would be one of many tall, freestanding buildings, and would be in keeping with the

Existing Conditions/Future Without the Proposed Project **17**

Proposed Project **18**

View of the Project Site Looking Southeast from East 93rd Street and Third Avenue

Figure D-11

Existing Conditions/Future Without the Proposed Project **19**

Proposed Project **20**

View of the Project Site
Looking South Along Third Avenue
Figure D-12

Existing Conditions/Future Without the Proposed Project **21**

Proposed Project **22**

View of the Project Site Looking Northeast from East 92nd Street and Third Avenue

Figure D-13

large residential towers that define most view corridors in the study area and rise above the surrounding lower-scale development. The proposed project would not obstruct any views to important visual resources, or eliminate any existing view corridors.

In summary, the proposed project would not change urban design features so that the context of a natural or built visual resource is altered, and would not partially or totally block any unique views to a visual resource. Therefore, the proposed action does not merit further analysis of visual resources, and would not be anticipated to result in significant adverse effects to visual resources.

Overall, the proposed project would not have any significant adverse impacts on urban design and visual resources. ✷

Attachment E: Hazardous Materials

A. INTRODUCTION

This attachment addresses the potential for the presence of hazardous materials resulting from previous and existing uses both on-site and in the surrounding area, and potential risks related to the proposed project with respect to any such hazardous materials. The proposed project would entail construction of a multistory mixed-use building which would include a private school, a health club, accessory parking, residential uses, and a small amount of retail use. The building would occupy the western portion of the project site, with its cellar and partial sub-cellar extending east beyond the above ground footprint. The cellar would extend beneath the majority of the project site. A publicly accessible plaza would be constructed over the cellar. The proposed construction would entail excavation to a depth of approximately 14 feet below grade over the majority of the project site, with deeper excavation (approximately 24 feet below grade) for the area of the sub-cellar.

This assessment was based on a *Draft Phase I Environmental Site Assessment (ESA)* prepared by Langan Engineering and Environmental Services, P.C. (Langan) in August 2012 and a *Draft Phase II Environmental Site Investigation (Phase II)* conducted by Langan in October 2012.

B. EXISTING CONDITIONS

SUBSURFACE CONDITIONS

The project site is at an elevation of approximately 56 feet above mean sea level, with an approximately ten-foot elevation decrease across the project site from west to east. A 2009 geotechnical investigation and the Phase II indicated that the project site is underlain by a layer of urban fill materials (11 feet thick on average), which is above a sand layer (11 inches thick on average), with decomposed bedrock and competent bedrock beneath. The geotechnical investigation encountered competent bedrock at depths ranging from approximately 7.5 to 20.5 feet below grade. Groundwater (possibly perched on bedrock) was first encountered at approximately 10 to 14.5 feet below grade and most likely flows in an easterly direction toward the East River, approximately 1,800 feet away. However, actual groundwater flow at the project site can be affected by many factors including past filling, underground utilities, other subsurface openings or obstructions such as basements and underground parking garages, bedrock geology, and other factors. Groundwater in Manhattan is not used as a source of potable water.

HAZARDOUS MATERIALS ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT

The Phase I ESA reviewed a variety of sources including: current and historical Sanborn Fire Insurance maps; state and federal environmental regulatory databases; and computerized New York City Fire Department and Buildings Department records. The Phase I ESA also included

reconnaissance of the project site and its surroundings. At the time of the Phase I ESA, the project site was occupied by an unused former recreation facility (with athletic courts and a children's play area) permanently closed to the public. The Phase I ESA identified the following:

- The project site was historically part of a large brewery, and was occupied by ice machines, steam boilers, coal bunkers, a machine shop, auto repair and a garage. Historical land use maps showed a 275-gallon gasoline underground storage tank (UST) in a garage in the southeastern corner of the project site. It is unknown whether this UST has been removed or remains beneath the project site.
- A geotechnical investigation in 2009 identified urban fill materials of unknown origin beneath the project site. Urban fill commonly contains elevated levels of certain contaminants, e.g. metals and semi-volatile organic compounds (SVOCs).
- A garage with a gasoline UST was historically located north of the project site across East 93rd Street. Properties located potentially upgradient of the project site included the west-adjacent building with a 5,000-gallon fuel oil aboveground storage tank (AST), and four dry cleaners within a quarter mile of the project site.

PHASE II ENVIRONMENTAL SITE INVESTIGATION (PHASE II)

The Phase II investigation included: a geophysical survey to locate potential USTs; the advancement of five borings with the collection of one soil sample from each; collection of groundwater samples from three monitoring wells installed into bedrock during the 2009 geotechnical investigation; and collection of three soil gas samples. The soil and groundwater samples were analyzed for volatile organic compounds (VOCs), SVOCs, polychlorinated biphenyls (PCBs), pesticides, and Target Analyte List (TAL) metals (total and dissolved metals for the groundwater samples). The soil gas samples were analyzed for VOCs. The Phase II identified the following:

- The geophysical survey identified no evidence of USTs.
- Laboratory analysis of the soil samples identified no VOCs, pesticides or PCBs in exceedance of their respective 6 NYCRR Part 375 Soil Cleanup Objectives for Restricted – Residential Use (RRSCOs). Several SVOCs and lead exceeded their respective RRSCOs in the soil samples. The detected concentrations were however typical of urban fill materials (which were encountered in the borings), rather than indicative of a spill or release.
- Laboratory analysis of the groundwater samples identified no VOCs, pesticides or PCBs in exceedance of New York State Department of Environmental Conservation (NYSDEC) Class GA Standards (drinking water standards). One SVOC, bis(2-ethylhexyl)phthalate exceeded its Class GA standard in one sample; however, this SVOC is often present in plastics and is a common field or laboratory contaminant. Two metals (magnesium and selenium) exceeded their respective Class GA standards in both total and filtered groundwater samples, likely due to soil particles in the samples and/or natural background levels.
- A variety of VOCs potentially associated with gasoline and solvents were detected in the soil gas samples. However, only trace VOC concentrations were detected in the soil samples, suggesting the detected soil gas VOCs were more likely attributable to off-site sources. The levels of several VOCs exceeded their respective background indoor air values published in the 2006 *New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, but no VOCs were in exceedance

of their respective NYSDOH Indoor Air Guideline Values (AGVs) published in the 2006 document. It should be noted that both the background indoor air values and the AGVs relate to indoor air concentrations, which are typically much lower than the corresponding soil gas concentrations.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the proposed project, the project site would remain in its current undeveloped condition. Currently, there are no known significant health risks associated with the project site. Likewise, there would be no significant health risks at the project site in the future without the proposed project.

D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would involve excavation for the construction of the proposed building and construction of a publicly accessible plaza over the building's cellar. Based on the depth to groundwater, dewatering will likely be required during the excavation.

The Phase II identified urban fill materials containing somewhat elevated concentrations of certain metals and SVOCs, and soil gas containing VOCs potentially associated with gasoline and solvents (most likely attributable to off-site sources). Although excavation activities associated with the proposed project could increase pathways for human exposure, impacts would be avoided by performing these activities in accordance with the following:

- Based on the findings of the Phase II, a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP) have been prepared for implementation during proposed construction. The RAP and CHASP have been submitted to the New York City Department of Environmental Protection (NYCDEP) for review and approval. The RAP addresses requirements for items such as: soil stockpiling, soil disposal and transportation; dust control; quality assurance; contingency measures for closure and removal of any unexpectedly encountered petroleum storage tanks and addressing any unexpectedly encountered contamination; requirements for the installation of a vapor barrier beneath the new building; and requirements for the imported clean soil in the publicly accessible plaza. The CHASP includes measures for worker and community protection, including personal protective equipment, dust control and air monitoring. The RAP and CHASP were approved by NYCDEP in a letter dated March 4, 2013 (see Appendix B).
- Dewatering for the proposed construction would be conducted in accordance with NYCDEP requirements.
- If petroleum storage tanks are encountered during project site redevelopment, these tanks would be properly closed and removed, along with any contaminated soil, in accordance with the applicable regulations, including NYSDEC spill reporting and registration requirements.

With these measures, the proposed project would not result in any significant adverse impacts related to hazardous materials. ✷

A. INTRODUCTION

As discussed in the EAS project description, the proposed project is the development of a mixed-use building on a through-block site bounded by East 92nd and 93rd Streets and Second and Third Avenues on the Upper East Side of Manhattan. The project site is currently an unused former recreation facility permanently closed to the public. The proposed project would include approximately 290 residential units; approximately 33,448 gross square feet (gsf) of health club use; approximately 1,007 gsf of local retail; an approximately 61,559 gsf K-8 private school; and approximately 80 accessory parking spaces on the cellar level. The proposed private school would have approximately 350 seats and 125 faculty and staff members. In addition, it is expected that an approximately 10,679 gsf publicly accessible plaza and approximately 2,111 sf of additional open space would be developed on the site.

The assessment of the proposed project's potential transportation impacts is based on the methodologies set forth in the *2012 City Environmental Quality Review (CEQR) Technical Manual*. As detailed below, no significant adverse transportation-related impacts would occur as a result of the proposed project.

B. PRELIMINARY ANALYSIS METHODOLOGY

The *CEQR Technical Manual* describes a two-tier screening procedure for the preparation of a "preliminary analysis" to determine if quantified analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation analysis (Level 1) to estimate the volume of person and vehicle trips attributable to the proposed project. According to the *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 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 peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

C. LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the volume of person and vehicle trips by mode expected to be generated by the proposed project during the weekday AM, midday/afternoon, and PM peak hours. These estimates were then compared to the *CEQR Technical Manual* thresholds to determine if a Level 2 screening and/or quantified analyses would be warranted.

TRANSPORTATION PLANNING ASSUMPTIONS

Travel demand projections were prepared for the residential, health club, retail, publicly accessible plaza, and school components for the weekday AM, midday/afternoon, and PM peak hours. The trips generated by the proposed project were compared to the above screening thresholds to determine if additional quantified analyses are warranted. **Tables F-1** and **F-2** summarizes the transportation planning assumptions applied in estimating person and vehicle trips for the residential/health club/retail/publicly accessible plaza and the school components, respectively. Consistent with *CEQR* requirements, these assumptions were based on travel demand factors from established and published sources including the 2012 *CEQR Technical Manual*, U.S. Census data, and other approved studies. In addition, information provided by the proposed school operator—The Windward Schools—was used in estimating the travel demand for the proposed school component.

Table F-1a

Travel Demand Assumptions — Residential and Health Club Components

Use	Residential			Health Club		
Daily Person Trip	(1)			(1)		
Generation Rate	8.075			44.7		
	Trips / DU			Trips / KSF		
	AM	**MD/Afternoon**	**PM**	**AM**	**MD/Afternoon**	**PM**
Temporal	(1)	(1)(6)	(1)	(1)	(1)(6)	(1)
	10%	5%	11%	4%	9%	5%
Direction	(2)	(2)(6)	(2)	(4)	(4)(6)	(4)
In	15%	50%	70%	41%	54%	75%
Out	85%	50%	30%	59%	46%	25%
Total	100%	100%	100%	100%	100%	100%
Modal Split	(3)	(3)	(3)	(5)	(5)	(5)
Auto	10%	10%	10%	2%	2%	2%
Taxi	4%	4%	4%	2%	2%	2%
Subway	61%	61%	61%	12%	12%	12%
Bus	11%	11%	11%	4%	4%	4%
Walk	14%	14%	14%	80%	80%	80%
Total	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(2)(3)	(2)(3)	(2)(3)	(5)	(5)	(5)
Auto	1.15	1.15	1.15	1.00	1.00	1.00
Taxi	1.40	1.40	1.40	1.00	1.00	1.00
Daily Delivery Trip	(1)			(4)		
Generation Rate	0.06			0.19		
	Delivery Trips / DU			Delivery Trips / KSF		
	AM	**MD/Afternoon**	**PM**	**AM**	**MD/Afternoon**	**PM**
Delivery Temporal	(1)	(1)(6)	(1)	(4)	(4)(6)	(4)
	12%	9%	2%	6%	11%	1%
Delivery Direction	(1)	(1)	(1)	(4)	(4)	(4)
In	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%

Sources
(1) 2012 *CEQR Technical Manual*
(2) Western Rail Yard FEIS, 2009
(3) U.S. Census 2007-2011 American Community Survey 5-year estimates for tracts 144.02, 146.02, 148.02, 152, 154, 156.01, and 158.01.
(4) 770 Eleventh Avenue Mixed-Use Development Rezoning EIS, 2009
(5) Equinox – 344 Amsterdam Avenue EAS, 2008
(6) Assumed trip generation characteristics for weekday afternoon peak hour (3-4) is the same as weekday midday (1-2).

Table F-1b
Travel Demand Assumptions — Retail and Plaza Components

Use	Local Retail			Public Plaza		
Initial Daily Person Trip	(1)			(1)		
Generation Rate	205			139.0		
	Trips / KSF			Trips / Acre		
Trip Linkage	25%			0%		
Final Person Trip	153.8			139.0		
Generation Rate	Trips / KSF			Trips / Acre		
	AM	**MD/Afternoon**	**PM**	**AM**	**MD/Afternoon**	**PM**
Temporal	(1)	(1)(4)	(1)	(1)	(1)(4)	(1)
	3%	19%	10%	3%	5%	6%
Direction	(2)	(2)	(2)	(3)	(3)(4)	(3)
In	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%
Modal Split	(2)	(2)	(2)	(3)	(3)	(3)
Auto	2%	2%	2%	0%	0%	0%
Taxi	3%	3%	3%	0%	0%	0%
Subway	6%	6%	6%	0%	0%	0%
Bus	6%	6%	6%	0%	0%	0%
Walk	83%	83%	83%	100%	100%	100%
Total	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(2)	(2)	(2)	(3)	(3)	(3)
Auto	1.65	1.65	1.65	N/A	N/A	N/A
Taxi	1.40	1.40	1.40	N/A	N/A	N/A
Daily Delivery Trip	(1)			(3)		
Generation Rate	0.35			N/A		
	Delivery Trips / KSF			Delivery Trips / KSF		
	AM	**MD/Afternoon**	**PM**			
Delivery Temporal	(1)	(1)(4)	(1)			
	8%	11%	2%			
Delivery Direction	(1)	(1)	(1)	N/A		
In	50%	50%	50%			
Out	50%	50%	50%			
Total	100%	100%	100%			

Sources
(1) 2012 *CEQR Technical Manual*
(2) Western Rail Yard FEIS, 2009
(3) First Avenue Properties Rezoning FEIS, 2008
(4) Assumed trip generation characteristics for weekday afternoon peak hour (3-4) is the same as weekday midday (1-2).

Table F-2
Travel Demand Assumptions — School Component

	Students	**Faculty/Staff**
Population	350	125
Vehicle Occupancy	1.3 (1)	1.19 (4)
School Bus/Van Occupancy	17 (1)	-
Absentee Rate	0%	0%
AM Peak Hour Temporal	90% (1)	90% (1)
Midday/Afternoon Peak Hour Temporal	90% (1)	90% (1)
PM Peak Hour Temporal	10% (3)	10% (3)
Travel Mode	**Modal Split (2)**	**Modal Split (4)**
Auto (Drop-offs/Pick-ups)	15%*	29%
Taxi	0%	3%
School Bus/Van	20%*	0%
City Bus	10%	11%
Subway	45%	41%
Walk	10% (5)	16%

Notes:
(1) ECF 57th Street and 2nd Avenue EAF (2008)
(2) Based on information provided by the Windward School
(3) Assumes 10% of the students and faculty/staff would stay for after school activities and depart during the 5-6 PM peak hour
(4) 2000 Census Reverse-Journey-to-Work data for tracts 144.02, 146.02, 148.02, 152, 154, 156.01, and 158.01
(5) Assumes one parent/guardian accompanying two students walking to school
* Both inbound and outbound vehicle trips take place during the same peak hour

RESIDENTIAL

For the residential component, trip generation rates of 8.075 daily person trips per dwelling unit per weekday and a temporal distribution of 10 percent for the weekday AM peak hour, 5 percent for the midday/afternoon peak hour, and 11 percent for the PM peak hour were obtained from the *CEQR Technical Manual*. Directional distributions of 15 percent "in" during the weekday AM peak hour, 50 percent "in" during the midday/afternoon peak hour, and 70 percent "in" during the PM peak hour were obtained from the *Western Rail Yard FEIS* (2009). Modal split information and auto occupancy was obtained from journey–to-work data from the U.S. Census American Community Survey (ACS) 2007-2011. A taxi occupancy rate of 1.4 passengers per taxi was also obtained from the *Western Rail Yard FEIS* (2009).

Daily truck trip generation rates of 0.06 trips per dwelling unit were obtained from the *CEQR Technical Manual*. Temporal distribution for trucks (12 percent during the weekday AM peak hour, 9 percent during the midday/afternoon peak hour, and 2 percent during the PM peak hour) and directional distribution assumptions (50 percent "in" during all peak hours) were also obtained from the *CEQR Technical Manual.*

HEALTH CLUB

For the health club use, daily person trip generation rates of 44.7 person trips per 1,000 square feet, and a temporal distribution of 4 percent for the weekday AM peak hour, 9 percent for the midday/afternoon peak hour, and 5 percent for the PM peak hour were obtained from the *CEQR Technical Manual*. Directional distributions of 41 percent "in" during the weekday AM peak hour, 54 percent "in" during the midday/afternoon peak hour, and 75 percent "in" during the PM peak hour were obtained from the *770 Eleventh Avenue Mixed-Use Development Rezoning EIS* (2009). Modal split information and vehicle occupancies were obtained from the *Equinox—344 Amsterdam Avenue EAS* (2008).

For truck deliveries, a daily trip generation rate of 0.19 trips per 1,000 square feet was obtained from the *770 Eleventh Avenue Mixed-Use Development Rezoning EIS* (2009). Temporal distribution (6 percent during the weekday AM peak hour, 11 percent during the midday/afternoon peak hour, and 1 percent during the PM peak hour) and directional distribution assumptions (50 percent "in" during all peak hours) were also obtained from the *770 Eleventh Avenue Mixed-Use Development Rezoning EIS* (2009).

PRIVATE SCHOOL

For the private school component, the overall student population and the number of faculty/staff were used in estimating trip generation activities. Temporal distributions of 90 percent for the weekday AM peak hour, 90 percent for the midday/afternoon peak hour, and 10 percent for the PM peak hour for both students and faculty/staff were based on the information provided by Windward Schools (the proposed school operator). Directional distributions of 100 percent "in" and 100 percent "out" during all three peak hours were assumed for student drop-off and pick-up activities. Modal split information and vehicle occupancy were also based on the information provided by the Windward Schools. For faculty/staff, the modal split and vehicle occupancy was obtained from reverse-journey-to-work data from the 2000 U.S. Census Database.

LOCAL RETAIL

For the local retail component, trip generation rates of 205 daily person trips per 1,000 square feet, and a temporal distribution of 3 percent for the weekday AM peak hour, 19 percent for the midday/afternoon peak hour, and 10 percent for the PM peak hour were obtained from the *CEQR*

Technical Manual. A directional distribution of 50 percent "in" during all peak hours, modal split information and vehicle occupancies were obtained from the *Western Rail Yard FEIS* (2009). A 25 percent linked trip credit was assumed for all local retail trips.

Daily truck trip generation rates of 0.35 trips per 1,000 square feet were obtained from the *CEQR Technical Manual*. Temporal distribution for trucks (8 percent during the weekday AM peak hour, 11 percent during the midday/afternoon peak hour, and 2 percent during the PM peak hour) and directional distribution assumptions (50 percent "in" during all peak hours) were also obtained from the *CEQR Technical Manual.*

PUBLICLY ACCESSIBLE PLAZA

For the publicly accessible plaza component, trip generation rates of 139 daily person trips per acre, and a temporal distribution of 3 percent for the weekday AM peak hour, 5 percent for the midday/afternoon peak hour, and 6 percent for the PM peak hour were obtained from the *CEQR Technical Manual*. A directional distribution of 50 percent "in" during all peak hours and modal split information were obtained from the *First Avenue Properties Rezoning FEIS* (2008).

TRAVEL DEMAND ANALYSIS RESULTS

Table F-3 summarizes the person and vehicle trips generated by the proposed project. In total**,** the proposed project would generate approximately 761, 743, and 403 person trips— including 339, 277, and 188 subway trips, and 72, 64, and 38 bus trips—during the weekday AM, midday/afternoon, and PM peak hours, respectively. In terms of vehicle trips, the proposed project would generate approximately 158, 144, and 49 vehicle trips—including 122, 114, and 35 auto trips and 26, 20, and 12 taxi trips—during the weekday AM, midday/afternoon, and PM peak hours, respectively.

As shown in **Table F-3**, the trip projections would exceed the *CEQR* recommended Level-1 screening thresholds for traffic, transit, and pedestrians during at least one time period. Therefore, a Level-2 screening assessment, involving the assignment of the projected trips, was prepared.

Table F-3
Trip Generation Summary

Peak Hour	In/Out	Person Trips							Vehicle Trips				
		Auto	Taxi	School Bus	Bus	Subway	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Residential Component													
AM	In	4	1	-	4	21	5	35	3	7	-	1	11
	Out	20	8	-	22	121	28	199	17	7	-	1	25
	Total	24	9	-	26	142	33	234	20	14	-	2	36
Midday/Afternoon	In	6	2	-	6	36	8	58	5	3	-	1	9
	Out	6	2	-	6	36	8	58	5	3	-	1	9
	Total	12	4	-	12	72	16	116	10	6	-	2	18
PM	In	18	7	-	20	110	25	180	16	5	-	0	21
	Out	8	3	-	9	47	11	78	7	5	-	0	12
	Total	26	10	-	29	157	36	258	23	10	-	0	33
School Component—Student Trips													
AM	In	47	0	63	32	141	48	331	36	0	4	0	40
	Out	0	0	0	0	0	16	16	36	0	4	0	40
	Total	47	0	63	32	141	64	347	72	0	8	0	80
Midday/Afternoon	In	0	0	0	0	0	16	16	36	0	4	0	40
	Out	47	0	63	32	141	48	331	36	0	4	0	40
	Total	47	0	63	32	141	64	347	72	0	8	0	80
PM	In	0	0	0	0	0	2	2	4	0	1	0	5
	Out	5	0	7	4	15	6	37	4	0	1	0	5
	Total	5	0	7	4	15	8	39	8	0	2	0	10
School Component—Staff/Faculty Trips													
AM	In	33	3	-	12	47	18	113	28	5	-	0	33
	Out	0	0	-	0	0	0	0	0	5	-	0	5
	Total	33	3	-	12	47	18	113	28	10	-	0	38
Midday/Afternoon	In	0	0	-	0	0	0	0	0	5	-	0	5
	Out	33	3	-	12	47	18	113	28	5	-	0	33
	Total	33	3	-	12	47	18	113	28	10	-	0	38
PM	In	0	0	-	0	0	0	0	0	0	-	0	0
	Out	4	0	-	1	6	2	13	3	0	-	0	3
	Total	4	0	-	1	6	2	13	3	0	-	0	3
Health Club Component													
AM	In	0	0	-	1	3	20	24	0	1	-	0	1
	Out	1	1	-	1	4	28	35	1	1	-	0	2
	Total	1	1	-	2	7	48	59	1	2	-	0	3
Midday/Afternoon	In	1	1	-	3	9	58	72	1	2	-	0	3
	Out	1	1	-	2	7	50	61	1	2	-	0	3
	Total	2	2	-	5	16	108	133	2	4	-	0	6
PM	In	1	1	-	2	7	45	56	1	1	-	0	2
	Out	0	0	-	1	2	15	18	0	1	-	0	1
	Total	1	1	-	3	9	60	74	1	2	-	0	3
Local Retail Component													
AM	In	0	0	-	0	0	2	2	0	0	-	0	0
	Out	0	0	-	0	0	2	2	0	0	-	0	0
	Total	0	0	-	0	0	4	4	0	0	-	0	0
Midday/Afternoon	In	0	0	-	1	1	12	14	0	0	-	0	0
	Out	0	0	-	1	1	12	14	0	0	-	0	0
	Total	0	0	-	2	2	24	28	0	0	-	0	0
PM	In	0	0	-	0	0	6	6	0	0	-	0	0
	Out	0	0	-	0	0	6	6	0	0	-	0	0
	Total	0	0	-	0	0	12	12	0	0	-	0	0

Table F-3 (cont'd)
Trip Generation Summary

Peak Hour	In/Out	Person Trips							Vehicle Trips				
		Auto	Taxi	School Bus	Bus	Subway	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Publicly Accessible Plaza Component													
AM	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
Midday/Afternoon	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
PM	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
Total Trips													
AM	In	84	5	63	49	213	93	507	68	13	4	1	86
	Out	21	9	0	23	126	75	254	54	13	4	1	72
	Total	**105**	**14**	**63**	**72**	**339**	**168**	**761**	**122**	**26**	**8**	**2**	**158**
Midday/Afternoon	In	8	4	0	10	45	96	163	43	10	4	1	58
	Out	87	7	63	54	232	137	580	71	10	4	1	86
	Total	**95**	**11**	**63**	**64**	**277**	**233**	**743**	**114**	**20**	**8**	**2**	**144**
PM	In	19	9	0	23	117	80	248	21	6	1	0	28
	Out	17	4	7	15	71	41	155	14	6	1	0	21
	Total	**36**	**13**	**7**	**38**	**188**	**121**	**403**	**35**	**12**	**2**	**0**	**49**

D. LEVEL 2 SCREENING ASSESSMENT

A Level 2 screening assessment involves the distribution and assignment of projected trips to the transportation network and the determination of whether specific locations are expected to incur incremental trips exceeding *CEQR* thresholds. If the results of this analysis show that the proposed project would generate 50 or more peak hour vehicle trips through an intersection, 50 or more peak hour bus riders on a bus route in a single direction, 200 or more peak hour subway passengers per station, or 200 or more peak hour pedestrian trips per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts. For the Level 2 screening assessment, project-generated trips were assigned to specific intersections, transit routes, and pedestrian elements near the project site. The results of this assessment are discussed as follows:

TRAFFIC

As discussed above, project generated vehicle trips resulting from the proposed project would exceed the Level-1 screening threshold during the weekday AM and midday/afternoon peak hours. During the weekday PM peak hour, the project generated vehicle trips will be slightly lower than the *CEQR* recommended threshold of 50 peak hour vehicle trips. Taking into consideration the location of the project site, the existing street network, and the location of off-site parking facilities as well the driveway for the on-site accessory parking garage, the project-generated vehicle trips during the PM peak hour would be distributed through various intersections in the study area. Therefore, it is not expected that a given intersection in the study area would exceed the *CEQR* recommended threshold of 50 peak hour vehicle trips during the weekday PM peak hour. Therefore, a quantified analysis of traffic conditions is not warranted during the weekday PM peak hour.

The project generated vehicle trips during the weekday AM and midday/afternoon peak hours were assigned to study area intersections based on the most likely travel routes to and from the project site, the configuration of the roadway network, and the anticipated locations of site's access and egress. Vehicle trips generated by the residential and health club components were assigned to the on-site accessory parking garage on East 92nd Street, whereas the school's staff/faculty autos were assigned to off-site parking garages in the vicinity of the project site. Taxi trips were assigned to the block faces bordering the project site. Traffic assignments for autos, taxis, and deliveries are discussed as follows:

AUTOS

Residential

Residential auto assignments were based on the origin-and-destination patterns obtained from the 2000 U.S. Census journey-to-work data. Based on this information, majority of residential trips (approximately 95 percent) would be within Manhattan. The remaining 5 percent of the trips would be distributed among Queens (2 percent), Connecticut (2 percent) and Brooklyn (1 percent).

Of the 95 percent of trips within Manhattan, approximately 32 percent were assigned to points north via Third and Second Avenues; 31 percent were assigned to the areas south via Lexington Avenue and Second Avenue; and 32 percent were assigned to points west via the local street network. Trips to Brooklyn were assigned to the FDR Drive, whereas trips to Queens and Connecticut were assigned to FDR Drive, Lexington Avenue and the RFK Bridge.

Health Club

Health Club generated auto trips were distributed to the local street network in the following manner: 32 percent from the north, 33 percent from the south, and 35 percent from the west.

School

Based on prevailing travel patterns and professional judgment, vehicle trips (including both private autos and school buses) generated by the student and staff/faculty were distributed to the area's roadway network in the following manner: 32 percent from the north, 33 percent from the south, and 35 percent from the west. All student auto and school bus drop-off/pick-up activities were assumed to take place on East 93rd Street between Third and Second Avenues in front of the school's main entrance. All staff/faculty autos were assigned to off-site parking garages in the vicinity of the project site.

Taxis

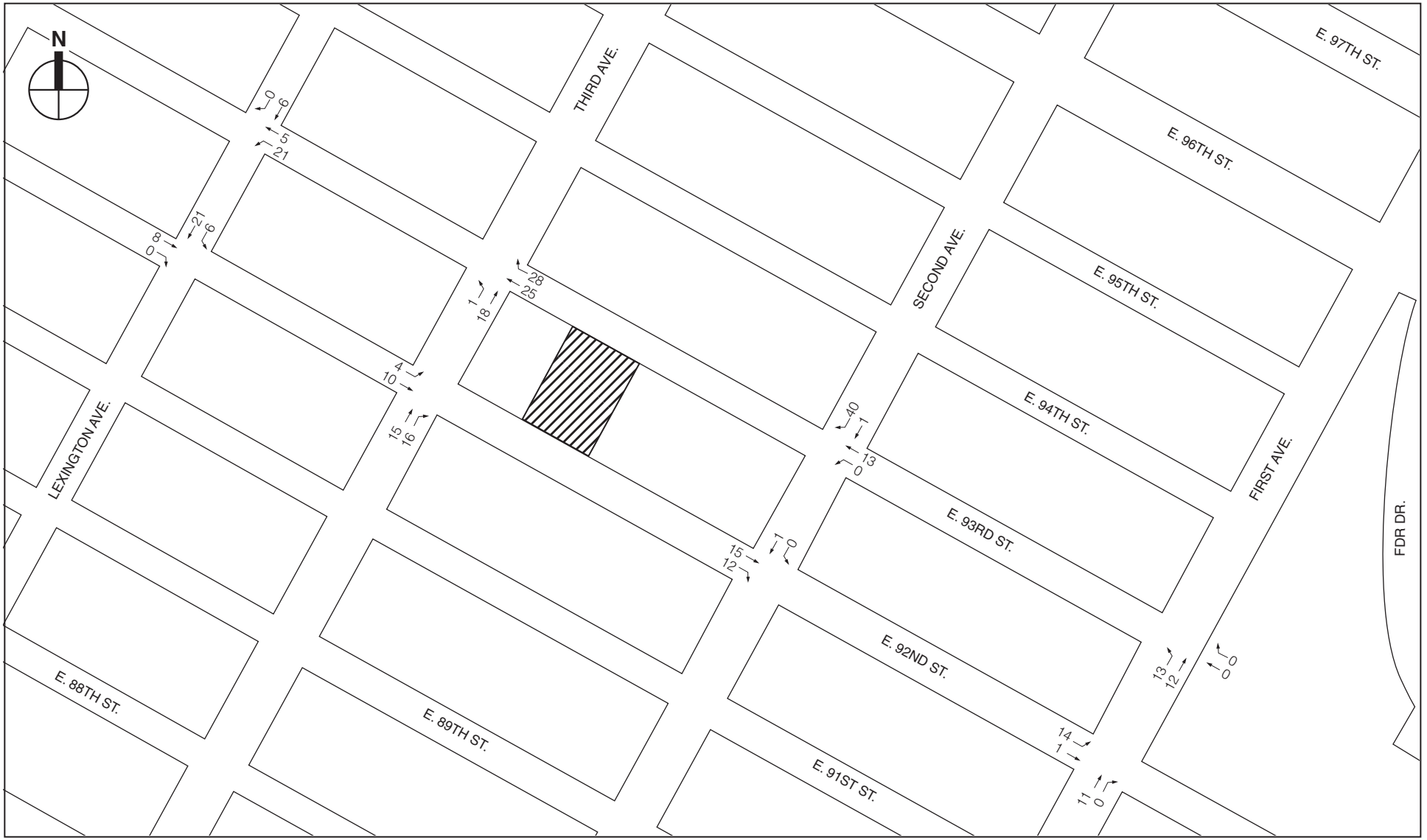
The taxi pick-ups and drop-offs for all development components were assigned in front of the proposed building's main entrances.

Deliveries

Delivery trips for all development components were assigned to the project site via NYCDOT-designated truck routes.

The weekday AM and midday/afternoon peak hour incremental vehicle trips generated by the proposed project are presented in **Figures F-1** and **F-2**, respectively.

According to the *CEQR Technical Manual*, intersections expected to incur 50 or more incremental peak hour vehicle trips as a result of the proposed project would have the potential for significant adverse traffic impacts and should be assessed in a quantified traffic impact



Project Generated Traffic Volumes
Weekday AM Peak Hour

203-205 East 92nd Street

Figure F-1

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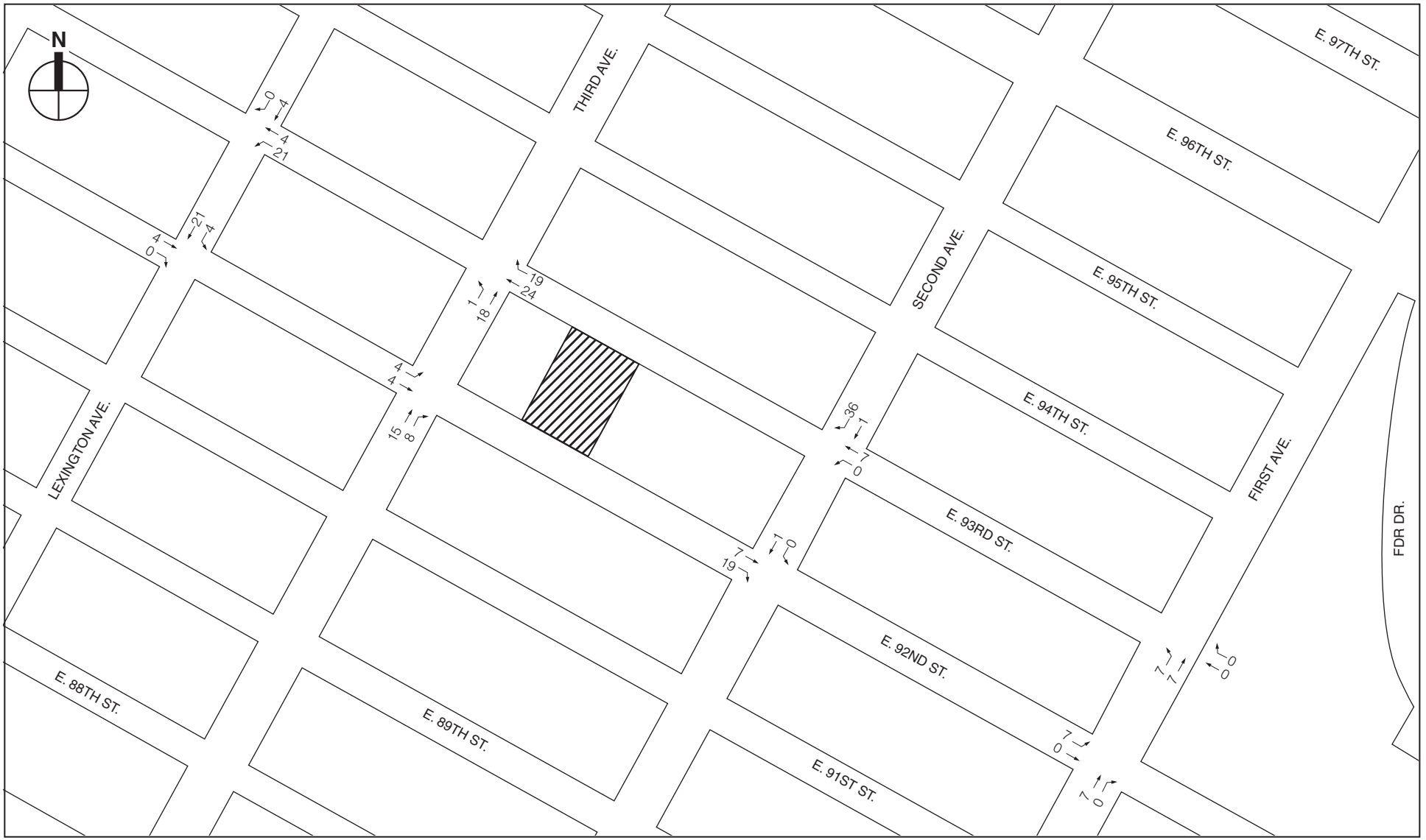


Project Generated Traffic Volumes
Weekday Midday/Afternoon Peak Hour

203-205 East 92nd Street

Figure F-2

analysis. Therefore, in accordance with the *CEQR* criteria, the following four intersections, together comprising the traffic study area, were analyzed for the weekday AM and midday/afternoon peak hours for assessing proposed project's potential impact on study area's traffic conditions.

1. East 93rd Street and Third Avenue
2. East 93rd Street and Second Avenue
3. East 92nd Street and Third Avenue
4. East 92nd Street and Second Avenue

TRANSIT

The project site is located near the East 96th Street subway station (#6 line) operated by New York City Transit (NYCT). All project generated subway trips are expected to be served by this station. As summarized in **Table F-3**, the proposed project is expected to generate approximately 339, 277, and 188 incremental peak hour subway trips during the weekday AM, midday/afternoon, and PM peak hours, respectively. Based on the distribution of these trips to the 96th Street (No. 6 line) subway station, the station stairway at Lexington Avenue between East 95th Street and East 96th Street on the east sidewalk (S2), and the adjoining control area (booth #R251) were identified for detailed analysis during the weekday AM and PM peak hours.

With regard to bus service, there are six local bus routes—M15, M96, M98, M101, M102, and M103—with stops adjacent to or near the project site (see **Figure F-3**). As summarized in **Table F-3**, the proposed project is expected to generate approximately 72, 64, and 38 incremental peak hour bus trips during the weekday AM, midday/afternoon and PM peak hours, respectively. Based on the distribution of these trips, no individual bus route would experience 50 or more peak hour bus trips in one direction—the *CEQR* recommended threshold for undertaking quantified bus analysis, and therefore, a quantitative analysis of bus operations was not warranted.

PEDESTRIANS

Pedestrian trip assignments were developed by distributing person trips generated by the proposed project to surrounding pedestrian facilities, including sidewalks, corner reservoirs, and crosswalks, adjacent to and near the project site. As discussed above, the main entrances for the residential/health club/local retail/plaza components and the school would be located on East 92nd Street and East 93rd Street, respectively.

Figures F-4 and **F-5** present the weekday AM and midday/afternoon peak hour pedestrian increments for the proposed project. As shown in these figures, incremental pedestrian activities from the proposed project are expected to be concentrated on the sidewalks, corners, and crosswalks bordering the project site.

Based on the *CEQR Technical Manual*, quantified pedestrian analyses would be required for pedestrian elements incurring 200 or more incremental peak hour trips. Therefore, in accordance with the *CEQR* criteria, the following pedestrian elements, together comprising the pedestrian study area, were analyzed for the weekday AM and midday/afternoon peak hours.

Sidewalk Locations

1. East sidewalk on Lexington Avenue between East 96th and 95th Streets
2. East sidewalk on Lexington Avenue between East 95th and 94th Streets
3. East sidewalk on Lexington Avenue between East 94th and 93rd Streets
4. North sidewalk on East 93rd Street between Lexington and Third Avenues

5. South sidewalk on East 93rd Street between Lexington and Third Avenues
6. South sidewalk on East 93rd Street between Third and Second Avenues
7. East sidewalk on Third Avenue between East 93rd and 92nd Streets
8. North sidewalk on East 92nd Street between Third and Second Avenues

Crosswalk Locations

1. East crosswalk of Lexington Avenue and East 95th Street
2. East crosswalk of Lexington Avenue and East 94th Street
3. East crosswalk of Lexington Avenue and East 93rd Street
4. East crosswalk of Third Avenue and East 93rd Street
5. North crosswalk of Third Avenue and East 93rd Street
6. South crosswalk of Third Avenue and East 93rd Street
7. East crosswalk of Third Avenue and East 92nd Street
8. North crosswalk of Third Avenue and East 92nd Street

Corner Reservoir Locations

1. Northeast corner of Lexington Avenue and East 95th Street
2. Southeast corner of Lexington Avenue and East 95th Street
3. Northeast corner of Lexington Avenue and East 94th Street
4. Southeast corner of Lexington Avenue and East 94th Street
5. Northeast corner of Lexington Avenue and East 93rd Street
6. Southeast corner of Lexington Avenue and East 93rd Street
7. Northeast corner of Third Avenue and East 93rd Street
8. Southeast corner of Third Avenue and East 93rd Street
9. Northwest corner of Third Avenue and East 92nd Street
10. Northeast corner of Third Avenue and East 92nd Street

Although the proposed project would generate approximately 403 person trips during the weekday PM peak hour, given the two separate access-and-egress points on East 92nd and 93rd Streets, the project-generated pedestrian trips would be distributed through various intersections in the study area. Therefore, it is not expected that a single pedestrian element in the study area would exceed the 200-trip *CEQR* threshold during the weekday PM peak hour. Therefore, a quantified analysis of traffic conditions is not warranted during the weekday PM peak hour.

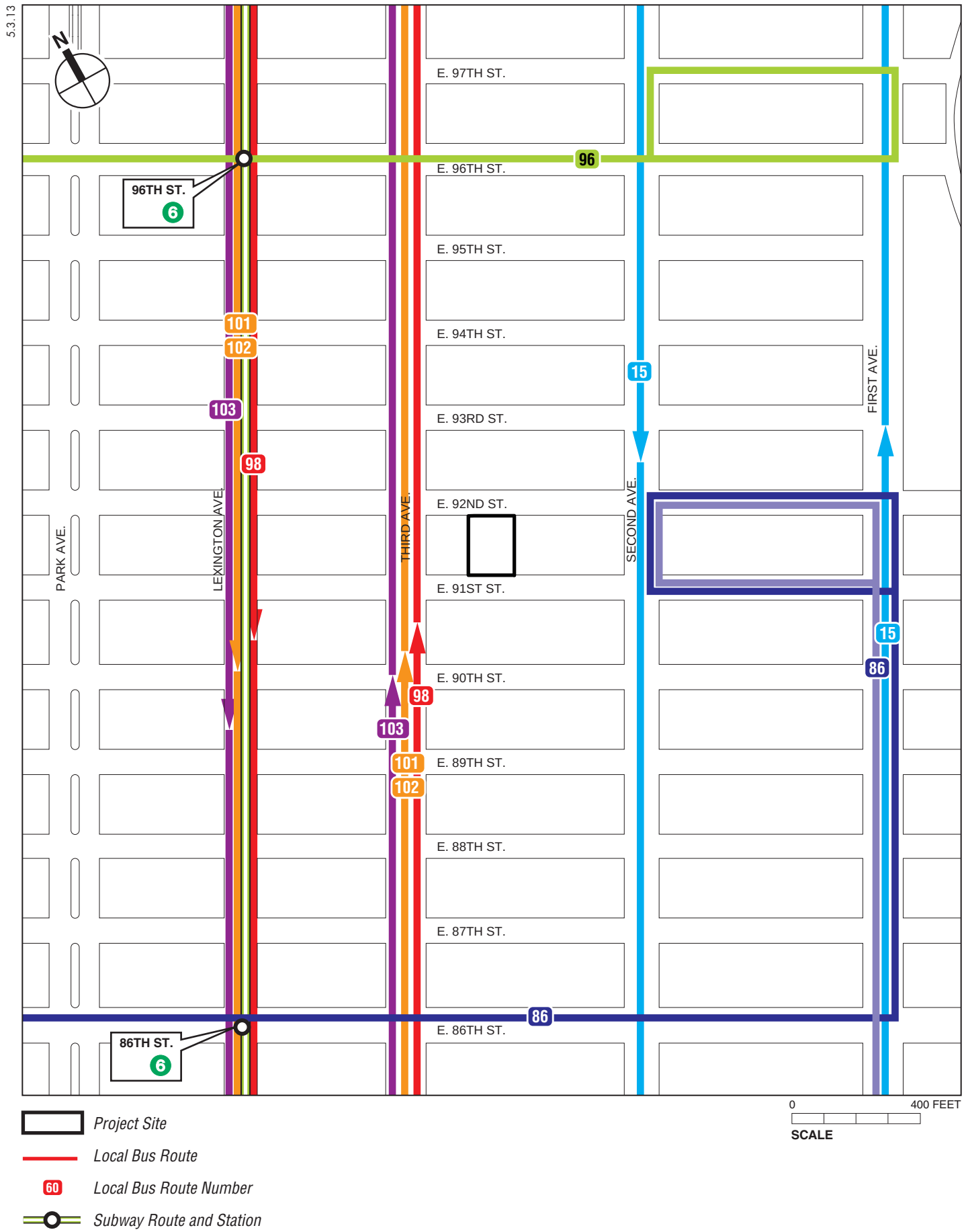
E. TRANSPORTATION ANALYSIS METHODOLOGIES

TRAFFIC OPERATIONS

Study area intersections were assessed using methodologies presented in the *2000 Highway Capacity Manual (HCM)* using the *Highway Capacity Software (HCS+ 5.5)*. The *HCM* procedure evaluates the levels of service (LOS) for signalized and unsignalized intersections using average stop control delay, in seconds per vehicle.

SIGNALIZED INTERSECTIONS

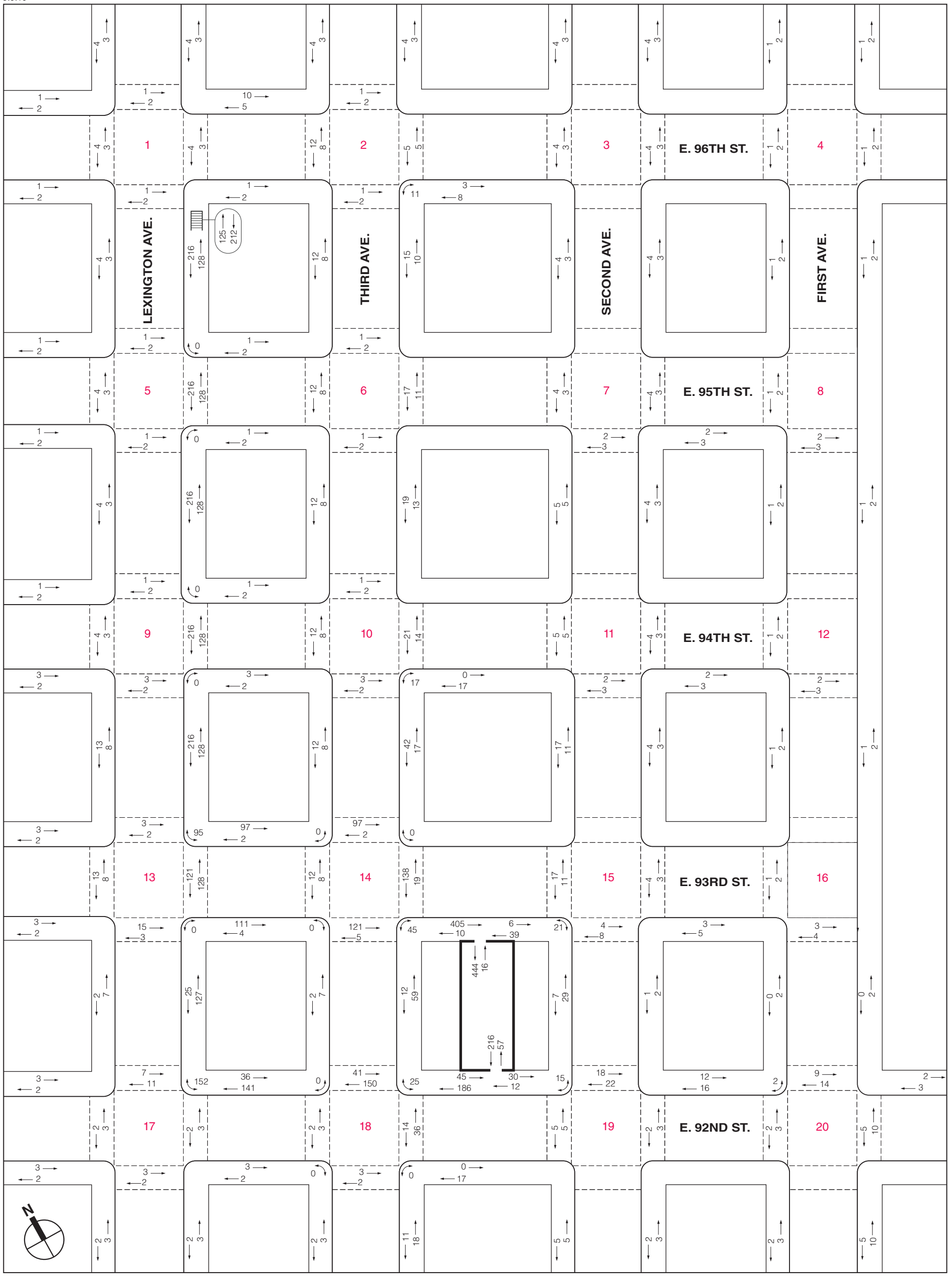
The average control delay per vehicle is the basis for LOS determination for individual lane groups (grouping of movements in one or more travel lanes), the approaches, and the overall intersection. The levels of service are defined in **Table F-4**.



Subway and Local Bus Service

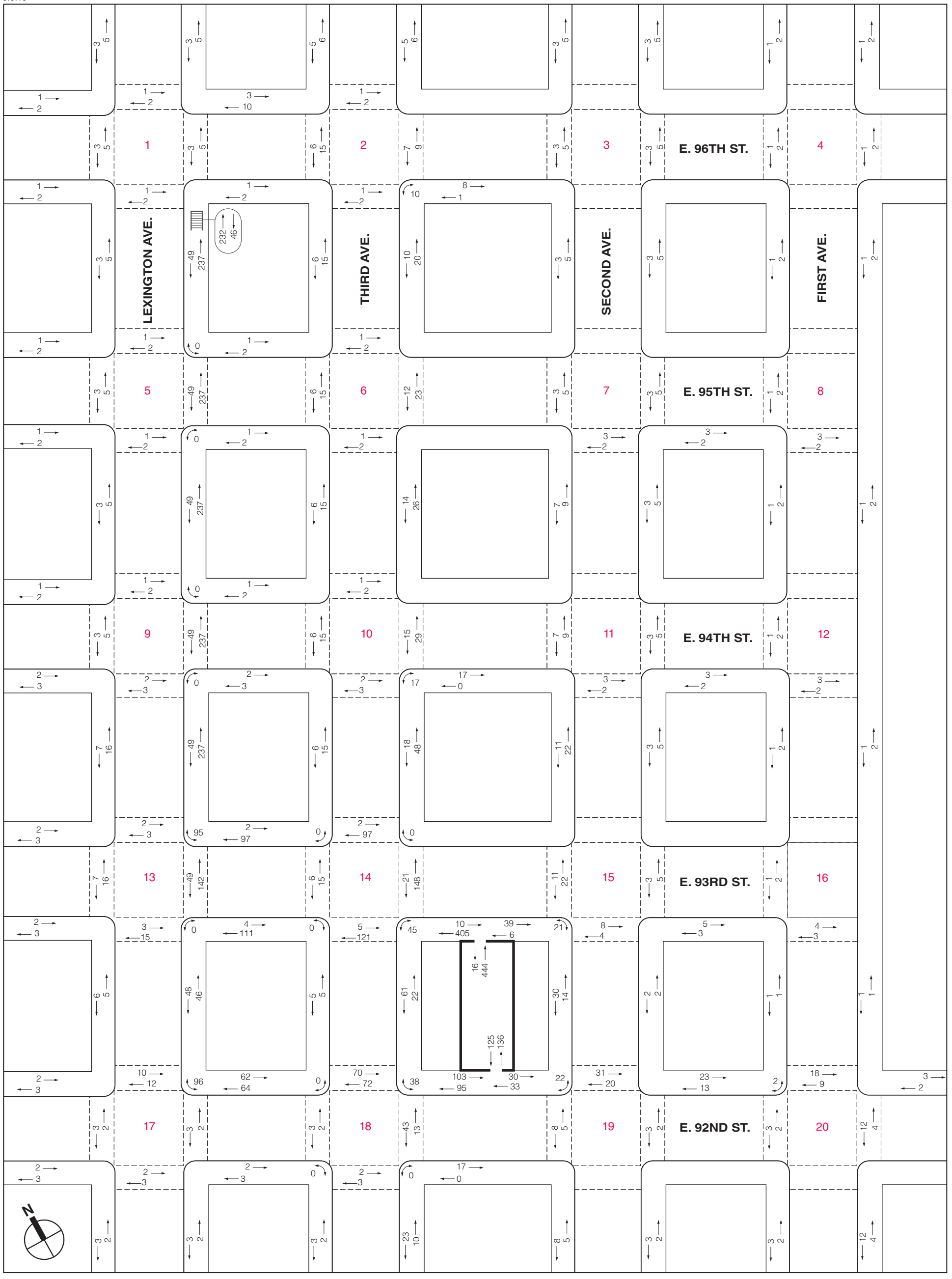
Figure F-3

203-205 East 92nd Street



Project Generated Pedestrian Volumes
Weekday AM Peak Hour

Figure F-4



Project Site

NOT TO SCALE

Project Generated Pedestrian Volumes
Weekday Midday/Afternoon Peak Hour

Figure F-5

Table F-4
LOS Criteria for Signalized Intersections

LOS	Average Control Delay
A	≤ 10.0 seconds
B	>10.0 and ≤ 20.0 seconds
C	>20.0 and ≤ 35.0 seconds
D	>35.0 and ≤ 55.0 seconds
E	>55.0 and ≤ 80.0 seconds
F	>80.0 seconds

Source: Transportation Research Board. *Highway Capacity Manual*, 2000.

Although the HCM methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS as defined in the *HCM*. A high v/c ratio indicates substantial traffic passing through an intersection, but a high v/c ratio combined with low average delay actually represents the most efficient condition in terms of traffic engineering standards, where an approach or the whole intersection processes traffic close to its theoretical maximum capacity with minimal delay. However, very high v/c ratios—especially those approaching or greater than 1.0—are often correlated with a deteriorated LOS. Other important variables affecting delay include cycle length, progression, and green time. LOS A and B indicate good operating conditions with minimal delay. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition where congestion levels are more noticeable and individual cycle failures (a condition where motorists may have to wait for more than one green phase to clear the intersection) can occur. Conditions at LOS E and F reflect poor service levels, and cycle breakdowns are frequent. The *HCM* methodology also provides for a summary of the total intersection operating conditions. The analysis chooses the two critical movements (the worst case from each roadway) and calculates a summary critical v/c ratio. The overall intersection delay, which determines the intersection's LOS, is based on a weighted average of control delays of the individual lane groups. Within New York City, the midpoint of LOS D (45 seconds of delay) is generally considered as the threshold between acceptable and unacceptable operations.

Significant Impact Criteria

According to the criteria presented in the *CEQR Technical Manual*, impacts are considered significant and require examination of mitigation if they result in an increase in the Build condition of 5 or more seconds of delay in a lane group over No Build levels beyond mid-LOS D. For No Build LOS E, a 4-second increase in delay is considered significant. For No Build LOS F, a 3-second increase in delay is considered significant. In addition, impacts are considered significant if levels of service deteriorate from acceptable A, B, or C in the No Build condition to marginally unacceptable LOS D (a delay in excess of 45 seconds, the midpoint of LOS D), or unacceptable LOS E or F in the Build condition.

TRANSIT OPERATIONS

SUBWAY STATION ELEMENTS

The methodology for assessing station circulation (stairs, escalators, and passageways) elements compares the user volume with the analyzed element's design capacity, resulting in a volume-to-capacity (v/c) ratio.

For stairs, the design capacity considers the effective width of a tread, which accounts for railings or other obstructions, the friction or counter-flow between upward and downward pedestrians (up to 10-percent capacity reduction applied to account for counter-flow friction), surging of exiting pedestrians (up to 25-percent capacity reduction applied to account for detraining surges near platforms), and the average area required for circulation. For passageways, similar considerations are made. In the analysis for each of these elements, volumes and capacities are presented for 15-minute intervals.

The estimated v/c ratio is compared with NYCT criteria to determine a level-of-service (LOS) for the operation of an element, as summarized in **Table F-5**.

Table F-5
LOS Criteria for Subway Station Elements

LOS	V/C Ratio
A	0.00 to 0.45
B	0.45 to 0.70
C	0.70 to 1.00
D	1.00 to 1.33
E	1.33 to 1.67
F	Above 1.67

Source: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (2012).

At LOS A ("free flow") and B ("fluid flow"), there is sufficient area to allow pedestrians to freely select their walking speed and bypass slower pedestrians. When cross and reverse flow movement exists, only minor conflicts may occur. At LOS C ("fluid, somewhat restricted"), movement is fluid although somewhat restricted. While there is sufficient room for standing without personal contact, circulation through queuing areas may require adjustments to walking speed. At LOS D ("crowded, walking speed restricted"), walking speed is restricted and reduced. Reverse and cross flow movement is severely restricted because of congestion and the difficult passage of slower moving pedestrians. At LOS E ("congested, some shuffling and queuing") and F ("severely congested, queued"), walking speed is restricted. There is also insufficient area to bypass others, and opposing movement is difficult. Often, forward progress is achievable only through shuffling, with queues forming.

Significant Impact Criteria

The determination of significant impacts for station elements varies based on their type and use. For stairs and passageways, significant impacts are defined in terms of width increment threshold (WIT) based on the minimum amount of additional capacity that would be required either to mitigate the location to its service conditions (LOS) under the future No Action levels, or to bring it to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Significant impacts are typically considered to occur once the WITs in **Table F-6** are reached or exceeded.

PEDESTRIAN OPERATIONS

The adequacy of the study area's sidewalks, crosswalks, and corner reservoir capacities in relation to the demand imposed on them is evaluated based on the methodologies presented in the 2010 *Highway Capacity Manual* (HCM), pursuant to procedures detailed in the *CEQR Technical Manual*.

Table F-6
Significant Impact Guidance for Stairs and Passageways

With Action V/C Ratio	WIT for Significant Impact (inches)	
	Stairway	Passageway
1.00 to 1.09	8.0	13.0
1.10 to 1.19	7.0	11.5
1.20 to 1.29	6.0	10.0
1.30 to 1.39	5.0	8.5
1.40 to 1.49	4.0	6.0
1.50 to 1.59	3.0	4.5
1.60 and up	2.0	3.0

Notes: WIT = Width Increment Threshold
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (2012).

Sidewalks are analyzed in terms of pedestrian flow. The calculation of the average pedestrians per minute per foot (PMF) of effective walkway width is the basis for a sidewalk level-of-service (LOS) analysis. The determination of walkway LOS is also dependent on whether the pedestrian flow being analyzed is best described as "non-platoon" or "platoon." Non-platoon flow occurs when pedestrian volume within the peak 15-minute period is relatively uniform, whereas, platoon flow occurs when pedestrian volumes vary significantly with the peak 15-minute period. Such variation typically occurs near bus stops, subway stations, and/or where adjacent crosswalks account for much of the walkway's pedestrian volume. Crosswalks and street corners are not easily measured in terms of free pedestrian flow, as they are influenced by the effects of traffic signals. Street corners must be able to provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the street or moving around the corner). The HCM methodologies apply a measure of time and space availability based on the area of the corner, the timing of the intersection signal, and the estimated space used by circulating pedestrians.

The total "time-space" available for these activities, expressed in square feet-second, is calculated by multiplying the net area of the corner (in square feet) by the signal's cycle length. The analysis then determines the total circulation time for all pedestrian movements at the corner per signal cycle (expressed as pedestrians per second). The ratio of net time-space divided by the total pedestrian circulation volume per signal cycle provides the LOS measurement of square feet per pedestrian (SFP).

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet-second. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the total crosswalk pedestrian occupancy time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk. The LOS standards for sidewalks, corner reservoirs, and crosswalks are summarized in **Table F-7**. The *CEQR Technical Manual* specifies that acceptable LOS in non-Central Business District (CBD) areas is LOS C or better.

Table F-7
Level of Service Criteria for Pedestrian Elements

LOS	Sidewalks		Corner Reservoirs and Crosswalks
	Non-Platoon Flow	Platoon Flow	
A	≤ 5 PMF	≤ 0.5 PMF	> 60 SFP
B	> 5 and ≤ 7 PMF	> 0.5 and ≤ 3 PMF	> 40 and ≤ 60 SFP
C	> 7 and ≤ 10 PMF	> 3 and ≤ 6 PMF	> 24 and ≤ 40 SFP
D	> 10 and ≤ 15 PMF	> 6 and ≤ 11 PMF	> 15 and ≤ 24 SFP
E	> 15 and ≤ 23 PMF	> 11 and ≤ 18 PMF	> 8 and ≤ 15 SFP
F	> 23 PMF	> 18 PMF	≤ 8 SFP

Notes: PMF = pedestrians per minute per foot; SFP = square feet per pedestrian.
Source: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (2012).

SIGNIFICANT IMPACT CRITERIA

The determination of significant pedestrian impacts considers the level of predicted deterioration in pedestrian flow or decrease in pedestrian space between the No Action and With Action conditions. For different pedestrian elements, flow conditions, and area types, the CEQR procedure for impact determination corresponds with various sliding-scale formulas, as further detailed below.

Sidewalks

There are two sliding-scale formulas for determining significant sidewalk impacts. For non-platoon flow, the increase in average pedestrian flow rate (Y) in PMF needs to be greater or equal to 3.5 minus X divided by 8.0 (where X is the No Action pedestrian flow rate in PMF [$Y \geq 3.5 - X/8.0$]) for it to be a significant impact. For platoon flow, the sliding-scale formula is $Y \geq 3.0 - X/8.0$. Since deterioration in pedestrian flow within acceptable levels would not constitute a significant impact, these formulas would apply only if the With Action pedestrian flow exceeds LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table F-8** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant sidewalk impacts.

Corner Reservoirs and Crosswalks

The determination of significant corner and crosswalk impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.3$, where Y is the decrease in pedestrian space in SFP and X is the No Action pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, this formula would apply only if the With Action pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table F-9** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant corner reservoir and crosswalk impacts.

Table F-8
Significant Impact Guidance for Sidewalks

Non-Platoon Flow				Platoon Flow			
Sliding Scale Formula: ***Y ≥ 3.5 – X/8.0***				**Sliding Scale Formula:** ***Y ≥ 3.0 – X/8.0***			
Non-CBD Areas		**CBD Areas**		**Non-CBD Areas**		**CBD Areas**	
No Action Ped. Flow (X, PMF)	**Action Ped. Flow Incr. (Y, PMF)**	**No Action Ped. Flow (X, PMF)**	**Action Ped. Flow Incr. (Y, PMF)**	**No Action Ped. Flow (X, PMF)**	**Action Ped. Flow Incr. (Y, PMF)**	**No Action Ped. Flow (X, PMF)**	**Action Ped. Flow Incr. (Y, PMF)**
7.4 to 7.8	≥ 2.6	–	–	3.4 to 3.8	≥ 2.6	–	–
7.9 to 8.6	≥ 2.5	–	–	3.9 to 4.6	≥ 2.5	–	–
8.7 to 9.4	≥ 2.4	–	–	4.7 to 5.4	≥ 2.4	–	–
9.5 to 10.2	≥ 2.3	–	–	5.5 to 6.2	≥ 2.3	–	–
10.3 to 11.0	≥ 2.2	10.3 to 11.0	≥ 2.2	6.3 to 7.0	≥ 2.2	6.3 to 7.0	≥ 2.2
11.1 to 11.8	≥ 2.1	11.1 to 11.8	≥ 2.1	7.1 to 7.8	≥ 2.1	7.1 to 7.8	≥ 2.1
11.9 to 12.6	≥ 2.0	11.9 to 12.6	≥ 2.0	7.9 to 8.6	≥ 2.0	7.9 to 8.6	≥ 2.0
12.7 to 13.4	≥ 1.9	12.7 to 13.4	≥ 1.9	8.7 to 9.4	≥ 1.9	8.7 to 9.4	≥ 1.9
13.5 to 14.2	≥ 1.8	13.5 to 14.2	≥ 1.8	9.5 to 10.2	≥ 1.8	9.5 to 10.2	≥ 1.8
14.3 to 15.0	≥ 1.7	14.3 to 15.0	≥ 1.7	10. to 11.0	≥ 1.7	10. to 11.0	≥ 1.7
15.1 to 15.8	≥ 1.6	15.1 to 15.8	≥ 1.6	11.1 to 11.8	≥ 1.6	11.1 to 11.8	≥ 1.6
15.9 to 16.6	≥ 1.5	15.9 to 16.6	≥ 1.5	11.9 to 12.6	≥ 1.5	11.9 to 12.6	≥ 1.5
16.7 to 17.4	≥ 1.4	16.7 to 17.4	≥ 1.4	12.7 to 13.4	≥ 1.4	12.7 to 13.4	≥ 1.4
17.5 to 18.2	≥ 1.3	17.5 to 18.2	≥ 1.3	13.5 to 14.2	≥ 1.3	13.5 to 14.2	≥ 1.3
18.3 to 19.0	≥ 1.2	18.3 to 19.0	≥ 1.2	14.3 to 15.0	≥ 1.2	14.3 to 15.0	≥ 1.2
19.1 to 19.8	≥ 1.1	19.1 to 19.8	≥ 1.1	15.1 to 15.8	≥ 1.1	15.1 to 15.8	≥ 1.1
19.9 to 20.6	≥ 1.0	19.9 to 20.6	≥ 1.0	15.9 to 16.6	≥ 1.0	15.9 to 16.6	≥ 1.0
20.7 to 21.4	≥ 0.9	20.7 to 21.4	≥ 0.9	16.7 to 17.4	≥ 0.9	16.7 to 17.4	≥ 0.9
21.5 to 22.2	≥ 0.8	21.5 to 22.2	≥ 0.8	17.5 to 18.2	≥ 0.8	17.5 to 18.2	≥ 0.8
22.3 to 23.0	≥ 0.7	22.3 to 23.0	≥ 0.7	18.3 to 19.0	≥ 0.7	18.3 to 19.0	≥ 0.7
> 23.0	≥ 0.6	> 23.0	≥ 0.6	> 19.0	≥ 0.6	> 19.0	≥ 0.6

Notes: PMF = pedestrians per minute per foot; Y = increase in average pedestrian flow rate in PMF; X = No Action pedestrian flow rate in PMF.

Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (2012).

Table F-9
Significant Impact Guidance for Corners and Crosswalks

Sliding Scale Formula: *Y ≥ X/9.0 – 0.3*			
Non-CBD Areas		**CBD Areas**	
No Action Pedestrian Space (X, SFP)	**Action Pedestrian Space Reduction (Y, SFP)**	**No Action Pedestrian Space (X, SFP)**	**Action Pedestrian Space Reduction (Y, SFP)**
25.8 to 26.6	≥ 2.6	–	–
24.9 to 25.7	≥ 2.5	–	–
24.0 to 24.8	≥ 2.4	–	–
23.1 to 23.9	≥ 2.3	–	–
22.2 to 23.0	≥ 2.2	–	–
21.3 to 22.1	≥ 2.1	21.3 to 21.6	≥ 2.1
20.4 to 21.2	≥ 2.0	20.4 to 21.2	≥ 2.0
19.5 to 20.3	≥ 1.9	19.5 to 20.3	≥ 1.9
18.6 to 19.4	≥ 1.8	18.6 to 19.4	≥ 1.8
17.7 to 18.5	≥ 1.7	17.7 to 18.5	≥ 1.7
16.8 to 17.6	≥ 1.6	16.8 to 17.6	≥ 1.6
15.9 to 16.7	≥ 1.5	15.9 to 16.7	≥ 1.5
15.0 to 15.8	≥ 1.4	15.0 to 15.8	≥ 1.4
14.1 to 14.9	≥ 1.3	14.1 to 14.9	≥ 1.3
13.2 to 14.0	≥ 1.2	13.2 to 14.0	≥ 1.2
12.3 to 13.1	≥ 1.1	12.3 to 13.1	≥ 1.1
11.4 to 12.2	≥ 1.0	11.4 to 12.2	≥ 1.0
10.5 to 11.3	≥ 0.9	10.5 to 11.3	≥ 0.9
9.6 to 10.4	≥ 0.8	9.6 to 10.4	≥ 0.8
8.7 to 9.5	≥ 0.7	8.7 to 9.5	≥ 0.7
7.8 to 8.6	≥ 0.6	7.8 to 8.6	≥ 0.6
6.9 to 7.7	≥ 0.5	6.9 to 7.7	≥ 0.5
6.0 to 6.8	≥ 0.4	6.0 to 6.8	≥ 0.4
5.1 to 5.9	≥ 0.3	5.1 to 5.9	≥ 0.3
< 5.1	≥ 0.2	< 5.1	≥ 0.2

Notes: SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No Action pedestrian space in SFP.
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual* (2012).

VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

An evaluation of vehicular and pedestrian safety is necessary for locations within the traffic and pedestrian study areas that have been identified as high accident locations, where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent 3-year period for which data are available. For these locations, accident trends are identified to determine whether projected vehicular and pedestrian traffic would further impact safety at these locations. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic volumes, accident types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety are identified and coordinated with NYCDOT.

F. TRAFFIC

2012 EXISTING CONDITIONS

ROADWAY NETWORK

The roadway network around the project site is a grid of local east-west cross streets and major north-south avenues. Key north-south roadways within the study area include Second Avenue and Third Avenue. The east-west streets in the study area include East 92nd Street and East 93rd Street.

Second Avenue is a major southbound roadway on Manhattan's east side extending from East 128th Street in the north (in the vicinity of Third Avenue Bridge) to East Houston Street in the south. Third Avenue is a major northbound roadway extending from East 5th Street in the south (after branching out from Bowery in the vicinity of Cooper Square) to East 128th Street in the north (in the vicinity of Third Avenue Bridge). Both Second and Third Avenues operate with four lanes of moving traffic with curbside parking on both sides. Currently, due to the on-going construction at the Metropolitan Transportation Authority's Second Avenue Subway project, the east curbside lane of Second Avenue is being used as part of the construction zone.

East 92nd Street is a one-way eastbound street extending from Fifth Avenue in the west to FDR Drive in the east. Within the study area, it generally operates with one moving lane of traffic with curbside parking permitted on both sides. The on-street parking on East 92nd Street within the study area is generally regulated by alternate-side-of-the-street cleaning regulations. East 93rd Street is a one-way westbound street extending from FDR Drive in the east to Fifth Avenue in the west. Within the study area, it generally operates with one moving lane of traffic with curbside parking permitted on both sides. Like East 92nd Street, on-street parking on East 92nd Street within the study area is also regulated by alternate-side-of-the-street cleaning regulations.

TRAFFIC CONDITIONS

Existing traffic volumes for the study area intersections are shown in **Figures F-6** and **F-7**, and were established based on field counts (including manual turning movement counts and Automatic Traffic Recorder [ATR] counts) conducted in September and October 2012.

During the data collection, construction was underway on the Second Avenue Subway project. However, as discussed above, the only affect of the construction activity at the study area roadways was on Second Avenue where the eastside curb lane was prohibited for both moving traffic and curbside parking activities since it is being used as part of the construction zone.

LEVELS OF SERVICE

Table F-10 presents the existing service conditions for study area intersections. The analysis results indicate that all of the study area's intersection approaches/lane groups operate acceptably—at mid-LOS D (delays of 45 seconds per vehicle [spv] or less for signalized intersections) or better for the two analysis peak hours.

Table F-10
2012 Existing Conditions Level of Service Analysis

Intersection	AM				Midday/Afternoon			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 92nd Street and Second Avenue								
Eastbound	T	0.65	31.3	C	T	0.58	28.9	C
	R	0.51	29.5	C	R	0.41	25.9	C
Southbound	LT	0.46	13.0	B	LT	0.56	14.6	B
	Intersection		17.8	B	Intersection		18.2	B
East 92nd Street and Third Avenue								
Eastbound	LT	0.63	28.2	C	LT	0.75	32.7	C
Northbound	TR	0.49	14.9	B	TR	0.52	15.3	B
	Intersection		17.4	B	Intersection		18.7	B
East 93rd Street and Second Avenue								
Westbound	LT	0.29	23.2	C	LT	0.30	23.3	C
Southbound	TR	0.48	13.3	B	TR	0.58	14.8	B
	Intersection		14.1	B	Intersection		15.7	B
East 93rd Street and Third Avenue								
Westbound	TR	0.27	22.7	C	TR	0.36	24.1	C
Northbound	LT	0.42	12.5	B	LT	0.50	13.4	B
	Intersection		13.3	B	Intersection		14.4	B

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service

THE FUTURE WITHOUT THE PROPOSED ACTION

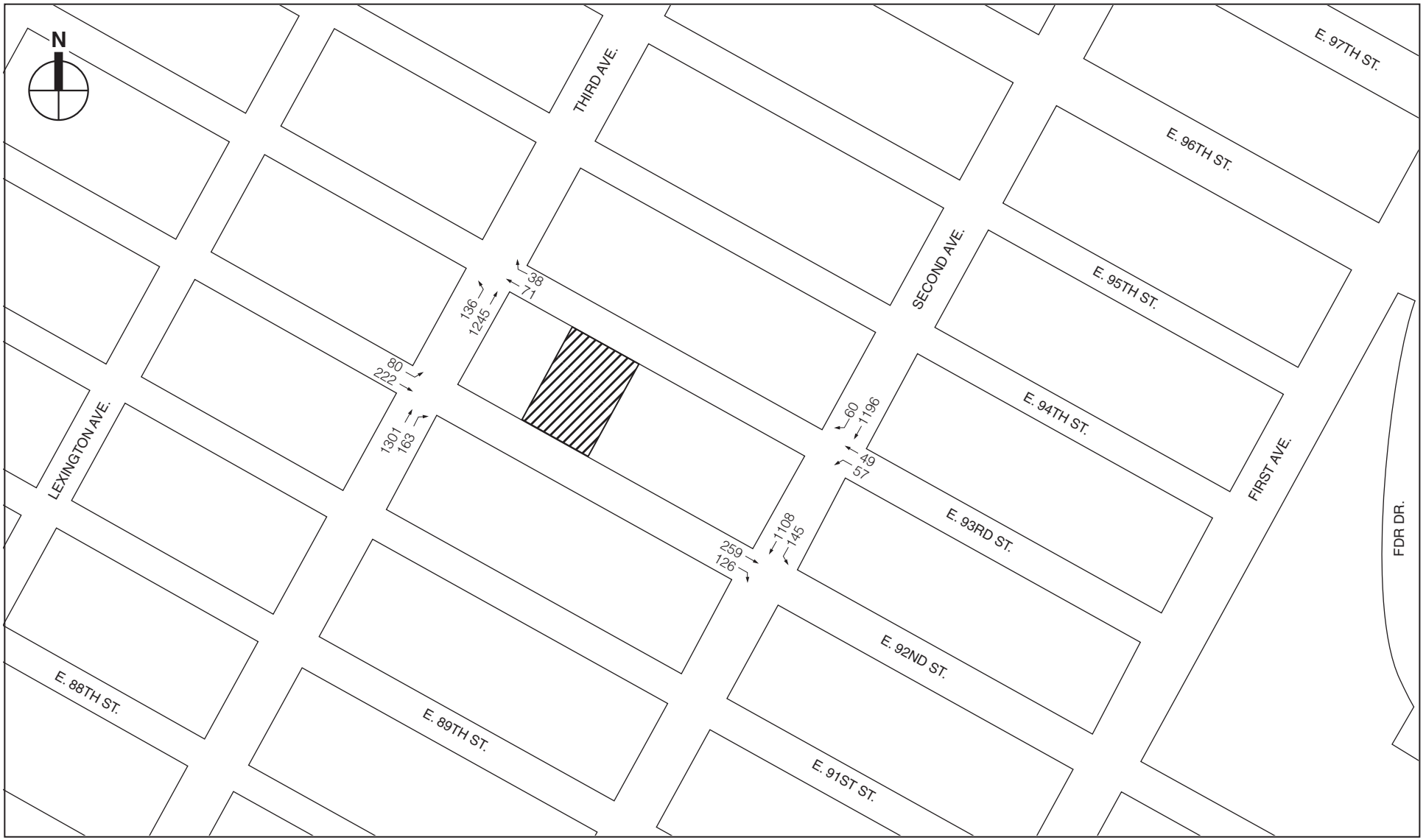
The No Build condition was developed by increasing existing (2012) traffic levels by the expected growth in overall travel through and within the study area. As per *CEQR* guidelines, an annual background growth rate of 0.25 percent was assumed for an overall growth rate of approximately 0.75 percent by the proposed project's anticipated Build year. In addition, the following four development projects expected to occur in the future No Build condition were identified in coordination with the New York City Department of City Planning (DCP) as being planned for the study area:

- Development located at 301 East 99th Street consisting of 37,350 gsf of retail use; 176 residential units and 3,300 gsf of community facility space;
- Development located on 99th Street and Second Avenue consisting of 168 assisting living units, 10,855 gsf of community facility space and 17,000 gsf of office use;
- Development located on 104th Street between Second and Third Avenues consisting of a 56,000 gsf charter school, 89 residential units and 5,000 gsf of office use; and
- Development located at 215 East 99th Street consisting of 90 residential units. Person and vehicle trips generated by these projects were determined based on the standard trip generation factors and were incorporated in the No Build traffic analysis.

TRAFFIC OPERATIONS

The No Build condition traffic volumes are shown in **Figures F-8 and F-9** for the weekday AM, and midday/afternoon peak hours**. Table F-11** presents a comparison of the Existing and the No Build level of service conditions at the study area intersections. The analysis results indicate that, for both the analysis peak hours in the 2015 No Build conditions, all of the study area's intersection approaches/lane groups continue to operate at the same LOS as existing conditions

5.3.13



NOT TO SCALE

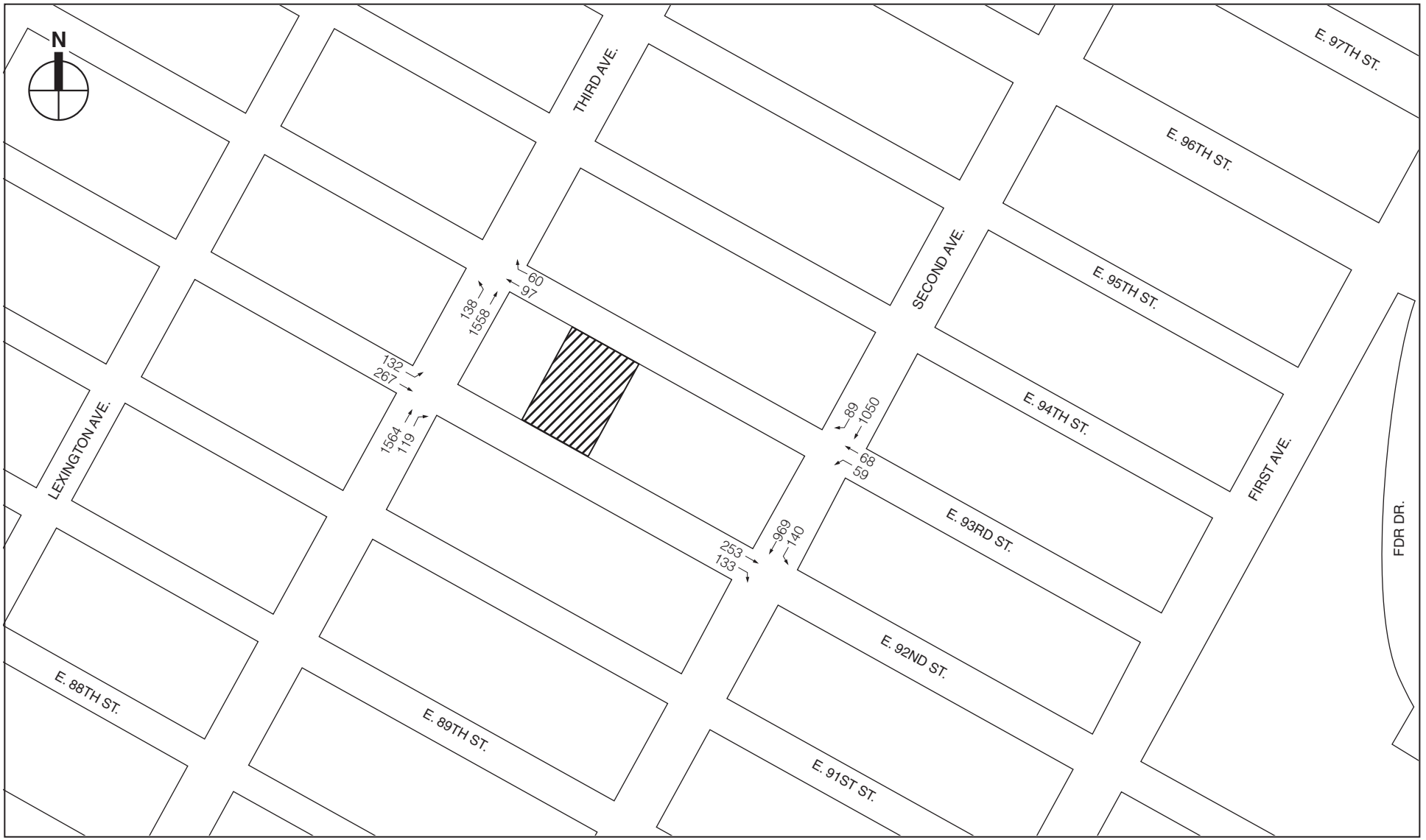
Project Site

2012 Existing Traffic Volumes
Weekday AM Peak Hour

Figure F-6

203-205 East 92nd Street

5.3.13



NOT TO SCALE

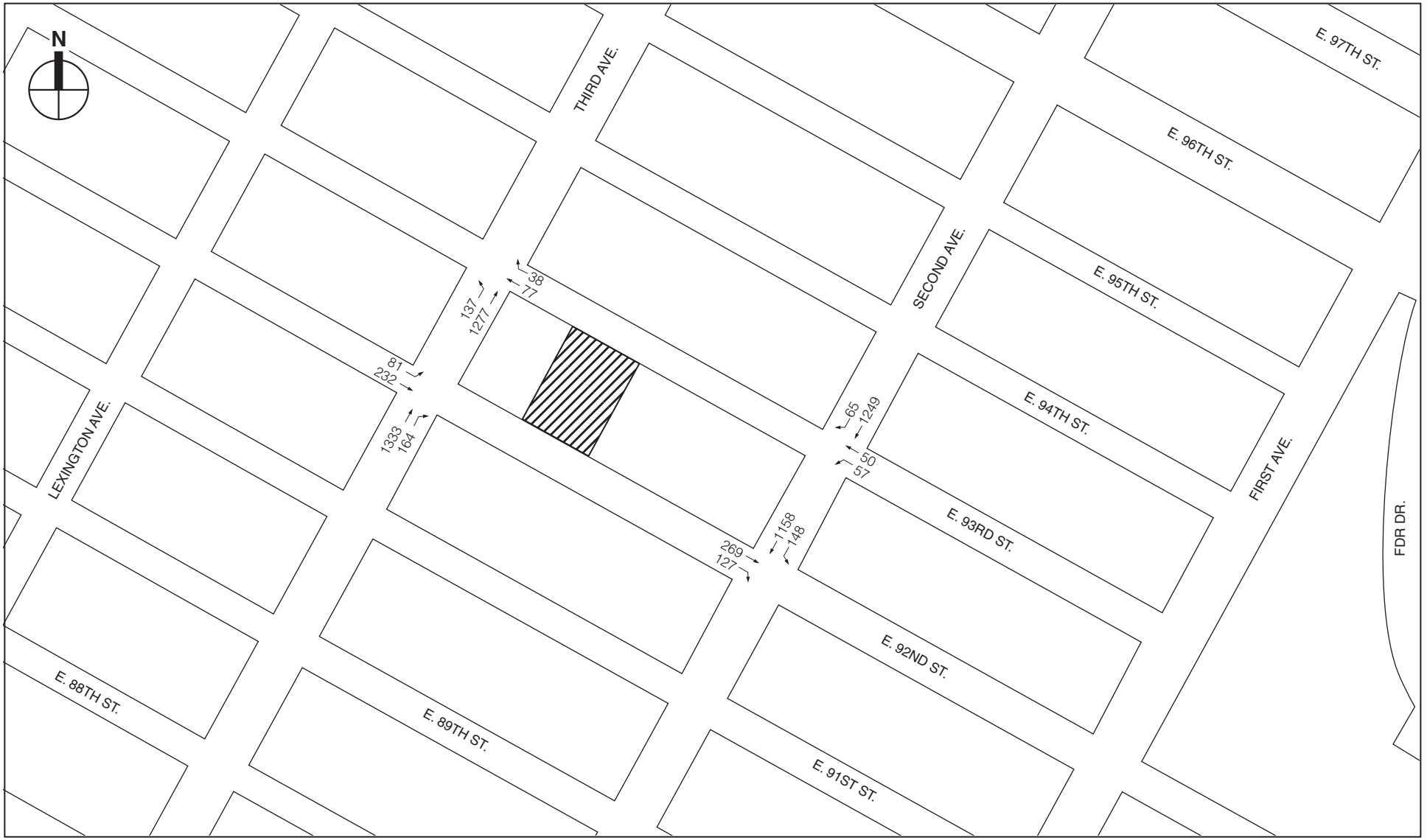
Project Site

2012 Existing Traffic Volumes
Weekday Midday/Afternoon Peak Hour

203-205 East 92nd Street

Figure F-7

5.3.13



NOT TO SCALE

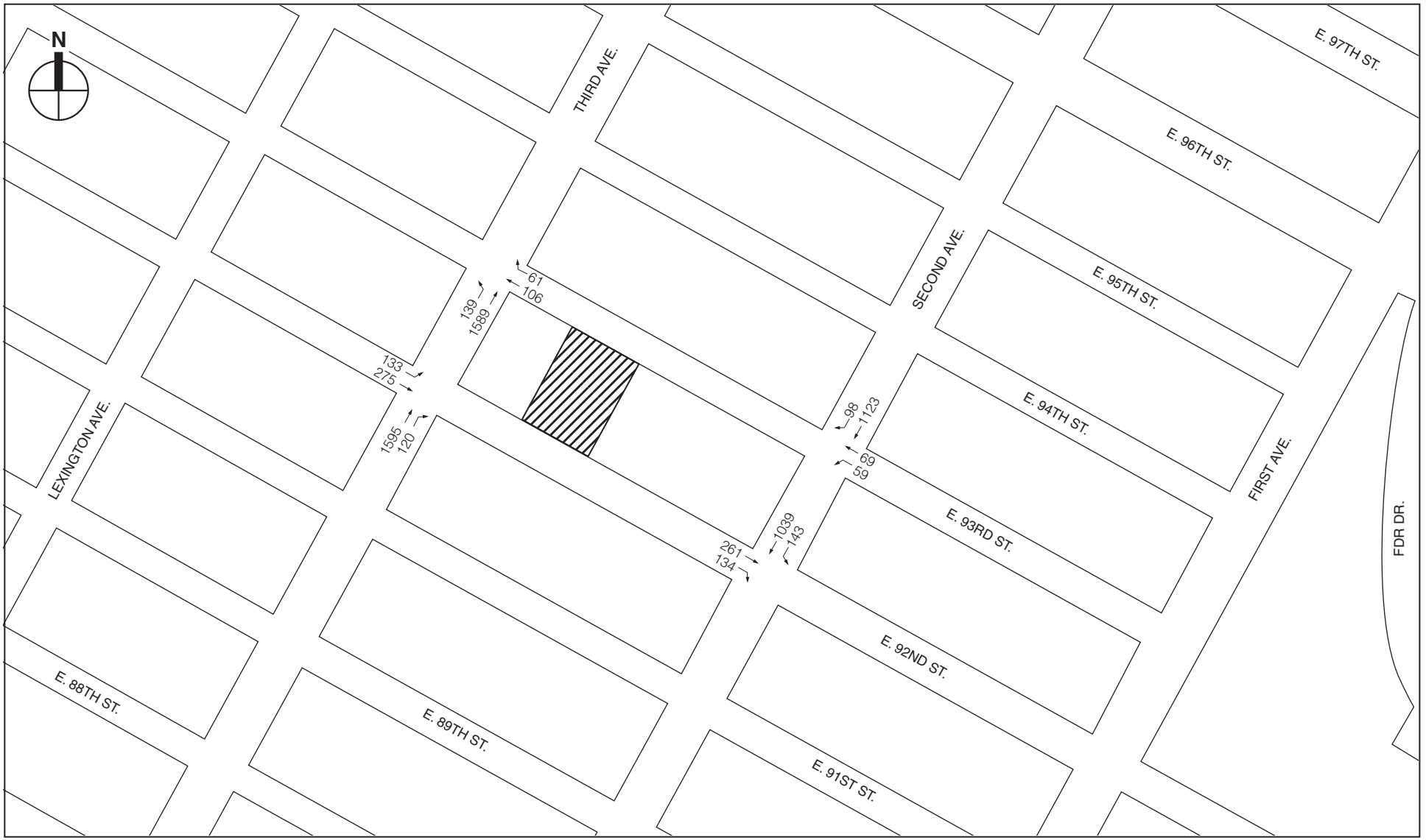
Project Site

2015 No Build Traffic Volumes
Weekday AM Peak Hour

Figure F-8

203-205 East 92nd Street

5.4.13



NOT TO SCALE

Project Site

2015 No Build Traffic Volumes
Weekday Midday/Afternoon Peak Hour

203-205 East 92nd Street

Figure F-9

or within acceptable levels—at mid-LOS D (delays of 45 seconds per vehicle [spv] or less for signalized intersections).

Table F-11
2012 Existing and 2015 No Build Conditions Level of Service Analysis

	AM Peak Period								Midday/Afternoon Peak Period							
	Existing				No Build				Existing				No Build			
Intersection	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 92nd Street and Second Avenue																
Eastbound	T	0.65	31.3	C	T	0.67	32.2	C	T	0.58	28.9	C	T	0.60	29.4	C
	R	0.51	29.5	C	R	0.52	29.9	C	R	0.41	25.9	C	R	0.41	25.9	C
Southbound	LT	0.46	13.0	B	LT	0.48	13.2	B	LT	0.56	14.6	B	LT	0.60	15.2	B
	Intersection		17.8	B	Intersection		18.2	B	Intersection		18.2	B	Intersection		18.6	B
East 92nd Street and Third Avenue																
Eastbound	LT	0.63	28.2	C	LT	0.66	29.1	C	LT	0.75	32.7	C	LT	0.76	33.7	C
Northbound	TR	0.49	14.9	B	TR	0.50	15.0	B	TR	0.52	15.3	B	TR	0.53	15.4	B
	Intersection		17.4	B	Intersection		17.7	B	Intersection		18.7	B	Intersection		19.1	B
East 93rd Street and Second Avenue																
Westbound	LT	0.29	23.2	C	LT	0.29	23.2	C	LT	0.30	23.3	C	LT	0.31	23.3	C
Southbound	TR	0.48	13.3	B	TR	0.51	13.5	B	TR	0.58	14.8	B	TR	0.62	15.5	B
	Intersection		14.1	B	Intersection		14.3	B	Intersection		15.7	B	Intersection		16.3	B
150th Avenue and 127th Street																
Westbound	TR	0.27	22.7	C	TR	0.29	22.9	C	TR	0.36	24.1	C	TR	0.38	24.5	C
Northbound	LT	0.42	12.5	B	LT	0.43	12.6	B	LT	0.50	13.4	B	LT	0.52	13.5	B
	Intersection		13.3	B	Intersection		13.5	B	Intersection		14.4	B	Intersection		14.6	B

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service

FUTURE WITH THE PROPOSED ACTION

As discussed above in Section D, "Level 2 Screening Assessment," auto trips were assigned to the proposed project's accessory parking garage on East 92nd Street and to two other public parking facilities located in the vicinity of project site with available capacities. Taxi trips were assigned to project site's block fronts, and delivery trips were assigned to the site via NYCDOT designated truck routes.

Overall, the 2015 completion of the proposed project would result in approximately 158 and 144 incremental vehicle trips during the weekday AM and midday/afternoon peak hours, respectively. The related peak hour traffic assignments are discussed above in Section D, "Level 2 Screening Assessment," and the incremental peak hour trips resulting from the proposed project are shown in **Figures F-1 and F-2**.

TRAFFIC OPERATIONS

The Build condition traffic volumes are shown in **Figures F-10 and F-11 f**or the weekday AM and midday/afternoon peak hours. As shown in the comparison of No Build and Build level of service results in **Table F-12,** the proposed project would not result in significant adverse traffic impacts at the study area intersections during the two analyzed peak hours.

Table F-12
2015 No Build and Build Conditions Level of Service Analysis

Intersection	AM Peak Period								Midday/Afternoon Peak Period							
	No Build				Build				No Build				Build			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
East 92nd Street and Second Avenue																
Eastbound	T	0.67	32.2	C	T	0.71	33.9	C	T	0.60	29.4	C	T	0.61	29.9	C
	R	0.52	29.9	C	R	0.57	31.7	C	R	0.41	25.9	C	R	0.47	27.3	C
Southbound	LT	0.48	13.2	B	LT	0.48	13.2	B	LT	0.60	15.2	B	LT	0.60	15.2	B
	Intersection		18.2	B	Intersection		18.9	B	Intersection		18.6	B	Intersection		19.0	B
East 92nd Street and Third Avenue																
Eastbound	LT	0.66	29.1	C	LT	0.72	31.6	C	LT	0.76	33.7	C	LT	0.81	36.9	D
Northbound	TR	0.50	15.0	B	TR	0.51	15.2	B	TR	0.53	15.4	B	TR	0.54	15.5	B
	Intersection		17.7	B	Intersection		18.4	B	Intersection		19.1	B	Intersection		19.8	B
East 93rd Street and Second Avenue																
Westbound	LT	0.29	23.2	C	LT	0.33	23.8	C	LT	0.31	23.3	C	LT	0.32	23.6	C
Southbound	TR	0.51	13.5	B	TR	0.53	13.8	B	TR	0.62	15.5	B	TR	0.65	16.0	B
	Intersection		14.3	B	Intersection		14.7	B	Intersection		16.3	B	Intersection		16.8	B
150th Avenue and 127th Street																
Westbound	TR	0.29	22.9	C	TR	0.44	25.8	C	TR	0.36	24.1	C	TR	0.50	27.0	C
Northbound	LT	0.43	12.6	B	LT	0.44	12.6	B	LT	0.50	13.4	B	LT	0.52	13.6	B
	Intersection		13.5	B	Intersection		14.2	B	Intersection		14.6	B	Intersection		15.1	B

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service

G. TRANSIT

Mass transit options serving the study area are provided by the NYCT including the Lexington Avenue No. 6 local subway line at the East 96th Street Station, and the six local bus routes—M15, M96, M98, M101, M102, and M103—with stops adjacent to or near the project site (see **Figure F-3**). A detailed analysis of subway transit operations during the critical weekday AM and PM peak periods is presented below. During other time periods, background transit ridership and station utilization, are comparatively lower. Hence, potential transit impacts were evaluated for the weekday AM and PM peak periods.

TRANSIT STUDY AREA

SUBWAY SERVICE

The Lexington Avenue No. 6 subway line operates between Brooklyn Bridge-City Hall in Manhattan and Pelham Bay Park in The Bronx.

2012 EXISTING CONDITIONS—SUBWAY STATION OPERATIONS

As presented in **Table F-3**, "Trip Generation Summary," the proposed project is expected to result in approximately 339 and 188 project-generated subway trips during the AM and PM peak hours, respectively. These trips were assigned to the East 96th Street station and the corresponding station elements. Based on the results of the Level 2 Screening Assessment, the station stairway at Lexington Avenue between East 95th Street and East 96th Street on the east sidewalk (S2) and the adjoining control area (booth # R251) were identified for analysis.

Field surveys conducted in October 2012 during the hours of 7:30 to 9:30 AM and 2:00 to 6:00 PM provided the baseline volumes for the analysis of all of the subway station elements.

As shown in **Tables F-13** and **F-14**, the analyzed stairway and control area currently operates at acceptable levels during the weekday AM and PM peak periods.

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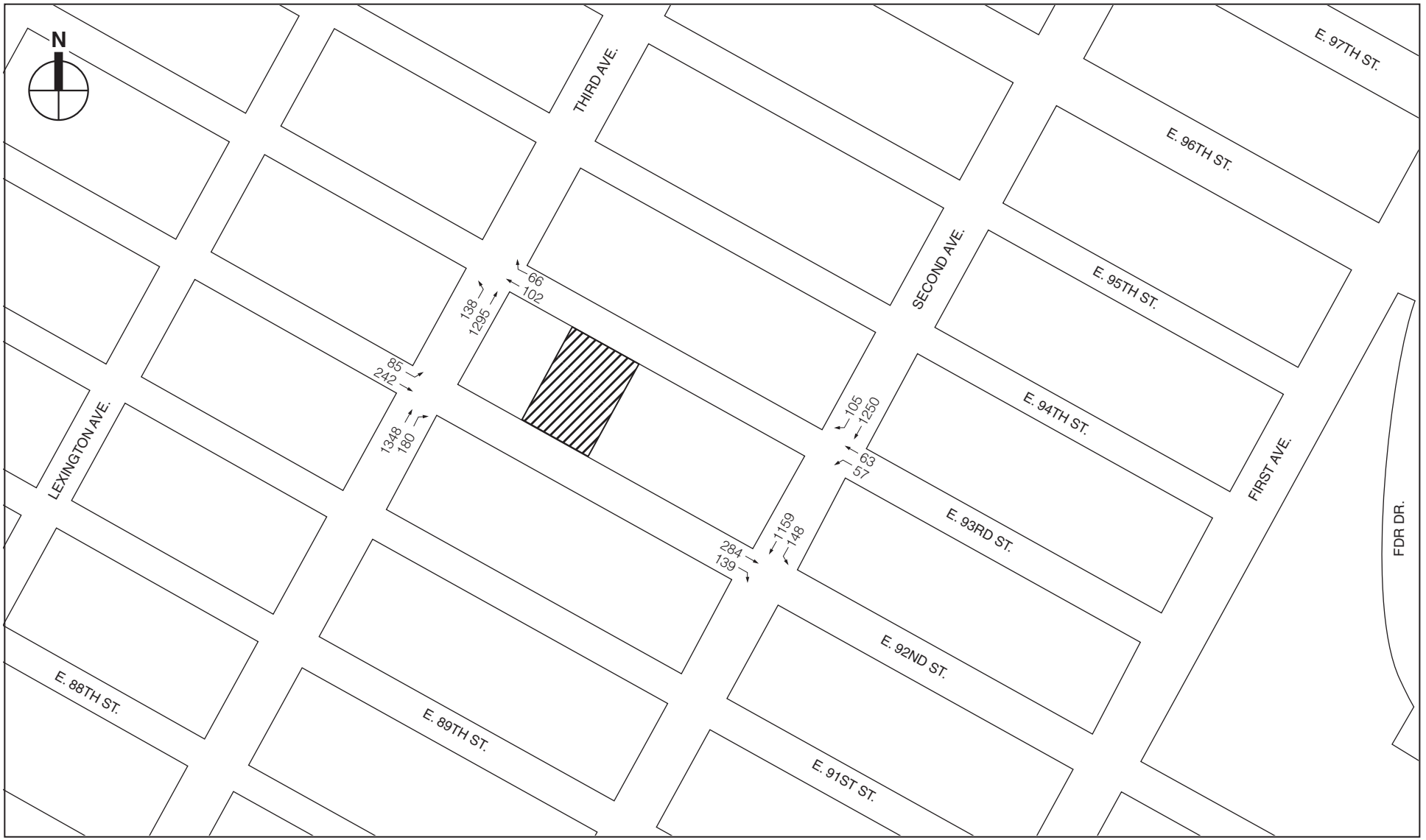

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Project Site

2015 Build Traffic Volumes
Weekday AM Peak Hour

Figure F-10

203-205 East 92nd Street

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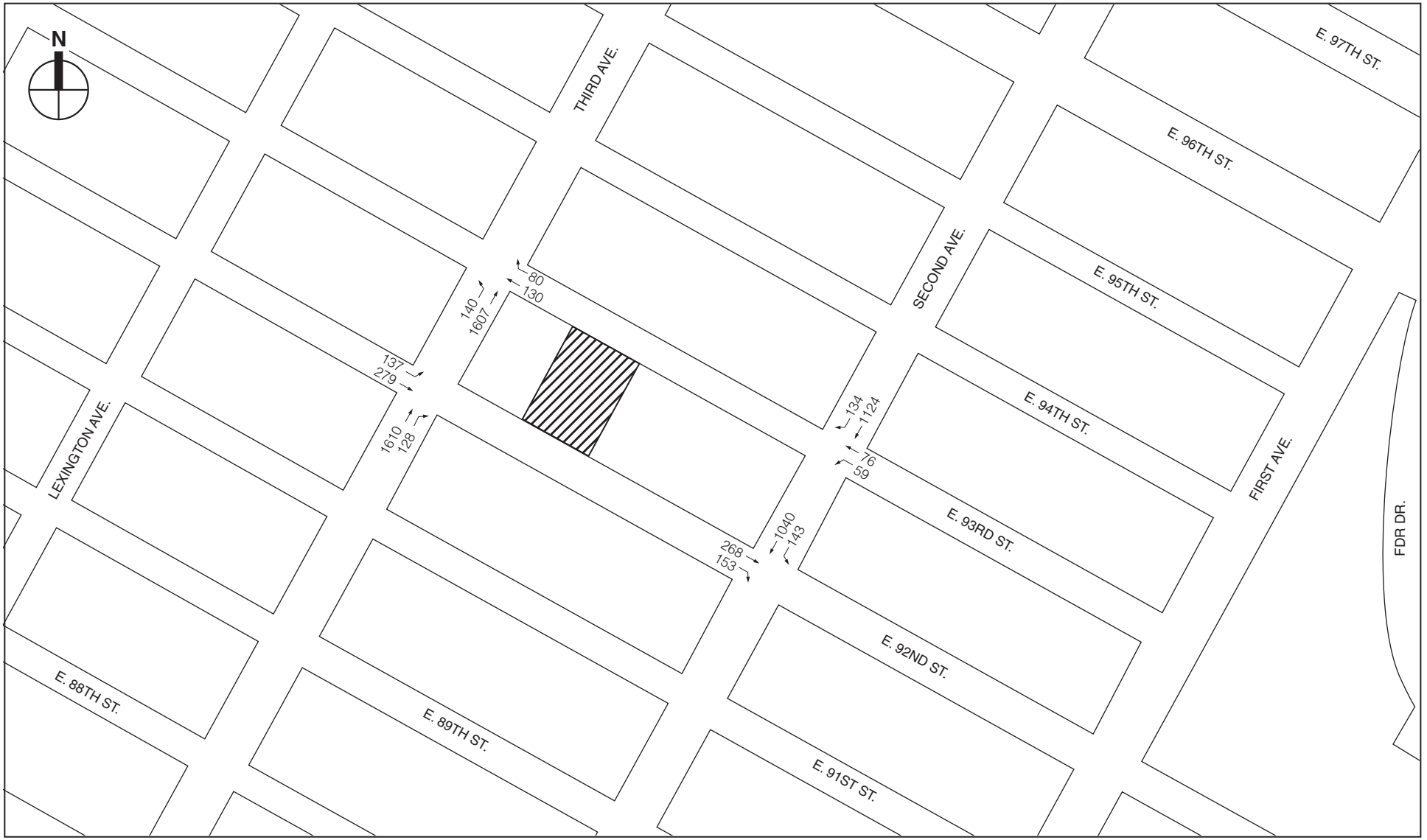

NOT TO SCALE

Project Site

2015 Build Traffic Volumes
Weekday Midday/Afternoon Peak Hour

203-205 East 92nd Street

Figure F-11

Table F-13
2012 Existing Conditions Subway Stairway Analysis

Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
96th Street Station (6 Line)								
Weekday AM Peak 15 Minutes								
Southeast Corner of Lexington Avenue and East 96th Street (S2)	7.4	6.4	200	420	0.90	0.90	0.74	C
Weekday PM Peak 15 Minutes								
Southeast Corner of Lexington Avenue and East 96th Street (S2)	7.4	6.4	254	147	0.90	0.90	0.50	B

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table F-14
2012 Existing Conditions Subway Control Area Analysis

Station Elements	Qty.	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
		Into Control Area	Out from Control Area				
96th Street Station (6 Line)							
Weekday AM Peak 15-Minutes							
Two-Way Turnstiles	6	1,060	265	0.80	0.90	0.56	B
Uptown High Exit Turnstiles (HXT)	2	0	293	0.80	1.00	0.33	A
Downtown High Exit Turnstiles (HXT)	2	0	312	0.80	1.00	0.35	A
Weekday PM Peak 15-Minutes							
Two-Way Turnstiles	6	932	176	0.80	0.90	0.47	B
Uptown High Exit Turnstiles (HXT)	2	0	108	0.80	1.00	0.12	A
Downtown High Exit Turnstiles (HXT)	2	0	322	0.80	1.00	0.36	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = Vin / (Cin * Ff) + Vx/ (Cx * Sf * Ff)
Vin = Peak 15-minute entering passenger volume
Cin = Total 15 minute capacity of all turnstiles for entering passengers
Vx = Peak 15-minute exiting passenger volume
Cx = Total 15 minute capacity of all turnstile for exiting passengers
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

THE FUTURE WITHOUT THE PROPOSED ACTION—SUBWAY STATION OPERATIONS

Estimates of peak hour transit volumes in the 2015 No Build conditions were developed by applying the *CEQR Technical Manual* recommended annual background growth rates. As per *CEQR* guidelines, an annual compounded background growth rate of 0.25 percent was applied to

the transit volumes from 2012 to 2015. In addition, trips associated with the No Build project in the study area were incorporated into the No Action transit volumes.

The No Build peak period volume projections were allocated to the transit analysis elements described above. As shown in **Tables F-15** and **F-16**, the analyzed stairway and control area would continue to operate at acceptable levels in the No Build conditions.

Table F-15
2015 No Build Conditions Subway Stairway Analysis

Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
96th Street Station (6 Line)								
Weekday AM Peak 15 Minutes								
Southeast Corner of Lexington Avenue and East 96th Street (S2)	7.4	6.4	248	436	0.90	0.90	0.82	C
Weekday PM Peak 15 Minutes								
Southeast Corner of Lexington Avenue and East 96th Street (S2)	7.4	6.4	289	165	0.90	0.90	0.56	B

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table F-16
2015 No Build Conditions Subway Control Area Analysis

Station Elements	Qty.	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
		Into Control Area	Out from Control Area				
96th Street Station (6 Line)							
Weekday AM Peak 15-Minutes							
Two-Way Turnstiles	6	1,148	281	0.80	0.90	0.61	B
Uptown High Exit Turnstiles (HXT)	2	0	309	0.80	1.00	0.35	A
Downtown High Exit Turnstiles (HXT)	2	0	331	0.80	1.00	0.37	A
Weekday PM Peak 15-Minutes							
Two-Way Turnstiles	6	991	191	0.80	0.90	0.51	B
Uptown High Exit Turnstiles (HXT)	2	0	117	0.80	1.00	0.13	A
Downtown High Exit Turnstiles (HXT)	2	0	349	0.80	1.00	0.39	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = Vin / (Cin * Ff) + Vx/ (Cx * Sf * Ff)
Vin = Peak 15-minute entering passenger volume
Cin = Total 15 minute capacity of all turnstiles for entering passengers
Vx = Peak 15-minute exiting passenger volume
Cx = Total 15 minute capacity of all turnstile for exiting passengers
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

FUTURE WITH THE PROPOSED ACTION—SUBWAY STATION OPERATIONS

The 339 (213 in and 126 out) AM peak hour and 188 (117 in and 71 out) PM peak hour project-generated subway trips were assigned to the East 96th Street station and its corresponding station elements.

The analyzed station stairways are expected to operate at acceptable levels in the Build conditions. As shown in **Tables F-17** and **F-18**, the analyzed stairway and control area would continue to operate at acceptable levels in the Build conditions. Based on the transit analysis of the East 96th Street station, no potentially significant adverse impacts at the station elements were identified during the peak analysis periods.

Table F-17
2015 Build Conditions Subway Stairway Analysis

Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
			Up	Down				
96th Street Station (6 Line)								
Weekday AM Peak 15 Minutes								
Southeast Corner of Lexington Avenue and East 96th Street (S2)	7.4	6.4	306	470	0.90	0.90	0.94	C
Weekday PM Peak 15 Minutes								
Southeast Corner of Lexington Avenue and East 96th Street (S2)	7.4	6.4	326	187	0.90	0.90	0.64	B

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = [Vin / (150 * We * Sf * Ff)]+ [Vx/ (150 * We * Sf * Ff)]
Vin = Peak 15-minute entering passenger volume
Vx = Peak 15-minute exiting passenger volume
We = Effective width of stairs
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

Table F-18
2015 Build Conditions Subway Control Area Analysis

Station Elements	Qty.	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
		Into Control Area	Out from Control Area				
96th Street Station (6 Line)							
Weekday AM Peak 15-Minutes							
Two-Way Turnstiles	6	1,211	292	0.80	0.90	0.64	B
Uptown High Exit Turnstiles (HXT)	2	0	320	0.80	1.00	0.36	A
Downtown High Exit Turnstiles (HXT)	2	0	344	0.80	1.00	0.39	A
Weekday PM Peak 15-Minutes							
Two-Way Turnstiles	6	1,028	197	0.80	0.90	0.52	B
Uptown High Exit Turnstiles (HXT)	2	0	121	0.80	1.00	0.14	A
Downtown High Exit Turnstiles (HXT)	2	0	360	0.80	1.00	0.41	A

Notes:
Capacities were calculated based on rates presented in the 2012 *CEQR Technical Manual*.
Surging factors are only applied to the exiting pedestrian volume (2012 *CEQR Technical Manual*).
V/C = Vin / (Cin * Ff) + Vx/ (Cx * Sf * Ff)
Vin = Peak 15-minute entering passenger volume
Cin = Total 15 minute capacity of all turnstiles for entering passengers
Vx = Peak 15-minute exiting passenger volume
Cx = Total 15 minute capacity of all turnstile for exiting passengers
Sf = Surging factor (if applicable)
Ff = Friction factor (if applicable)

H. PEDESTRIANS

2012 EXISTING CONDITIONS

Pedestrian data were collected in October 2012 at key locations near the project site during the weekday hours of 7:30 AM to 9:30 AM and 2:00 PM to 6:00 PM.

Peak hours were determined by comparing rolling hourly averages and the highest 15-minute volumes within the selected peak hours (see **Figures F-12** and **F-13**). As shown in **Tables F-19** to **F-21**, all sidewalk, crosswalk, and corner reservoir analysis locations operate at acceptable levels (LOS C or better, with a minimum 24 SFP for crosswalks and corners or a maximum 6 PMF platoon flows for sidewalks) in the existing conditions.

Table F-19
2012 Existing Conditions: Sidewalk Analysis

Intersection No.	Location	Sidewalk	Effective Width (ft)	1-Hour Two-Way Volume	Platoon Flow	
					PMF	LOS
AM Peak Period						
1	Lexington Avenue between East 96th Street and East 95th Street	East	6.0	1557	5.27	C
2	Lexington Avenue between East 95th Street and East 94th Street	East	3.0	417	2.64	B
3	Lexington Avenue between East 94th Street and East 93rd Street	East	4.0	395	1.92	B
4	East 93rd Street between Lexington Avenue and Third Avenue	North	2.0	168	1.75	B
		South	2.0	139	1.45	B
5	Third Avenue between East 93rd Street and East 92nd Street	East	4.0	581	2.77	B
	East 93rd Street between Third Avenue and Second Avenue	South	8.0	209	0.54	B
6	East 93rd Street between Second Avenue and Third Avenue	South	8.0	209	0.54	B
7	East 92nd Street between Third Avenue and Second Avenue	North	8.0	205	0.53	B
8	East 92nd Street between Second Avenue and Third Avenue	North	8.0	205	0.53	B
Midday/Afternoon Peak Period						
1	Lexington Avenue between East 96th Street and East 95th Street	East	6.0	673	2.03	B
2	Lexington Avenue between East 95th Street and East 94th Street	East	3.0	360	2.31	B
3	Lexington Avenue between East 94th Street and East 93rd Street	East	4.0	410	1.95	B
4	East 93rd Street between Lexington Avenue and Third Avenue	North	2.0	120	1.25	B
		South	2.0	131	1.36	B
5	Third Avenue between East 93rd Street and East 92nd Street	East	4.0	746	3.53	C
	East 93rd Street between Third Avenue and Second Avenue	South	8.0	205	0.53	B
6	East 93rd Street between Second Avenue and Third Avenue	South	8.0	205	0.53	B
7	East 92nd Street between Third Avenue and Second Avenue	North	8.0	164	0.43	A
8	East 92nd Street between Second Avenue and Third Avenue	North	8.0	164	0.43	A

Note: PMF = pedestrians per minute per foot

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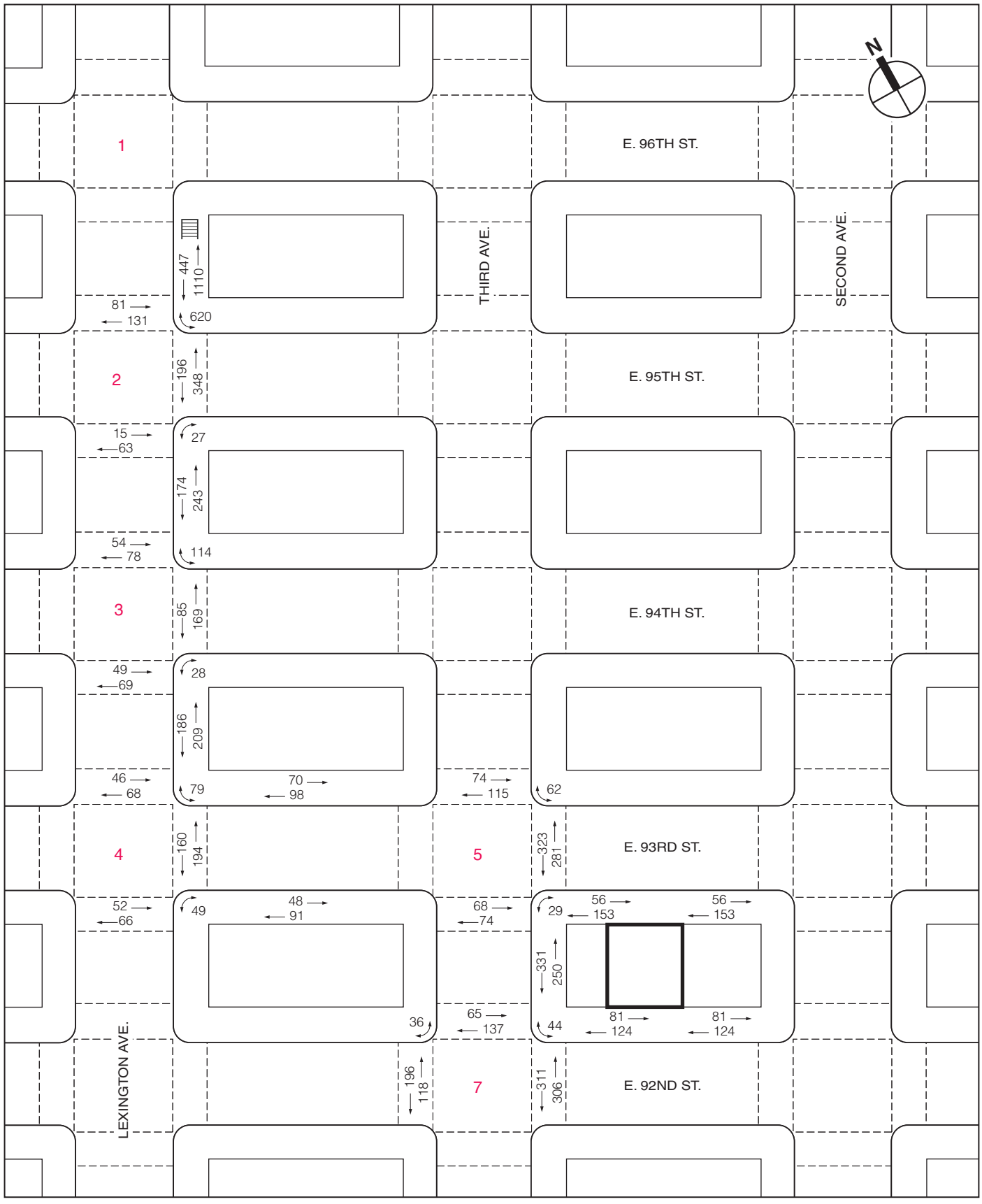

Project Site

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2012 Existing Pedestrian Volumes
Weekday AM Peak Hour

203-205 East 92nd Street

Figure F-12

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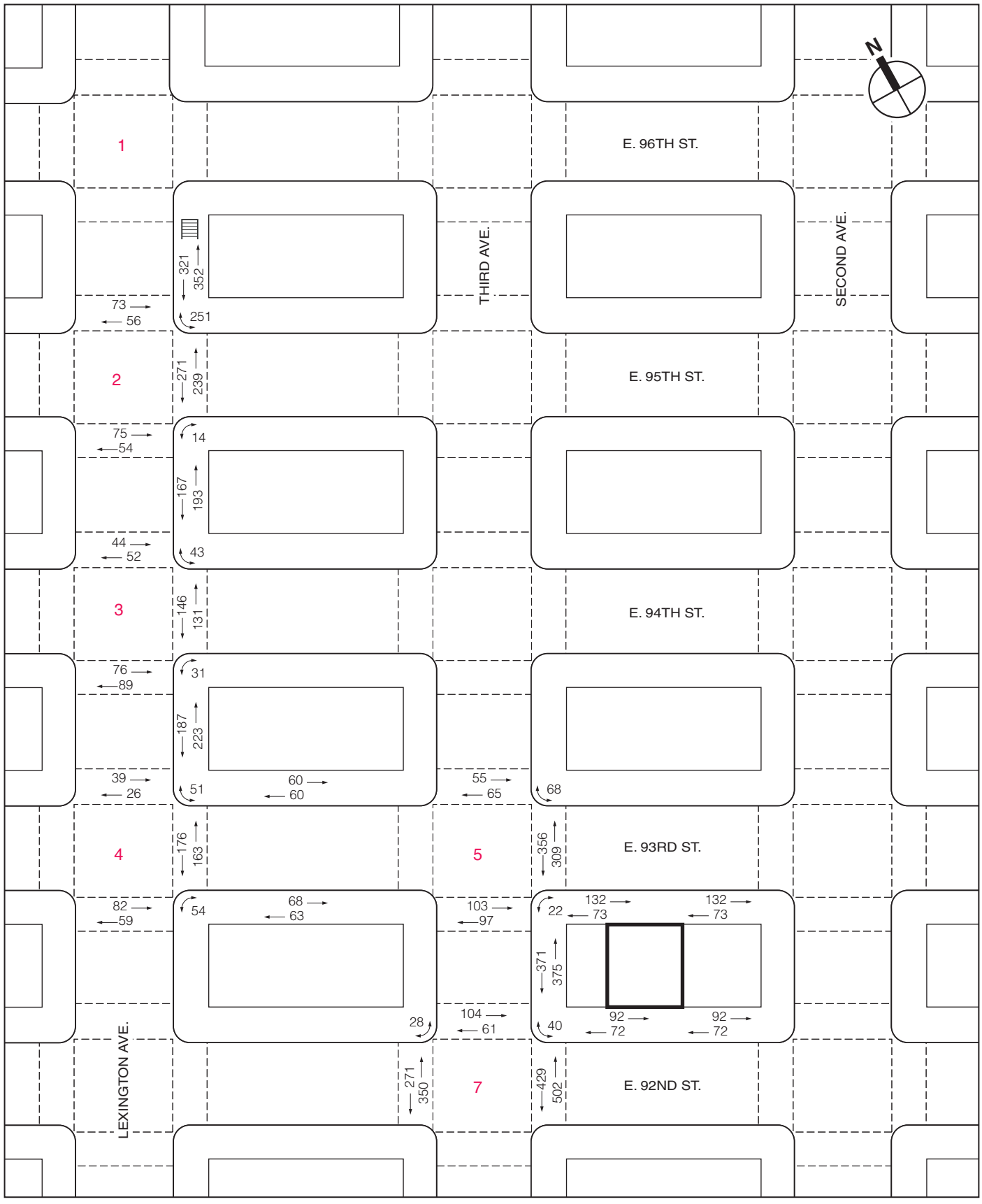

Project Site

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2012 Existing Pedestrian Volumes
Weekday Midday/Afternoon Peak Hour

203-205 East 92nd Street

Figure F-13

Table F-20
2012 Existing Conditions: Corner Analysis

Intersection No.	Location	Corner	AM Peak Period		Midday/Afternoon Peak Period	
			SFP	LOS	SFP	LOS
2	Lexington Avenue and East 95th Street	Northeast	78.5	A	127.5	A
		Southeast	66.0	A	69.6	A
3	Lexington Avenue and East 94th Street	Northeast	90.5	A	110.9	A
		Southeast	235.0	A	198.4	A
4	Lexington Avenue and East 93rd Street	Northeast	110.3	A	139.8	A
		Southeast	152.0	A	150.7	A
5	Third Avenue and East 93rd Street	Northeast	361.3	A	396.4	A
		Southeast	631.8	A	571.2	A
7	Third Avenue and East 92nd Street	Northwest	224.7	A	148.3	A
		Northeast	306.4	A	227.0	A

Note: SFP = square feet per pedestrian

Table F-21
2012 Existing Conditions: Crosswalk Analysis

Intersection No.	Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles					
					AM			Midday/Afternoon		
					2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
2	Lexington Avenue and East 95th Street	North	51.0	14.0	212	109.2	A	129	197.9	A
		East	29.0	12.0	544	69.6	A	510	76.3	A
		South	51.0	11.0	78	258.1	A	129	153.2	A
3	Lexington Avenue and East 94th Street	North	51.0	13.0	132	186.4	A	96	276.3	A
		East	30.0	13.0	254	167.0	A	277	150.6	A
		South	51.0	15.0	118	212.9	A	165	154.8	A
4	Lexington Avenue and East 93rd Street	North	51.0	13.0	114	190.7	A	65	380.1	A
		East	30.0	12.0	354	112.2	A	339	119.2	A
		South	51.0	13.0	118	167.7	A	141	137.8	A
5	Third Avenue and East 93rd Street	North	70.0	13.0	189	88.0	A	120	136.8	A
		East	30.0	16.0	604	98.6	A	665	98.0	A
		South	70.0	15.0	142	160.6	A	200	100.4	A
7	Third Avenue and East 92nd Street	North	70.0	14.0	202	110.2	A	165	148.9	A
		East	30.0	13.0	617	63.5	A	931	39.2	C
		West	30.0	14.0	314	167.6	A	621	76.3	A

Note: SFP = square feet per pedestrian

THE FUTURE WITHOUT THE PROPOSED ACTION

No Build pedestrian volumes were estimated by increasing existing pedestrian levels to reflect expected growth in overall travel through and within the study area. As per *CEQR* guidelines, an annual background growth rate of 0.25 percent was assumed for an overall growth rate of 0.75 percent by the year 2015. Likewise traffic, pedestrian volumes expected to be generated by the future No Build projects were also added to arrive at the 2015 No Build pedestrian volumes **(**see **Figures F-14** and **F-15**). As shown in **Tables F-22** to **F-24**, all sidewalk, crosswalk, and corner reservoir analysis locations would continue to operate at acceptable levels (LOS C or better, with a minimum 24 SFP for crosswalks and corners or a maximum 6 PMF platoon flows for sidewalks) in the no build conditions, except at the following location:

- The east sidewalk of Lexington Avenue between East 96th Street and East 95th Street, which operates at LOS D with 6.06 PMF during the AM peak 15-minute period.

Table F-22
2015 No Build Conditions: Sidewalk Analysis

Intersection No.	Location	Sidewalk	Effective Width (ft)	1-Hour Two-Way Volume	Platoon Flow	
					PMF	LOS
AM Peak Period						
1	Lexington Avenue between East 96th Street and East 95th Street	East	6.0	1792	6.06	D
2	Lexington Avenue between East 95th Street and East 94th Street	East	3.0	429	2.72	B
3	Lexington Avenue between East 94th Street and East 93rd Street	East	4.0	407	1.97	B
4	East 93rd Street between Lexington Avenue and Third Avenue	North	2.0	170	1.77	B
		South	2.0	140	1.46	B
5	Third Avenue between East 93rd Street and East 92nd Street	East	4.0	594	2.83	B
	East 93rd Street between Third Avenue and Second Avenue	South	8.0	210	0.55	B
6	East 93rd Street between Second Avenue and Third Avenue	South	8.0	210	0.55	B
7	East 92nd Street between Third Avenue and Second Avenue	North	8.0	207	0.53	B
8	East 92nd Street between Second Avenue and Third Avenue	North	8.0	207	0.53	B
Midday/Afternoon Peak Period						
1	Lexington Avenue between East 96th Street and East 95th Street	East	6.0	917	2.77	B
2	Lexington Avenue between East 95th Street and East 94th Street	East	3.0	394	2.53	B
3	Lexington Avenue between East 94th Street and East 93rd Street	East	4.0	445	2.12	B
4	East 93rd Street between Lexington Avenue and Third Avenue	North	2.0	120	1.25	B
		South	2.0	132	1.38	B
5	Third Avenue between East 93rd Street and East 92nd Street	East	4.0	784	3.71	C
	East 93rd Street between Third Avenue and Second Avenue	South	8.0	207	0.54	B
6	East 93rd Street between Second Avenue and Third Avenue	South	8.0	207	0.54	B
7	East 92nd Street between Third Avenue and Second Avenue	North	8.0	166	0.43	A
8	East 92nd Street between Second Avenue and Third Avenue	North	8.0	166	0.43	A

Note: PMF = pedestrians per minute per foot

Table F-23
2015 No Build Conditions: Corner Analysis

Intersection No.	Location	Corner	AM Peak Period		Midday/Afternoon Peak Period	
			SFP	LOS	SFP	LOS
2	Lexington Avenue and East 95th Street	Northeast	76.6	A	117.2	A
		Southeast	64.6	A	65.5	A
3	Lexington Avenue and East 94th Street	Northeast	88.0	A	101.8	A
		Southeast	227.9	A	183.9	A
4	Lexington Avenue and East 93rd Street	Northeast	107.6	A	129.6	A
		Southeast	148.7	A	141.2	A
5	Third Avenue and East 93rd Street	Northeast	355.0	A	379.6	A
		Southeast	619.6	A	547.7	A
7	Third Avenue and East 92nd Street	Northwest	219.9	A	141.1	A
		Northeast	301.4	A	218.9	A

Note: SFP = square feet per pedestrian

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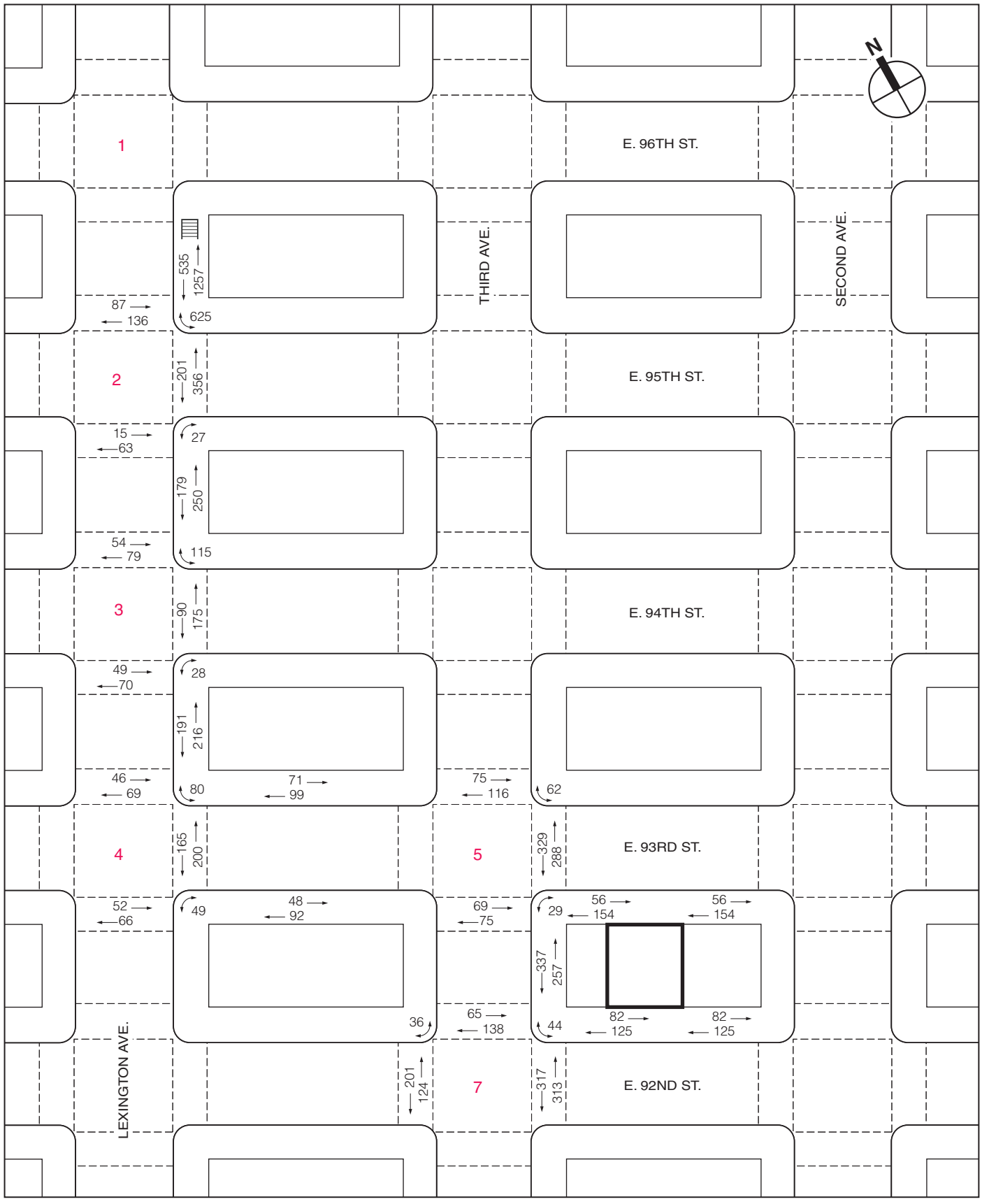

Project Site

NOT TO SCALE

2015 No Build Pedestrian Volumes
Weekday AM Peak Hour

203-205 East 92nd Street

Figure F-14

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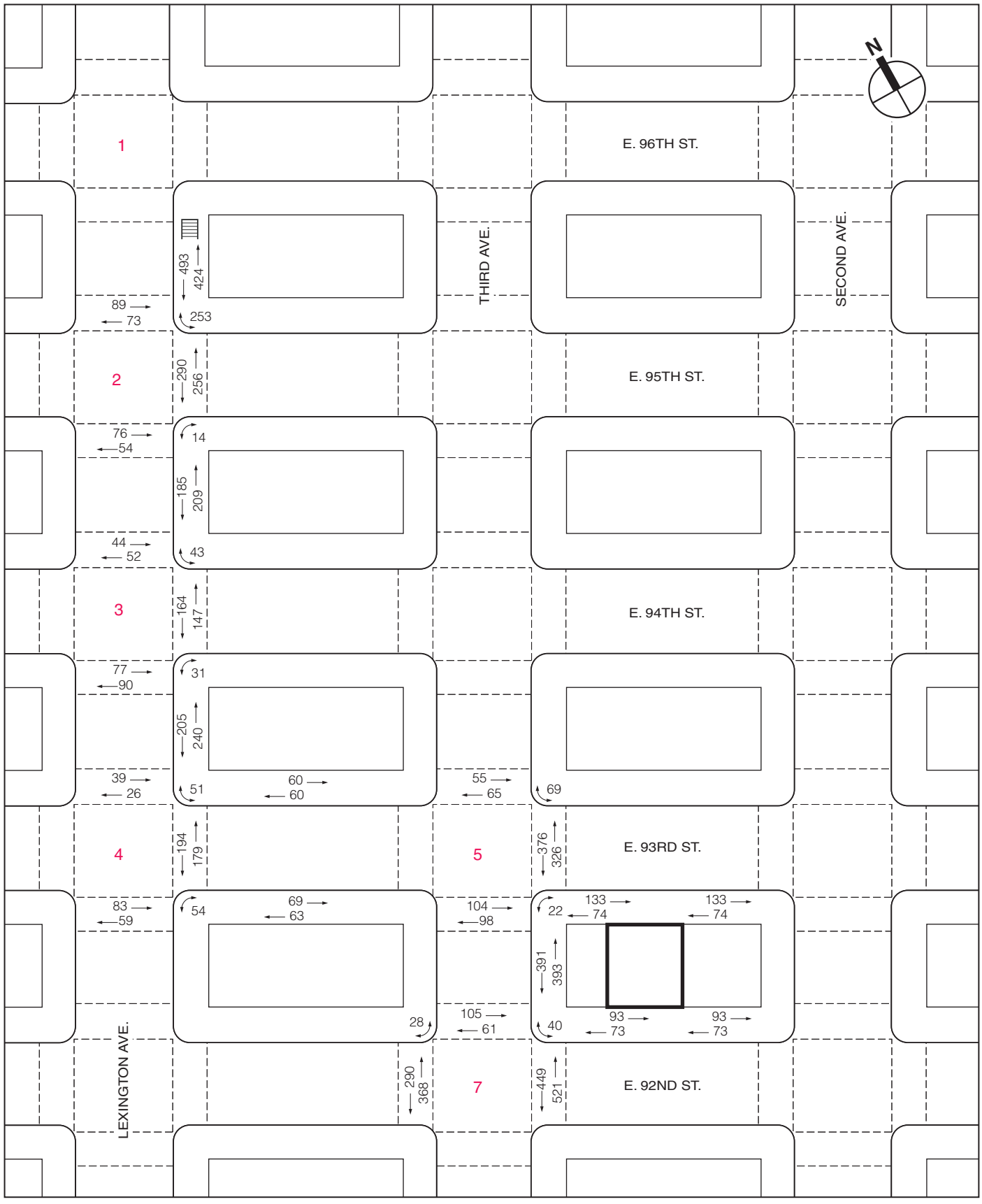


Project Site

NOT TO SCALE

2015 No Build Pedestrian Volumes
Weekday Midday/Afternoon Peak Hour

203-205 East 92nd Street

Figure F-15

Table F-24
2015 No Build Conditions: Crosswalk Analysis

Intersection No.	Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles					
					AM			Midday/Afternoon		
					2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
2	Lexington Avenue and East 95th Street	North	51.0	14.0	223	103.7	A	162	157.1	A
		East	29.0	12.0	557	67.9	A	546	71.0	A
		South	51.0	11.0	78	257.8	A	130	151.8	A
3	Lexington Avenue and East 94th Street	North	51.0	13.0	133	184.9	A	96	276.3	A
		East	30.0	13.0	265	159.7	A	311	133.5	A
		South	51.0	15.0	119	210.9	A	167	152.8	A
4	Lexington Avenue and East 93rd Street	North	51.0	13.0	115	189.0	A	65	380.1	A
		East	30.0	12.0	365	108.7	A	373	107.9	A
		South	51.0	13.0	118	167.5	A	142	136.6	A
5	Third Avenue and East 93rd Street	North	70.0	13.0	191	87.1	A	120	136.7	A
		East	30.0	16.0	617	96.4	A	702	92.6	A
		South	70.0	15.0	144	158.3	A	202	99.4	A
7	Third Avenue and East 92nd Street	North	70.0	14.0	203	109.5	A	166	147.8	A
		East	30.0	13.0	630	62.0	A	970	37.4	C
		West	30.0	14.0	325	161.8	A	658	71.7	A

Note: SFP = square feet per pedestrian

FUTURE WITH THE PROPOSED ACTION

The project-generated pedestrian volumes were assigned to the pedestrian network considering current land uses in the area, nearby parking locations, available transit services, and surrounding pedestrian facilities. Based on the "Level 2 Screening Assessment," peak 15-minute incremental pedestrian volumes were developed by dividing the hourly incremental volumes by four and accounting for peaking characteristics within the peak hours. These pedestrian volumes were added to the projected 2015 No Build volumes to generate the 2015 Build pedestrian volumes for analysis (see **Figures F-16** to **F-17**).

As shown in **Tables F-25** to **F-27**, all sidewalk, crosswalk, and corner reservoir analysis locations would continue to operate at acceptable levels (LOS C or better, with a minimum 24 SFP for crosswalks and corners or a maximum 6 PMF platoon flows for sidewalks), except the east sidewalk of Lexington Avenue between East 96th Street and East 95th Street, which would continue to operate at LOS D with 7.23 PMF during the AM peak 15-minute period. The degradation at this location when compared to the no build condition, does not exceed the CEQR *Technical Manual* sliding scale impact threshold (see **Table F-8**) and therefore would not result in any significant adverse pedestrian impacts as part of the proposed project.

Table F-25
2015 Build Conditions: Sidewalk Analysis

Intersection No.	Location	Sidewalk	Effective Width (ft)	1-Hour Two-Way Volume	Platoon Flow	
					PMF	LOS
AM Peak Period						
1	Lexington Avenue between East 96th Street and East 95th Street	East	6.0	2136	7.23	D
2	Lexington Avenue between East 95th Street and East 94th Street	East	3.0	773	4.90	C
3	Lexington Avenue between East 94th Street and East 93rd Street	East	4.0	751	3.64	C
4	East 93rd Street between Lexington Avenue and Third Avenue	North	2.0	269	2.80	B
		South	2.0	255	2.66	B
5	Third Avenue between East 93rd Street and East 92nd Street	East	4.0	665	3.17	C
	East 93rd Street between Third Avenue and Second Avenue	South	8.0	625	1.63	B
6	East 93rd Street between Second Avenue and Third Avenue	South	8.0	255	0.66	B
7	East 92nd Street between Third Avenue and Second Avenue	North	8.0	438	1.12	B
8	East 92nd Street between Second Avenue and Third Avenue	North	8.0	249	0.64	B
Midday/Afternoon Peak Period						
1	Lexington Avenue between East 96th Street and East 95th Street	East	6.0	1203	3.63	C
2	Lexington Avenue between East 95th Street and East 94th Street	East	3.0	680	4.37	C
3	Lexington Avenue between East 94th Street and East 93rd Street	East	4.0	731	3.48	C
4	East 93rd Street between Lexington Avenue and Third Avenue	North	2.0	219	2.28	B
		South	2.0	247	2.57	B
5	Third Avenue between East 93rd Street and East 92nd Street	East	4.0	867	4.11	C
	East 93rd Street between Third Avenue and Second Avenue	South	8.0	622	1.62	B
6	East 93rd Street between Second Avenue and Third Avenue	South	8.0	252	0.66	B
7	East 92nd Street between Third Avenue and Second Avenue	North	8.0	364	0.95	B
8	East 92nd Street between Second Avenue and Third Avenue	North	8.0	229	0.60	B

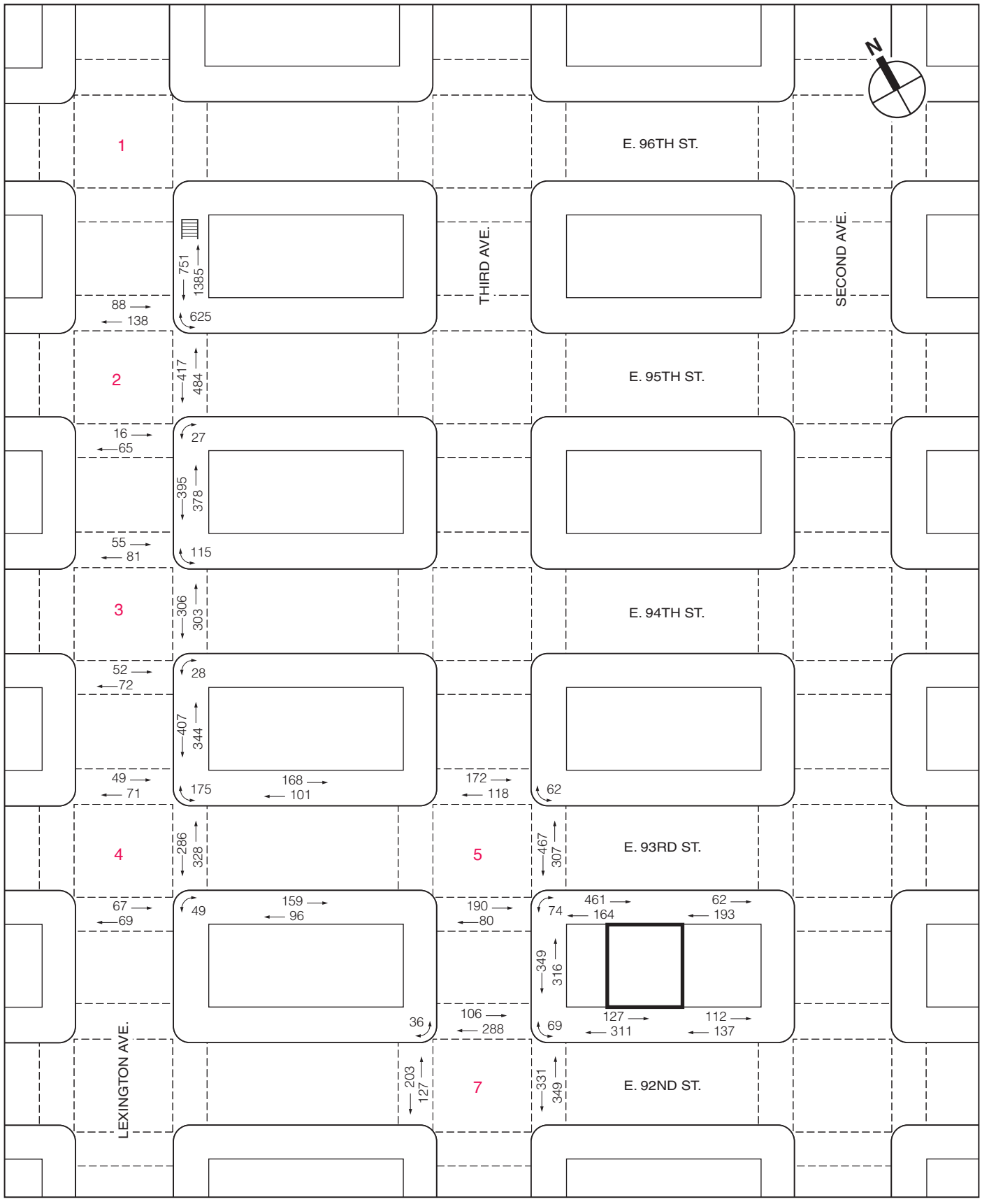
Note: PMF = pedestrians per minute per foot

Table F-26
2015 Build Conditions: Corner Analysis

Intersection No.	Location	Corner	AM Peak Period		Midday/Afternoon Peak Period	
			SFP	LOS	SFP	LOS
2	Lexington Avenue and East 95th Street	Northeast	59.6	B	88.9	A
		Southeast	40.5	B	42.8	B
3	Lexington Avenue and East 94th Street	Northeast	49.1	B	60.7	A
		Southeast	121.0	A	112.9	A
4	Lexington Avenue and East 93rd Street	Northeast	64.5	A	79.7	A
		Southeast	97.0	A	100.5	A
5	Third Avenue and East 93rd Street	Northeast	272.1	A	285.5	A
		Southeast	439.4	A	390.3	A
7	Third Avenue and East 92nd Street	Northwest	158.0	A	119.1	A
		Northeast	224.6	A	182.5	A

Note: SFP = square feet per pedestrian

5.3.13



Project Site

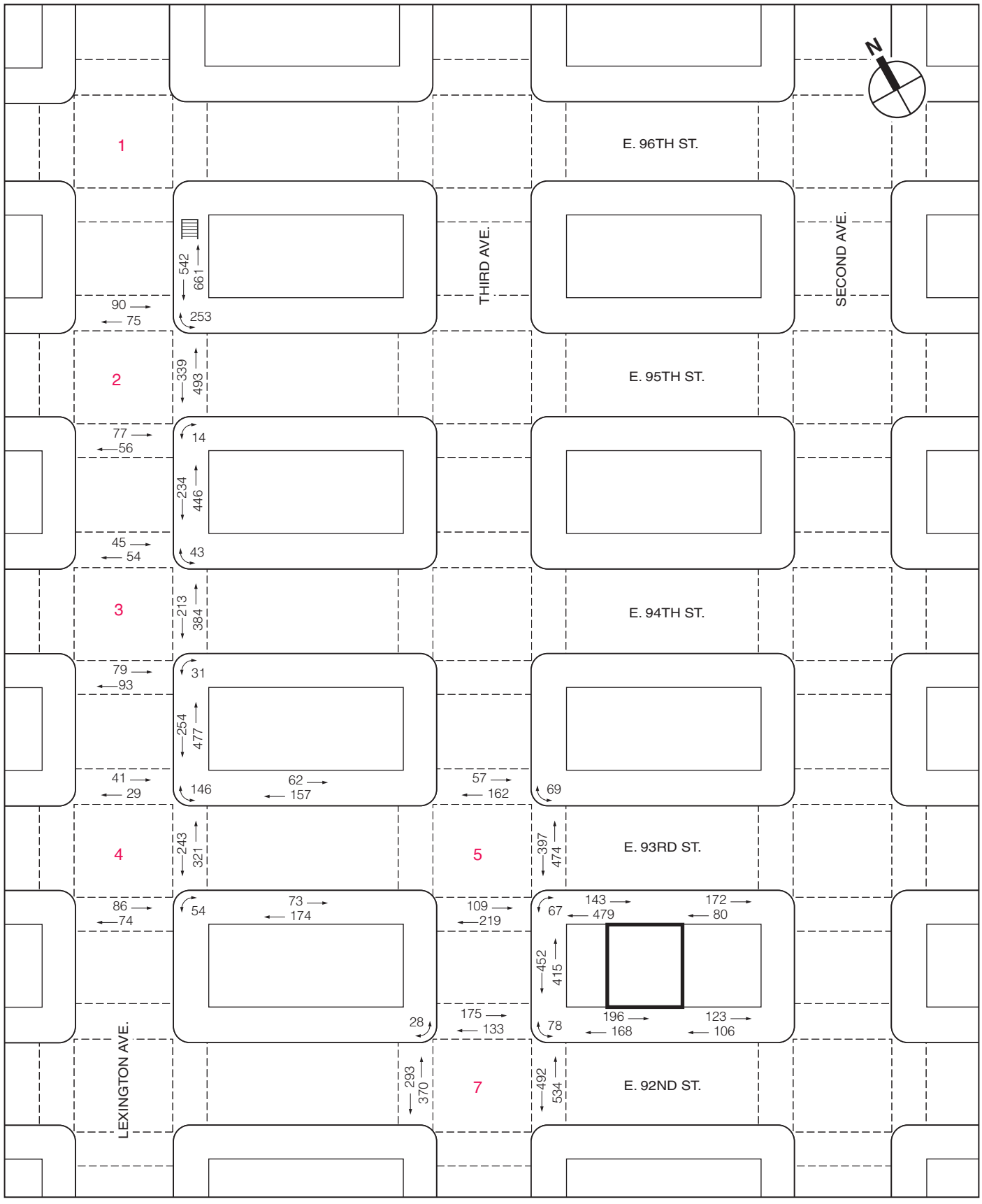
NOT TO SCALE

2015 Build Pedestrian Volumes
Weekday AM Peak Hour

203-205 East 92nd Street

Figure F-16

5.3.13



Project Site

NOT TO SCALE

2015 Build Pedestrian Volumes
Weekday Midday/Afternoon Peak Hour

203-205 East 92nd Street

Figure F-17

Table F-27
2015 Build Conditions: Crosswalk Analysis

Intersection No.	Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	Conditions with conflicting vehicles					
					AM			Midday/Afternoon		
					2-way Volume	SFP	LOS	2-way Volume	SFP	LOS
2	Lexington Avenue and East 95th Street	North	51.0	14.0	226	102.3	A	165	154.2	A
		East	29.0	12.0	901	40.5	B	832	44.9	B
		South	51.0	11.0	81	248.1	A	133	148.4	A
3	Lexington Avenue and East 94th Street	North	51.0	13.0	136	180.8	A	99	267.8	A
		East	30.0	13.0	609	66.8	A	597	66.7	A
		South	51.0	15.0	124	202.3	A	172	148.3	A
4	Lexington Avenue and East 93rd Street	North	51.0	13.0	120	181.0	A	70	352.8	A
		East	30.0	12.0	614	62.7	A	564	69.7	A
		South	51.0	13.0	136	141.9	A	160	118.4	A
5	Third Avenue and East 93rd Street	North	70.0	13.0	290	55.3	B	219	72.5	A
		East	30.0	16.0	774	75.5	A	871	73.5	A
		South	70.0	15.0	270	83.4	A	328	60.4	A
7	Third Avenue and East 92nd Street	North	70.0	14.0	394	54.9	B	308	78.4	A
		East	30.0	13.0	680	56.3	B	1026	34.9	C
		West	30.0	14.0	330	159.3	A	663	71.1	A

Note: SFP = square feet per pedestrian

I. VEHICULAR AND PEDESTRIAN SAFETY

Accident data for the intersections in the vicinity of the project site were obtained from the New York State Department of Transportation (NYSDOT) for the period between January 2009 and December 2011. The data obtained quantify the total number of reportable accidents (involving fatality, injury, or more than $1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related accidents at each location. According to the *CEQR Technical Manual*, a high pedestrian accident location is one where there were five or more pedestrian/bicyclist-related accidents or 48 or more reportable and non-reportable accidents in any consecutive 12 months of the most recent three-year period for which data are available.

During this period, a total of 136 reportable and non-reportable accidents, zero fatalities, 81 injuries, and 43 pedestrian/bicyclist-related accidents occurred at study area intersections. A rolling total of accident data identified none of the study area intersections as high pedestrian accident locations in the 2009 to 2011 period. **Table F-28** depicts total accident characteristics by intersection during the study period, as well as a breakdown of pedestrian and bicycle accidents by year and location.

Table F-28
Accident Summary

Intersection		Study Period					Accidents by Year					
North-South Roadway	East-West Roadway	All Accidents by Year			Total Fatalities	Total Injuries	Pedestrian			Bicycle		
		2009	2010	2011			2009	2010	2011	2009	2010	2011
Lexington Avenue	94th Street	2	2	1	0	4	0	1	0	0	0	0
Lexington Avenue	93rd Street	1	3	2	0	6	1	3	0	0	0	0
Lexington Avenue	92nd Street	3	3	6	0	3	0	0	0	0	0	3
Lexington Avenue	91st Street	4	5	0	0	7	2	2	0	0	0	0
3rd Avenue	94th Street	1	0	2	0	3	0	0	0	0	0	0
3rd Avenue	93rd Street	4	2	5	0	5	1	1	0	0	0	2
3rd Avenue	92nd Street	1	6	5	0	11	1	2	2	0	0	2
3rd Avenue	91st Street	1	1	2	0	1	0	1	0	0	0	0
2nd Avenue	94th Street	0	5	1	0	3	0	0	0	0	0	0
2nd Avenue	93rd Street	5	2	7	0	8	0	0	1	1	0	0
2nd Avenue	92nd Street	3	1	3	0	6	2	0	0	1	0	0
2nd Avenue	91st Street	1	2	3	0	3	0	1	0	0	0	0
1st Avenue	94th Street	1	5	3	0	5	0	0	0	0	1	0
1st Avenue	93rd Street	8	3	4	0	7	3	1	1	0	0	1
1st Avenue	92nd Street	5	3	4	0	6	1	2	0	0	0	2
1st Avenue	91st Street	2	1	2	0	3	1	0	0	0	0	0

Source: NYSDOT January 1, 2009 and December 31, 2011 accident data.

J. PARKING

As described in Chapter 1, "Project Description," the proposed project would provide 80 accessory parking spaces. Given the residential character of the proposed project, the overnight period would represent the peak demand for parking. The overnight parking demand generated by the proposed project was estimated by applying the specific vehicle ownership rates—from the 2000 Census Data for the census tracts bordering the project—for the proposed project's residential component. Based on the census data, the vehicle ownership rate for renter occupied units is approximately 20 percent. Applying these vehicle ownership rates to the proposed project's residential component would result in a peak parking demand for approximately 58 spaces. The total parking demand from the proposed project (including the residential and health club components) is summarized in **Table F-29**. Based on this, the peak parking demand of 58 spaces would occur during the overnight hours. Therefore, all of the proposed project's parking demand would be accommodated by the 80 on-site accessory parking spaces.

As discussed above, the faculty/staff autos were assigned to the two off-site public parking facilities located in the vicinity of the project site at 230 East 92nd Street and 213 East 94th Street. Based on responses given by parking attendants and visual inspections, these parking facilities operate with available capacities and would accommodate the parking demand generated by the faculty/staff. Therefore, the proposed project would not result in any potential significant adverse impact to the supply and demand of parking in the study area.

Table F-29
Parking Accumulation

Program Size	Residential 290 Renter Occupied Units		Health Club 33,000 gsf		Total Accumulation
Vehicles Parked Overnight	58		0		
Time	In	Out	In	Out	
12:00 AM - 1:00 AM	2	2	0	0	58
1:00 AM - 2:00 AM	1	1	0	0	58
2:00 AM - 3:00 AM	0	0	0	0	58
3:00 AM - 4:00 AM	0	0	0	0	58
4:00 AM - 5:00 AM	0	0	0	0	58
5:00 AM - 6:00 AM	0	0	0	0	58
6:00 AM - 7:00 AM	1	1	0	0	58
7:00 AM - 8:00 AM	1	7	1	0	53
8:00 AM - 9:00 AM	3	17	0	1	38
9:00 AM - 10:00 AM	2	12	1	0	29
10:00 AM - 11:00 AM	3	9	1	0	24
11:00 AM - 12:00 PM	4	5	1	0	24
12:00 PM - 1:00 PM	6	5	1	1	25
1:00 PM - 2:00 PM	5	5	1	1	25
2:00 PM - 3:00 PM	4	4	1	1	25
3:00 PM - 4:00 PM	5	5	1	1	25
4:00 PM - 5:00 PM	9	6	1	1	28
5:00 PM - 6:00 PM	16	7	1	0	38
6:00 PM - 7:00 PM	14	6	2	1	47
7:00 PM - 8:00 PM	12	5	1	2	53
8:00 PM - 9:00 PM	5	2	1	3	54
9:00 PM - 10:00 PM	4	2	1	2	55
10:00 PM - 11:00 PM	3	1	0	1	56
11:00 PM - 12:00 AM	3	1	0	0	58

Note: The local retail and open-space components would not generate demand for vehicular parking.

✶

A. INTRODUCTION

This attachment examines the potential for air quality impacts from the proposed project. The project site is located on the block bounded by Third Avenue to the west, East 93rd Street to the north, Second Avenue to the east, and East 92nd Street to the south (Block 1538, Lot 10).

Air quality impacts can be either direct or indirect. Direct impacts result from emissions generated by stationary sources at a development site, such as emissions from on-site fuel heating and hot water systems. Indirect impacts are impacts that are caused by emissions from nearby existing sources or by emissions from on-road vehicle trips generated by a project or changes to future traffic conditions due to the project.

The maximum hourly incremental traffic from the proposed project would not exceed the 2012 *City Environmental Quality Review (CEQR) Technical Manual* carbon monoxide (CO) screening threshold of 170 peak hour trips at nearby intersections in the study area; however, it would exceed the fine particulate matter ($PM_{2.5}$) emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, a quantified assessment of $PM_{2.5}$ and PM_{10} emissions from project-generated traffic is warranted. The proposed project would include a below-grade accessory parking garage; therefore, an analysis was conducted to evaluate potential future pollutant concentrations in the vicinity of the ventilation outlets with the proposed parking garage.

The proposed project would include a natural gas-fired heat and hot water installation, and potentially a microturbine for cogeneration. Therefore, a stationary source analysis was conducted to evaluate potential future pollutant concentrations from the proposed combustion equipment. The project site is also in the vicinity of existing industrial and combustion sources of emissions. Therefore, potential air quality impacts from these sources on the proposed project were evaluated.

As described in detail below, this analysis concludes that the proposed project would not result in any significant adverse air quality impacts.

B. POLLUTANTS FOR ANALYSIS

Ambient air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. Ambient concentrations of CO are predominantly influenced by mobile source emissions. Particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (nitric oxide, NO, and nitrogen dioxide, NO_2, collectively referred to as NO_x) are emitted from both mobile and stationary sources. Fine PM is also formed when emissions of NO_x, sulfur oxides (SO_x), ammonia, organic compounds, and other gases react or condense in the atmosphere. Emissions of sulfur dioxide (SO_2) are associated mainly with stationary sources, and some other sources

utilizing high-sulfur non-road diesel such as large international marine engines. On-road diesel vehicles currently contribute very little to SO_2 emissions since the sulfur content of on-road diesel fuel, which is federally regulated, is extremely low. Ozone is formed in the atmosphere by complex photochemical processes that include NO_x and VOCs. Ambient concentrations of CO, PM, NO_2, SO_2, and lead are regulated by the U.S. Environmental Protection Agency (EPA) under the Clean Air Act, and are referred to as 'criteria pollutants'; emissions of VOCs, NO_x, and other precursors to criteria pollutants are also regulated by EPA.

CARBON MONOXIDE

CO, a colorless and odorless gas, is produced in the urban environment primarily by the incomplete combustion of gasoline and other fossil fuels. In urban areas, approximately 80 to 90 percent of CO emissions are from motor vehicles. Since CO is a reactive gas which does not persist in the atmosphere, CO concentrations can diminish greatly over relatively short distances—elevated concentrations are usually limited to locations near crowded intersections, heavily traveled and congested roadways, parking lots, and garages. Consequently, CO concentrations must be predicted on a local, or microscale, basis.

The proposed project is not expected to significantly alter traffic conditions and the dispersion of roadway emissions. Since the proposed project would result in fewer new peak hour vehicle trips than the *CEQR Technical Manual* screening threshold of 170 trips at nearby intersections in the study area, a quantified assessment of on-street CO emissions is not warranted.

NITROGEN OXIDES, VOCS, AND OZONE

NO_x are of principal concern because of their role, together with VOCs, as precursors in the formation of ozone. Ozone is formed through a series of reactions that take place in the atmosphere in the presence of sunlight. Because the reactions are slow, and occur as the pollutants are advected downwind, elevated ozone levels are often found many miles from sources of the precursor pollutants. The effects of NO_x and VOC emissions from all sources are therefore generally examined on a regional basis. The contribution of any action or project to regional emissions of these pollutants would include any added stationary or mobile source emissions. The proposed project would not result in changes in the overall quantity of on-road emissions.

In addition to being a precursor to the formation of ozone, NO_2 (one component of NO_x) is also a regulated pollutant. Since NO_2 is mostly formed from the transformation of NO in the atmosphere, it has mostly been of concern further downwind from large stationary point sources, and not a local concern from mobile sources. (NO_x emissions from fuel combustion consist of approximately 90 percent NO and 10 percent NO_2 at the source.) However, with the promulgation of the 2010 1-hour average standard for NO_2, local sources such as vehicular emissions may become of greater concern for this pollutant. Potential impacts on local NO_2 concentrations from the fuel combustion of the stationary sources associated with the proposed project were evaluated. In addition, a screening analysis of potential local impacts on NO_2 concentrations from on-site fuel combustion was prepared.

LEAD

Airborne lead emissions are currently associated principally with industrial sources. Effective January 1, 1996, the Clean Air Act (CAA) banned the sale of the small amount of leaded fuel that was still available in some parts of the country for use in on-road vehicles, concluding a 25-

year effort to phase out lead in gasoline. Even at locations in the New York City area where traffic volumes are very high, atmospheric lead concentrations are far below the 3-month average national standard of 0.15 micrograms per cubic meter ($\mu g/m^3$).

No significant sources of lead are associated with the proposed project and, therefore, analysis was not warranted.

RESPIRABLE PARTICULATE MATTER—PM_{10} AND $PM_{2.5}$

PM is a broad class of air pollutants that includes discrete particles of a wide range of sizes and chemical compositions, as either liquid droplets (aerosols) or solids suspended in the atmosphere. The constituents of PM are both numerous and varied, and they are emitted from a wide variety of sources (both natural and anthropogenic). Natural sources include the condensed and reacted forms of naturally occurring VOC; salt particles resulting from the evaporation of sea spray; wind-borne pollen, fungi, molds, algae, yeasts, rusts, bacteria, and material from live and decaying plant and animal life; particles eroded from beaches, soil, and rock; and particles emitted from volcanic and geothermal eruptions and from forest fires. Naturally occurring PM is generally greater than 2.5 micrometers in diameter. Major anthropogenic sources include the combustion of fossil fuels (e.g., vehicular exhaust, power generation, boilers, engines, and home heating), chemical and manufacturing processes, all types of construction, agricultural activities, as well as wood-burning stoves and fireplaces. PM also acts as a substrate for the adsorption (accumulation of gases, liquids, or solutes on the surface of a solid or liquid) of other pollutants, often toxic and some likely carcinogenic compounds.

As described below, PM is regulated in two size categories: particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), and particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}, which includes $PM_{2.5}$). $PM_{2.5}$ has the ability to reach the lower regions of the respiratory tract, delivering with it other compounds that adsorb to the surfaces of the particles, and is also extremely persistent in the atmosphere. $PM_{2.5}$ is mainly derived from combustion material that has volatilized and then condensed to form primary PM (often soon after the release from a source exhaust) or from precursor gases reacting in the atmosphere to form secondary PM.

Diesel-powered vehicles, especially heavy duty trucks and buses, are a significant source of respirable PM, most of which is $PM_{2.5}$; PM concentrations may, consequently, be locally elevated near roadways with high volumes of heavy diesel powered vehicles. An analysis was conducted to assess the potential worst-case PM impacts due to the increased traffic associated with the proposed project.

Stationary combustion by the proposed project's heat and hot water and cogeneration systems would result in emissions of PM; therefore, theses stationary sources were evaluated for potential impacts. Potential 24-hour and annual incremental impacts of $PM_{2.5}$ were evaluated using an incremental microscale analysis.

SULFUR DIOXIDE

SO_2 emissions are primarily associated with the combustion of sulfur-containing fuels (oil and coal). SO_2 is also of concern as a precursor to $PM_{2.5}$ and is regulated as a $PM_{2.5}$ precursor under the New Source Review permitting program for large sources. Due to the federal restrictions on the sulfur content in diesel fuel for on-road and non-road vehicles, no significant quantities are emitted from vehicular sources. Vehicular sources of SO_2 are not significant and therefore, analysis of SO_2 from mobile sources was not warranted. As part of the proposed project, natural

gas would be burned in the proposed heat and hot water and cogeneration systems. The sulfur content of natural gas is negligible; therefore, no analysis was performed to estimate the future levels of SO_2 with the proposed project.

C. AIR QUALITY REGULATIONS, STANDARDS, AND BENCHMARKS

NATIONAL AND STATE AIR QUALITY STANDARDS

As required by the CAA, primary and secondary National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: CO, NO_2, ozone, respirable PM (both $PM_{2.5}$ and PM_{10}), SO_2, and lead. The primary standards represent levels that are requisite to protect the public health, allowing an adequate margin of safety. The secondary standards are intended to protect the nation's welfare, and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the environment. The primary standards are generally either the same as the secondary standards or more restrictive. The NAAQS are presented in **Table G-1**. The NAAQS for CO, annual NO_2, and 3-hour SO_2 have also been adopted as the ambient air quality standards for New York State, but are defined on a running 12-month basis rather than for calendar years only. New York State also has standards for total suspended particulate matter (TSP), settleable particles, non-methane hydrocarbons (NMHC), 24-hour and annual SO_2, and ozone which correspond to federal standards that have since been revoked or replaced, and for the noncriteria pollutants beryllium, fluoride, and hydrogen sulfide (H_2S).

EPA has revised the NAAQS for PM, effective December 18, 2006. The revision included lowering the level of the 24-hour $PM_{2.5}$ standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$ and retaining the level of the annual standard at 15 $\mu g/m^3$. The PM_{10} 24-hour average standard was retained and the annual average PM_{10} standard was revoked. EPA recently announced a final decision to lower the primary annual-average standard from 15 $\mu g/m^3$ to 12 $\mu g/m^3$, effective March 2013.

EPA has also revised the 8-hour ozone standard, lowering it from 0.08 to 0.075 parts per million (ppm), effective as of May 2008. On January 6, 2010, EPA proposed a change in the 2008 ozone NAAQS, lowering the primary NAAQS from the current 0.075 ppm level to within the range of 0.060 to 0.070 ppm. EPA is also proposing a secondary ozone standard, measured as a cumulative concentration within the range of 7 to 15 ppm-hours aimed mainly at protecting sensitive vegetation. A final decision on this standard has been postponed but is expected to occur in 2013.

EPA lowered the primary and secondary standards for lead to 0.15 $\mu g/m^3$, effective January 12, 2009. EPA revised the averaging time to a rolling 3-month average and the form of the standard to not-to-exceed across a 3-year span. The current lead NAAQS will remain in place for one year following the effective date of attainment designations for any new or revised NAAQS before being revoked, except in current non-attainment areas, where the existing NAAQS will not be revoked until the affected area submits, and EPA approves, an attainment demonstration for the revised lead NAAQS.

EPA established a 1-hour average NO_2 standard of 0.100 ppm, effective April 12, 2010, in addition to the annual standard. The statistical form is the 3-year average of the 98th percentile of daily maximum 1-hour average concentration in a year.

Table G-1
National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary		Secondary	
	ppm	µg/m^3	Ppm	µg/m^3
Carbon Monoxide (CO)				
8-Hour Average [1]	9	10,000	None	
1-Hour Average [1]	35	40,000		
Lead				
Rolling 3-Month Average [2]	NA	0.15	NA	0.15
Nitrogen Dioxide (NO_2)				
1-Hour Average [3]	0.100	188	None	
Annual Average	0.053	100	0.053	100
Ozone (O_3)				
8-Hour Average [4,5]	0.075	150	0.075	150
Respirable Particulate Matter (PM_{10})				
24-Hour Average [1]	NA	150	NA	150
Fine Respirable Particulate Matter ($PM_{2.5}$)				
Annual Mean [6]	NA	12	NA	15
24-Hour Average [7]	NA	35	NA	35
Sulfur Dioxide (SO_2) [8]				
1-Hour Average [9]	0.075	197	NA	NA
Maximum 3-Hour Average [1]	NA	NA	0.50	1,300

Notes:

ppm – parts per million (unit of measure for gases only)

µg/m^3 – micrograms per cubic meter (unit of measure for gases and particles, including lead)

NA – not applicable

All annual periods refer to calendar year.

Standards are defined in ppm. Approximately equivalent concentrations in µg/m^3 are presented.

(1) Not to be exceeded more than once a year.

(2) EPA has lowered the NAAQS down from 1.5 µg/m^3, effective January 12, 2009.

(3) 3-year average of the annual 98th percentile daily maximum 1-hr average concentration. Effective April 12, 2010.

(4) 3-year average of the annual fourth highest daily maximum 8-hr average concentration.

(5) EPA has proposed lowering the primary standard further to within the range 0.060-0.070 ppm, and adding a secondary standard measured as a cumulative concentration within the range of 7 to 15 ppm-hours aimed mainly at protecting sensitive vegetation. A final decision on this standard has been postponed but is expected to occur in 2013.

(6) 3-year average of annual mean. EPA has lowered the primary standard from 15 µg/m^3, effective March 2013.

(7) Not to be exceeded by the annual 98th percentile when averaged over 3 years.

(8) EPA revoked the 24-hour and annual primary standards, replacing them with a 1-hour average standard. Effective August 23, 2010.

(9) 3-year average of the annual 99th percentile daily maximum 1-hr average concentration.

Source: 40 CFR Part 50: National Primary and Secondary Ambient Air Quality Standards.

EPA also established a 1-hour average SO_2 standard of 0.075 ppm, replacing the 24-hour and annual primary standards, effective August 23, 2010. The statistical form is the 3-year average of the 99th percentile of the annual distribution of daily maximum 1-hour concentrations (the 4th highest daily maximum corresponds approximately to 99th percentile for a year.)

NAAQS ATTAINMENT STATUS AND STATE IMPLEMENTATION PLANS

The CAA, as amended in 1990, defines non-attainment areas (NAA) as geographic regions that have been designated as not meeting one or more of the NAAQS. When an area is designated as non-attainment by EPA, the state is required to develop and implement a State Implementation Plan (SIP), which delineates how a state plans to achieve air quality that meets the NAAQS under the deadlines established by the Clean Air Act, followed by a plan for maintaining attainment status once the area is in attainment.

In 2002, EPA re-designated New York City as in attainment for CO. Under the resulting maintenance plan, New York City is committed to implementing site-specific control measures throughout the city to reduce CO levels, should unanticipated localized growth result in elevated CO levels during the maintenance period.

Manhattan has been designated as a moderate NAA for PM_{10}. On January 30, 2013, New York State requested that EPA approve its withdrawal of the 1995 SIP and redesignation request for the 1987 PM_{10} NAAQS, and that EPA make a clean data finding instead, based on data monitored from 2009-2011 indicating PM_{10} concentrations well below the 1987 NAAQS. Although not yet a redesignation to attainment status, if approved, this determination would remove further requirements for related SIP submissions.

On December 17, 2004, EPA took final action designating the five New York City counties and Nassau, Suffolk, Rockland, Westchester, and Orange Counties as a $PM_{2.5}$ non-attainment area under the CAA due to exceedance of the annual average standard. Based on recent monitoring data (2006-2009), annual average concentrations of $PM_{2.5}$ in New York City no longer exceed the annual standard. EPA has determined that the area has attained the 1997 annual $PM_{2.5}$ NAAQS, effective December 15, 2010. As stated above, EPA has recently lowered the annual average primary standard to 12 $\mu g/m^3$. EPA will make initial attainment designations by December 2014. Based on analysis of 2009-2011 monitoring data, it is likely that the region will be in attainment for the new standard.

As described above, EPA has revised the 24-hour average $PM_{2.5}$ standard. In November 2009, EPA finalized the designation of the New York City Metropolitan Area as non-attainment with the 2006 24-hour $PM_{2.5}$ NAAQS. The non-attainment area includes the same 10-county area originally designated as non-attainment with the 1997 annual $PM_{2.5}$ NAAQS. Based on recent monitoring data (2007-2011), EPA determined that the area has attained the standard. Although not yet a redesignation to attainment status, this determination removes further requirements for related SIP submissions.

Nassau, Rockland, Suffolk, Westchester, Lower Orange County Metropolitan Area (LOCMA), and the five New York City counties (the New York–New Jersey–Long Island, New York portion) had been designated as a severe non-attainment area for ozone (1-hour average standard, 0.12 ppm). In November 1998, New York State submitted its *Phase II Alternative Attainment Demonstration for Ozone*, which was finalized and approved by EPA effective March 6, 2002, addressing attainment of the 1-hour ozone NAAQS by 2007. The 1-hour standard was revoked in 2004 when it was replaced by the 8-hour ozone standard, but certain

further requirements remained ('anti-backsliding'). On December 7, 2009, EPA determined that the Poughkeepsie non-attainment area (Dutchess, Orange, Ulster, and Putnam counties) has attained the 1-hour standard. On June 18, 2012, EPA determined that the New York–New Jersey–Long Island NAA has also attained the standard. Although not yet a redesignation to attainment status, this determination removes further requirements under the 1-hour standard.

Effective June 15, 2004, EPA designated these same counties as moderate non-attainment for the 1997 8-hour average ozone standard (LOCMA was moved to the Poughkeepsie moderate non-attainment area for 8-hour ozone). On February 8, 2008, the New York State Department of Environmental Conservation (NYSDEC) submitted final revisions to the SIP to EPA to address the 1997 8-hour ozone standard. Based on recent monitoring data (2007-2011), EPA determined that the Poughkeepsie and the NY-NJ-CT areas have attained the 1997 8-hour ozone NAAQS (0.08 ppm). Although not yet a redesignation to attainment status, this determination removes further requirements under the 1997 8-hour standard.

In March 2008 EPA strengthened the 8–hour ozone standards. EPA designated the counties of Suffolk, Nassau, Bronx, Kings, New York, Queens, Richmond, Rockland, and Westchester (NY portion of the New York–Northern New Jersey–Long Island, NY-NJ-CT NAA) as a marginal non-attainment area for the 2008 ozone NAAQS, effective July 20, 2012. SIPs will be due in 2015.

New York City is currently in attainment of the annual-average NO_2 standard. EPA has designated the entire state of New York as "unclassifiable/attainment" of the new 1-hour NO_2 standard effective February 29, 2012. Since additional monitoring is required for the 1-hour standard, areas will be reclassified once three years of monitoring data are available (2016 or 2017).

EPA has established a 1-hour SO_2 standard, replacing the former 24-hour and annual standards, effective August 23, 2010. Based on the available monitoring data, all New York State counties currently meet the 1-hour standard. Additional monitoring will be required. EPA plans to make final attainment designations in June 2013. SIPs for nonattainment areas will be due in 2015.

DETERMINING THE SIGNIFICANCE OF AIR QUALITY IMPACTS

The State Environmental Quality Review Act (SEQRA) regulations and the *CEQR Technical Manual* state that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large or important) should be assessed in connection with its setting (e.g., urban or rural), probability of occurrence, duration, irreversibility, geographic scope, magnitude, and the number of people affected.[1] In terms of the magnitude of air quality impacts, any action predicted to increase the concentration of a criteria air pollutant to a level that would exceed the concentrations defined by the NAAQS (see **Table G-1**) would be deemed to have a potential significant adverse impact.

In addition, in order to maintain concentrations lower than the NAAQS in attainment areas, or to ensure that concentrations will not be significantly increased in non-attainment areas, threshold levels have been defined for certain pollutants. Any action predicted to increase the concentrations of these pollutants above the thresholds would be deemed to have a potential significant adverse impact, even in cases where violations of the NAAQS are not predicted.

[1] *CEQR Technical Manual*, Chapter 1, section 222, June 2012

DE MINIMIS CRITERIA REGARDING CO IMPACTS

New York City has developed *de minimis* criteria to assess the significance of the increase in CO concentrations that would result from the impact of proposed projects or actions on mobile sources, as set forth in the *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant environmental impact. Significant increases of CO concentrations in New York City are defined as: (1) an increase of 0.5 ppm or more in the maximum 8-hour average CO concentration at a location where the predicted No Action 8-hour concentration is equal to or between 8 and 9 ppm; or (2) 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 8.0 ppm.

$PM_{2.5}$ INTERIM GUIDANCE CRITERIA

NYSDEC has published a policy to provide interim direction for evaluating $PM_{2.5}$ impacts.[2] This policy applies only to facilities applying for permits or major permit modifications under SEQRA that emit 15 tons of PM_{10} or more annually. The policy states that such a project will be deemed to have a potentially significant adverse impact if the project's maximum impacts are predicted to increase $PM_{2.5}$ concentrations by more than 0.3 $\mu g/m^3$ averaged annually or more than 5 $\mu g/m^3$ on a 24-hour basis. Projects that exceed either the annual or 24-hour threshold will be required to prepare an Environmental Impact Statement (EIS) to assess the severity of the impacts, to evaluate alternatives, and to employ reasonable and necessary mitigation measures to minimize the $PM_{2.5}$ impacts of the source to the maximum extent practicable.

In addition, New York City uses interim guidance criteria for evaluating the potential $PM_{2.5}$ impacts for projects subject to CEQR. The interim guidance criteria currently employed to determine the potential significant adverse $PM_{2.5}$ impacts under CEQR are as follows:

- 24-hour average $PM_{2.5}$ concentration increments which are predicted to be greater than 5 $\mu g/m^3$ at a discrete receptor location would be considered a significant adverse impact on air quality under operational conditions (i.e., a permanent condition predicted to exist for many years regardless of the frequency of occurrence);
- 24-hour average $PM_{2.5}$ concentration increments which are predicted to be greater than 2 $\mu g/m^3$ but no greater than 5 $\mu g/m^3$ would be considered a significant adverse impact on air quality based on the magnitude, frequency, duration, location, and size of the area of the predicted concentrations;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete receptor location (elevated or ground level).

Actions under CEQR predicted to increase $PM_{2.5}$ concentrations by more than the above interim guidance criteria will be considered to have a potential significant adverse impact.

[2] CP33/Assessing and Mitigating Impacts of Fine Particulate Emissions, NYSDEC 12/29/2003.

The proposed project's annual emissions of PM_{10} are estimated to be well below the 15-ton-per-year threshold under NYSDEC's $PM_{2.5}$ policy guidance. The above interim guidance criteria have been used to evaluate the significance of predicted impacts of the proposed project on $PM_{2.5}$ concentrations.

D. METHODOLOGY FOR PREDICTING POLLUTANT CONCENTRATIONS

MOBILE SOURCES

The prediction of vehicle-generated emissions and their dispersion in an urban environment incorporates meteorological phenomena, traffic conditions, and physical configuration. Air pollutant dispersion models mathematically simulate how traffic, meteorology, and physical configuration combine to affect pollutant concentrations. The mathematical expressions and formulations contained in the various models attempt to describe an extremely complex physical phenomenon as closely as possible. However, because all models contain simplifications and approximations of actual conditions and interactions, and since it is necessary to predict the reasonable worst-case condition, most dispersion analyses predict conservatively high concentrations of pollutants, particularly under adverse meteorological conditions.

The mobile source analyses for the proposed project employ a model approved by EPA that has been widely used for evaluating air quality impacts of projects in New York City, other parts of New York State, and throughout the country. The modeling approach includes a series of conservative assumptions relating to meteorology, traffic, and background concentration levels resulting in a conservatively high estimate of expected pollutant concentrations that could ensue from the proposed project. The assumptions used in the PM analysis were based on the latest $PM_{2.5}$ draft interim guidance developed by the New York City Department of Environmental Protection (DEP).

VEHICLE EMISSIONS

Engine Emissions

Vehicular PM engine emission factors are computed using the EPA mobile source emissions model, MOBILE6.2[3]. This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway types, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs incorporate the most current guidance available from NYSDEC and DEP.

Vehicle classification data were based on field studies. Appropriate credits were used to accurately reflect the inspection and maintenance program. The inspection and maintenance programs require inspections of automobiles and light trucks to determine if pollutant emissions from each vehicle exhaust system are lower than emission standards. Vehicles failing the emissions test must undergo maintenance and pass a repeat test to be registered in New York State.

[3] EPA, User's Guide to MOBILE6.1 and MOBILE6.2: Mobile Source Emission Factor Model, EPA420-R-03-010, August 2003.

All taxis were assumed to be in hot stabilized mode (i.e. excluding any start emissions). The general categories of vehicle types for specific roadways were further categorized into subcategories based on their relative breakdown within the fleet.[4]

An ambient temperature of 50° Fahrenheit was used. The use of this temperature is recommended in the *CEQR Technical Manual* for the Borough of Manhattan and is consistent with current DEP guidance.

Road Dust

The contribution of re-entrained road dust to PM_{10} concentrations, as presented in the PM_{10} SIP, is considered to be significant; therefore, the PM_{10} estimates include both exhaust and road dust. In accordance with the $PM_{2.5}$ interim guidance criteria methodology, $PM_{2.5}$ emission rates are determined with fugitive road dust to account for their impacts in local microscale analyses. However, fugitive road dust is not included in the neighborhood scale $PM_{2.5}$ microscale analyses since DEP considers it to have an insignificant contribution on that scale. Road dust emission factors are calculated according to the latest procedure delineated by EPA[5] and the *CEQR Technical Manual*.

Traffic Data

Traffic data for the mobile source analysis were derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the traffic analysis for the proposed project (see Attachment F, "Transportation"). Traffic data for the future without and with the proposed project were employed in the respective air quality modeling scenarios. The weekday morning (8 AM to 9 AM), and afternoon (3:30 PM to 4:30 PM) peak periods were analyzed. These time periods were selected for the mobile source analysis because they produce the maximum anticipated project-generated traffic and therefore have the greatest potential for significant air quality impacts.

For particulate matter, off-peak traffic volumes in the future with and without the proposed project were determined by adjusting the peak period volumes by the 24-hour distributions of actual vehicle counts collected at appropriate locations.

Dispersion Model for Microscale Analyses

To determine motor vehicle-generated $PM_{2.5}$ and PM_{10} concentrations on sidewalks near the project site, the CAL3QHCR model was applied. This is a refined version of the CAL3QHC model Version 2.0. CAL3QHCR predicts emissions and dispersion of $PM_{2.5}$ and PM_{10} from idling and moving vehicles. The queuing algorithm includes site-specific traffic parameters, such as signal timing and delay calculations (from the 2000 *Highway Capacity Manual* traffic forecasting model), saturation flow rate, vehicle arrival type, and signal actuation (i.e., pre-timed or actuated signal) characteristics to predict the number of idling vehicles. The CAL3QHCR model can utilize hourly traffic and meteorological data, and is therefore appropriate for calculating 24-hour and annual average concentrations.

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[4] The MOBILE6.2 emissions model utilizes 28 vehicle categories by size and fuel. Traffic counts and predictions are based on broader size categories, and then broken down according to the fleet-wide distribution of subcategories and fuel types (diesel, gasoline, or alternative).

[5] EPA, Compilations of Air Pollutant Emission Factors AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1, NC, http://www.epa.gov/ttn/chief/ap42, December 2003.

Meteorology

In general, the transport and concentration of pollutants from vehicular sources are influenced by three principal meteorological factors: wind direction, wind speed, and atmospheric stability. Wind direction influences the direction in which pollutants are dispersed, and atmospheric stability accounts for the effects of vertical mixing in the atmosphere. These factors, therefore, influence the concentration at a particular prediction location (receptor).

Using the CAL3QHCR model, hourly concentrations were predicted based on hourly traffic data and five years (2007-2011) of monitored hourly meteorological data. The data consists of surface data collected at LaGuardia Airport and upper air data collected at Brookhaven, New York, which are the nearest National Weather Surface data collection sites. All hours were modeled, and the highest resulting concentration for each averaging period is presented.

Analysis Year

The microscale analyses were performed for 2015, the year by which the proposed project is expected to be completed. The future analysis was performed both without the proposed project (the No Build condition) and with the proposed project (the Build condition).

Analysis Site

One intersection was selected for microscale analysis, at Third Avenue and East 93rd Street. This site was selected because it is the only location in the study area with the levels of project-generated traffic that are predicted to exceed the *CEQR Technical Manual* screening threshold for $PM_{2.5}$ emissions, and, therefore, where the greatest air quality impacts and maximum changes in concentrations would be expected.

Receptor Placement

Multiple receptors (i.e. precise locations at which concentrations are predicted) were modeled at each of the selected sites; receptors were placed along the approach and departure links at spaced intervals. Receptors were placed at sidewalk or roadside locations near intersections with continuous public access. Receptors in the analysis models for predicting annual average neighborhood-scale $PM_{2.5}$ concentrations were placed at a distance of 15 meters, from the nearest moving lane at each analysis location, based on the DEP procedure for neighborhood-scale corridor $PM_{2.5}$ modeling.

PARKING GARAGE

The proposed project would include an approximately 80-space accessory parking facility. Emissions from vehicles using the parking facility could potentially affect ambient levels of pollutants at adjacent receptors. Since the parking facility would be used by automobiles, the primary pollutant of concern is CO. Because cold-starting automobiles leaving the parking facility would emit far higher levels of CO than vehicles entering the facility, the impact from the parking facility would be greatest during the periods with the largest number of departing vehicles. An analysis was performed using the methodology delineated in the *CEQR Technical Manual* to calculate pollutant levels.

Potential impacts from the proposed parking facility on CO concentrations were assessed at multiple receptor locations. The CO concentrations were determined for the time periods, when overall usage would be the greatest, considering the hours when the greatest number of vehicles would enter and exit the project site. Departing vehicles were assumed to be operating in a

"cold-start" mode, emitting higher levels of CO than arriving vehicles. Emissions from vehicles entering, parking, and exiting the parking facility were estimated using the EPA MOBILE6.2 mobile source emission model and an ambient temperature of 50°F, as referenced in the *CEQR Technical Manual*. All arriving and departing vehicles were conservatively assumed to travel at an average speed of 5 miles per hour within the parking facility. In addition, all departing vehicles were assumed to idle for 1 minute before exiting.

"Near" and "far" receptors were placed on the sidewalk adjacent to the parking lot and on the sidewalk directly opposite the parking facility across, respectively. In addition, receptors were placed on building façades at a height of 6 feet above the vent. To determine compliance with the NAAQS, CO concentrations were determined for the maximum 1- and 8-hour average periods. A persistence factor of 0.70 was used to convert the calculated 1-hour average maximum concentrations to 8-hour averages, accounting for meteorological variability over the average 8-hour period.

Background CO concentrations from the nearest NYSDEC monitoring station were added to the modeling results to obtain the total ambient levels. The on-street CO concentration was determined using the methodology in the Air Quality Appendix of the *CEQR Technical Manual*, utilizing traffic volumes from the traffic study conducted for the proposed project (see **Attachment F**, "Transportation").

STATIONARY SOURCES

CEQR SCREENING ANALYSIS

The proposed project's design includes four natural gas-fueled condensing boilers for heat and hot water systems, and potentially a microturbine as cogeneration equipment to be operated based on electrical load requirement for the building. The methodology described in the *CEQR Technical Manual* was used for the analysis of these systems and considered potential impacts on nearby sensitive uses.

The screening methodology described in the *CEQR Technical Manual* was used for the analysis of annual NO_2 concentrations. The screening determines the threshold of emissions below which the action would not have a significant adverse impact based on the distance from sensitive receptors. The screening procedure considers the fuel to be used, the expected fuel consumption, the type and size of the equipment, and the stack height, to evaluate whether a significant adverse impact is likely. Based on the distance from the stack location to the nearest building of similar or greater height, if the emissions are greater than the threshold size in the *CEQR Technical Manual,* there is the potential for significant adverse air quality impacts, and a refined dispersion modeling analysis is required. Otherwise, the source passes the screening analysis, and no further analysis is required.

For the boilers, the annual NO_2 emission rate for this screening was estimated based on emission factors published by EPA for natural gas combustion in systems of this type:[6] (50 pounds of NO_x per million standard cubic feet) and the estimated energy consumption factor provided in the *CEQR Technical Manual Appendix*. For the microturbine, the NO_x emission rate was based on manufacturer's data, assuming continuous operation. As a conservative approach, the estimated emissions from the boilers and the microturbine were combined, and the nearest building to

[6] EPA, AP42, Chapter 1.4, *Natural Gas Combustion,* 1998.

either the location of the boiler stacks or the microturbine stack was considered. The height of release was assumed to be at least 405 feet above grade (based on the lower of the two heights, i.e., 10 feet above the section of the roof the boilers are proposed to be located). The distance from the stacks to the nearest building, i.e., the western façade of the Ruppert House on the eastern half of the project block, would be approximately 108 feet.

AERMOD ANALYSIS

A refined dispersion modeling analysis was performed to assess the potential impacts of PM and 1-hour NO_2 using the EPA/AMS AERMOD model.[7] The AERMOD model calculates pollutant concentrations from one or more sources based on hourly meteorological data, and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. The analysis of potential impacts from exhaust stacks was performed assuming stack tip downwash, urban dispersion and surface roughness length, with and without building downwash, and elimination of calms. The AERMOD model also incorporates the algorithms from the PRIME model, which is designed to predict impacts in the "cavity region" (i.e., the area around a structure which under certain conditions may affect an exhaust plume, causing a portion of the plume to become entrained in a recirculation region). The Building Profile Input Program (BPIP) program for the PRIME model (BPIPRM) was used to determine the projected building dimensions modeling with the building downwash algorithm enabled. The modeling of downwash from sources accounts for all obstructions within a radius equal to five obstruction heights of the stack.

Methodology Utilized for Estimating 1-Hour NO2 Concentrations

EPA has recently issued guidance for assessing 1-hour average NO_2 concentrations for compliance with NAAQS.[8] Background concentrations are currently monitored at several sites within New York City, which are used for reporting concentrations on a "community" scale. Because this data is compiled on a 1-hour average format, it can be used for comparison with the new 1-hour standards. Therefore, background 1-hour NO_2 concentrations currently measured at the community-scale monitors can be considered representative of background concentrations for purposes of assessing the impact of heat and hot water systems.

EPA's preferred regulatory stationary source model, AERMOD, is capable of producing detailed output data that can be analyzed at the hourly level required for the form of the 1-hour standards. EPA has also developed guidance to estimate the transformation ratio of NO_2 to NO_x, applicable to heating and hot water systems, as discussed further below.

1-Hour average NO_2 concentration increments associated with proposed and existing heat and hot water systems were estimated using AERMOD model's Plume Volume Molar Ratio Method (PVMRM) module to analyze chemical transformation within the model. The PVMRM module incorporates hourly background ozone concentrations to estimate NO_x transformation within the source plume. Ozone concentrations were taken from the NYSDEC Queens College monitoring station that is the nearest ozone monitoring station and had complete five years of hourly data

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[7] EPA, AERMOD: *Description Of Model Formulation*, 454/R-03-004, September 2004; and
EPA, *User's Guide for the AMS/EPA Regulatory Model AERMOD*, 454/B-03-001, September 2004 and Addendum December 2006.

[8] EPA Memorandum, "Additional Clarification Regarding Application of Appendix W, Modeling Guidance for the 1-Hour NO_2 National Ambient Air Quality Standard," March 1, 2011.

available. An initial NO_2 to NO_x ratio of 10 percent at the source exhaust stack was assumed, which is considered representative for boilers.

Total 1-hour NO_2 concentrations were determined following methodologies that are accepted by the EPA as appropriate and conservative. The methodology used to determine the compliance of total 1-hour NO_2 concentrations from the future facility sources with the 1-hour NO_2 NAAQS was based on adding the monitored background to modeled concentrations, as follows: hourly modeled concentrations from the future facility sources were first added to the seasonal hourly background monitored concentrations; then the highest combined daily 1-hour NO_2 concentration was determined at each receptor location and the 98th percentile daily 1-hour maximum concentration for each modeled year was calculated within the AERMOD model; finally the 98th percentile concentrations were averaged over the latest five years. This refined approach is recognized as being conservative by EPA and the City and is referenced in the EPA modeling guidance.

Receptors

Discrete receptors (i.e., locations at which concentrations are calculated) were modeled along the facades of nearby buildings to represent operable window locations, intake vents, and otherwise accessible locations such as terraces. Rows of receptors were placed at spaced intervals on the nearby buildings at multiple elevations.

Background Concentrations

As described above, the seasonal hourly NO_2 background concentrations were added to the hourly modeled concentrations at each receptor location within the AERMOD model, which then determined the total 98th percentile maximum concentration for each modeled year.

$PM_{2.5}$ impacts are assessed on an incremental basis and compared with the $PM_{2.5}$ interim guidance criteria. Therefore, a background concentration for $PM_{2.5}$ is not included.

Meteorological Data

The meteorological data set consisted of five consecutive years of meteorological data: surface data collected at LaGuardia Airport (2007–2011) and concurrent upper air data collected at Brookhaven, New York. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the 5-year period. These data were processed using the EPA AERMET program to develop data in a format that can be readily processed by the AERMOD model. The land uses around the site where meteorological surface data were available were classified using categories defined in digital United States Geological Survey (USGS) maps to determine surface parameters used by the AERMET program.

Emission Rates and Stack Parameters

Table G-2 presents the emission rates and stack exhaust parameters used in the AERMOD analysis.

Table G-2
Emission Rates and Stack Parameters

Emission Rate	Boiler Stacks		Microturbine Stack[3]
	Heating Season[1]	Non Heating Season[2]	
$PM_{2.5}$ emission rate[4] (g/s)	0.0049	0.0040	0.0007
NO_x emission rate (1-hour) (g/s)	0.0321	0.0265	0.0041
Stack Parameter			
Stack Height[5] (m)	123.4		128.0
Stack Diameter[5] (m)	0.203		0.305
Stack Exit Temperature[6] (K)	322		582
Stack Exit Velocity[7] (m/s)	21.2		11.3

Notes:
1. The emission rates for the boiler stacks during heating season reflect the operation of all four boilers at 85% load on natural gas. Emission rates for both pollutants are based on AP-42 emission factors and are for each boiler.
2. The emission rates for the boilers for the rest of the year reflect the operation of two boilers at 70% load, all on natural gas. Emission rates are based on AP-42 emission factors and peak hourly fuel consumption and are for each boiler.
3. The emission rates for the cogeneration stack conservatively assume continuous operation through the year. The emission rate for NO_x is based on manufacturer's data. The emission rate for $PM_{2.5}$ is based on AP-42 emission factor.
4. The same $PM_{2.5}$ emission rate is used for short term and annual average estimates.
5. Stack heights are based on available site plans, descriptions (for the boiler stacks, the height is assumed to be at least 10 feet above the base of the 37th Floor), and equipment data.
6. Exhaust temperature for the boilers are based on typical exhaust temperature for boilers of the same type. The exhaust temperature for the Microturbine is based on manufacturer's data.
7. The exhaust velocity is calculated from stack parameters and the flow rates obtained or calculated from manufacturer's data.

INDUSTRIAL SOURCES

A screening analysis was performed to determine whether there are any industrial sources within the study area. A number of dry cleaners were identified within the 400 feet study area. None of the businesses were found to have a DEP issued permit for dry cleaning operations; however, one additional industrial source was identified: an auto body spray paint operation located at 243 East 94rd Street (DEP Permit ID PB483203H). Although the permit was identified for this business, only the paint spray usage rate was obtained from the permit. In the absence of detailed permit information, a very conservative approach was used to address the potential for significant adverse impacts from the auto body painting activity onto the proposed project.

Information on surface coating operations at auto body shops was obtained from other certificates to operate issued by the DEP to businesses performing auto body painting. The permit information was then reviewed to determine the ten most frequently listed air pollutants emitted from surface coating processes. Short term (1-hr) and annual impacts were evaluated by calculating the maximum allowable coating usage at the auto business in the project study area, and comparing it to typical usage levels reported in DEP certificates to operate auto body shops.

ADDITIONAL SOURCES

The *CEQR Technical Manual* requires an assessment of any actions that could result in the location of sensitive uses within 1,000 feet of a "large" emission source (examples of large emission sources provided in the *CEQR Technical Manual* include solid and medical waste incinerators, cogeneration plants, asphalt and concrete plants, or power plants), as well as

commercial, institutional and residential developments within 400 feet. To assess the potential effects of these existing sources on the proposed project, a review of existing permitted facilities was conducted. Within the study area boundaries, sources permitted under NYSDEC's Title V program and State Facility permit program were considered.

No large sources were identified within the 1,000 foot study area. Existing and proposed large-scale developments with emission sources within 400 feet of the project site were analyzed to assess the potential for air quality impacts on the proposed project's buildings, consistent with the recommendations in the *CEQR Technical Manual*. Sources with fossil fuel-fired combustion equipment having a total estimated heat input capacity of 20 million BTU/hr were included in the analysis. Based on this threshold, the boiler plant at 200 East 94th Street was identified for analysis. A screening analysis was performed using the screening methodology in the *CEQR Technical Manual* assuming the total size of the existing building (486,484 gsf) and the nearest distance to the proposed project (approximately 200 feet).

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The following sections describe the results of the analyses performed to assess the potential impacts on the surrounding community from the mobile and stationary sources associated with the proposed project.

MOBILE SOURCES

Future maximum predicted PM_{10} concentrations were also determined using the methodology previously described. **Table G-3** presents the future maximum predicted PM_{10} 24-hour concentrations, including background concentrations, at the analyzed intersections in the No Build and Build conditions.

Table G-3
Future Maximum Predicted 24-Hour Average PM_{10} Concentrations ($\mu g/m^3$)

Receptor Site	Location	Concentration	
		No Build	Build
1	Third Avenue and East 93rd Street	55.0	55.3

Notes:
NAAQS—24-hour average 150 $\mu g/m^3$.
Concentration includes a background concentration of 45.0 $\mu g/m^3$.

Future maximum predicted 24-hour and annual average $PM_{2.5}$ concentration increments were calculated so that they could be compared to the interim guidance criteria that would determine the potential significance of any impacts from the proposed project. Based on this analysis, the maximum predicted localized 24-hour average and neighborhood-scale annual average incremental $PM_{2.5}$ concentrations are presented in **Table G-4** and **Table G-5**, respectively. $PM_{2.5}$ concentrations without the proposed project are not presented, since impacts are assessed on an incremental basis.

Table G-4
Future Maximum Predicted 24-Hour Average $PM_{2.5}$ Increments ($\mu g/m^3$)

Receptor Site	Location	Increment
1	Third Avenue and East 93rd Street	0.10

Note: $PM_{2.5}$ interim guidance criteria—24-hour average, 2 $\mu g/m^3$ (5 $\mu g/m^3$ not-to-exceed value).

Table G-5
Future Maximum Predicted Annual Average $PM_{2.5}$ Increments ($\mu g/m^3$)

Receptor Site	Location	Increment
1	Third Avenue and East 93rd Street	0.01
Note: $PM_{2.5}$ interim guidance criteria—annual (neighborhood scale), 0.1 $\mu g/m^3$.		

The results show that the annual and daily (24-hour) $PM_{2.5}$ increments are predicted to be well below the interim guidance criteria, and the daily PM_{10} concentrations are predicted to be well below the PM_{10} standard. Therefore, there would be no potential for significant adverse impacts on air quality from vehicle trips generated by the proposed project for the 2015 analysis year.

PARKING GARAGE

Based on the methodology previously described, the maximum predicted 8-hour average CO concentrations from the proposed parking facility were analyzed at the following locations, assuming a vent location on the facade of the proposed building: a near side sidewalk receptor on the same side of the street as the parking facility; a far side sidewalk receptor on the opposite side of the street from the parking facility; and a receptor placed on the façade of the building above the parking garage vent.

The total CO concentrations include both background CO levels and contributions from traffic on adjacent roadways for the far side receptor only. The maximum predicted 8-hour average CO concentration of all the receptors modeled is 3.7 ppm on the building facade. This value includes a predicted concentration of 1.8 ppm from the parking garage vent, and a background level of 1.9 ppm. At other locations the maximum predicted CO concentration is lower. The maximum predicted concentration is substantially below the applicable standard of 9 ppm. Therefore, the proposed parking garage would not result in any significant adverse air quality impacts.

STATIONARY SOURCES

CEQR SCREENING ANALYSIS

The screening methodology in the *CEQR Technical Manual* was performed assuming the total size of the proposed project (462,091 gsf) and the use of natural gas. Based on the CEQR screening using the combined emissions of 0.019 g/s from the proposed boilers and the microturbine, the annual average NO_2 NAAQS would not be impacted unless the source were located at a distance of 53 feet or less from any sensitive receptors, as shown in Figure 17-9 of the Air Quality Appendix of the *CEQR Technical Manual*. Since the nearest receptor would be at a distance of approximately 108 feet, no significant adverse impact on annual-average NO_2 concentrations would occur.

AERMOD ANALYSIS

An AERMOD modeling analysis was performed to determine potential 1-hour NO_2, 24-hour $PM_{2.5}$ and annual $PM_{2.5}$ impacts from the exhaust stack for the heat and hot water systems and potential microturbine associated with the proposed project. Maximum modeled concentrations are presented in **Table G-6**.

Table G-6
Maximum Modeled Pollutant Concentrations (in μg/m^3)

Pollutant	Averaging Period	Modeled Concentration	Background Concentration	Total Concentration	NAAQS
NO_2	1-hour	Hourly	Hourly	122.1	188
$PM_{2.5}$	24-hour	1.94	-	1.94	2/5 (SIL) (1)
	Annual (discrete)	0.14	-	0.14	0.3 (SIL)
	Annual (neighborhood scale)	0.01	-	0.01	0.1 (SIL)

Notes:
(1) 24-hour $PM_{2.5}$ interim guidance criterion, > 2 μg/m^3 (5 μg/m^3 not-to-exceed value), depending on the magnitude, frequency, duration, location, and size of the area of the predicted concentrations.

As shown in **Table G-6**, the maximum potential increase in 1-hour NO_2 concentrations associated with the proposed project's boilers and microturbine systems, when added to background concentrations, would be less than the NAAQS. The maximum 24-hour incremental impacts at any discrete receptor location would be less than the applicable interim guidance criterion of 2 μg/m^3. On an annual basis, the maximum projected $PM_{2.5}$ increments would be less than the applicable interim guidance criterion of 0.3 μg/m^3.

To ensure that there are no significant adverse impacts of $PM_{2.5}$ from the proposed project's HVAC emissions, certain restrictions would be required regarding fuel type and exhaust stack location. The results of the analysis demonstrate that no potential significant air quality impacts related to $PM_{2.5}$ and NO_2 are expected to occur from the proposed project. Therefore with the restrictions in place, no significant adverse air quality impacts are predicted from the proposed project's emission sources.

INDUSTRIAL SOURCES

As discussed above, a study was conducted to identify manufacturing and industrial uses within 400 feet of the project site. The only permitted source of emissions identified was a business that performs auto body work which has emissions from spray coating operations.

Impacts were evaluated by calculating the maximum allowable coating usage at the auto business in the project study area, and comparing it to typical usage levels reported in DEP certificates to operate auto body shops. Initially, impacts were set equal to the short-term guideline concentration (SGC) for each coating compound. The AERMOD screening database table contained in the *CEQR Technical Manual* (Table 17-3) provides normalized concentrations (i.e., in units of micrograms per cubic meter per gram per second of emission) for various source/receptor distances. The nearest distance from the auto business to the proposed project was then determined to be approximately 370 feet. Using this distance and the AERMOD database table, a 1-hour concentration and annual concentration was determined. To determine the maximum allowable emission rate for each pollutant, the SGC and AGC was divided by applicable value in the AERMOD database table.

The DEP certificates to operate were analyzed to identify instances where the compounds of concern were reported in units of pounds emitted per gallon of coating. The typical coating application rate for each compound emitted was based on the median value for the range of application rates found in DEP permits. To determine the maximum allowable coating usage rates, the calculated allowable emission rate (pounds of pollutant per hour) for each compound

was divided by its typical application rate (gallon of coating per hour). The calculated maximum allowable application rate for the business of concern was 48 gallons per hour and 213 gallons per year, which are the maximum application rates that would result in concentrations below the NYSDEC SGCs and AGCs, respectively, for all of the compounds of concern.

The potential for significant impacts from the auto spray painting business was then assessed by comparing the calculated maximum surface coating application rates to the application rate for the permitted paint spray operation, which is 8 gallons per month. Since this usage is well below the maximum hourly usage determined above, and on an annual basis (96 gallons per year) is less than the maximum annual usage, the auto business would not have the potential for significant adverse air quality impacts on the proposed project.

ADDITIONAL SOURCES

As discussed above, a screening analysis was performed for the existing building at 200 East 94th Street using the screening methodology in the *CEQR Technical Manual* to determine the potential for impacts from boiler emissions on the proposed project. The analysis determined that with the use of natural gas, no significant adverse air quality impacts are predicted on the proposed project.

Therefore, the operator of the 200 East 94th Street building would be required to ensure that modifications are made to the existing boiler installation to convert the boilers to utilize natural gas (see **Appendix C**). The work would be completed and a certificate to operate for the boiler installation would be obtained prior to the proposed project obtaining a Certificate of Occupancy from the New York City Department of Buildings.

PROPOSED (E) DESIGNATION

To ensure that there are no significant adverse impacts of $PM_{2.5}$ from the proposed project's HVAC emissions and on the proposed project from nearby emission sources, certain restrictions would be required regarding fuel type and exhaust stack location. The text of the (E) designation would be as follows:

- Block 1538, Lot 10

  Any new development on the above-referenced property must ensure that fossil fuel fired heating and hot water equipment be fitted with low NO_x (30 ppm) burners and utilize only natural gas, and that boiler equipment exhaust stack(s) are at least 405 feet above grade.

  In addition, no temporary or permanent Certificate of Occupancy from the New York City Department of Buildings (DOB) may be obtained for any new development at the subject property unless and until the operator of the building located at 200 East 94th Street (Block 1539, Lot 1) has converted its existing boilers to utilize natural gas, as evidenced by a certificate from DOB. ✷

A. INTRODUCTION

The proposed project would have the potential to increase ambient noise levels due to traffic generated by the proposed project and noise generated by the proposed school's terrace playground. The effect of these noise sources is addressed in the following chapter and an analysis is presented which determines the level of building attenuation necessary to ensure that the proposed project's interior noise levels satisfy applicable CEQR interior noise criteria.

B. ACOUSTICAL 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 such factors 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. 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 in the measurement system, to simulate response of the human ear. For most noise assessments the A-weighted sound pressure level in units of dBA is used in view of its widespread recognition and its close correlation with 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 H-1**.

ABILITY TO PERCEIVE CHANGES IN NOISE LEVELS

The average ability of an individual to perceive changes in noise levels is well documented (see **Table H-2**). Generally, changes in noise levels less than 3 dBA are barely perceptible to most listeners, whereas 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 H-1
Common Noise Levels

Sound Source	(dBA)
Military jet, air raid siren	130
Amplified rock music	110
Jet takeoff at 500 meters	100
Freight train at 30 meters	95
Train horn at 30 meters	90
Heavy truck at 15 meters	80–90
Busy city street, loud shout	80
Busy traffic intersection	70–80
Highway traffic at 15 meters, train	70
Predominantly industrial area	60
Light car traffic at 15 meters, city or commercial areas, or residential areas close to industry	50–60
Background noise in an office	50
Suburban areas with medium-density transportation	40–50
Public library	40
Soft whisper at 5 meters	30
Threshold of hearing	0

Note: A 10 dBA increase in level appears to double the loudness, and a 10 dBA decrease halves the apparent loudness.
Sources: Cowan, James P. *Handbook of Environmental Acoustics,* Van Nostrand Reinhold, New York, 1994. Egan, M. David, Architectural Acoustics. McGraw-Hill Book Company, 1988.

Table H-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 Newman, 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 of 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 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.

For the purposes of this project, 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

recommended for use in the *City Environmental Quality Review (CEQR) Technical Manual* and is used to provide an indication of highest expected sound levels. The 1-hour L_{10} is the noise descriptor used in the *CEQR Technical Manual* noise exposure guidelines for City environmental impact review classification. 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.

C. NOISE STANDARDS AND CRITERIA

NEW YORK CEQR NOISE STANDARDS

The *CEQR Technical Manual* contains noise exposure guidelines for use in City environmental impact review and required attenuation values to achieve acceptable interior noise levels. These values are shown in **Table H-3** and **Table H-4**. Noise Exposure is classified into four categories: "acceptable," "marginally acceptable," "marginally unacceptable," and "clearly unacceptable." The *CEQR Technical Manual* criteria are based on maintaining an interior noise level for the worst-case hour $L_{10(1)}$ less than or equal to 45 dBA for school and residential uses and 50 dBA for commercial uses.

Table H-3
Noise Exposure Guidelines For Use in City Environmental Impact Review[1]

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	---------- Ldn ≤ 60 dBA ----------	NA	NA	NA	NA	NA	NA
Hospital, nursing home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA	---------- 60 < Ldn ≤ 65 dBA ----------	$65 < L_{10} \leq 80$ dBA	(i) 65 < Ldn ≤ 70 dBA, (II) 70 ≤ Ldn	$L_{10} > 80$ dBA	---------- Ldn ≤ 75 dBA ----------
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	
School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, outpatient public health facility		Same as Residential Day (7 AM-11 PM)		Same as Residential Day (7 AM-11 PM)		Same as Residential Day (7 AM-11 PM)		Same as Residential Day (7 AM-11 PM)	
Commercial or office		Same as Residential Day (7 AM-11 PM)		Same as Residential Day (7 AM-11 PM)		Same as Residential Day (7 AM-11 PM)		Same as Residential Day (7 AM-11 PM)	
Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

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

Table Notes:
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 nursing homes.
3 One may use 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).

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

Table H-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)

Notes: [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.
Sources: New York City Department of Environmental Protection

In addition, the *CEQR Technical Manual* uses the following criteria to determine whether a proposed project would result in a significant adverse noise impact. The impact assessments compare the proposed project's Build condition $L_{eq(1)}$ noise levels to those calculated for the No Build condition, for receptors potentially affected by the project.

If the No Build 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 Build condition noise level would have to be equal to or less than 65 dBA. If the No Build 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 PM and 7 AM), the incremental significant impact threshold would be 3 dBA $L_{eq(1)}$. (If the No Build 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.)

C. NOISE PREDICTION METHODOLOGY

VEHICULAR TRAFFIC NOISE

Proportional modeling was used to determine locations in the vicinity of the project site which had the potential for having significant traffic related noise impacts and to quantify the magnitude of those potential impacts. Proportional modeling is one of the techniques recommended in the 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 future with the proposed project (Build) levels. Vehicular traffic volumes 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:

$FB\ NL - FNA\ NL = 10 * \log_{10} (FB\ PCE / FNB\ PCE)$

where:

FB NL = Future Build Noise Level

FNA NL = Future No Action Noise Level

FB PCE = Future Build PCEs

FNA PCE = Future No Action PCEs

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.

Proportional modeling analyses were conducted for two time periods: the weekday AM and weekday Pre-PM peak hours. These time periods are the hours when the maximum traffic generation is expected and, therefore, the hours when future with the proposed project conditions are most likely to result in maximum noise impacts.

NOISE FROM THE TERRACE SCHOOL PLAYGROUND

A K-8 school's playground would be located on the 3rd floor terrace of the west portion of the proposed building. The occupancy for the playground is expected to be approximately 40 students. The playground location would be surrounded by the proposed building façades of approximately 426'9" feet height to the east, 79 feet height to the south and north, and a commercial building (1645 Third Avenue) façade of approximately 51 feet height to the west.

The CadnaA model was used to determine sound effects of the proposed playground at nearby receptor locations. The CadnaA model is a computerized model developed by DataKustik for sound prediction and assessment. The model can be used for the analysis of a wide variety of sound sources, including stationary sources (e.g., construction equipment, industrial equipment, power generation equipment, etc.), transportation sources (e.g., roads, highways, railroad lines, busways, airports, etc.), and other specialized sources (e.g., sporting facilities, etc.) The model takes into account the sound power levels of the sound sources, attenuation with distance, ground contours, reflections from barriers and structures, attenuation due to shielding, etc. The CadnaA model is based on the acoustic propagation standards promulgated in International Standard ISO 9613-2. The CadnaA model is a state-of-the-art tool for acoustical analysis.

The analysis of the proposed playgrounds consisted of the following five step procedure:

- Street-level noise measurements were made at the project site;
- The project site geometry and surrounding building geometry were coded into the CadnaA model;
- Using preliminary drawings of the proposed project and the location of the proposed playground at the project site, the building geometry in the CadnaA model was updated to reflect future conditions with the proposed project;
- An area source was created in the CadnaA model for the proposed playground. The acoustical parameters of the area sources were defined based on noise measurements that were performed at an existing playground similar to the proposed playground. The sound power level of the area source created in the CadnaA model was based on measured $L_{eq(1)}$ noise levels (in dBA) from the comparable playground and the number of children assumed to be utilizing the corresponding proposed playground at any given time; and

- Using the area source to represent the proposed project's playground, the CadnaA model was used to predict noise levels with the proposed project at nearby buildings.

D. EXISTING CONDITIONS

SITE DESCRIPTION

The proposed project would be located on a mid-block site between East 92nd and 93rd Streets and Second and Third Avenues. This block is primarily residential with some commercial uses. Traffic on East 92nd and 93rd Streets is the dominant source of ambient noise.

SELECTION OF NOISE MONITORING LOCATIONS

Two receptor locations adjacent to the project site were selected for noise monitoring. Site 1 was located on East 92nd Street between Second and Third Avenues and Site 2 was located on East 93rd Street between Second and Third Avenues. Sites 1 and 2 were used to determine: 1) whether project-generated vehicular traffic would have the potential for resulting in significant noise impacts, and 2) the level of building attenuation necessary to achieve acceptable interior noise levels for the proposed building. These two receptors, due to their proximity to the project site, represent the nearby sensitive noise receptors with the greatest potential to experience significant noise increases as a result of the proposed project. Sensitive receptors further from the project site would be less likely to experience significant noise increases as a result of the proposed project. **Figure H-1** shows the locations of the two noise monitoring sites.

NOISE MONITORING

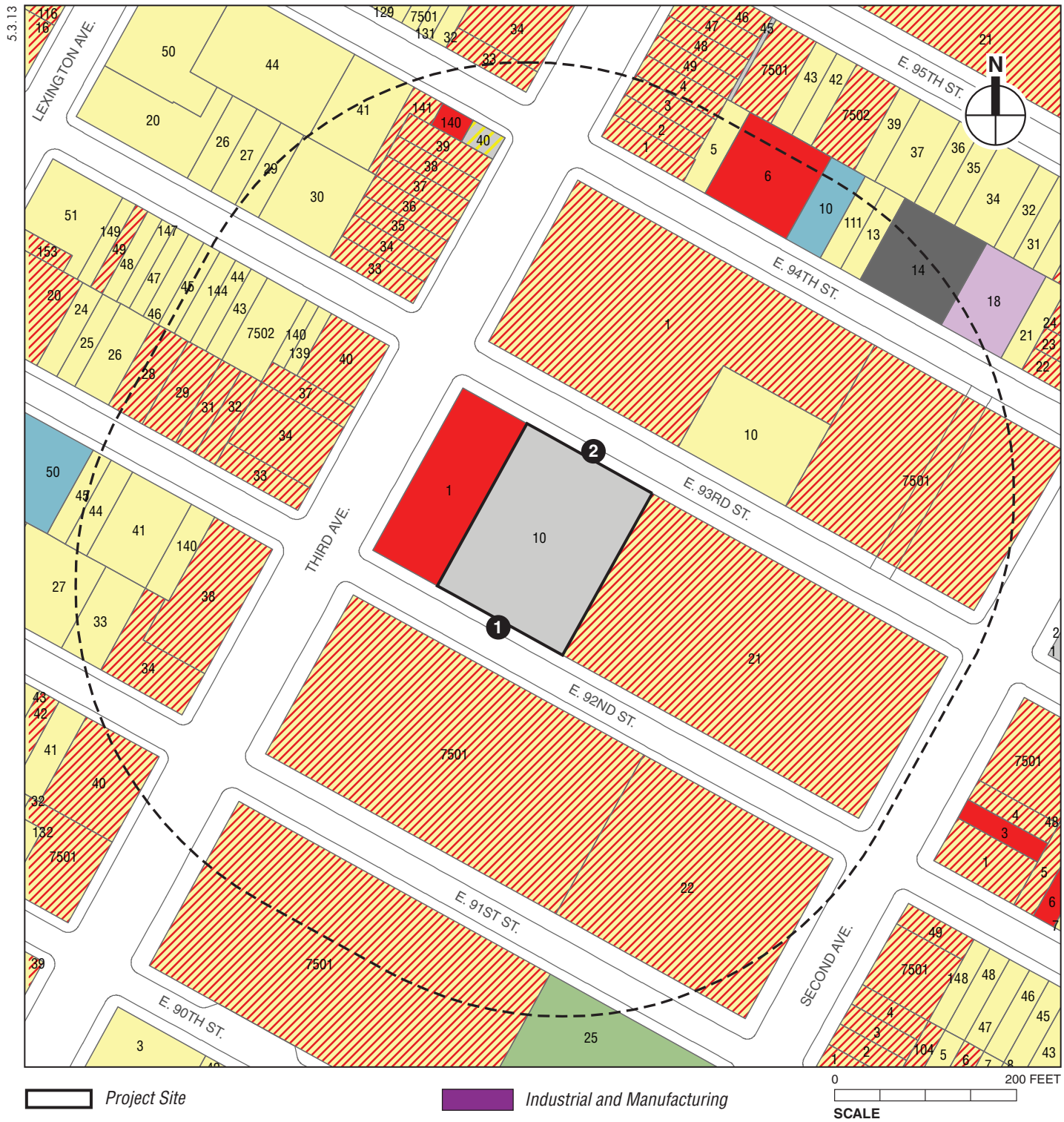
Noise monitoring at the two receptor sites was performed on October 10, 16, and 18, 2012. Existing noise levels were measured for 20-minute during AM (8:00 – 9:00 AM), MD (midday) (12:00 – 1:00 PM), Pre-PM (2:30 – 3:30 PM), and PM (5:00 – 6:00 PM) periods.

EQUIPMENT USED DURING NOISE MONITORING

Measurements were performed using a Brüel & Kjær Sound Level Meter (SLM) Type 2260, a Brüel & Kjær ½-inch microphone Type 4189, and a Brüel & Kjær Sound Level Calibrator Type 4231. The SLMs were calibrated within one year of use. The microphone was mounted at a height of approximately five feet above the ground surface on a tripod and mounted at least approximately five feet away from any large reflecting surfaces. The SLMs were 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 meters and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_1, L_{10}, L_{50}, L_{90}, and 1/3 octave band levels. A windscreen was used during all sound measurements except for calibration. All measurement procedures were based on the guidelines outlined in ANSI Standard S1.13-2005.

RESULTS OF BASELINE MEASUREMENTS

The noise monitoring results are summarized in **Table H-5**. Vehicular traffic was the dominant noise source at Sites 1 and 2. In terms of the New York City CEQR standards, existing noise levels at Sites 1 and 2 are in the "acceptable" category.



Noise Receptor Locations

Figure H-1

203-205 East 92nd Street

Table H-5
Existing Noise Levels at Receptor Sites (in dBA)

Site	Measurement Location	Time	L_{eq}	L_1	L_{10}	L_{50}	L_{90}
1	East 92nd Street between Second and Third Avenues	AM	61.9	69.4	63.9	60.8	58.9
		MD	61.4	69.4	64.0	59.4	57.9
		Pre-PM	60.5	67.0	62.4	59.4	57.8
		PM	62.6	72.1	64.2	60.5	58.3
2	East 93rd Street between Second and Third Avenues	AM	61.4	67.7	63.6	60.3	58.1
		MD	59.9	66.9	61.8	58.8	57.4
		Pre-PM	62.2	69.5	64.6	60.7	58.2
		PM	61.3	68.3	64.0	59.6	58.0

Note: Field measurements were performed by AKRF, Inc. on October 10, 16 and 18, 2012.

E. THE FUTURE WITHOUT THE PROPOSED PROJECT

Using the previously described methodology, **Table H-6** shows the future noise levels without the project at the two receptor locations analyzed for the AM and Pre-PM peak analysis periods. Future noise levels without the project at Sites 1 and 2 would increase by less than 1.0 dBA. Changes of this magnitude would be considered imperceptible. In terms of the New York City CEQR standards, at the two receptor sites the noise level without the project would remain in the "acceptable" category.

Table H-6
Future No Build Noise Levels (in dBA)

Site	Time	Existing $L_{eq(1)}$	No Build $L_{eq(1)}$	Change	No Build $L_{10(1)}$
1	AM	61.9	62.0	0.1	64.0
	MD	61.4	61.4	0.0	64.0
	Pre-PM	60.5	60.6	0.1	62.5
	PM	62.6	62.6	0.0	64.2
2	AM	61.4	61.6	0.2	63.8
	MD	59.9	59.9	0.0	61.8
	Pre-PM	62.2	62.5	0.3	64.9
	PM	61.3	61.3	0.0	64.0

F. PROBABLE IMPACTS OF THE PROPOSED PROJECT

TRAFFIC NOISE

Using the previously described methodology, **Table H-7** shows the future noise levels with the project at the two receptor locations analyzed for the AM and Pre-PM peak analysis periods. Future noise levels with the project at Sites 1 and 2 would increase by less than 2.0 dBA. Changes of this magnitude would be considered imperceptible.

Table H-7
Future Build Noise Levels (in dBA)

Site	Time	No Build $L_{eq(1)}$	Build $L_{eq(1)}$	Change	Build $L_{10(1)}$
1	AM	62.0	62.3	0.3	64.3
	MD	61.4	61.9	0.5	64.5
	Pre-PM	60.6	61.0	0.4	62.9
	PM	62.6	62.7	0.1	64.3
2	AM	61.6	63.5	1.9	65.7
	MD	59.9	59.9	0.0	61.8
	Pre-PM	62.5	63.6	1.1	66.0
	PM	61.3	62.1	0.8	64.8

In terms of the New York City CEQR standards, the noise level with the project at Site 1 would remain in the "acceptable" category and the noise level with the project at Site 2 would change from the "acceptable" category to the "marginally acceptable" category.

SCHOOL PLAYGROUND NOISE

Using the methodology previously described, noise levels due to the playground on the 3rd floor terrace were calculated at receptor locations adjacent to the project site. At the nearby residential buildings (1623 Third Avenue, 225 East 93rd Street, and 1767 Second Avenue) where noise from the playground would be shielded by the proposed building façades, the playground activities would not be expected to change ambient noise levels at these locations. For the commercial building located immediately adjacent to the west of the playground (1645 Third Avenue), exterior noise levels would increase up to 24 dBA during the hours for the use of playground. However, this building has no windows facing the playground. With the existing brick wall interior noise levels are expected to ensure the acceptable interior noise levels of 50 dBA $L_{10(1)}$ or lower for commercial uses according to CEQR criteria. As a result, the noise level increases due to the playground would not constitute significant impacts.

INTERIOR NOISE LEVELS

As shown in **Table H-4**, the *CEQR Technical Manual* has set noise attenuation quantities for buildings, based on exterior $L_{10(1)}$ noise levels, and in order to maintain interior noise levels of 45 dBA $L_{10(1)}$ or lower for classroom uses or residential uses and 50 dBA $L_{10(1)}$ or lower for commercial uses The results of the proposed building attenuation analysis are summarized in **Table H-8**.

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Normally, a building façade is comprised of the wall, glazing, and any vents or louvers for air conditioning units in various ratios of area. At the specific locations identified in **Table H-8** where a CEQR attenuation requirement is necessary, the proposed building will include acoustically-rated windows and an alternate means of ventilation. At these specific locations, the proposed building would need to be designed to provide a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the attenuation requirements listed in **Table H-8**. The OITC classification is defined by ASTM International (ASTM E1332-10a) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise. By adhering to these design requirements, the proposed project will provide sufficient attenuation to achieve the CEQR interior noise level requirements.

Table H-8
CEQR Attenuation Requirements

Proposed Building Façade Location	Applicable Noise Receptor or Floor Location	Elevation Height	Maximum L_{10} (in dBA)[1]	Attenuation Required (in dBA)
Facing East 92nd Street	Site 1	At-grade	64.5	N/A[2]
Facing East 93rd Street	Site 2	At-grade	66.0	N/A[2]
Facing East Side	Site 1	At-grade	64.5	N/A[2]
Facing Playground at 3rd Floor Terrace	3rd Floor	26'-1"	84.2	41
	4th Floor	37'-11"	81.9	38
	5th Floor	50'-3"	80.3	32[3]
	6th Floor	64'-3"	78.3	30[3]
	7th Floor	78'-9"	76.8	N/A[4]
	8th Floor	93'-9"	75.4	31
	9th Floor	103'-9"	74.5	31
	10th Floor	113'-9"	73.6	31
	11th Floor	123'-9"	72.7	28
	12th Floor	135'-1"	72.0	28
	13th Floor	145'-1"	71.2	28
	14th Floor	155'-1"	70.6	28
	15th Floor	165'-1"	69.9	N/A[2]
	16th Floor to Top	176'-5" or Higher	less than 69.9	N/A[2]

Notes:
(1) Based on the predicted Build L_{10} values.
(2) "N/A" indicates that the L_{10} value is less than 70 dB(A). The *CEQR Technical Manual* does not specify noise attenuation requirements when noise levels are this low and therefore there is no minimum attenuation requirement necessary at these locations.
(3) Commercial uses.
(4) CEQR attenuation requirements do not apply to mechanical space uses.

Certain restrictions would be required to ensure an acceptable interior noise environment for the school and residential uses. The text of the (E) designations would be as follows:

- Block 1538, Lot 10

  In order to ensure an acceptable interior noise environment, future school/residential/commercial uses must provide a closed window condition with up to 41 dBA of window/wall attenuation in order to maintain an interior noise level of 45 dBA. In order to maintain a closed window condition, an alternate means of ventilation that brings outside air into the building without degrading the acoustical performance of the building must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning. The specific attenuation requirements to be implemented throughout the project building facades are provided in the 203-205 East 92nd Street EAS, Table H-8 (CEQR No. 13DCP121M), May 2013.

MECHANICAL SYSTEMS

The building mechanical system (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. ✷

Appendix A

RUPPERT BREWERY URBAN RENEWAL PROJECT
DOCKET COPY
APPLICATION FOR LARGE SCALE RESIDENTIAL DEVELOPMENT

January 1972
Revised: February 29, 1982
July 6, 1982
September 10, 1982
December 5, 1983
October 27, 1986
April __, 2013

Total Site Area	10.3 acres
Total Dwelling Units Proposed	3,616 apartments
Total Commercial Space Proposed	230,866 square feet
Total Community Facility Space Proposed	68,150 square feet

The City of New York
Department of Housing Preservation and Development

RUPPERT BREWERY UNASSISTED URBAN RENEWAL PROJECT
APPLICATION FOR LARGE SCALE RESIDENTIAL DEVELOPMENT

The following narrative, tables and site plan constitute the large scale Residential Development plan for the Ruppert Brewery Urban Renewal Area

The Large-Scale Development area consists of ten parcels. Parcels 1 and 2B contain middle-income housing. Parcels 2C and 3B contain middle-income housing. Parcels 2C and 3B contain moderate-income housing. Parcel 3A contains commercial space. Parcel 2A contains an unmapped park but is not included as site area in determining allowable building bulk. It is therefore excluded from Tables I and II. Parcel 4A contained a public recreational area until June 2008. Parcel 4A is to be developed with a mixed use building containing market rate and affordable dwelling units, and with commercial (retail and physical culture establishment) and community facility (private school) uses. Parcel 4B and the Q-parcel are to contain market rate housing. Parcel 4C is to contain market rate housing for elderly tenants.

Table I compares the total maximum development proposed in terms of building bulk, zoning rooms, commercial floor area, community facilities floor area and off street parking against the controls of the Zoning Resolution. As shown in the table, the proposed overall development is within the limits established by the Zoning Resolution, except that a waiver by the Board of Standards and Appeals was granted to permit the reduction of parking on Parcel 3B below the zoning requirement.

Table II compares the maximum development proposed for each parcel against the controls of the Zoning Resolution and thus indicates the distribution of bulk and zoning rooms permitted by previously granted authorizations and by those requested herewith.

Table III summarizes other authorizations previously granted with respect to Height and Setback and Spacing requirements as shown on the Site Plan, which is attached.

AUTHORIZATIONS REQUESTED UNDER ARTICLE VIII
CHAPTER 8 OF THE ZONING RESOLUTION

In attempting to achieve an improved site plan in terms of distribution and arrangement of open space, light and air, while permitting the development authorized by the Urban Renewal plan, it has been necessary to allow variations in the zoning regulations as permitted by Article VII, Chapter 8 of the Zoning Resolution, "Special Regulations Applying to Large-Scale Residential Developments."

The Stage I large-scale plan, approved by City Planning Commission on September 22, 1971, CP-21724 (Cal. No. 14), and by the Board of Estimate on November 24, 1971 (Cal. No. 4), involved the following authorizations (1-5):

1. Section 78-311 (a). To authorize the distribution of zoning rooms without regard for lot lines (Parcel 3B);

2. Section 78-33 (d). To authorize the location of buildings without regard for yard regulations which would otherwise apply along portions of streets wholly within the development;

3. Section 78-311 (e). To authorize the location of buildings without regard for the height and setback regulations which would otherwise apply along portions of E. 92nd and 93rd Streets, wholly within the development (Parcel 3B);

4. Section 78-312 (d). To permit minor variations in the front height and setback regulations on a portion of E. 93rd Street and Second Avenue on the periphery of the development (Parcel 3B), and

5. Section 74-53. To permit group parking facilities accessory to uses in the large-scale residential development, with more than 150 spaces (Parcel 3B).

The Stage II large-scale plan, approved by the City Planning Commission on January 19, 1972 (CP-21855, Cal. No. 22) involved the following authorizations (6-8):

6. Section 78-311 (a). To authorize distribution of floor area without regard for lot lines (Parcels 2B and 2C);

7. Section 78-311 (e). To authorize the locations of buildings without regard for the height and setback regulations which would otherwise apply along portions of East 91st Street and East 92nd Street, streets wholly within the development (Parcels 1, 2B and 2C), and

8. Section 78-311 (h). To authorize the location of buildings on a single zoning lot without regard for spacing between building regulations, provided that the resultant spacing will not be reduced by more than 15% as required by Section 23-71 (Parcels 2B and 2C).

The Stage III large-scale plan, approved by the City Planning Commission on May 5, 1982 (N820778ZAM, Cal. No. 73) amended the boundaries of the previously approved large scale

plan and involved the following authorizations (9&10) for the Q-Parcel:

9. Section 78-311 (a). To authorize the distribution of floor area and rooms without regard for lot lines (or the boundary between the C2-8 district and the proposed district , and

10. Section 78-311 (d). To authorize the location of buildings without regard for yard regulations this would otherwise apply along portions of the rear lot line, wholly within the development.

The Stage IV large-scale plan added Parcel 4C to the Plan, changed the uses of Parcels 4A and 4B from Public High School to Public Recreational Open Space and Residential respectively and involved the following authorization (Application # N803109ZAM) for Parcel 4C:

11. Section 78-311 (e). To authorize the location of buildings without regard for the height and setback regulations which would otherwise apply along portions of E. 93rd Street, wholly within the development.

The stage V Large-Scale Plan (C830264ZSM) approved by the City Planning Commission on February 2, 1983 (Cal. No. 49) and by the Board of Estimate on March 18, 1983 (Cal. No. 6) involved the following Special Permit Authorization for parcel 4B:

12. Section 78-312 (d). To permit minor variations in the front height and setback regulations on a portion of E. 94th Street and 3rd Avenue on the periphery of the development.

The minor modification requested for the Q-parcel was:

13. To modify the site plans previously approved and adjust the zoning data in the large-scale tables accordingly; and

14. To modify a previous authorization (item 10 above in order to allow the use of alternative (c) instead of alternative (a) under section 23-533 (Rear Yard Equivalent).

The minor modification now requested for the 4A Parcel is:

15. To modify the site plans previously approved and adjust the zoning data in the large-scale tables accordingly.

RUPPERT BREWERY URBAN RENEWAL AREA
LARGE SCALE RESIDENTIAL DEVELOPMENT PLAN

Table I
Total Proposed Maximum Development Vs. Zoning Capacity

	R10 Equivalent		R-8		All Zones	
	Proposed	Capacity	Proposed	Capacity	Proposed	Capacity
Lot Area	425,845		22,156		448,001	
Floor Area (s.f.) Total	4,187,909	4,258,450	19,748	131,828	4,207,657	4,390,278
Residential	3,910,029	4,059,851	19,348	131,828	3,929,777	4,112,399
Community Facilities	68,161	21,148	-	-	68,161	68,161
Commercial	230,866	198,599	-	-	230,866	230,866
Lot Coverage (s.f) Total	201,916 (160,955*)	-	9,998	-	211,914	-
Residential	143,356	-	9,998	-	153,354	-
Community Facilities	3,107	-	-	-	3,107 (0*)	-
Commercial	47,328	-	-	-	47,328 (14,400*)	-
Height Factor	21	-	15	15		-
Floor Area Ratio	8.93	10.00	0.89	5.95		-
Residential						
Lot Area	403,870	403,870	22,156	22,156	-	-
Height Factor	29.2	-	15	15		-
Floor Area Ratio	8.46	9.53	0.89	5.95		-
Open Space	247,036	-	13,524	13,315	260,560	13,315
Open Space Ratio	7.4	-	68.5	10.1		-
Zoning Rooms	12,999	13,462	54	476	13,053	13,938
Dwelling Units	3,604	-	12	-	3,616	-
Parking Spaces (Residential)	-	-	-	-		

RUPPERT BREWERY URBAN RENEWAL AREA
LARGE SCALE RESIDENTIAL DEVELOPMENT PLAN

Table II
Proposed Maximum Development Vs. Zoning Capacity

	Parcel 1 C2-8 (R10)		Parcel 2B C2-8(R10)		Parcel 2c C2-8 (R10)	
	Proposed	Capacity	Proposed	Capacity	Proposed	Capacity
Lot Area	79,355		73,749		49,166	
Floor Area (s.f.) Total	666,400		841,600§		540,640§	
Residential	621,000		796,200§		509,800§	
Community Facilities	5,400		5,400		1,450	
Commercial	40,000		40,000		29,390	
Lot Coverage (s.f) Total	30,140 (22,140*)		30,140 (22,140*)		19,600 (15,600*)	
Residential	22,140		22,140		15,600	
Community Facilities	-		-		-	
Commercial	8,000(-*)		8,000(-*)		4,000(-*)	
Height Factor	0	-	38	-	35	-
Floor Area Ratio	8.4	10	11.41§	10	11§	10
Residential						
Lot Area	74,815	74,815	69,209	69,209	46,082	46,082
Height Factor	28	28	36	36	33	-
Floor Area Ratio	7.83	10	10.80§	10	10.37§	10
Open Space	57,215	None	51,609	None	33,566	None
Open Space Ratio	9.2	-	6.5	-	6.58	-
Zoning Rooms	2,084.50	2,493.80	2,692.5§	2,307.00	2,109.50	1,536.10
Dwelling Units	549	-	709	-	578	-
Parking Spaces (Residential)	220	220	284	284	237	237

RUPPERT BREWERY URBAN RENEWAL AREA
LARGE SCALE RESIDENTIAL DEVELOPMENT PLAN

Table II
Proposed Maximum Development Vs. Zoning Capacity

	Parcel 3A		Parcel 3B		Parcel 4A	
	C4-6		C2-8(R10)		C4-6	
	Proposed	Capacity	Proposed	Capacity	Proposed	Capacity
Lot Area	16,114		74,727		32,026	
Floor Area (s.f.) Total	39,781		676,244		384,300	384,312
Residential	-		646,346		305,020	305,020
Community Facilities	-		8,898		47013 ^	47,013
Commercial	39,781		21,000		32267 ^^	32,267
Lot Coverage (s.f) Total	14,400		30,117 (27,010*)		19,325	-
Residential	-		27,010		11,200	-
Community Facilities	-		3,107 (0*)		-	-
Commercial	14,400					
Height Factor	3	-	25	-	-	-
Floor Area Ratio	2.47	3.4	9.05	10	12	12****
Residential						
Lot Area	12,136	12,136	71,737	71,737	32,026	32,026
Height Factor	-	-	24	-	-	-
Floor Area Ratio	-	-	8.64	10	9.52	12
Open Space	1,714	-	47,717	-	12,700	-
Open Space Ratio	-	-	7.4	-	-	-
Zoning Rooms	-	404.5	2,805§	2391.2	0	1,067.50
Dwelling Units	-	-		-	290	387
Parking Spaces (Residential)	-	-	180**	196	80	122

RUPPERT BREWERY URBAN RENEWAL AREA
LARGE SCALE RESIDENTIAL DEVELOPMENT PLAN

Table II
Proposed Maximum Development Vs. Zoning Capacity

	Parcel 4B		Parcel 4C	
	C4-6(R10)		C4-6(R10)	
	Proposed	Capacity	Proposed	Capacity
Lot Area	61,738		13,793	
Floor Area (s.f.) Total	564,460	617,380	111,000	137,930
Residential	548,960	601,880	111,000	137,930
Community Facilities	-	-	-	-
Commercial	15,500	15,500	-	-
Lot Coverage (s.f) Total	32,935	-	7,770	-
Residential	32,935	-	7,770	-
Community Facilities	-	-	-	-
Commercial	-	-	-	-
Height Factor	17	-	14	-
Floor Area Ratio	9.14	10.00	8.05	10.00
Residential				
Lot Area	60,188	60,188	13,793	13,793
Height Factor	17	-	14	-
Floor Area Ratio	8.89	9.75	8.05	10.00
Open Space	28,803	-	6,023	-
Open Space Ratio	5.2	-	5.4	-
Zoning Rooms	1,720	2,006	450	460
Dwelling Units	397	-	150	-
Parking Spaces (Residential)	114	139	0	53

RUPPERT BREWERY URBAN RENEWAL AREA
LARGE SCALE RESIDENTIAL DEVELOPMENT PLAN

Table II
Proposed Maximum Development Vs. Zoning Capacity

	Q Parcel					
	C2-8 (R10)		R-8		Combined Total	
	Proposed	Capacity	Proposed	Capacity	Proposed	Capacity
Lot Area	25,177		22,156		47,333	
Floor Area (s.f.) Total	363,484	251,770	19,748	131,828	383,232	383,598
Residential	350,555	238,842	19,748	131,828	370,303	370,670
Community Facilities	-	-	-	-	-	-
Commercial	12,928	12,928			12,928	12,928
Lot Coverage (s.f) Total	17,489	-	8,632	-	26,121	-
Residential	4,561	-	8,632	-	13,193	-
Community Facilities	-	-	-	-	-	-
Commercial	12,928	-	-	-	12,928	-
Height Factor	15	-	15	15	15	15
Floor Area Ratio	14.44	10.00	0.89	5.95	-	-
Residential						
Lot Area	23,884	23,884	22,156	22,156	46,040	46,040
Height Factor	15	-	15	15	15	15
Floor Area Ratio	13.92	9.49	0.89	5.95	7.82	7.83
Open Space	7,688	-	13,524	13,315	21,212	13,315
Open Space Ratio	2.11	-	68.5	10.1	5.53	-
Zoning Rooms	1,137.50	796	54	476	1,191.50	1,272
Dwelling Units	279	-	12	-	291	-
Parking Spaces (Residential)	(1)	98	(1)	4	102	102

NOTES TO TABLES I AND II:

§ Requires zoning waiver under this Large Scale Residential Development Plan

* Lot coverage for height factor and open space computations. Additional lot coverage qualifies as open space.

** Variance by the Board of Standards and Appeals

*** Parking requirements are based on the Zoning Resolution amendment revising the parking requirements in Manhattan Community Board Districts 1 through 8.

**** Includes 2.0 FAR Bonus for Public Plaza pursuant to Zoning Resolution Sections 24-14, 24-223 and 35-35.

^ Community facility use limited to private school use (UG 3).

^^ Commercial use in the upper floors of the proposed building limited to a Physical Culture or Health Establishment. Commercial use fronting on the public open space limited to uses permitted by the underlying C4-6 zoning district regulations.

Table III
HEIGHT AND SETBACK AND SPACING AUTHORIZATIONS

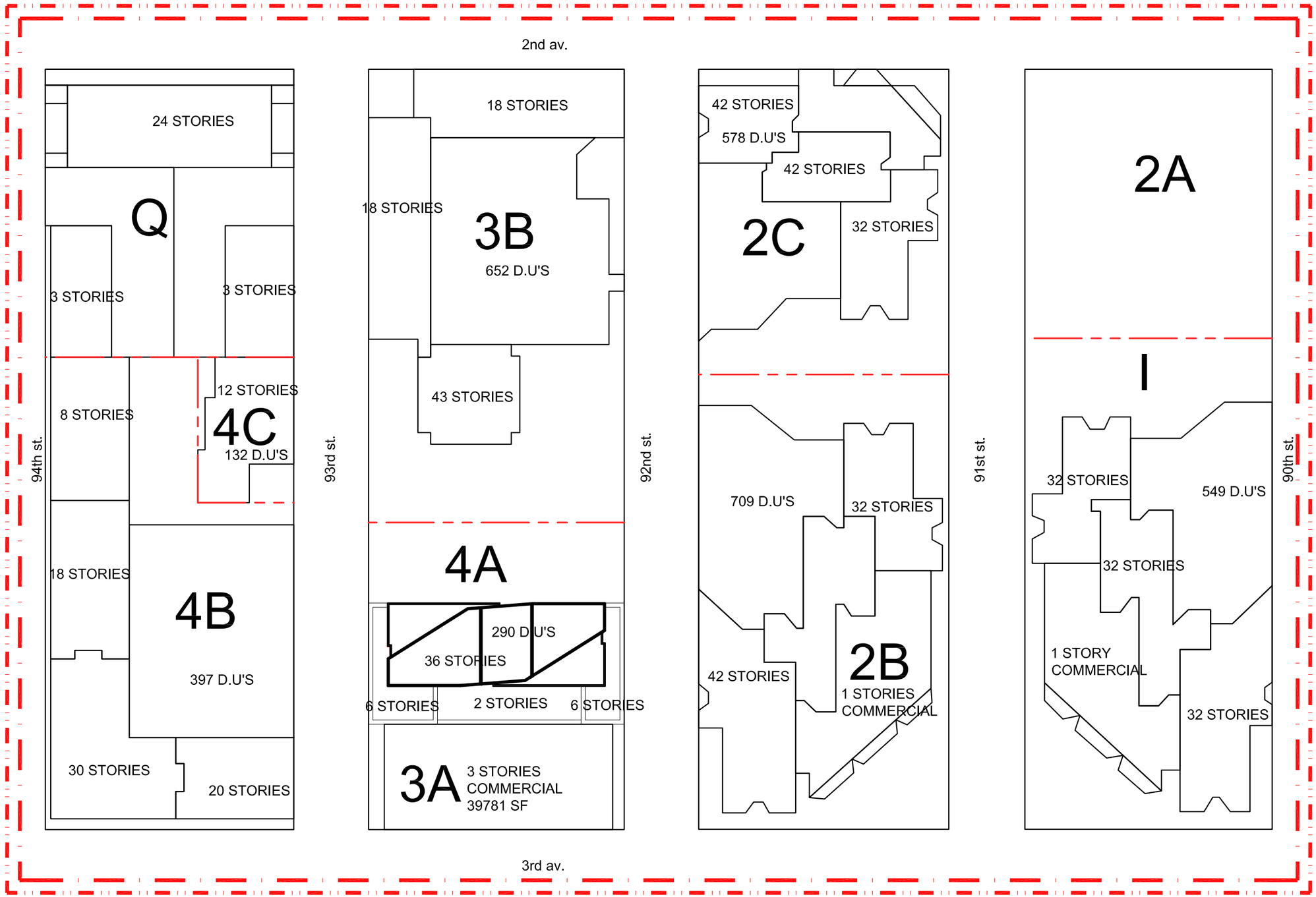
A. Height and Setback Requirements

	Minimum Front setback (feet)	Location of Front Wall	Sky Exposure Plane Penetration Proposed (feet)
Parcel 3B	40'	E. 93rd St.	199'
	None	E. 93rd St.	86'
	None	Second Avenue	86'
	None	E. 92nd St.	80'
	53'	E. 92nd St.	158'
Parcel 2B	None	E. 92nd St.	288'
	15'	E. 91st St.	171'
Parcel 2C	None	E. 91st St.	201'
	None	E. 92nd St.	288'
Parcel 1	None	E. 91st St.	149'
Parcel 4C	None	E. 93rd St.	31'
Parcel 4B	None	E. 94th St.	224'
	None	Third Avenue	169'

B. Minimum Spacing Between Buildings

	Required	Provided
Parcel 2B to 2C	102'	87'
Parcel 4A to 3B	104'	65'

C. Q Parcel - Building located in Rear Yard Equivalent Area.



LEGEND

PROJECT BOUNDARY
LARGE SCALE BOUNDARY
PARCEL BOUNDARY

LARGE SCALE RESIDENTIAL DEVELOPMENT PLAN

03/04/2013

Appendix B

NYC Landmarks Preservation Commission

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

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

ARCHAEOLOGY

Project number: NO LEAD AGENCY / NL-CEQR-M
Project:
Date received: 10/9/2012

Comments:

This document only contains Archaeological review findings. If your request also requires Architecture review, the findings from that review will come in a separate document.

Properties with no Archaeological significance:
1) ADDRESS: 203 EAST 92 STREET, BBL: 1015380010
2) ADDRESS: 217 EAST 92 STREET, BBL: 1015380012

10/16/2012

SIGNATURE DATE
Amanda Sutphin, Director of Archaeology

File Name: 28118_FSO_GS_10162012.doc

Environmental Protection

Carter H. Strickland, Jr.
Commissioner

Angela Licata
Deputy Commissioner
of Sustainability
alicata@dep.nyc.gov

59-17 Junction Boulevard
Flushing, NY 11373
T: (718) 595-4398
F: (718) 595-4479

March 4, 2013

Mr. Robert Dobruskin
Director, Environmental Assessment and Review Division
New York City Department of City Planning
22 Reade Street, Room 4E
New York, New York 10007-1216

Re: 203 East 92nd Street
Block 1538, Lots 10 and 12
DEP # 13DEPTECH025M / CEQR # 77DCP088M
Manhattan, New York

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Environmental Planning and Analysis (DEP) has reviewed the February 2013 Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prepared by Langan Engineering and Environmental Services (Langan) on behalf of Related Companies(applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning text amendment from the New York City Department of City Planning to allow the project applicant to apply for a minor modification of the Large Scale Residential Development (LSRD) associated with the Ruppert Brewery Urban Renewal Plan, which expired in 2008. The project site is bounded by East 92nd and 93rd Street and Second and Third Avenue in the Upper East Side neighborhood of Manhattan, Community District 8. As currently proposed, the zoning action would facilitate the development of a 36-story mixed-use building with approximately 32,726 gross square feet (gsf) of health club uses on the first, fifth and sixth floor; a K-8 private school of approximately 61,183 gsf on the cellar through fourth floors; approximately 80 accessory parking spaces on the cellar level; approximately 939 gsf square feet of retail space at grade; and approximately 341,116 gsf of residential space (approximately 290 dwelling units). It should be noted that approximately 20 percent of the proposed residential units would be designated as affordable.

The February 2013 RAP proposes excavation of historical fill and disposed of in accordance with applicable New York State Department of Environmental Conservation (NYSDEC) regulations; proper removal/closing of underground storage tanks in accordance with applicable NYSDEC regulations; de-watering into storm/sewer drains in accordance with applicable New York City Department of Environmental Protection requirements; air monitoring; dust control measures and installation of two feet of certified clean fill/top soil capping requirement in landscaped/grass covered areas not capped with concrete/asphalt. The February 2013 CHASP addresses worker and community health and safety during redevelopment.

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

Remedial Action Plan

- DCP should instruct the applicant that a vapor barrier should be incorporated into the design plan of the proposed construction project.

- DEP finds the February 2013 RAP and CHASP for the proposed project acceptable as long as the aforementioned information is incorporated into the RAP and CHASP. DCP should instruct the applicant that at the completion of the project, a Professional Engineer (P.E.) certified Remedial Closure Report should be submitted to DEP for review and approval for the proposed project. The P.E. certified Remedial Closure Report should indicate that all remedial requirements have been properly implemented (i.e., proper transportation/disposal manifests and certificates from impacted soils removed and properly disposed of in accordance with NYSDEC regulations, proof of installation of vapor barrier, and two feet of certified clean fill/top soil capping requirement in any landscaped/grass covered areas not capped with concrete/asphalt, etc.).

Future correspondence and submittals related to this project should include the following tracking number **13DEPTECH025M**. If you have any questions, you may contact Maurice Winter at (718) 595-4514.

Sincerely,

Maurice S. Winter
Deputy Director, Site Assessment

c: E. Mahoney
M. Winter
W. Yu
T. Estesen
M. Wimbish
C. Evans- DCP
File

NYC Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 77DCP088M
Project:
Date received: 4/11/2013

The LPC is in receipt of the EAS dated 4/10/13.

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 217 EAST 92 STREET, BBL: 1015380012
2) ADDRESS: 203 EAST 92 STREET, BBL: 1015380010,

Comments: LPC AND NR LISTED IN RADIUS: CHURCH OF THE HOLY TRINITY (316 TO 332 EAST 88TH STREET); 146 TO 156 EAST 89TH STREET HOUSES; AND 160 EAST 92 ST.

There are no additional concerns.

Gina Santucci 4/17/2013

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 28118_FSO_GS_04172013.doc

Appendix C

Carnegie Park Associates, LP
c/o Related Companies
60 Columbus Circle
New York, NY 10023

May 2, 2013

Olga Abinader
CEQR – EARD
NYC DCP
22 Reade Street
New York, NY 10007

Re: CEQR No. 13DCP121M
203 East 92nd Street

To Whom it May Concern:

Carnegie Park Associates, LP is retrofitting the existing boiler installation at Carnegie Park on 200 East 94th Street to burn natural gas. The retrofit will be completed and a Certificate of Operation will be obtained from the New York City Department of Buildings prior to the development at 203 East 92nd Street obtaining a temporary or permanent Certificate of Occupancy from the New York City Department of Buildings.

Sincerely,

Benjamin Joseph
Vice President

Appendix D

Technical Memorandum for 203-205 East 92nd Street EAS
CEQR Number 13DCP121M
ULURP Nos. M860259(A)ZAM, N130263ZRM, and N130264ZCM
August 20, 2013

A. INTRODUCTION

On May 6, 2013, the New York City Planning Commission (CPC), as Lead Agency, issued a Negative Declaration for the proposed 203-205 East 92nd Street project (CEQR No 13DCP121M, and ULURP Nos. M860259(A)ZAM, N130263ZRM, and N130264ZCM) based on analyses identified in an Environmental Assessment Statement (EAS) completed on May 3, 2013 (the "May 3, 2013 EAS"). The CPC is now considering a modification to the project (the "proposed modification") that is proposed by the applicant in response to refinements to the building program.

The purpose of this technical memorandum is to describe the proposed modification and to evaluate whether the proposed modification would result in any significant adverse impacts not already identified in the May 3, 2013 EAS.

Based on a revised analysis framework that reflects the proposed modification, this technical memorandum evaluates the impact categories included in the May 3, 2013 EAS to assure compliance with the 2012 *CEQR Technical Manual*.

As disclosed in this technical memorandum the proposed modification would neither alter the conclusions of the May 3, 2013 EAS or Negative Declaration, nor result in any significant adverse impacts.

B. DESCRIPTION OF PROPOSED CPC MODIFICATION

PROJECT AS ANALYZED IN MAY 3, 2013 EAS

As described in detail below, the projected development analyzed in the May 3, 2013 EAS identified a mixed-use, approximately 462,091 gsf development, which resulted in no significant adverse impacts.[1]

The May 3, 2013 EAS analyzed a mixed-use, approximately 462,091 gsf (384,300 zoning floor area (zsf)) development comprising an approximately 36 story (426'9" tall) building located on a through-block site on the Upper East Side of Manhattan. The affected area is bounded by East 92nd and 93rd Streets and Second and Third Avenues (Block 1538, Lot 10). The proposed building program identified in the May 3, 2013 EAS included:

- Approximately 33,448 gross square feet (gsf) of health club use on the first, fifth, and sixth floors;
- A K-8 private school approximately 61,559 gsf in size on the cellar through fourth floors (projected to include approximately 350 seats and 125 faculty and staff members);

[1] It should also be noted that the May 3, 2013 EAS incorrectly identified one of the three ULURP application numbers associated with the project. The EAS identified one of the numbers as M 860259 (A)ZAM; this should have been identified correctly as N 860259 ZAM.

- Approximately 80 accessory parking spaces on the cellar level;
- Approximately 1,007 gsf of retail use at grade; and
- Approximately 351,203 gsf (no more than 290 units) of residential use above.
- Approximately 20 percent of the proposed residential units were to be designated as affordable.
- Additionally, it was expected that an approximately 10,679 gsf publicly accessible plaza and approximately 2,111 sf of additional open space would be developed on the site, and that the school would have an approximately 2,900-gsf playyard on a third-floor terrace (see **Figures 1 and 2** for the site plan included in the May 3, 2013 EAS and a building elevation from the related ULURP application).

Based on the 2012 *CEQR Technical Manual* thresholds, the May 3, 2013 EAS included analyses of the following impact categories: Land Use, Zoning and Public Policy; Open Space; Shadows; Urban Design and Visual Resources; Hazardous Materials; Transportation; Air Quality; and Noise.

The following impact category analyses warranted (E) designations, which are noted below.

AIR QUALITY (E) DESIGNATION

- Block 1538, Lot 10

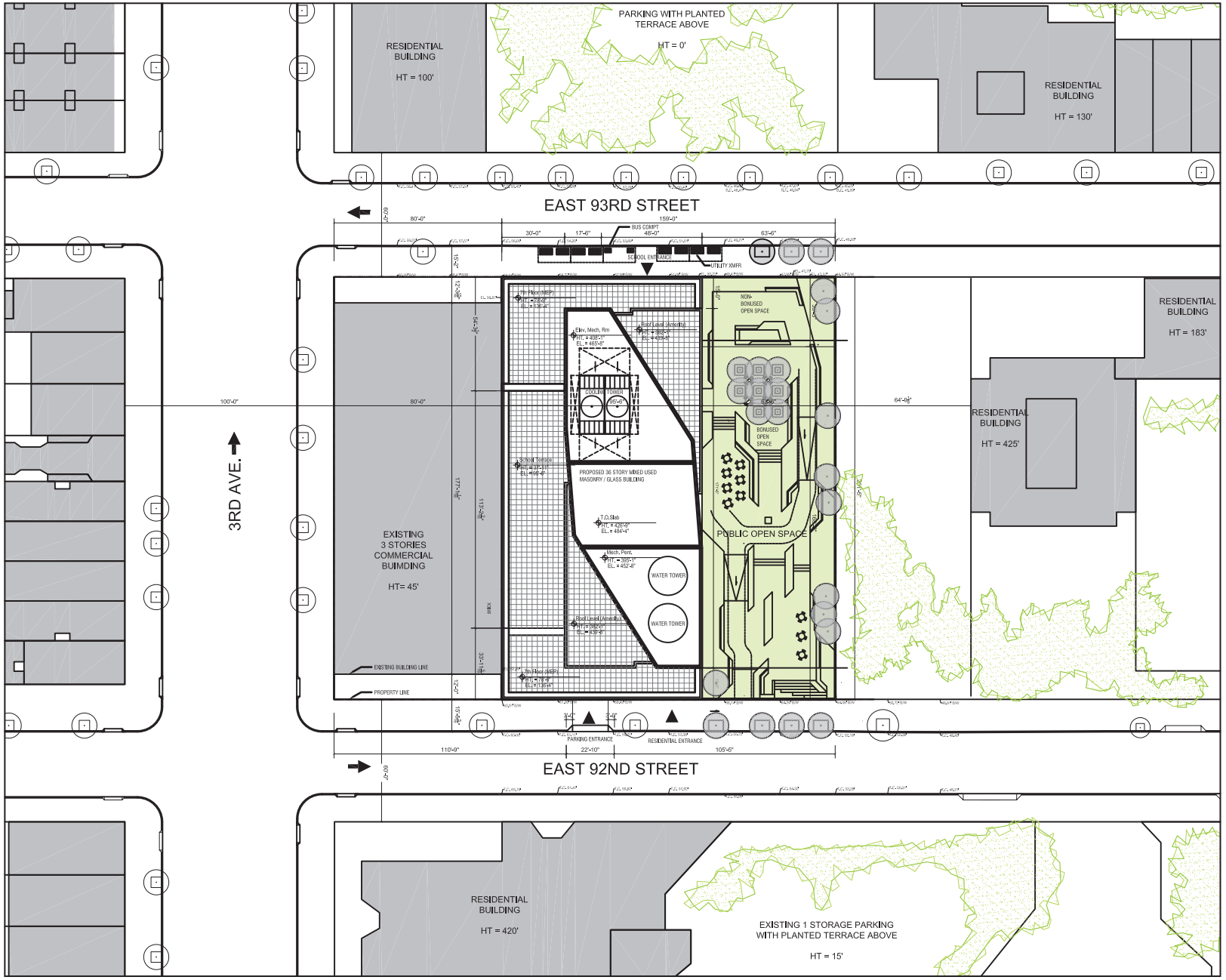
  Any new development on the above-referenced property must ensure that fossil fuel fired heating and hot water equipment be fitted with low NO_x (30 ppm) burners and utilize only natural gas, and that boiler equipment exhaust stack(s) are at least 405 feet above grade. In addition, no temporary or permanent Certificate of Occupancy from the New York City Department of Buildings (DOB) may be obtained for any new development at the subject property unless and until the operator of the building located at 200 East 94th Street (Block 1539, Lot 1) has converted its existing boilers to utilize natural gas, as evidenced by a certificate from DOB.

NOISE (E) DESIGNATION

- Block 1538, Lot 10

  In order to ensure an acceptable interior noise environment, future school/residential/commercial uses must provide a closed window condition with up to 41 dBA of window/wall attenuation in order to maintain an interior noise level of 45 dBA. In order to maintain a closed window condition, an alternate means of ventilation that brings outside air into the building without degrading the acoustical performance of the building must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning. The specific attenuation requirements to be implemented throughout the project building facades are provided in the 203-205 East 92nd Street EAS, Table H-8 (CEQR No. 13DCP121M), May 2013.

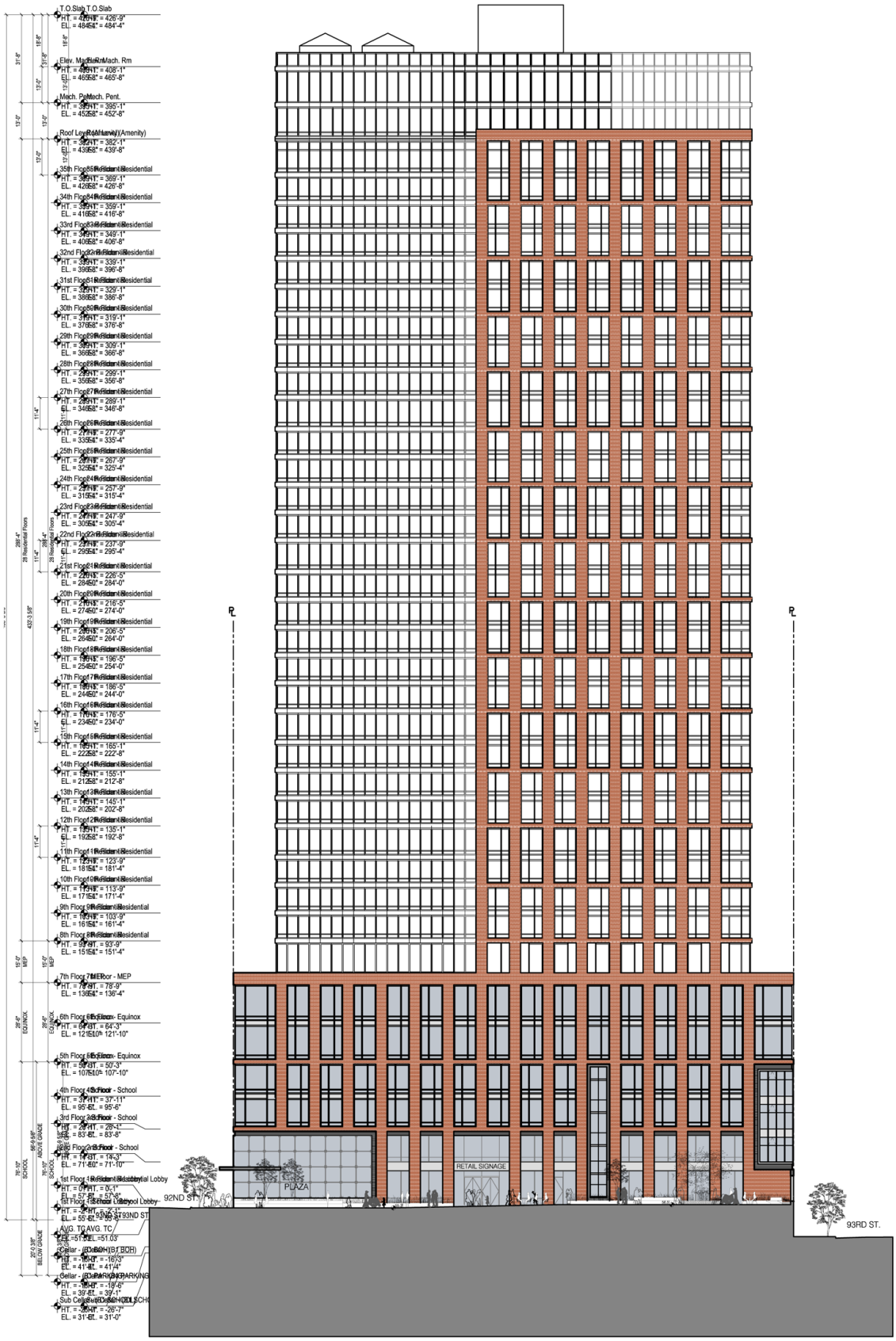
The EAS identified that with the (E) designations in place, the proposed project would not result in any significant adverse impacts.



Site Plan, Project as Analyzed in May 3, 2013 EAS

203-205 East 92nd Street

Figure 1



Building Elevation, Project as Analyzed in May 3, 2013 EAS

PROJECT WITH PROPOSED MODIFICATIONS

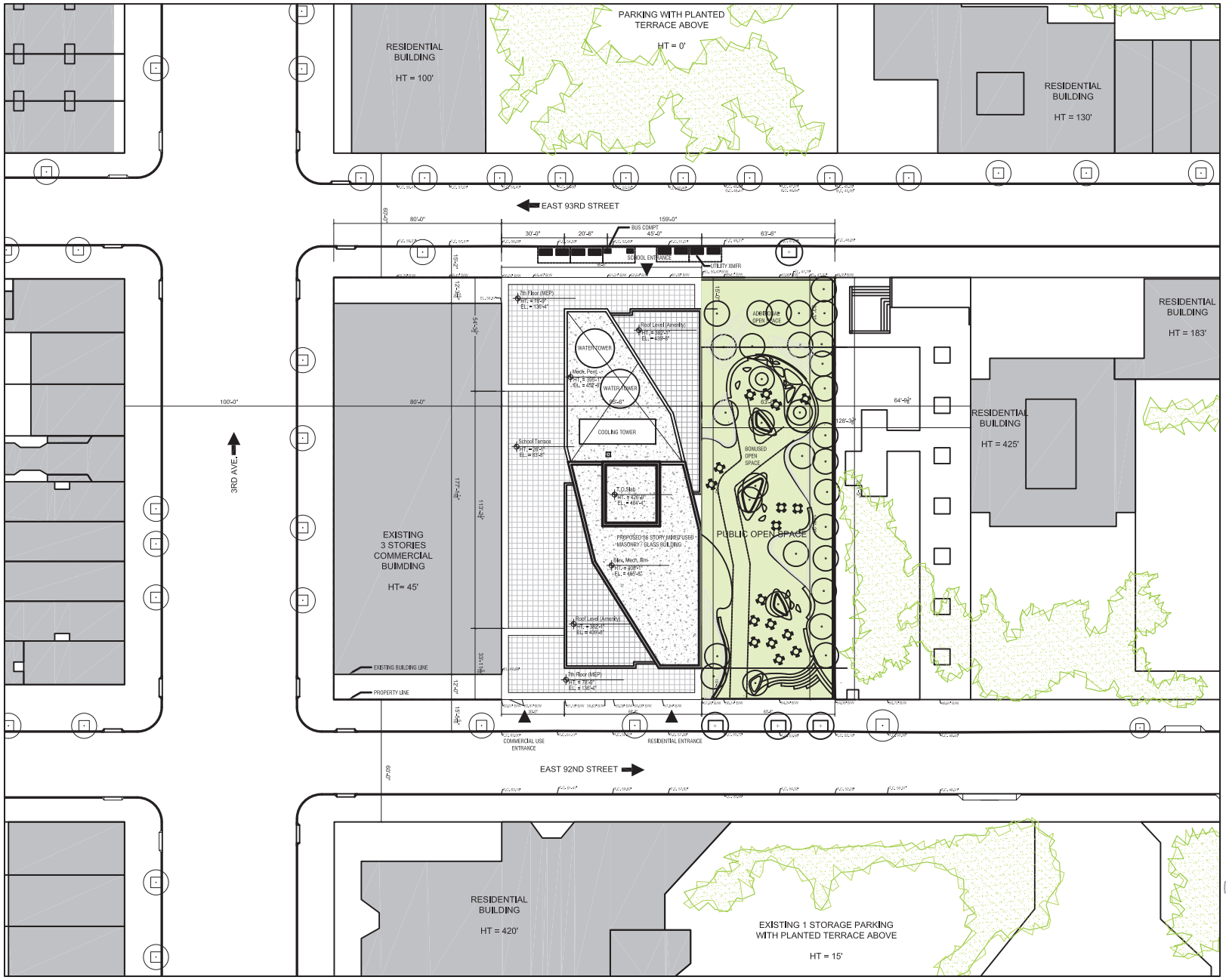
As discussed below, with the proposed modifications, the mix of uses and square footage breakdown of the proposed project would differ from the projected development analyzed in the May 3, 2013 EAS.

While the previously-analyzed project was approximately 462,091 gsf (384,300 zfa) in size and 426'9" tall, the project with the proposed modifications would be approximately 466,253 gsf in size, representing an incremental increase of 4,162 gsf (see **Figures 3 and 4** for the current site plan and building elevation). With the proposed modifications, the project would not change its overall height (426'9" tall) or zoning floor area (384,300 zfa). The proposed development as modified is described as follows:

- Approximately 44,544 gross square feet (gsf) of health club use on the cellar, first, fifth, and sixth floors;
- A K-8 private school approximately 60,024 gsf in size on the cellar through fourth floors (projected to include approximately 350 seats and 125 faculty and staff members);
- No accessory parking spaces;
- Approximately 826 gsf of retail use at grade; and
- Approximately 360,859 gsf (no more than 231 units) of residential use above.
- Approximately 20 percent of the proposed residential units are to be designated as affordable.
- Additionally, an approximately 10,679 gsf publicly accessible plaza and approximately 2,111 sf of additional open space would be developed on the site, and the school would have an approximately 2,900-gsf playyard on a third-floor terrace (see **Figure 3** of this Technical Memorandum).

It should also be noted that:

- The elevation heights of floors above the seventh floor are to be slightly modified (refer to Table H-8 in the Noise section of this Technical Memorandum),
- The project as modified would not alter the massing or height of the proposed building, or the proposed design or square footage of the public plaza and additional open space.
- The proposed modifications would result in a reduction in the proposed number of dwelling units (from 290 to 231) for the proposed project, and no change to the proposed square footage of the public plaza and additional open space.
- No change in employment is anticipated with the modest reduction in square footage for the proposed school.
- The modest changes to the square footage for the health club and retail uses and the elimination of accessory parking from the proposed program would result in a total increase in the project's projected employment of 35 persons.
- There would be no change to the construction phasing or overall duration associated with the proposed modification.

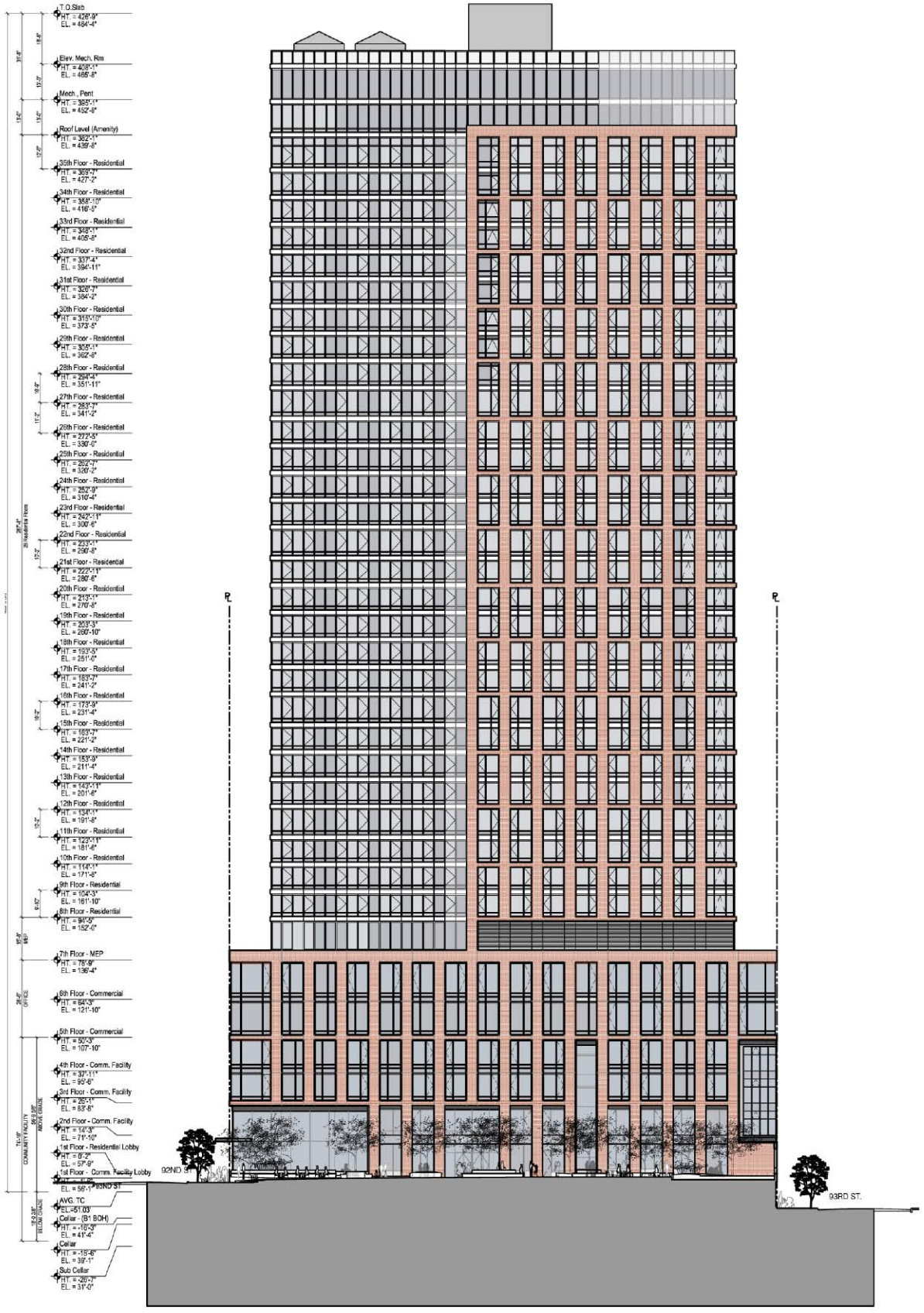


Site Plan, Project with Proposed Modifications

203-205 East 92nd Street

Figure 3

7.10.13



Building Elevation (East), Project with Proposed Modifications

203-205 East 92nd Street

Figure 4

In sum, the project would change in the following ways: (1) the project would no longer include any accessory parking spaces; (2) the project would include approximately 44,544 gsf of health club use, which would be located on the cellar level (replacing the formerly-proposed accessory parking) as well as the first, fifth, and sixth floors as previously analyzed, representing an incremental increase of 11,096 gsf; (3)the K-8 private school would see a slight reduction in square footage (an incremental decrease of 1,535 gsf); (4) the proposed at-grade retail use would decrease slightly, from approximately 1,007 gsf to approximately 826 gsf (an incremental decrease of 181 gsf); and (5) there would be approximately 360,859 gsf (no more than 231 units) of residential use above, representing a decrease of 59 units and an increase of 9,656 gsf.[1] As with the previously-analyzed project, (1) approximately 20 percent of the proposed residential units would be designated as affordable, for a total of 46 affordable units; (2) the square footage of the proposed publicly accessible plaza and additional open space, as well as the school's terrace play yard, would remain as previously analyzed; (3) the proposed private school would continue to include approximately 350 seats and 125 faculty and staff members; and (4) the project building's massing would remain as previously analyzed.

In total, the previously-analyzed building was approximately 462,091 gsf (384,300 zfa) in size and 426'9" tall; the project as currently proposed would be the same height and zoning floor area, and approximately 466,253 gsf in size, representing an incremental increase of 4,162 gsf (see **Figures 3 and 4** for the current site plan and building elevation).

C. ANALYSIS FRAMEWORK

For reference purposes, **Table 1** provides a comparison of the project as analyzed in the May 3, 2013 EAS to the project with the proposed modifications.

Table 1: Comparison of Previously-Analyzed Project to Project with Proposed Modifications

Use	Project as Analyzed in May 3, 2013 EAS	Project with Proposed Modifications	Increment
Residential	351,203 gsf (290 units) 305,020 zfa	360,859 gsf (231 units) 303,933 zfa	+9,656 gsf (-59 units) -1,087 zfa
School	61,559 gsf 47,013 zfa	60,024 gsf 46,432 zfa	-1,535 gsf -581 zfa
Health Club[1]	33,448 gsf 31,272 zfa	44,544 gsf 33,126 zfa	+11,096 gsf +1,854 zfa
Retail	1,007 gsf 995 zfa	826 gsf 809 zfa	-181 gsf -186 zfa
Accessory Parking	80 spaces (14,874 gsf)	0 spaces	-80 spaces (-14,874 gsf)
Publicly Accessible Plaza / Additional Open Space	10,679 sf / 2,111 sf	10,679 sf / 2,111 sf	No change
Total	462,091 gsf (384,300 zfa)	466,253 gsf (384,300 zfa)	+4,162 gsf 0 zfa

Notes: [1]This use would now be on the cellar level as well as the 1st, 5th, and 6th floors, replacing the accessory parking use formerly assumed for that space.

[1] There would be a decrease in the number of units because the project with the proposed modifications would include larger units than assumed in the project as analyzed in the May 3, 2013 EAS.

D. POTENTIAL IMPACTS OF THE PROPOSED MODIFICATION

For each of the screening analyses and supplemental attachments provided in the EAS, the potential effect of the proposed modifications is summarized below.

LAND USE, ZONING, AND PUBLIC POLICY

As described above in Section B, the proposed modification would result in a modest change to the proposed gross square footage (approximately 4,162 gsf) and no change to the proposed zoning floor area for the proposed project. The proposed modification would also result in the elimination of the proposed 80 spaces of accessory parking for the site. There would be no change to the proposed square footage of the public plaza and additional open space. The proposed health club use would be 11,096 gsf larger than previously analyzed; the proposed K-8 private school would have a slight reduction in square footage (an incremental decrease of 1,535 gsf); the proposed at-grade retail use would have an incremental decrease of 181 gsf; and the proposed number of dwelling units is now lower than previously assumed (231, compared to 290). The proposed modification reflects refinements to the building program including the elimination of the proposed accessory parking, which was not necessary to support the other uses, and to reallocate the relevant square footage to the other proposed uses.

Given the minor nature of the changes, the proposed project, as modified, would not be expected to have an adverse effect on land use either on-site or in the land use study area. The proposed modification would not affect zoning either on-site or in the land use study area, and no applicable public policies would be affected by the proposed modification. Therefore, the proposed change has no impact on the analysis and conclusions of the Land Use, Zoning, and Public Policy section of the May 3, 2013 EAS.

SOCIOECONOMIC CONDITIONS

The proposed modifications would result in a reduction to the proposed number of dwelling units (from 290 to 231) for the proposed project. Since the relevant Socioeconomic Conditions threshold for an indirect residential displacement analysis is whether the population increase would represent more than five percent of the primary study area population or otherwise potentially affect real estate market conditions, and the project analyzed in the May 3, 2013 EAS did not exceed that threshold, the new proposed project would similarly not exceed that threshold. Therefore, the project, as modified, does not change the Socioeconomic Conditions screening analysis provided in the May 3, 2013 EAS, and would not result in a significant adverse Socioeconomic Conditions impact.

OPEN SPACE

The proposed modifications would result in a reduction in the proposed number of dwelling units for the proposed project, and no change to the proposed square footage of the public plaza and additional open space. No changes in project employment are anticipated with the modest reduction in square footage for the proposed school; the modest changes to the square footage for the health club (an increase of 11,096 gsf) and retail uses (a reduction of 181 gsf) and the elimination of accessory parking from the proposed program would result in a total increase in the project's projected employment of 35 persons. The total projected employment generation for the project with the proposed modifications would be 276 (compared to 241 in the May 3, 2013 EAS), which is remains below the 500-worker threshold for an assessment of potential

open space effects on the non-residential (worker) population, for areas of the city not identified as underserved or well-served by open space. Therefore, the proposed project, as modified, would not result in significant adverse impacts related to Open Space or conclusions different from those identified in the Open Space section of the May 3, 2013 EAS.

SHADOWS

The proposed modifications would not alter the massing or height of the proposed building. Since the detailed analysis as presented in the May 3, 2013 EAS disclosed no significant adverse shadows impacts from the original proposal, this finding remains applicable with the proposed modification. No significant adverse impacts related to Shadows would result from the project, as modified, and the conclusions identified in the May 3, 2013 EAS remain.

HISTORIC AND CULTURAL RESOURCES

As described in the May 3, 2013 EAS, the New York City Landmarks Preservation Commission (LPC) determined that the project site is not archaeologically sensitive in a letter dated October 16, 2012. There are no known or potential architectural resources located within 90 feet of the project site. There is one known architectural resource and one potential architectural resource more than 350 feet from the project site. Since the project site is located well beyond 90 feet from these sites, the May 3, 2013 EAS concluded that the proposed project would have no adverse physical (construction-related) or visual or contextual impacts on these known and potential architectural resources.

As described above, the proposed modifications would not alter the massing or height of the proposed building, or the area of proposed subsurface disturbance. Therefore, the proposed modification has no impact on the answers provided for the Historic and Cultural Resources section of the May 3, 2013 EAS. No significant adverse impacts related to Historic and Cultural Resources would result from the project, as modified, and the conclusions identified in the May 3, 2013 EAS remain.

URBAN DESIGN AND VISUAL RESOURCES

As previously stated, the proposed modifications would not alter the massing or height of the proposed building, or the proposed design or square footage of the public plaza and additional open space. Since the proposed modifications would result in a building that is within the building envelope examined in the May 3, 2013 EAS, the proposed modification would have no significant effect to the urban design elements analyzed previously, including building types, arrangements, or uses, street patterns, streetscape elements, open spaces, natural resources, or wind or sunlight characteristics. Further, the project, as modified, would not obstruct or significantly affect any existing view corridors or views to visual resources. Thus, as concluded in the May 3, 2013 EAS supplemental assessment of Urban Design and Visual Resources, the proposed modification would result in a project that would not result in any significant adverse impacts related to Urban Design.

HAZARDOUS MATERIALS

As described in the May 3, 2013 EAS, a *Draft Phase I Environmental Site Assessment (ESA)* of the project site was prepared by Langan Engineering and Environmental Services, P.C. in August 2012, and a *Draft Phase II Environmental Site Investigation (Phase II)* of the project site was conducted by Langan in October 2012. Based on the findings of the Phase II, a Remedial

Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP) were prepared for implementation during proposed construction and were approved by the New York City Department of Environmental Protection in a letter dated March 4, 2013.

With the proposed modification, the proposed project would have the same ground and subsurface elements as the proposed project identified in the May 3, 2013 EAS, and would continue to require demolition and excavation. With the proposed modification, the same protective measures discussed in the EAS including implementation of the Remedial Action Plan and Construction Health and Safety Plan previously-approved by the New York City Department of Environmental Protection would be implemented. Therefore, with these protective measures, no significant adverse impacts related to Hazardous Materials would result from the project, as modified, and the conclusions of the Hazardous Materials section of the May 3, 2013 EAS remain.

TRANSPORTATION

The proposed modifications would result in a reduction in the proposed number of dwelling units for the proposed project, and no change to the proposed square footage of the public plaza and additional open space. The proposed modifications would result in modest changes to the proposed gross square footage for the school use (a net decrease of approximately 1,535 gsf, with no change to the student population and staff employment estimates) and for the retail use (a net decrease of approximately 181 gsf). However, the proposed modifications would increase the gross square footage for the health club use by approximately 11,000 gsf, and would result in the elimination of the 80 proposed on-site accessory parking spaces.

The reduction in the proposed number of dwelling units would result in a reduction in the total number of person and vehicle trips during both analysis peak hours, compared to the analysis presented in the May 2, 2013 EAS. Additionally, the proposed increase of approximately 11,000 gsf in the health club use would not result in significant increases in the levels of person and vehicle trips analyzed in the May 2, 2013 EAS. The modest nature of the proposed changes associated with the school and retail uses would not result in any perceptible changes in the level of person and vehicle trips analyzed in the May 3, 2013 EAS.

Table 2 below summarizes the total number of person and vehicle trips generated by the proposed project analyzed in the May 3, 2013 EAS. To account for the changes in traffic and pedestrian levels resulting from the proposed modifications, a trip generation analysis was conducted for the various project components using the trip generation factors identified in the May 3, 2013 EAS. The person and vehicle trips resulting from the proposed modifications are summarized in **Table 3** below. In total, the proposed project analyzed in the May 3, 2013 EAS resulted in 761, 743, and 403 person trips and 158, 144, and 49 vehicle trips during the weekday AM, midday/afternoon and PM peak hours, respectively (see **Table 2**). In comparison, with the proposed modifications, the total number of person and vehicle trips would be approximately 729, 760, and 371 person trips and 154, 142, and 45 vehicle trips during the weekday AM, midday/afternoon and PM peak hours, respectively (see **Table 3**).

Table 2

Trip Generation Summary – Project as Analyzed in the May 3, 2013 EAS

Peak Hour	In/Out	Person Trips							Vehicle Trips				
		Auto	Taxi	School Bus	Bus	Subway	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Residential Component													
AM	In	4	1	-	4	21	5	35	3	7	-	1	11
	Out	20	8	-	22	121	28	199	17	7	-	1	25
	Total	24	9	-	26	142	33	234	20	14	-	2	36
Midday/Afternoon	In	6	2	-	6	36	8	58	5	3	-	1	9
	Out	6	2	-	6	36	8	58	5	3	-	1	9
	Total	12	4	-	12	72	16	116	10	6	-	2	18
PM	In	18	7	-	20	110	25	180	16	5	-	0	21
	Out	8	3	-	9	47	11	78	7	5	-	0	12
	Total	26	10	-	29	157	36	258	23	10	-	0	33
School Component—Student Trips													
AM	In	47	0	63	32	141	48	331	36	0	4	0	40
	Out	0	0	0	0	0	16	16	36	0	4	0	40
	Total	47	0	63	32	141	64	347	72	0	8	0	80
Midday/Afternoon	In	0	0	0	0	0	16	16	36	0	4	0	40
	Out	47	0	63	32	141	48	331	36	0	4	0	40
	Total	47	0	63	32	141	64	347	72	0	8	0	80
PM	In	0	0	0	0	0	2	2	4	0	1	0	5
	Out	5	0	7	4	15	6	37	4	0	1	0	5
	Total	5	0	7	4	15	8	39	8	0	2	0	10
School Component—Staff/Faculty Trips													
AM	In	33	3	-	12	47	18	113	28	5	-	0	33
	Out	0	0	-	0	0	0	0	0	5	-	0	5
	Total	33	3	-	12	47	18	113	28	10	-	0	38
Midday/Afternoon	In	0	0	-	0	0	0	0	0	5	-	0	5
	Out	33	3	-	12	47	18	113	28	5	-	0	33
	Total	33	3	-	12	47	18	113	28	10	-	0	38
PM	In	0	0	-	0	0	0	0	0	0	-	0	0
	Out	4	0	-	1	6	2	13	3	0	-	0	3
	Total	4	0	-	1	6	2	13	3	0	-	0	3

Table 2 (cont'd)

Trip Generation Summary – Project as Analyzed in the May 3, 2013 EAS

Peak Hour	In/Out	Person Trips							Vehicle Trips				
		Auto	Taxi	School Bus	Bus	Subway	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Health Club Component													
AM	In	0	0	-	1	3	20	24	0	1	-	0	1
	Out	1	1	-	1	4	28	35	1	1	-	0	2
	Total	1	1	-	2	7	48	59	1	2	-	0	3
Midday/Afternoon	In	1	1	-	3	9	58	72	1	2	-	0	3
	Out	1	1	-	2	7	50	61	1	2	-	0	3
	Total	2	2	-	5	16	108	133	2	4	-	0	6
PM	In	1	1	-	2	7	45	56	1	1	-	0	2
	Out	0	0	-	1	2	15	18	0	1	-	0	1
	Total	1	1	-	3	9	60	74	1	2	-	0	3
Local Retail Component													
AM	In	0	0	-	0	0	2	2	0	0	-	0	0
	Out	0	0	-	0	0	2	2	0	0	-	0	0
	Total	0	0	-	0	0	4	4	0	0	-	0	0
Midday/Afternoon	In	0	0	-	1	1	12	14	0	0	-	0	0
	Out	0	0	-	1	1	12	14	0	0	-	0	0
	Total	0	0	-	2	2	24	28	0	0	-	0	0
PM	In	0	0	-	0	0	6	6	0	0	-	0	0
	Out	0	0	-	0	0	6	6	0	0	-	0	0
	Total	0	0	-	0	0	12	12	0	0	-	0	0
Publicly Accessible Plaza Component													
AM	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
Midday/Afternoon	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
PM	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
Total Trips													
AM	In	84	5	63	49	213	93	507	68	13	4	1	86
	Out	21	9	0	23	126	75	254	54	13	4	1	72
	Total	**105**	**14**	**63**	**72**	**339**	**168**	**761**	**122**	**26**	**8**	**2**	**158**
Midday/Afternoon	In	8	4	0	10	45	96	163	43	10	4	1	58
	Out	87	7	63	54	232	137	580	71	10	4	1	86
	Total	**95**	**11**	**63**	**64**	**277**	**233**	**743**	**114**	**20**	**8**	**2**	**144**
PM	In	19	9	0	23	117	80	248	21	6	1	0	28
	Out	17	4	7	15	71	41	155	14	6	1	0	21
	Total	**36**	**13**	**7**	**38**	**188**	**121**	**403**	**35**	**12**	**2**	**0**	**49**

Table 3

Trip Generation Summary – Project with Proposed Modifications

Peak Hour	In/Out	Person Trips							Vehicle Trips				
		Auto	Taxi	School Bus	Bus	Subway	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Residential Component													
AM	In	3	1	-	3	17	4	28	2	6	-	1	9
	Out	16	6	-	17	97	22	158	14	6	-	1	21
	Total	19	7	-	20	114	26	186	16	12	-	2	30
Midday/Afternoon	In	5	2	-	5	28	7	47	4	2	-	1	7
	Out	5	2	-	5	28	7	47	4	2	-	1	7
	Total	10	4	-	10	56	14	94	8	4	-	2	14
PM	In	14	6	-	16	88	20	144	12	5	-	0	17
	Out	6	2	-	7	38	9	62	5	5	-	0	10
	Total	20	8	-	23	126	29	206	17	10	-	0	27
School Component—Student Trips													
AM	In	47	0	63	32	141	48	331	36	0	4	0	40
	Out	0	0	0	0	0	16	16	36	0	4	0	40
	Total	47	0	63	32	141	64	347	72	0	8	0	80
Midday/Afternoon	In	0	0	0	0	0	16	16	36	0	4	0	40
	Out	47	0	63	32	141	48	331	36	0	4	0	40
	Total	47	0	63	32	141	64	347	72	0	8	0	80
PM	In	0	0	0	0	0	2	2	4	0	1	0	5
	Out	5	0	7	4	15	6	37	4	0	1	0	5
	Total	5	0	7	4	15	8	39	8	0	2	0	10
School Component—Staff/Faculty Trips													
AM	In	33	3	-	12	47	18	113	28	5	-	0	33
	Out	0	0	-	0	0	0	0	0	5	-	0	5
	Total	33	3	-	12	47	18	113	28	10	-	0	38
Midday/Afternoon	In	0	0	-	0	0	0	0	0	5	-	0	5
	Out	33	3	-	12	47	18	113	28	5	-	0	33
	Total	33	3	-	12	47	18	113	28	10	-	0	38
PM	In	0	0	-	0	0	0	0	0	0	-	0	0
	Out	4	0	-	1	6	2	13	3	0	-	0	3
	Total	4	0	-	1	6	2	13	3	0	-	0	3
Health Club Component													
AM	In	1	1	-	1	4	26	33	1	2	-	0	3
	Out	1	1	-	2	6	38	48	1	2	-	0	3
	Total	2	2	-	3	10	64	81	2	4	-	0	6
Midday/Afternoon	In	2	2	-	4	12	77	97	2	3	-	0	5
	Out	2	2	-	3	10	66	83	2	3	-	0	5
	Total	4	4	-	7	22	143	180	4	6	-	0	10
PM	In	1	1	-	3	9	60	74	1	1	-	0	2
	Out	0	0	-	1	3	20	24	0	1	-	0	1
	Total	1	1	-	4	12	80	98	1	2	-	0	3
Local Retail Component													
AM	In	0	0	-	0	0	2	2	0	0	-	0	0
	Out	0	0	-	0	0	2	2	0	0	-	0	0
	Total	0	0	-	0	0	4	4	0	0	-	0	0
Midday/Afternoon	In	0	0	-	1	1	10	12	0	0	-	0	0
	Out	0	0	-	1	1	10	12	0	0	-	0	0
	Total	0	0	-	2	2	20	24	0	0	-	0	0
PM	In	0	0	-	0	0	5	5	0	0	-	0	0
	Out	0	0	-	0	0	5	5	0	0	-	0	0
	Total	0	0	-	0	0	10	10	0	0	-	0	0

Table 3 (cont'd)
Trip Generation Summary – Project with Proposed Modifications

Peak Hour	In/Out	Person Trips							Vehicle Trips				
		Auto	Taxi	School Bus	Bus	Subway	Walk	Total	Auto	Taxi	School Bus	Delivery	Total
Publicly Accessible Plaza Component													
AM	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
Midday/Afternoon	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
PM	In	0	0	-	0	0	1	1	0	0	-	0	0
	Out	0	0	-	0	0	1	1	0	0	-	0	0
	Total	0	0	-	0	0	2	2	0	0	-	0	0
Total Trips													
AM	In	83	5	63	48	209	98	506	67	13	4	1	85
	Out	17	7	0	19	102	78	223	51	13	4	1	69
	Total	**100**	**12**	**63**	**67**	**311**	**176**	**729**	**118**	**26**	**8**	**2**	**154**
Midday/Afternoon	In	7	4	0	10	41	111	173	42	10	4	1	57
	Out	87	7	63	53	227	150	587	70	10	4	1	85
	Total	**94**	**11**	**63**	**63**	**268**	**261**	**760**	**112**	**20**	**8**	**2**	**142**
PM	In	16	7	0	19	97	88	227	18	6	1	0	25
	Out	16	3	7	13	62	43	144	13	6	1	0	20
	Total	**32**	**10**	**7**	**32**	**159**	**131**	**371**	**31**	**12**	**2**	**0**	**45**

Therefore, the proposed change in the square footage for the health club use in conjunction with the reduction in the number of proposed dwelling units would result in a maximum increase of approximately 17 person trips and 0 vehicle trips during any of the analysis peak hours. Furthermore, the elimination of on-site accessory parking spaces would not result in any changes to the auto trip assignments at the study area intersections, due to the fact that the autos related to the proposed residential use would continue to use East 92nd Street to access the off-site public parking garage located on the south side of the street (rather than the previously-proposed on-site facility). Therefore, the proposed modifications would have has no impact on the analysis and conclusions of the Transportation section of the May 3, 2013 EAS.

AIR QUALITY

As indicated in the Transportation section, the proposed changes associated with the school and retail uses would not result in any perceptible changes in the level of vehicle trips analyzed in the May 3, 2013 EAS. In addition, the proposed modification would result in the elimination of the 80 proposed on-site accessory parking spaces. Therefore, there would be no impact on the mobile source air quality analysis presented in the May 3, 2013 EAS.

The proposed modification would not affect the project building's massing and height. However, the roof plan for the project building would be revised, and the fossil fuel-fired heating, ventilation and air conditioning equipment exhausts would be relocated as a result. With the proposed modifications, the boiler installation would be relocated approximately 65 feet to the southeast. The boilers would exhaust vertically via individual stacks that would be a minimum of 10 feet above the top roof. The cogeneration plant would be relocated approximately 60 feet to the southwest as compared to the design analyzed in the May 3, 2013 EAS.

In addition, design changes have been made to the proposed boilers and cogeneration plant, and the project building currently includes a 500 kilowatt ultra low sulfur diesel-fired emergency

generator. **Table 4** provides a comparison of the boiler and cogeneration equipment with the proposed modification and the analyzed configuration in the May 3, 2013 EAS. As shown in the table, the overall capacity of the boiler equipment would not change with the proposed modifications. However, the current cogeneration plant design capacity is greater than the design analyzed in the May 3, 2013 EAS. In addition, under the proposed modifications, the boiler and cogeneration equipment would be closer to the existing residential development to the south.

Table 4
Proposed HVAC Equipment Modifications

Parameter	May 3, 2013 EAS	Proposed Modifications
No. & Capacity of Boilers	4 @ 6 MMBtu/hr	8 @ 3 MMBtu/hr
Maximum Boiler Operating Load	4 @ 85% load (heating season) 2 @ 70% load (non-heating season)	8 @ 85% load (heating season) 4 @ 70% load (non-heating season)
No. of Boiler Stacks	4	8
Boiler Exhaust Height & Configuration	405 ft Horizontal Exhaust	418 ft Minimum Vertical Exhaust
No. & Capacity of Cogeneration Plant	1 @ 65 KW	2 @ 100 KW
Cogeneration Plant Height & Configuration	420 ft Vertical Exhaust	418 ft Minimum Vertical Exhaust

Notes: Stack heights are referenced to mean curb elevation.

Therefore, an AERMOD modeling analysis was performed to determine potential 1-hour NO_2, 24-hour $PM_{2.5}$ and annual $PM_{2.5}$ impacts from the exhaust stack for the heat and hot water systems and potential cogeneration plant for the proposed project with the proposed modifications. (Annual concentrations of NO_2 were not analyzed since the screening analysis performed for the May 3, 2013 EAS determined that no significant adverse impacts would occur based on a screening-level analysis and the proposed modifications would not affect these conclusions.)

The $PM_{2.5}$ analysis was performed based on the parameters presented in Table 4, as well as based on a worst-case stack location and lower (405 foot) stack height, to determine maximum overall concentrations. Maximum modeled concentrations are presented in **Table 5**.

Table 5
Maximum Modeled Pollutant Concentrations (in μg/m^3)

Pollutant	Averaging Period	Modeled Concentration	Background Concentration	Total Concentration	Standard
NO_2	1-hour	Hourly	Hourly	119.8	188
$PM_{2.5}$	24-hour	1.94	-	1.94	4.0 (1)
	Annual (discrete)	0.20	-	0.20	0.3
	Annual (neighborhood scale)	0.01	-	0.01	0.1

Notes: (1) The $PM_{2.5}$ *de minimis* criteria superseded the $PM_{2.5}$ interim guidance criteria on June 5, 2013. The 24-hour average interim guidance criteria for $PM_{2.5}$ were as follows: > 2 μg/m^3 (5 μg/m^3 not-to-exceed value), based on the magnitude, frequency duration, location, and size of the area of the predicted concentrations. The $PM_{2.5}$ increments shown are less than the *de minimis* values. These increments were not considered significant when they were compared with the interim guidance criteria in the May 3, 2013 EAS, and are also not significant when compared to the *de minimis* values.
(2) NO_2 annual concentrations were not determined since the total NO_2 emission rate, 0.0175 g/sec, is less than the emission rate used in the screening analysis presented in the May 3, 2013 EAS.

As shown in **Table 5**, the maximum potential increase in 1-hour NO_2 concentrations associated with the proposed project's boilers and cogeneration plant systems, when added to background concentrations, would be less than the National Ambient Air Quality Standards. The maximum 24-hour incremental impacts at any discrete receptor location would be less than the applicable *de minimis* criteria of 2 $\mu g/m^3$. On an annual basis, the maximum projected $PM_{2.5}$ increments would be less than the applicable *de minimis* criteria of 0.3 $\mu g/m^3$.

Overall, these changes would not adversely affect air quality from the proposed project's stationary sources. In addition, as noted in Section B of this Technical Memorandum, an (E) designation related to Air Quality was identified in the May 3, 2013 EAS. No changes to the proposed (E) designation for air quality would be required. Therefore, the proposed modifications would have no impact on the analysis and the conclusions of the Air Quality section of the May 3, 2013 EAS remain unchanged.

NOISE

The proposed modification has no effect on the required noise attenuation established for the proposed building in the EAS; however, as the elevation heights of some of the lower floors have shifted very slightly, **Table 6** below provides an update to Table H-8 from the May 3, 2013 EAS, which identified the CEQR attenuation requirements for each façade of the proposed building.

Table 6
CEQR Attenuation Requirements

Proposed Building Façade Location	Applicable Noise Receptor or Floor Location	Elevation Height	Maximum L_{10} (in dBA)[1]	Attenuation Required (in dBA)
Facing East 92nd Street	Site 1	At-grade	64.5	N/A[2]
Facing East 93rd Street	Site 2	At-grade	66.0	N/A[2]
Facing East Side	Site 1	At-grade	64.5	N/A[2]
Facing Playground at 3rd Floor Terrace	3rd Floor	26'-1"	84.2	41
	4th Floor	37'-11"	81.9	38
	5th Floor	50'-3"	80.3	32[3]
	6th Floor	64'-3"	78.3	30[3]
	7th Floor	78'-9"	76.8	N/A[4]
	8th Floor	94'-5"	75.4	31
	9th Floor	104'-3"	74.5	31
	10th Floor	114'-1"	73.6	31
	11th Floor	123'-11"	72.7	28
	12th Floor	134'-1"	72.0	28
	13th Floor	143'-11"	71.2	28
	14th Floor	153'-9"	70.6	28
	15th Floor	163'-7"	69.9	N/A[2]
	16th Floor to Top	173'-9" or Higher	less than 69.9	N/A[2]

Notes:
(1) Based on the predicted Build L_{10} values.
(2) "N/A" indicates that the L_{10} value is less than 70 dB(A). The *CEQR Technical Manual* does not specify noise attenuation requirements when noise levels are this low and therefore there is no minimum attenuation requirement necessary at these locations.
(3) Commercial uses.
(4) CEQR attenuation requirements do not apply to mechanical space uses.

The noise attenuation requirements would continue to be enforced with the application of an (E) designation for noise which would ensure that the project would not result in significant adverse

impacts. As noted in Section B of this Technical Memorandum, an (E) designation related to Noise was identified in the May 3, 2013 EAS. Since the floor elevations noted in Table H-8 of the May 3, 2013 EAS have changed slightly, the text of the original (E) designation would change to read as follows (changes noted in **bold**):

- Block 1538, Lot 10

  In order to ensure an acceptable interior noise environment, future school/residential/commercial uses must provide a closed window condition with up to 41 dBA of window/wall attenuation in order to maintain an interior noise level of 45 dBA. In order to maintain a closed window condition, an alternate means of ventilation that brings outside air into the building without degrading the acoustical performance of the building must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning. The specific attenuation requirements to be implemented throughout the project building facades are provided in the 203-205 East 92nd Street **Technical Memorandum, Table 6** (CEQR No. 13DCP121M), **August 2013**.

Therefore, the conclusions of the Noise section of the May 3, 2013 EAS remain unchanged.

NEIGHBORHOOD CHARACTER

As detailed in the May 3, 2013 EAS, the proposed project would not have any significant adverse impacts on the following technical areas: land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; or noise. It would also not result in effects considered reasonably close to the significant adverse impact thresholds in those technical areas. Therefore, the May 3, 2013 EAS concluded that the proposed project would not have any significant adverse effects on neighborhood character.

As noted above, the proposed project, as modified, would not change the EAS conclusions for the technical areas of land use, urban design, visual resources, historic resources, or noise. Since the proposed modification would result in a slight decrease in the overall height of the proposed project and use of the proposed project would remain the same, there are no changes to the EAS threshold analyses that determined the project would not result in socioeconomic or traffic impacts. Therefore, there is no change to the May 3, 2013 EAS screening analysis that concluded the project would not result in significant adverse neighborhood character impacts.

CONSTRUCTION

As detailed in the May 3, 2013 EAS, construction of the proposed project would take approximately 24 months. All necessary measures would be implemented to ensure that the New York City Air Pollution Control Code relating to construction-related dust emissions would be followed, and compliance with the construction-related noise control measures of the New York City Noise Control Code and the Environmental Protection Agency (EPA) noise emission standards for construction equipment would be ensured by including them in the contract documents and by directives to the construction contractors. Therefore, the May 3, 2013 EAS concluded that the proposed project would not result in significant adverse impacts during construction.

There would be no change to the construction phasing or overall duration associated with the proposed modification and there would be no change to the screening analysis provided in the May 3, 2013 EAS indicating that the project would not result in significant adverse construction impacts.

E. CONCLUSIONS

As described above, the proposed modification for the 203-205 East 92nd Street project would not result in new significant adverse environmental impacts. As summarized from the Negative Declaration, the CPC's Statement of No Significant Effect set forth the following supporting statements which would remain true with the proposed modification:

- The (E) designation for air quality and noise would ensure that the proposed actions would not result in significant adverse impacts;
- There are no other foreseeable significant effects on the environment which would require preparation of an Environmental Impact Statement.