Environmental Assessment Statement
and
Supplemental Report

for

5402 Fort Hamilton Parkway Rezoning

CEQR # 14DCP135K

Prepared by:

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

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

Part I: GENERAL INFORMATION

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

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

2. *Project Name* 5402 Fort Hamilton Parkway Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
14DCP135K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of City Planning			NAME OF APPLICANT Fort Hamilton LLC		
NAME OF LEAD AGENCY CONTACT PERSON Robert Dobruskin, Director, EARD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Deirdre Carson of Greenberg Traurig, LLC		
ADDRESS 22 Reade Street			ADDRESS 200 Park Avenue 15th floor		
CITY New York	STATE NY	ZIP 10007	CITY New York	STATE NY	ZIP 10100
TELEPHONE 212-720-3423	EMAIL rdobrus@planning.nyc.gov		TELEPHONE 212-801-6855	EMAIL carsond@gtlaw.com	

5. *Project Description*

The applicant seeks a zoning map amendment entailing the extension of an existing R6 zoning district to facilitate the construction of a mixed-use building containing community facility space (57,890 gsf), ground floor commercial space (5,614 gsf), and a sub-grade accessory parking garage (151 spaces).

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 12	STREET ADDRESS 5402 Fort Hamilton Parkway
TAX BLOCK(S) AND LOT(S) Block 5673, Lots 42 and 50		ZIP CODE 11219
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS southwest corner of Fort Hamilton Parkway and 54th Street		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R5/C1-3		ZONING SECTIONAL MAP NUMBER 22a

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

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

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

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

☐ VARIANCE (use)

☐ VARIANCE (bulk)

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

☐ LEGISLATION ☐ FUNDING OF CONSTRUCTION, specify:

☐ RULEMAKING
☐ CONSTRUCTION OF PUBLIC FACILITIES
☐ 384(b)(4) APPROVAL
☐ OTHER, explain:
☐ POLICY OR PLAN, specify:
☐ FUNDING OF PROGRAMS, specify:
☒ PERMITS, specify: Building permit

Other City Approvals Not Subject to CEQR (check all that apply)

☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)
☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
☐ OTHER, explain:

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

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

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

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

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 11,167.5
Waterbody area (sq. ft) and type: 0
Roads, buildings, and other paved surfaces (sq. ft.): 11,167.5
Other, describe (sq. ft.): 0

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 99,034
NUMBER OF BUILDINGS: 1
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 99,034
HEIGHT OF EACH BUILDING (ft.): 66
NUMBER OF STORIES OF EACH BUILDING: 6

Does the proposed project involve changes in zoning on one or more sites? ☒ YES ☐ NO
If "yes," specify: The total square feet owned or controlled by the applicant: 11,167.5
The total square feet not owned or controlled by the applicant: +/-22,000

Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? ☒ YES ☐ NO
If "yes," indicate the estimated area and volume dimensions of subsurface permanent and temporary disturbance (if known):
AREA OF TEMPORARY DISTURBANCE: sq. ft. (width x length)
VOLUME OF DISTURBANCE: +/-263,528 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: +/-10,692 sq. ft. (width x length)

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

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	0	5,614	57,890	0
Type (*e.g.,* retail, office, school)	0 units	ground floor retail	medical center	

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO
If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 0 NUMBER OF ADDITIONAL WORKERS: 89
Provide a brief explanation of how these numbers were determined: 17 retail workers, assuming 3 workers per 1,000 sf; 72 medical center workers, as per A. Frances Schwartz, the executive director of the Brooklyn Birthing Center and the Brooklyn Midwifery Group.

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

Has a No-Action scenario been defined for this project that differs from the existing condition? ☒ YES ☐ NO
If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly: A smaller mixed-use building containing a medical center and ground floor retail space, built in accordance with the existing R5/C1-3 district regulations, with 27,165 gsf of community facility (medical center) space and 5,614 gsf of retail space.

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2016
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: fewer than 24 months
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO IF MULTIPLE PHASES, HOW MANY?

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

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

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

Part II: TECHNICAL ANALYSIS

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

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

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

	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?	☒	☐
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☒	☐
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. Monastery of the Precious Blood		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☐	☒
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☒	☐
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: Site's former use as a gas station and proximity of a dry cleaner	☒	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13?	☐	☐
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it	☐	☐

	YES	NO
involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?		
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 13,149.5		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 15,727,331,200		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☒	☐
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☒
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☒	☐
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☐	☒
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒

	YES	NO
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☐	☒
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☐	☒
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☐	☒
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☒	☐
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒

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

Construction of a new building will occur on the project site whether or not the Proposed Action is taken, and similar construction activities of comparable duration, phasing, and effects would occur under the no-Action and Action scenarios. The Proposed Action would add approximately two months to the construction period, which would not be a significant difference, and in either case the construction period would be less than two years. The Proposed Action would not affect the number of workers or the amount or type of equipment at the site at any time. Although the building's foundation would be eight feet deeper under the Action scenario, excavation and construction techniques would be the same under both scenarios; in neither case would blasting be necessary, and in either case screw pile driving would be used.

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	DATE
Brian Kintish	10/16/14

SIGNATURE Brian Kintish

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

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

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

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

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

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

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

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

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

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

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

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

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	New York City Department of City Planning
NAME	**DATE**
Olga Abinader	10/17/14

SIGNATURE

NEGATIVE DECLARATION (Use of this form is optional)

Statement of No Significant Effect

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

Reasons Supporting this Determination

The above determination is based on information contained in this EAS, which finds that the proposed project:

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA).

TITLE	LEAD AGENCY
NAME	DATE
SIGNATURE	

EAS SUPPLEMENTAL REPORT

1. PROJECT DESCRIPTION

PROPOSED ACTION

The Proposed Action involves an application by the project sponsor, Fort Hamilton, LLC, for a zoning map amendment that would rezone portions of two blocks located within the Borough Park neighborhood of Brooklyn's Community District 12. The two blocks are bounded by Fort Hamilton Parkway, 55th Street, 9th Avenue, and 53rd Street. (See Figure 1-1 for the location of the proposed action.)

The proposed zoning map change would cover all or part of four tax lots on these two blocks (the "rezoning area"), identified on the New York City Tax Map as Block 5673, Lots 41, 42, and 50, and Block 5666, Lot 20. (See Figure 1-2 for the tax maps for these blocks.)

The proposed rezoning entails the extension of an existing R6 zoning district, which south of 53rd Street now extends east to a line 100 feet from the western frontage of Fort Hamilton Parkway, and north of 53rd Street extends further east across Fort Hamilton Parkway. An R5 district now covers the area south and east of the R6 district, spanning Fort Hamilton Parkway south of 53rd Street, and including the proposed rezoning area. The Proposed Action would extend the R6 district eastwards and southwards, to the western edge of Fort Hamilton Parkway between 53rd Street and the middle of the blockfront between 54th and 55th Streets. In addition, a C1-3 commercial overlay covers the western blockfront of Fort Hamilton Parkway between 54th and 55th Streets, to a depth of 100 feet. It is proposed that the existing C1-3 commercial overlay continue to be mapped over the portion of that block to be rezoned. (See Figure 1-3 for a plan of the proposed rezoning area, and a delineation of the project site.)

The project sponsor proposes to construct a single-building, mixed-use development containing community facility space and ground floor commercial space (the "proposed project") on Lots 42 and 50 of Block 5673 (the "project site," referred to in Uniform Land Use Review Process (ULURP) documents as the "development area"). The property now contains a vacant former auto repair shop (a discontinued nonconforming use) on Lot 42 and a vacant, three-story building, which formerly contained two residential units above ground floor retail space, on Lot 50.

The portion of Block 5666 to be rezoned is between 53rd and 54th Streets, across 53rd Street from the project site, and is described in this environmental assessment statement (EAS) as an out parcel, meaning a property to be rezoned outside the control of the applicant. It has been occupied by a major institutional structure, the Monastery of the Precious Blood, since 1910. The fourth lot within the proposed rezoning area (Block 5673, Lot 41) is also an out parcel, a small lot on the south side of 54th Street, that is now divided between the R5 and R6 districts. As explained below under Reasonable Worst Case Development Scenario, neither out parcel is expected to be redeveloped or enlarged as a result of the Proposed Action.

The traffic analysis indicates that project-generated traffic has the potential to generate a significant adverse impact. The proposed traffic mitigation measures, including signal timing modifications and revisions to on-street parking regulations, would fully mitigate the potential impact. In consultation with NYCDOT, these measures were deemed to be reasonable and appropriate. A Restrictive Declaration will be recorded against the project site to ensure that the proposed traffic mitigation measures are implemented at the time of development to avoid a significant adverse impact.

PROPOSED PROJECT

The project site is owned by the applicant and consists of the contiguous tax lots identified as Block 5673, Lots 42 and 50. Lot 42 is on the southwest corner of 54th Street and Fort Hamilton Parkway. Lot 50 is to the immediate south and fronts on Fort Hamilton Parkway. The site contains 11,167.5 square feet of lot area.

Whether or not the Proposed Action is taken, the applicant intends to redevelop the site with a single mixed-use building containing a medical center, ground floor retail space, and a below-grade accessory parking garage. The applicant intends to construct a six-story building with 50,669 square feet of above grade floor area, for a floor area ratio (FAR) of 4.54. Because the proposed zoning would allow a 4.8 FAR building with 53,604 zoning square feet, this EAS assumes a building with 53,604 square feet of above grade floor area, and that is the proposed project described below and assessed in the remainder of the EAS.

The building would contain a total of 53,604 square feet above grade, including 47,990 square feet of community facility (medical center) space and 5,614 square feet of commercial (retail) space. Another 9,900 square feet of medical center space would occupy the cellar. This would bring the total amount of medical center space to 57,890 square feet and the total amount of gross rentable area (including the retail space) to 63,504 square feet. There would also be an accessory automated parking garage with an entrance on 54th Street and 151 parking spaces on up to three sub-cellar levels, occupying up to 35,530 square feet. (The amount of required garage space depends on the technology that is used.) Assuming the largest possible garage, the building's total gross floor area would be 99,034 square feet. This is summarized below in Table 1-1.

Table 1-1
Proposed Project Building Summary

GSF Above Grade	GSF Below Grade	Total GSF	DU's	Commercial Space (GSF)	Community Facility Space (GSF)*	Accessory Parking (Spaces) **	Accessory Parking (GSF)
53,604	45,430	99,034	0	5,614	57,890	151	35,530

* Medical Center
** Automated Car Storage

The building would have a roof height of 66 feet and a maximum building height of 76 feet to the top of the mechanical bulkhead. The building's lower floors would cover the entire site, except for a rear yard of approximately 475 square feet at the southwest corner of the property, but the building would be set back 23 feet 2 inches from 54th Street and 17 feet 3 inches from Fort Hamilton Parkway above the fourth floor (44 feet in height). The first three floors would each contain 10,387 square feet. The fourth floor would contain 9,734 square feet. The top two floors would both contain 6,354 square feet. (See Appendix 1, Architectural Plans for the Proposed Building.)

The medical center would be a consolidated women's health center, which would include the Brooklyn Birthing Center, the offices of the Brooklyn Midwifery Group, and other medical services and practices (including gynecology and obstetrics, perinatal care, cardiology, and radiology) designed to address the medical needs of women, plus circumcision, social work, and education and consultation regarding childbirth, nutrition, and lactation. Patients would have the option of giving birth in the onsite birthing center, which would be an outpatient facility licensed by the State of New York, or in nearby Maimonides Medical Center, located approximately a quarter-mile away on Fort Hamilton Parkway and accessible by bus from the project site. Many members of the medical staff would have admitting privileges at Maimonides. The medical center lobby and reception area would be entered from Fort Hamilton Parkway.

The Brooklyn Birthing Center and the Brooklyn Midwifery Group now occupy a smaller facility at 2183 Ocean Avenue in Midwood. It now has seven midwives, three obstetrician/gynecologists, a medical director, and 25 other employees, and an average of approximately 40 visitors a day. The staff and the

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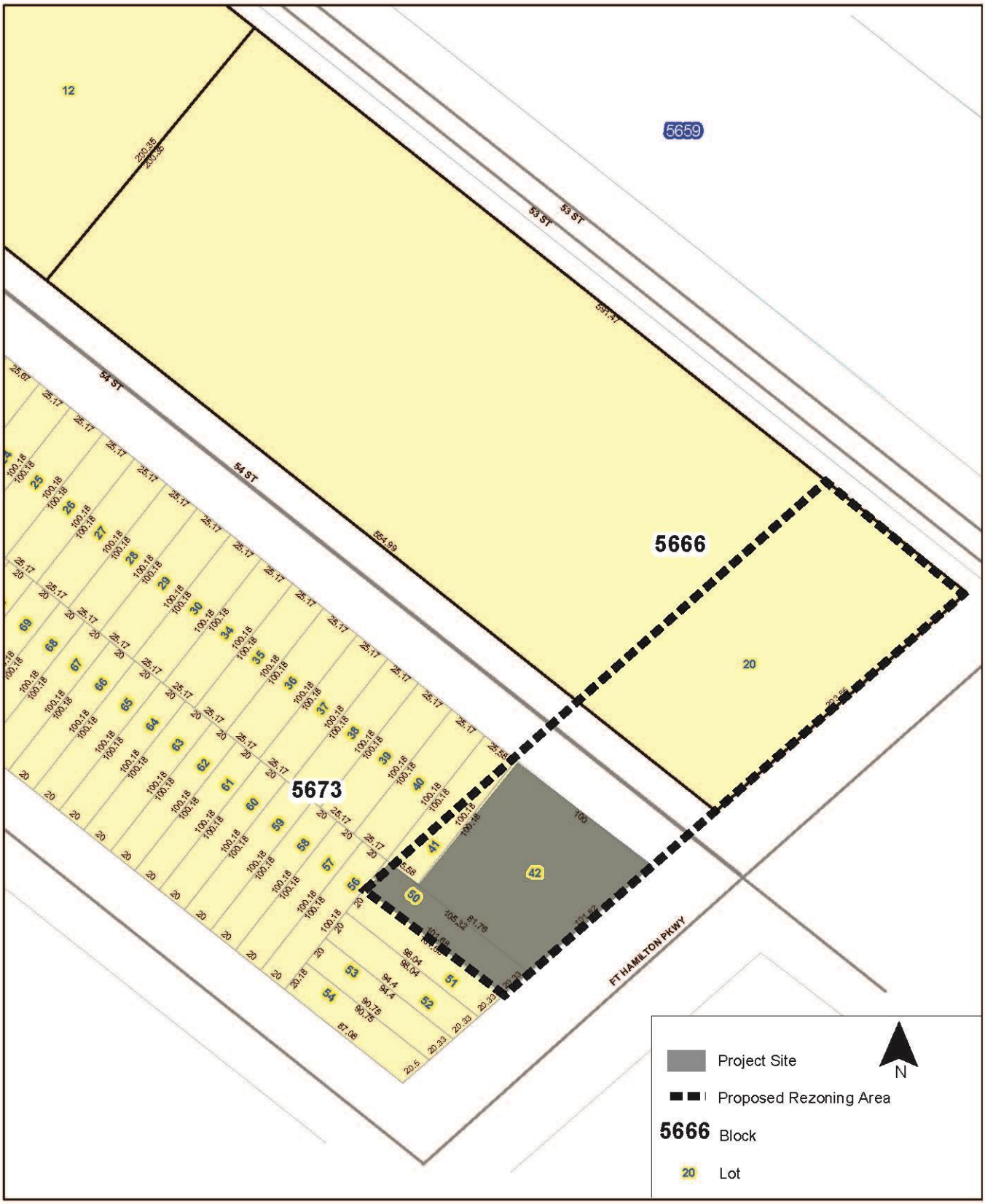

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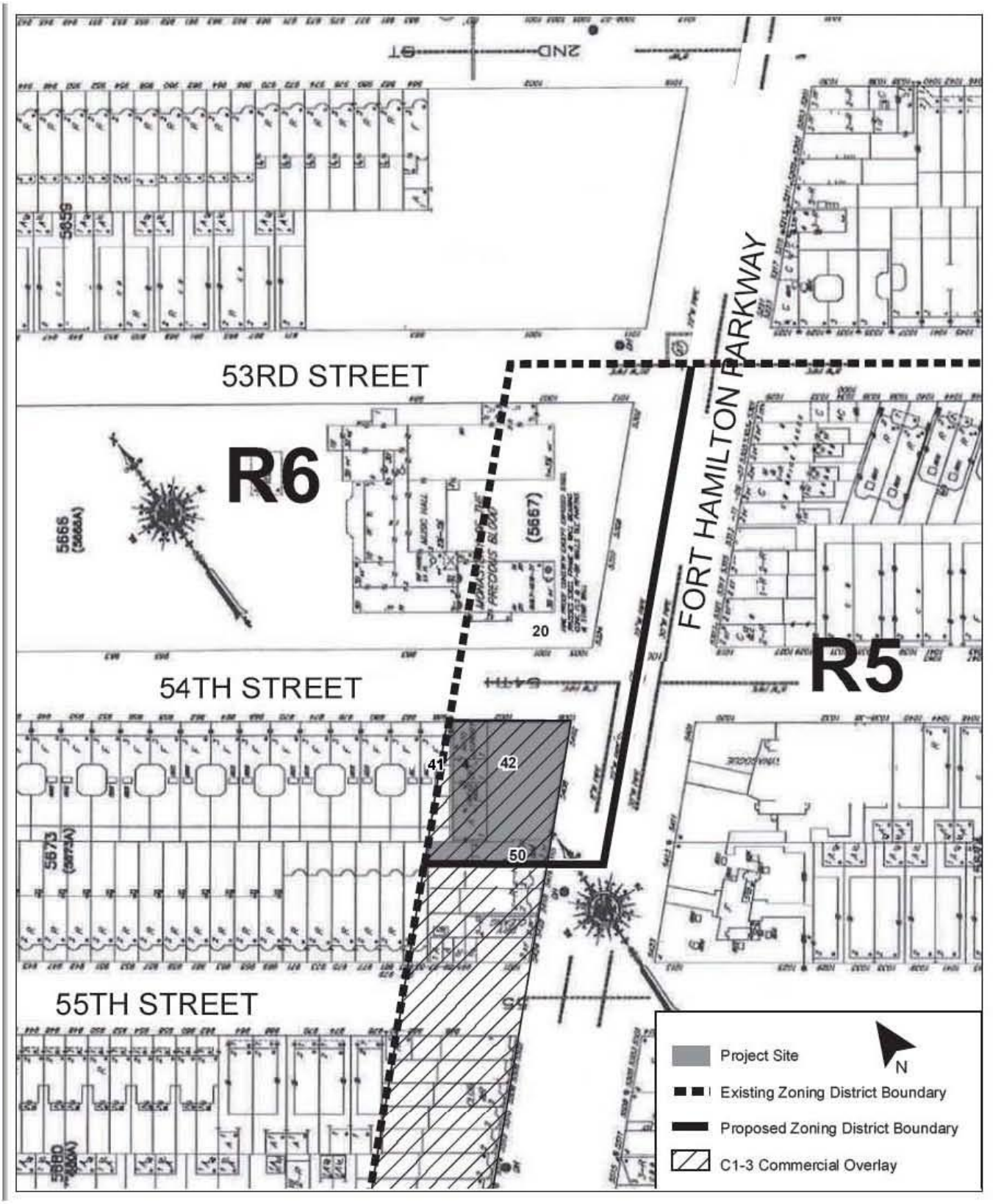
Figure 1-3: Existing and Proposed Zoning District Boundary



number of visitors are both expected to double after the move to the proposed facility, according to A. Frances Schwartz, the executive director of the Brooklyn Birthing Center and the Brooklyn Midwifery Group.

REASONABLE WORST CASE DEVELOPMENT SCENARIO

As described above, the EAS assumes a proposed project that would contain the maximum permissible floor area allowed by the proposed zoning.

As noted above, two out parcels would be partially rezoned from R5 to R6. These are identified as Block 5763, Lot 41 (immediately west of the project site) and Block 5666, Lot 20 (immediately north of the project site, across 54th Street).

Block 5673, Lot 41, Fronting on 54th Street. Though a portion of this lot would be rezoned from R5 to R6, the permitted density on the lot would not change. Under the so-called "25-foot rule," if a zoning lot is divided between two or more zoning districts and no portion of the lot not within the district that covers a majority of the lot's area is located more than 25 feet from the boundary of that district, then the regulations applicable to the zoning district covering the majority of the lot may be applied to the entire lot. The majority (55 percent) of Lot 41 is within the R6 district, and no portion of the lot is further than 25 feet from the R6 district boundary. The bulk regulations applicable to the R6 district could therefore be applied to the entire lot even under the current zoning. Hence, the Proposed Action would have no practical effect on the lot's redevelopment potential and would not result in the redevelopment of this lot.

Block 5666, Lot 20 (Monastery of the Precious Blood). This institutional use is located on a 115,274 square foot parcel. Most (82 percent) of the lot is already zoned R6; the remainder (18 percent) is zoned R5. Under current zoning, a residential use of 256,144 zoning square feet could be built. Under the proposed rezoning, the residential development potential would increase by 9 percent to 280,116 square feet. The community facility development potential would increase by 11 percent, from 496,433 to 553,315 zoning square feet. Given that the monastery is an institutional use that has occupied the site since 1910, and that redevelopment has not occurred despite the substantial development potential under the existing zoning, it would seem unlikely that a 9 percent increase in permitted residential floor area or an 11 percent increase in permitted community facility floor area would trigger the redevelopment of this parcel.

For these reasons, both of the out parcels would be expected to retain their current uses at their current densities under the Proposed Action.

REDEVELOPMENT OF THE PROJECT SITE IN THE FUTURE WITHOUT THE PRPOSED ACTION

As mentioned above, the applicant intends to redevelop the site with a single mixed-use building containing a medical center, ground floor retail space, and a below-grade accessory parking garage whether or not the Proposed Action is taken. In the future without the Proposed Action, the project site would continue to be zoned R5/C1-3, and it would be redeveloped in accordance with the regulations applicable to those districts. There would be a total of 22,879 square feet above grade, including 17,265 square feet of community facility (medical center) space and 5,614 square feet of commercial (retail) space. Another 9,900 square feet of medical center space would occupy the cellar. This would bring the total amount of medical center space to 27,165 square feet and the total amount of gross rentable area (including the retail space) to 32,779 square feet. There would also be an accessory automated parking garage with an entrance on 54th Street and 82 parking spaces on up to two sub-cellar levels, occupying up to 19,594 square feet. (As under the Action condition, the amount of required garage space depends on

the technology that is used.) Assuming the largest possible garage, the building's total gross floor area would be 52,373 square feet. This is summarized below in Table 1-2.

Table 1-2
No-Action Building Summary

GSF Above Grade	GSF Below Grade	Total GSF	DU's	Commercial Space (GSF)	Community Facility Space (GSF)*	Accessory Parking (Spaces) **	Accessory Parking (GSF)
22,879	29,494	52,373	0	5,614	27,165	82	19,594

* Medical Center
** Automated Car Storage

The new building would have the same footprint as the proposed project, but the building would be three stories in height (about 33 feet to the roof, plus an additional 11 feet of height for the mechanical bulkhead). The building would be set back 30 feet from 54th Street and 27 feet one inch from Fort Hamilton Parkway above the second floor (22 feet in height). (See Appendix 2, No-Action Building Site Plan.)

INCREMENT BETWEEN THE ACTION AND NO-ACTION CONDITIONS

Since the project site would be redeveloped with a medical center and retail space under both the Action and No-Action scenarios, the net effect of the Proposed Action would be the incremental increase in development between the two scenarios. The amount of retail space would be the same, but the Proposed Action would result in 30,725 square feet more medical center space. The Proposed Action would result in 30,725 square feet more above grade floor area and 46,661 square feet more of total gross floor area. With the Proposed Action, the accessory parking garage would contain 69 more parking spaces. This is summarized in Table 1-3.

Table 1-3
Increment between the Action and No-Action Conditions

GSF Above Grade	GSF Below Grade	Total GSF	DU's	Commercial Space (GSF)	Community Facility Space (GSF)*	Accessory Parking (Spaces) **	Accessory Parking (GSF)
30,725	15,936	46,661	0	0	30,725	69	15,936

* Medical Center
** Automated Car Storage

With the Proposed Action, the new building would be three stories (33 feet) taller than under the No-Action scenario. The building would have the same footprint under the No-Action condition, but it would set back from the street lines at a level two stories (22 feet) higher.

PURPOSE AND NEED

Approval of the Proposed Action would provide expanded healthcare facilities appropriate for the existing and future residents of the neighborhood. The proposed medical facility would offer services that complement those of Maimonides Medical Center, located approximately a quarter-mile away on Fort Hamilton Parkway and directly accessible by bus, where many members of the facility's medical staff

would have admitting privileges. The rezoning area would include the blockfront to the north of the project site to preserve a clear, consistent zoning district boundary.

CONSTRUCTION PHASING

The proposed project is expected to be constructed in a single phase, expected to last just under two years. For purposes of the analyses in this EAS, it is assumed that completion of construction for the entire project will occur in 2016.

REQUIRED APPROVALS

The proposed project would require a zoning map amendment. The site is currently zoned R5 with a C1-3 commercial overlay district, which allows an FAR of 2.0 for community facility uses. To implement the project as proposed, it would be necessary to rezone the project site to R6 while maintaining the C1-3 commercial overlay. This rezoning would increase the permitted FAR for community facility uses to 4.8.

2. ENVIRONMENTAL ASSESSMENT

2.A LAND USE, ZONING, AND PUBLIC POLICY

INTRODUCTION

A land use analysis characterizes the uses and development trends in the area that may be affected by an action and determines whether a proposed project is compatible with those conditions or whether it may adversely affect them. The analysis also considers the proposed project's compliance with, and effect on, the area's zoning and other applicable public policies.

PRINCIPAL CONCLUSIONS

The Proposed Action would not change permitted land uses in the area to be rezoned, and land uses within the study area and even within the proposed rezoning area would be the same under the No-Action condition and in the future with the Proposed Action. In either case, the land uses on the project site would be compatible with existing uses now found in the area. Only the expected density on the project site would be different as a result of the Proposed Action. The difference, approximately 31,000 more square feet of medical office space than under the No-Action scenario, would not be great enough to have a significant impact on land use patterns, and the density on the project site would be compatible with that of existing community facility uses in the area.

The proposed project is neither large nor publicly sponsored so there is no need for an assessment of its consistency with PlaNYC. No portion of the proposed rezoning area is within the Coastal Zone, an urban renewal area, or an area covered by a 197-a Plan.

STUDY AREA

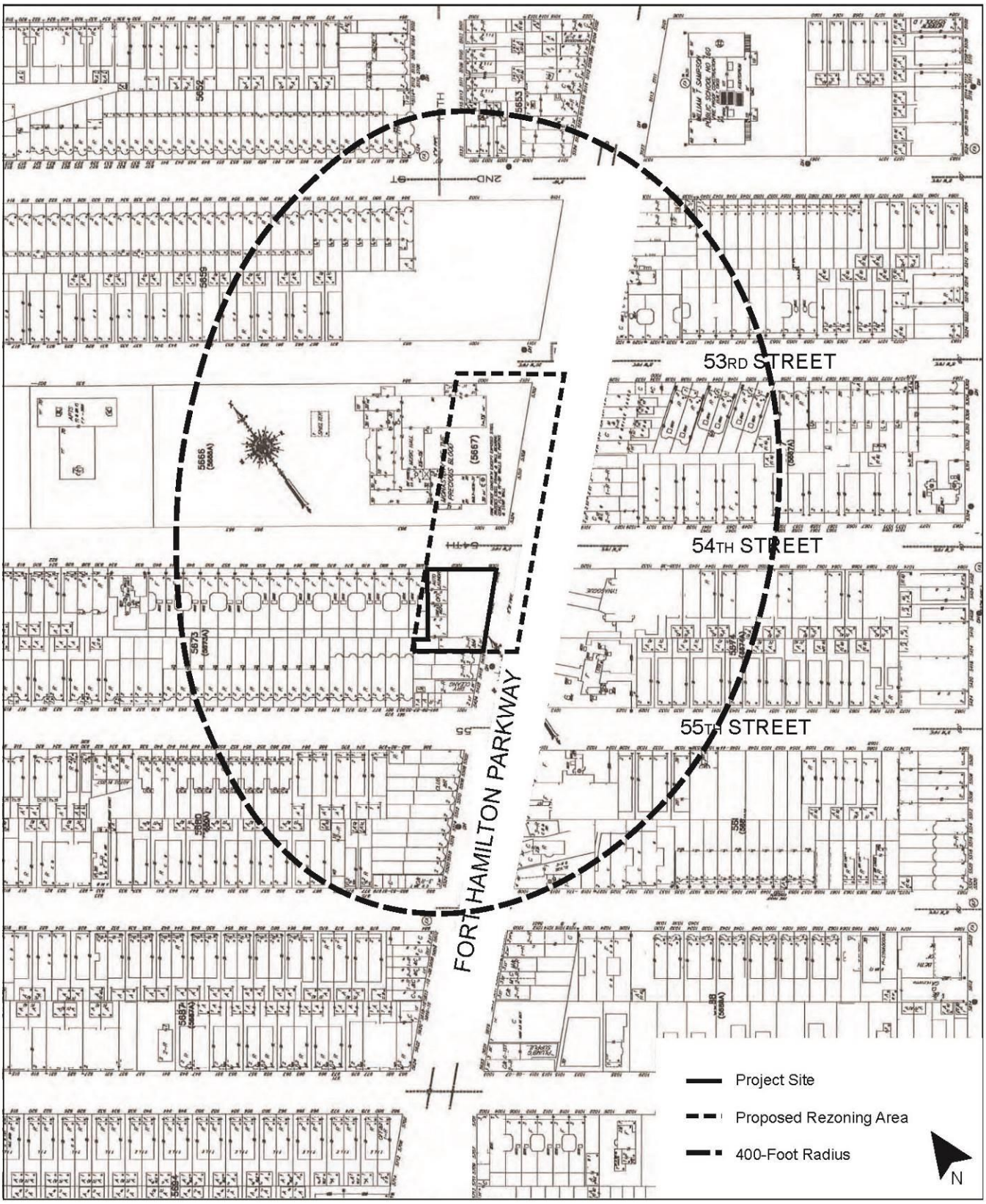
According to the *CEQR Technical Manual*, the appropriate study area for land use, zoning, and public policy is related to the type and size of the proposed project, as well as the location and context of the area that could be affected by the project. Study area radii vary according to these factors, with suggested study areas ranging from 400 feet for a small project to 0.5 miles for a very large project.

Because of the modest size of the proposed project, the land use, zoning, and public policy assessment for the Proposed Action considers a study area extending 400 feet around the proposed rezoning area. As shown in Figure A-1, Study Area Map, the study area boundaries are 52nd Street, points along the midblocks between 9th Avenue and Fort Hamilton Parkway, 56th Street, and points along the midblocks between 11th Avenue and Fort Hamilton Parkway.

DETERMINING WHETHER A LAND USE, ZONING, AND PUBLIC POLICY ASSESSMENT IS REQUIRED

According to the *CEQR Technical Manual*, a preliminary assessment that includes a basic description of existing and future land uses, as well as basic zoning information, is provided for most projects, regardless of their anticipated effects. Regarding public policy, the *CEQR Technical Manual* states, "Large, publicly-sponsored projects are assessed for their consistency with PlaNYC, the City's sustainability plan." An assessment of an action's consistency with the Waterfront Revitalization Plan is required if an action would occur within the designated Coastal Zone. Public policy assessments are also appropriate if an action would occur within an area covered by an Urban Renewal Plan or a 197-A Plan.

Figure A-1: Land Use Study Area Map



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A land use and zoning assessment is certainly appropriate for the Proposed Action, which is a zoning map amendment that would result in the development of additional floor area on the project site. The proposed project is neither large nor publicly sponsored. No portion of the proposed rezoning area is within the Coastal Zone, an urban renewal area, or an area covered by a 197-a Plan. The preliminary assessment will therefore focus on land use and zoning.

PRELIMINARY ASSESSMENT

Existing Conditions

Land Use

Site of the Proposed Action

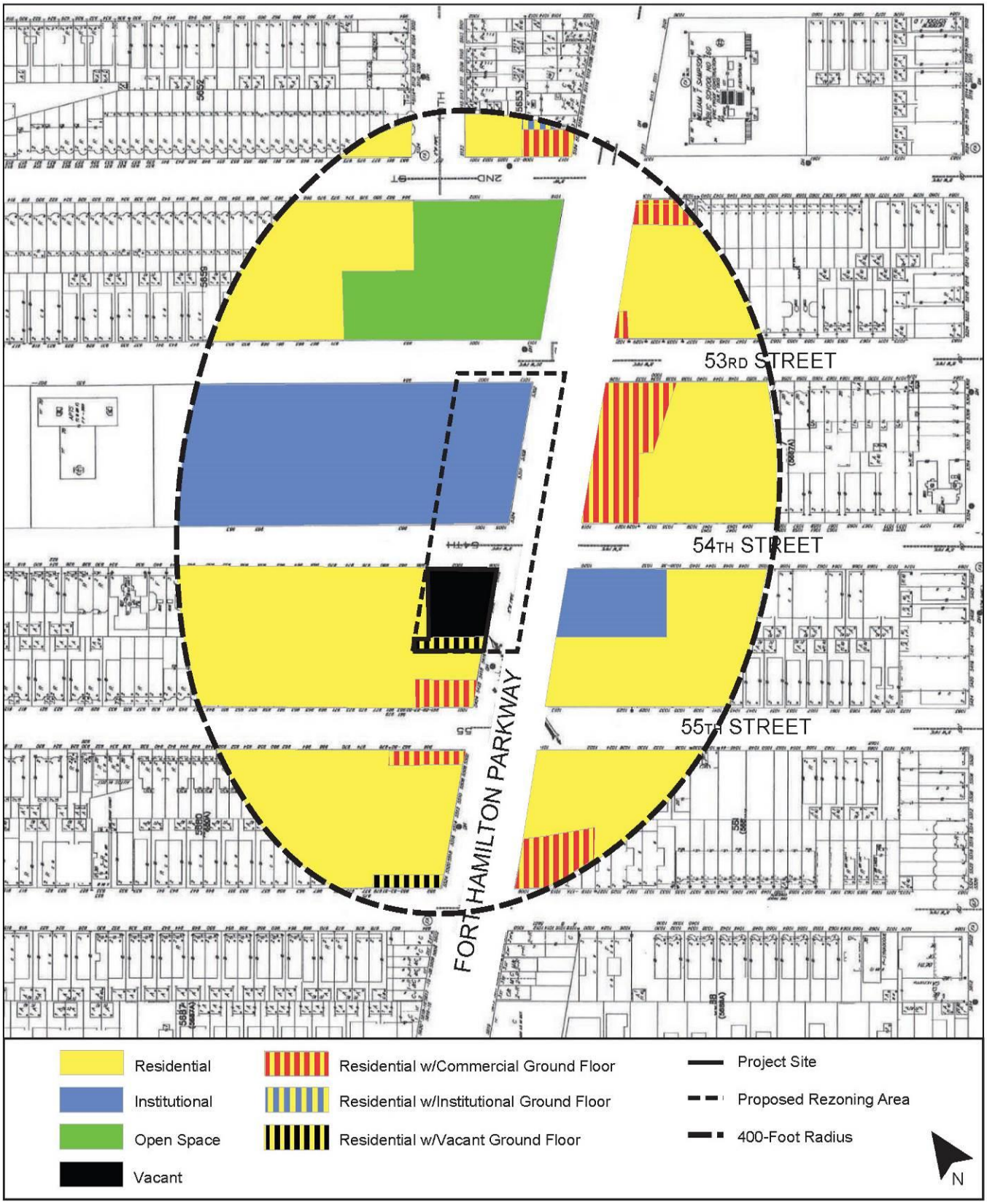
The project site consists of two adjacent lots. The larger lot, at the southwest corner of Fort Hamilton Parkway and 54th Street, is a former auto repair establishment, consisting of a vacant garage building and paved lot area that is fenced and unused. The other lot, located to the south of the corner lot and fronting on Fort Hamilton Parkway, contains a narrow, vacant three-story building that formerly contained two residential units above a ground floor commercial space.

The proposed rezoning area also includes part of one lot (Lot 41) to the west of the former auto repair shop, fronting on 54th Street. It contains a three-story residential building, with six residential units. The rezoning area also includes part of a large lot that extends along Fort Hamilton Parkway between 53rd and 54th Streets. The lot extends more than 500 feet back from the parkway frontage, and accommodates the Monastery of the Precious Blood. The building and grounds of the Monastery of the Precious Blood have occupied the lot since 1910. The monastery is the Brooklyn home of an order of cloistered nuns, the Sisters Adorers of the Precious Blood.

Study Area

Within the study area, except for properties fronting on Fort Hamilton Parkway, land use is entirely residential. (See Figure A-2, Existing Land Use Map). Three-story, six-unit attached brick buildings line the south side of 54th Street. Elsewhere along the cross streets, attached and semidetached brick homes predominate. At one location on the south side of 52nd Street, two four-story residential buildings are under construction, replacing smaller residential buildings.

Along Fort Hamilton Parkway within the study area, there is a mix of residential, commercial, institutional, and recreational uses. The recreational use is a mapped park, Rappaport Playground, on the west side of the parkway between 52nd and 53rd Streets. Aside from the monastery, the institutional uses are a four-story synagogue and religious school that occupies the northern half of the parkway's eastern blockfront between 54th and 55th Streets, opposite the project site, and a ground floor storefront synagogue beneath residential units at the northern edge of the study area. The commercial uses all occupy the ground floors of otherwise residential buildings; there are no entirely commercial buildings. Commercial uses occupy the entire eastern streetfront between 53rd and 54th Streets and scattered locations on other blocks. They consist of grocery stores, restaurants, drycleaners, a butcher shop, a laundromat, a store selling prosthetic and orthotic devices, a printer, a glass store, a plumbing and heating supplies store, and a discount store. The residences are in three- and four-story apartment buildings, two-story rowhouses, and two-story buildings with single residential units above ground floor stores.



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Zoning

The study area is divided between R5 and R6 residential zoning districts, with C1-3 commercial overlays mapped along all but two of the blockfronts along Fort Hamilton Parkway (the western blockfronts between 52nd and 54th Streets, occupied by the playground and the monastery). The R5 district covers the portion of the study area located south of 53rd Street and east of a line 100 feet to the west of Fort Hamilton Parkway. The R6 district covers the rest of the study area. (See Figure A-3, Existing Zoning Map.)

The proposed rezoning area occupies the northwestern corner of the R5 zoning district, bordered by the R6 district on its northern and western sides. Lot 41, adjacent to the project site on its west, is divided between R6 and R5/C1-3 districts. The monastery property is divided between R6 and R5 districts; all but the area within 100 feet of Fort Hamilton Parkway of this property is within the R6 district.

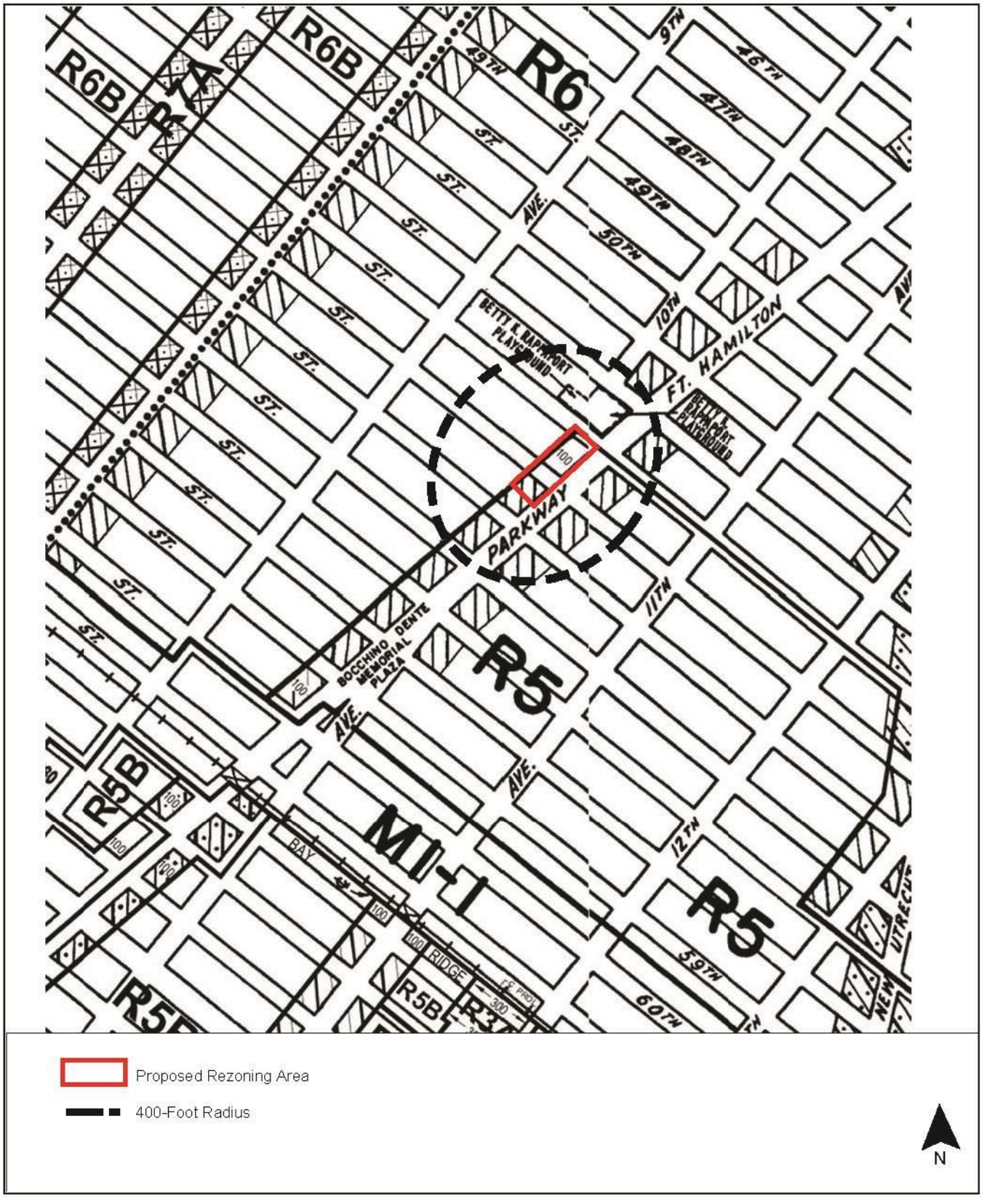
R5 and R6 allow the same set of uses, but they differ in permitted bulk and density. They allow residential and community facility uses but not industrial or commercial uses, except to a limited extent for commercial uses when combined with a commercial overlay district (a C1 or C2 district). The C1-3 overlay district allows certain commercial uses, those that serve the retail and service needs of a local population, and limits them to the ground floors of mixed use buildings or to freestanding commercial buildings of no more than two stories.

R5 allows a maximum floor area ratio (FAR) of 1.25 for residential uses. The maximum perimeter street wall height is 30 feet, and the maximum building height is 40 feet, for residential uses. The maximum lot coverage is 55 percent. Front yards are required.

The situation is more complicated for residential uses in an R6 district because different sets of regulations can apply. Under the R6 district's original height factor regulations, permitted FAR and required open space vary according to "height factor," which is the number obtained by dividing floor area by lot coverage. The maximum on the sliding scale in 2.43, but this is achievable only by buildings of about 13 or 14 stories occupying very small percentages of large lots. Under this set of regulations, the height and setback requirements are the same as for community facility buildings. Under the optional Quality Housing regulations that have been available since the late 1980s, either of two sets of regulations may apply, depending on location. For lots or portions of lots within 100 feet of a wide street (such as Fort Hamilton Parkway), the maximum residential FAR is 3.0, the maximum base height is 60 feet, the maximum building height is 70 feet, and the maximum lot coverage is 80 percent on corner lots and 65 percent on all other lots. Beyond 100 feet of a wide street, the maximum residential FAR is 2.2, the maximum base height is 45 feet, the maximum building height is 55 feet, and the maximum lot coverage is 80 percent on corner lots and 60 percent on all other lots. Front yards are not required, regardless of which set of regulations applies.

Within an R5 or R6 district without a commercial overlay, the residential district bulk regulations control the community facility development. R5 allows a maximum FAR of 2.0 for community facility uses. The maximum lot coverage is 55 percent on an interior or through lot and 60 percent on a corner lot. The maximum street wall height is 35 feet, and sky exposure planes (slanting upwards and rearwards from a line 35 feet above the front property line) regulate building height on the interior of the lot. In the R6 district, the maximum FAR for community facility uses is 4.8. The maximum lot coverage is 70 percent on corner lots and 65 percent on all other lots. The maximum street wall height is the lesser of 60 feet or six stories, and sky exposure planes regulate building height on the interior of the lot.

Where the C1-3 overlay has been mapped, the C1-3 regulations rather than the R5 or R6 regulations govern community facility as well as commercial development. For community facility uses, the FAR and height and setback regulations are those of the underlying residential district, however, and are thus



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the same as those stated above. The major difference from the R5 and R6 regulations is that in the C1-3 district no maximum lot coverage provisions apply. For commercial uses the maximum permitted FAR is 1.0 in the R5/C1-3 district and 2.0 in the R6/C1-3 district. No matter what the underlying residential district, commercial uses are restricted either to the ground floor of a mixed-use building or to a commercial-use-only building of no more than two stories.

The Future without the Proposed Action

Site of the Proposed Action

Project Site

In the future without the Proposed Action, the project site would continue to be zoned R5/C1-3, and it would be redeveloped in accordance with the regulations applicable to those districts, with a three-story medical center building containing ground floor retail space and a below grade accessory parking garage. There would be a total of 22,879 square feet above grade, including 17,265 square feet of community facility (medical center) space and 5,614 square feet of commercial (retail) space. Another 9,900 square feet of medical center space would occupy the cellar. This would bring the total amount of medical center space to 27,165 square feet and the total amount of gross rentable area (including the retail space) to 32,779 square feet. There would also be an accessory parking garage with an entrance on 54th Street and 82 parking spaces on up to two sub-cellar levels, occupying up to 19,594 square feet. The building's maximum total gross floor area would be 52,373 square feet.

The first two floors of the building would occupy the entire site, except for an approximately 475 square foot yard at the southwestern corner of the site. The third story would be set back from both street fronts. (See Appendix 2, No-Action Building Site Plan.)

Other Parcels in the Proposed Rezoning Area

As noted above, there are two additional parcels that are divided between the existing R6 district and the area that would be rezoned from R5 to R6 under the Proposed Action. These are identified as Block 5763, Lot 41 (immediately west of the project site), and Block 5666, Lot 20 (immediately north of the project site, across 54th Street). Neither of these lots are expected to redevelop by the build year of the proposed project. Without the Proposed Action, they would continue to be divided between R5 and R6 districts.

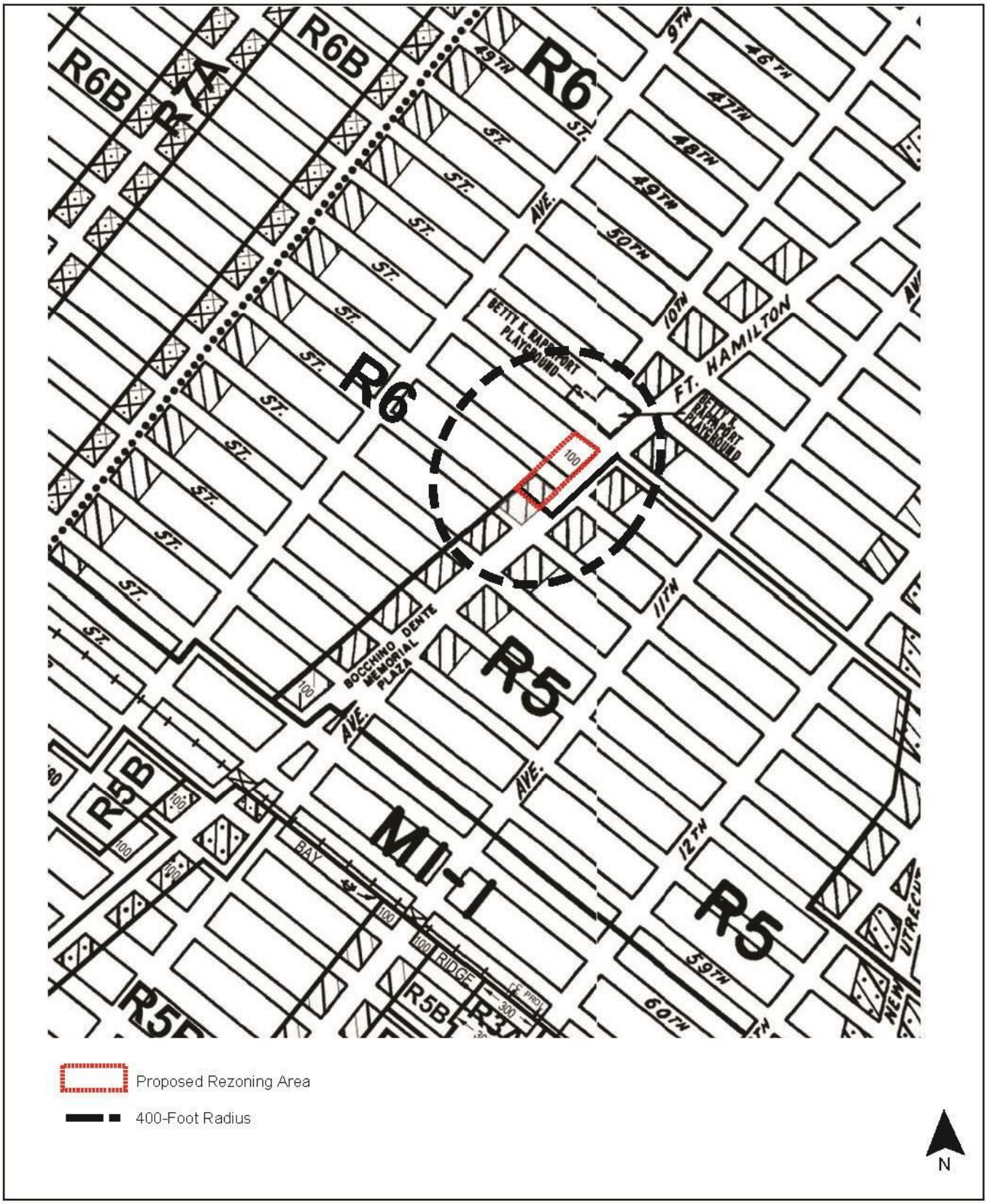
Study Area

By the build year of the proposed project (2016), only one land use change is anticipated in the study area. The two four-story residential buildings now under construction on 52nd Street would be completed. No zoning changes are anticipated.

The Future with the Proposed Action

Project Site

In the future with the Proposed Action, the project site would be rezoned from R5/C1-3 to R6/C1-3, and it would be redeveloped in accordance with the more permissive regulations applicable to the R6 district. (See Figure A-4, Proposed Zoning Map.) The land uses would be the same as under the No-Action scenario; as in the future without the Proposed Action, the site would be redeveloped with a medical center building containing ground floor retail space and a below grade accessory parking garage. The



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building would be larger than under the No-Action scenario; it would contain six rather than three stories. There would be a total of 53,604 square feet above grade, including 47,990 square feet of community facility (medical center) space and 5,614 square feet of commercial (retail) space. Another 9,900 square feet of medical center space would occupy the cellar. This would bring the total amount of medical center space to 57,890 square feet and the total amount of gross rentable area (including the retail space) to 63,504 square feet. There would also be an accessory parking garage with an entrance on 54th Street and 151 parking spaces on up to three sub-cellar levels, occupying up to 35,530 square feet. The building's maximum total gross floor area would be 99,034 square feet.

The first four floors of the building would occupy the entire site, except for an approximately 475 square foot yard at the southwestern corner of the site. The top two floors would be set back from both street fronts. (See Appendix 1, Architectural Plans for the Proposed Building.)

The proposed project would thus have the same amount of retail space as the development under the No-Action scenario, but it would contain 30,725 square feet more medical center space. The building would have the same footprint as under the No-Action scenario, but the proposed project would be three stories taller. The proposed project would have 69 more accessory parking spaces than the development under the No-Action scenario.

Other Parcels in the Area to be Rezoned

As noted above, two additional parcels would be partially rezoned from R5 to R6. These are identified as Block 5763, Lot 41 (immediately west of the project site) and Block 5666, Lot 20 (immediately north of the project site, across 54th Street).

Block 5673, Lot 41, Fronting on 54th Street. Though a portion of this lot would be rezoned from R5 to R6, the permitted density on the lot would not change. Under the so-called "25-foot rule," if a zoning lot is divided between two or more zoning districts and no portion of the lot not within the district that covers a majority of the lot's area is located more than 25 feet from the boundary of that district, then the regulations applicable to the zoning district covering the majority of the lot may be applied to the entire lot. The majority (55 percent) of Lot 41 is within the R6 district, and no portion of the lot is further than 25 feet from the R6 district boundary. The bulk regulations applicable to the R6 district could therefore be applied to the entire lot even under the current zoning. Hence, the Proposed Action would have no practical effect on the lot's redevelopment potential and would not result in the redevelopment of this lot.

Block 5666, Lot 20 (Monastery of the Precious Blood). This institutional use is located on a 115,274 square foot parcel. Most (82 percent) of the lot is already zoned R6; the remainder (18 percent) is zoned R5. Under current zoning, a residential use of 256,144 zoning square feet could be built. Under the proposed rezoning, the residential development potential would increase by 9 percent to 280,116 square feet. The community facility development potential would increase by 11 percent, from 496,433 to 553,315 zoning square feet.

Since the monastery is an institutional use that has occupied the site since 1910 and no redevelopment has occurred despite the substantial development potential under the existing zoning, it would seem unlikely that a 9 percent increase in permitted residential floor area or an 11 percent increase in permitted community facility floor area would trigger the redevelopment of this parcel.

Hence, both of the above parcels would be expected to retain their current uses at their current densities under the Proposed Action.

Impact Assessment

The Proposed Action is a zoning map amendment that would not change permitted land uses in the area to be rezoned. Although it would increase the development potential for residential or community facility uses, it would not lead to redevelopment except on the project site, which itself would be redeveloped whether or not the Proposed Action is taken. The land uses that would occupy the project site under either the No-Action or the Action scenario (a medical center and ground floor retail) would be compatible with existing uses now found in the study area (residential, ground floor retail, and community facility). The medical center would be particularly appropriate at this location because of the proximity of Maimonides Medical Center, located approximately a quarter-mile away on Fort Hamilton Parkway, where many of the medical center's practitioners would have admitting privileges. The only effect that the Proposed Action would have on land use would be the development of an additional 30,725 square feet of medical center space. That square footage is not large enough to have a significant impact on land use patterns. Furthermore, there are a number of large institutional uses already in the area, including the 400-student religious school directly across Fort Hamilton Parkway from the project site (with approximately 40,000 square feet of above-grade floor area), the monastery directly across 54th Street from the project site, and P. S. 160 at the northeast corner of Fort Hamilton Parkway and 52nd Street, just outside the study area. The size of the new community facility would thus not be incompatible with that of other community facilities in the area. For these reasons, the Proposed Action would not have a significant adverse impact on land use or zoning.

CONCLUSION

The Proposed Action would not change permitted land uses in the area to be rezoned, and land uses within the study area and even within the proposed rezoning area would be the same under the No-Action condition and in the future with the Proposed Action. In either case, the land uses on the project site would be compatible with existing uses now found in the area. Only the expected density on the project site would be different as a result of the Proposed Action. The difference, approximately 31,000 more square feet of medical office space than under the No-Action scenario, would not be great enough to have a significant impact on land use patterns, and the density on the project site would be compatible with that of existing community facility uses in the area.

The proposed project is neither large nor publicly sponsored so there is no need for an assessment of its consistency with PlaNYC. No portion of the proposed rezoning area is within the Coastal Zone, an urban renewal area, or an area covered by a 197-a Plan.

2.B SHADOWS

INTRODUCTION

Under CEQR an adverse shadow impact is considered to occur if shadows from a proposed project would fall on a publicly accessible open space resource and adversely affect its use by the public, on a recreational open space such as a school playground that is not partly under Parks Department jurisdiction and adversely affect its use, on a natural resource and threaten the viability of plant life, or on a historic resource and obscure features or details that make the landmark significant. The assessment therefore does not consider shadows that would fall on streets, sidewalks, private open space, or buildings other than landmarks with features that depend on sunlight, since these would not be considered significant impacts.

As noted in the project description and the land use sections, both the No-Action scenario and the Proposed Action would result in development only on the project site. Other lots to be partially rezoned would not be expected to develop further.

The proposed project, when completed, would create a single six-story building with a rooftop height of 66 feet and a maximum height of 76 feet to the top of the rooftop mechanical space bulkhead. The lower floors would cover the entire lot. The building would be set back 23 feet 2 inches from 54th Street and 17 feet 3 inches from Fort Hamilton Parkway at the fourth floor level (44 feet in height). The building would be comprised of 53,604 square feet of above-grade building area, which would all be community facility space with the exception of 5,614 square feet of commercial on the ground floor. The proposed project would also include a cellar level (with 9,900 square feet of additional community facility space) and up to three sub-cellar levels in which approximately 151 accessory parking spaces would be provided. Overall, the proposed project would result in a building containing 63,504 gross square feet of community facility and commercial uses.

In the future without the Proposed Action, it would be expected that the development on the project site would occur under the existing R5/C1-3 district regulations. The new building would have the same building footprint as the proposed project, with the lower two stories built full on the lot, but the building would be three stories in height, with a rooftop height of about 33 feet and a height of 44 feet to the top of the rooftop mechanical space bulkhead. The building would be set back above the second floor level (22 feet in height) 30 feet from 54th Street and 27 feet one inch from Fort Hamilton Parkway. The building would be expected to contain approximately 22,879 square feet of space above grade, which would all be community facility space except for 5,614 square feet of commercial space on the ground floor. The No-Action scenario would also include a cellar level (with 9,900 square feet of additional community facility space) and up to two sub-cellar levels in which approximately 82 accessory parking spaces would be provided. In all, the No-Action scenario would result in a building containing 32,779 gross square feet of community facility and commercial uses.

The difference in height between the No-Action and Action condition buildings would be 32 feet.

PRINCIPAL CONCLUSIONS

Shadows cast by the proposed building would not reach Rappaport Playground, located on the west side of Fort Hamilton Parkway between 52nd and 53rd Streets. Shadows would strike portions of the Monastery of the Precious Blood, a historic resource with sunlight-sensitive stained glass windows located across the street from the project site, on the west side of Fort Hamilton Parkway between 53rd and 54th Streets. Shadows would not strike the northern part of the main façade facing Fort Hamilton Parkway, where the

major sunlight-sensitive feature, a large roseate stained glass window, is located. Shadows would strike the southern part of the main façade, where smaller, more minor stained glass windows are located, during less than half of the year, and for up to no more than one hour 13 minutes a day, which would not constitute a substantial reduction in sunlight and would not alter the public's enjoyment of the historic resource. The Proposed Action would not result in significant shadow impacts.

DETERMINING WHETHER A SHADOW ASSESSMENT IS REQUIRED

According to the *CEQR Technical Manual*,

> "The shadow assessment considers projects that result in new shadows long enough to reach a sunlight-sensitive resource. Therefore, a shadow assessment is required only if the project would either result in (a) new structures (or additions to existing structures including the addition of rooftop mechanical equipment) of 50 feet or more or (b) be located adjacent to, or across the street from, a sunlight-sensitive resource."

The project site is located across 54th Street from the Monastery of the Precious Blood, a building that has been deemed eligible for listing on the National and State Registers of Historic Places and that has sunlight-sensitive stained glass windows and panels. A shadow assessment is therefore necessary.

TIER 1 ASSESSMENT

The first step in the assessment process is to determine the maximum length of the shadows that would be cast by the proposed building and to identify any sunlight-sensitive resources located within that distance of the project site.

Shadow lengths vary by time of day, being longest in the early morning and late afternoon and shortest at noon, and by time of year, being longest at the winter solstice and shortest at the summer solstice. According to the *CEQR Technical Manual*, the longest shadow cast by a building is 4.3 times the building's height. As noted above, the proposed building's maximum height would be 76 feet. The maximum shadow length would therefore be 327 feet. As Figure B-1 shows, one sunlight-sensitive historic resource, the Monastery of the Precious Blood, is within that distance of the project site, and one sunlight-sensitive open space resource, Rappaport Playground, is located at the edge of the shadow distance. Additional assessment is therefore required.

The monastery is not sunlight sensitive in its entirety; only the stained glass windows are. The major stained glass feature is a large roseate stained glass window located on the northern portion of the main façade facing Fort Hamilton Parkway. Smaller, more minor stained glass windows are located on the southern part of that façade. No stained glass windows are located on the building's southern façade, which faces 54th Street and the project site.

TIER 2 ASSESSMENT

The next step is to determine whether the sunlight-sensitive resources are within the arc in which shadows can be cast. That arc excludes the triangular area to the south of the proposed building that extends from +108 degrees to -108 degrees from true north. As Figure B-2 shows, the monastery and the playground are located within the arc in which shadows would be cast. Additional assessment is therefore required.

Figure B-1: Tier 1 Assessment

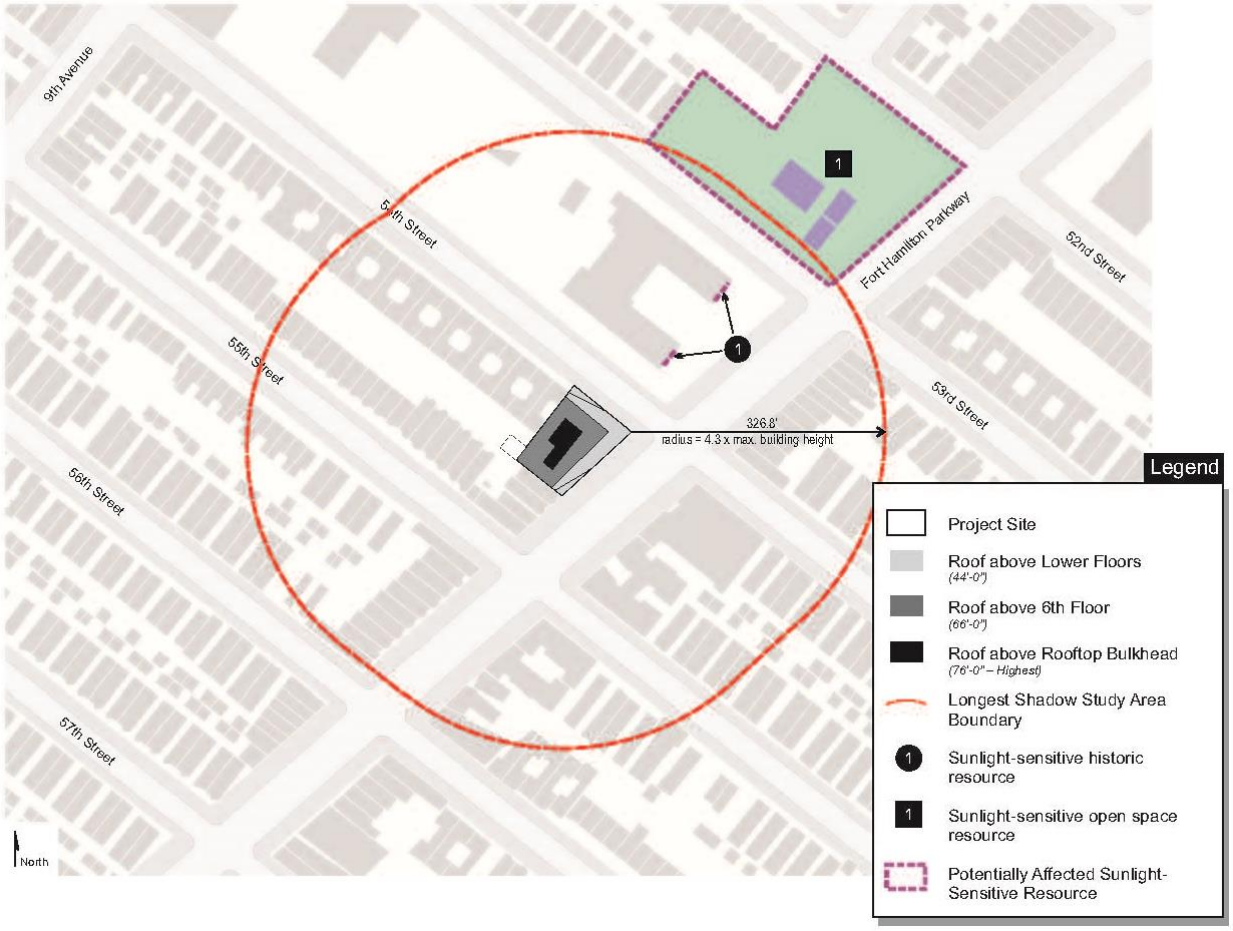


Figure B-2: Tier 2 Assessment

TIER 3 ASSESSMENT

The next step is to use computer modeling software to plot the shifting shadows that would be cast by the proposed building during the course of the day, as the sun travels from east to west in the sky, and as the shadows therefore travel from west to east. Modeling is performed for four days during the year: the winter solstice (December 21), the summer solstice (June 21), the spring or autumn equinox (March 21 or September 21), and the midpoint between the equinox and the summer solstice (May 6).

The results are shown in Figure B-3. Shadows from the proposed building would not reach Rappaport Playground at any time of the year. As Figures B-3a through B-3d show, shadows would reach the monastery's principal façade, where stained glass is located, only in the afternoon on only one of the four analysis days, December 21; thus, shadows from the building would reach this façade for a portion of the afternoon from sometime after September 21 to sometime before March 21, but not at all during the spring and summer. As explained in Figure B-3e, shadows from the taller portion of the proposed building would not strike either part of the monastery's principal façade because there is no direct line of sight between the two; shadows from that part of the building would strike only the monastery's southern façade, which is not sunlight sensitive. As explained in Figure B-3f, shadows from the easternmost (four-story-tall) portion of the building would not reach the northern portion of the monastery's principal façade where the roseate stained glass window is located; they would strike the southern part of the principal facade beginning at 1:40 PM on December 21. Since the CEQR shadow analysis period for that date ends

at 2:53 PM, shadows would strike stained glass windows in the monastery for a maximum of one hour 13 minutes in the course of the day, as is shown in Table B-1.

Table B-1
Duration of Shadows on Stained Glass Panels

December 21	March 21/ September 21	May 6/ August 6	June 21
1:40 PM - 2:53 PM	N/A	N/A	N/A
1 hr 13 min	0 minutes	0 minutes	0 minutes

It should be noted that the Tier 3 shadow diagrams represent a worst case situation. They do not show the height at which the shadow would strike the southern façade area; thus, it is possible that the shadow would strike only the lower part of that façade, below where the stained glass windows are located. They also do not show No-Action condition shadows from existing buildings or the shorter building that would be constructed on the project site in the future without the Proposed Action; thus, it is possible that the monastery's southern façade area would be in shadow whether or not the Proposed Action is taken. A more detailed Tier 4 assessment would be required for such determinations to be made.

A Tier 4 assessment has not been made because, even in the worst case situation identified by the Tier 3 assessment, a significant adverse impact would not occur. The *CEQR Technical Manual* states, "In general, 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 exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources." New shadows falling on some of the monastery's stained glass, but not on the major stained glass feature (the roseate window), during less than half of the year, and for up to no more than one hour 13 minutes a day, would not constitute a substantial reduction and would not alter the public's enjoyment of the historic resource.

CONCLUSION

Shadows cast by the proposed building would not reach Rappaport Playground, located on the west side of Fort Hamilton Parkway between 52nd and 53rd Streets. Shadows would strike portions of the Monastery of the Precious Blood, a historic resource with sunlight-sensitive stained glass windows located across the street from the project site, on the west side of Fort Hamilton Parkway between 53rd and 54th Streets. Shadows would not strike the northern part of the main façade facing Fort Hamilton Parkway, where the major sunlight-sensitive feature, a large roseate stained glass window, is located. Shadows would strike the southern part of the main façade, where smaller, more minor stained glass windows are located, during less than half of the year, and for up to no more than one hour 13 minutes a day, which would not constitute a substantial reduction in sunlight and would not alter the public's enjoyment of the historic resource. The Proposed Action would not result in significant shadow impacts.

Figure B-3a: Tier 3 Assessment December 21

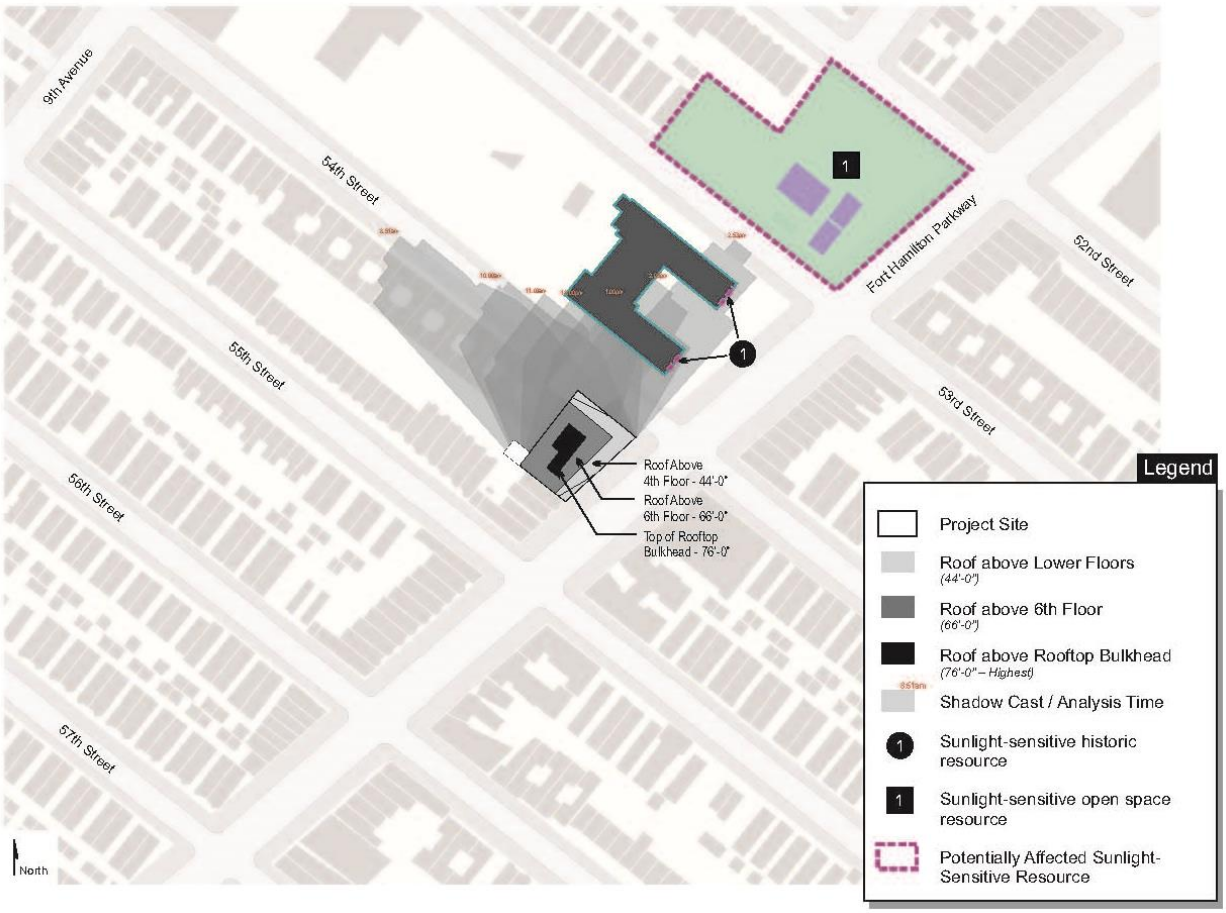


Figure B-3b: Tier 3 Assessment March 21

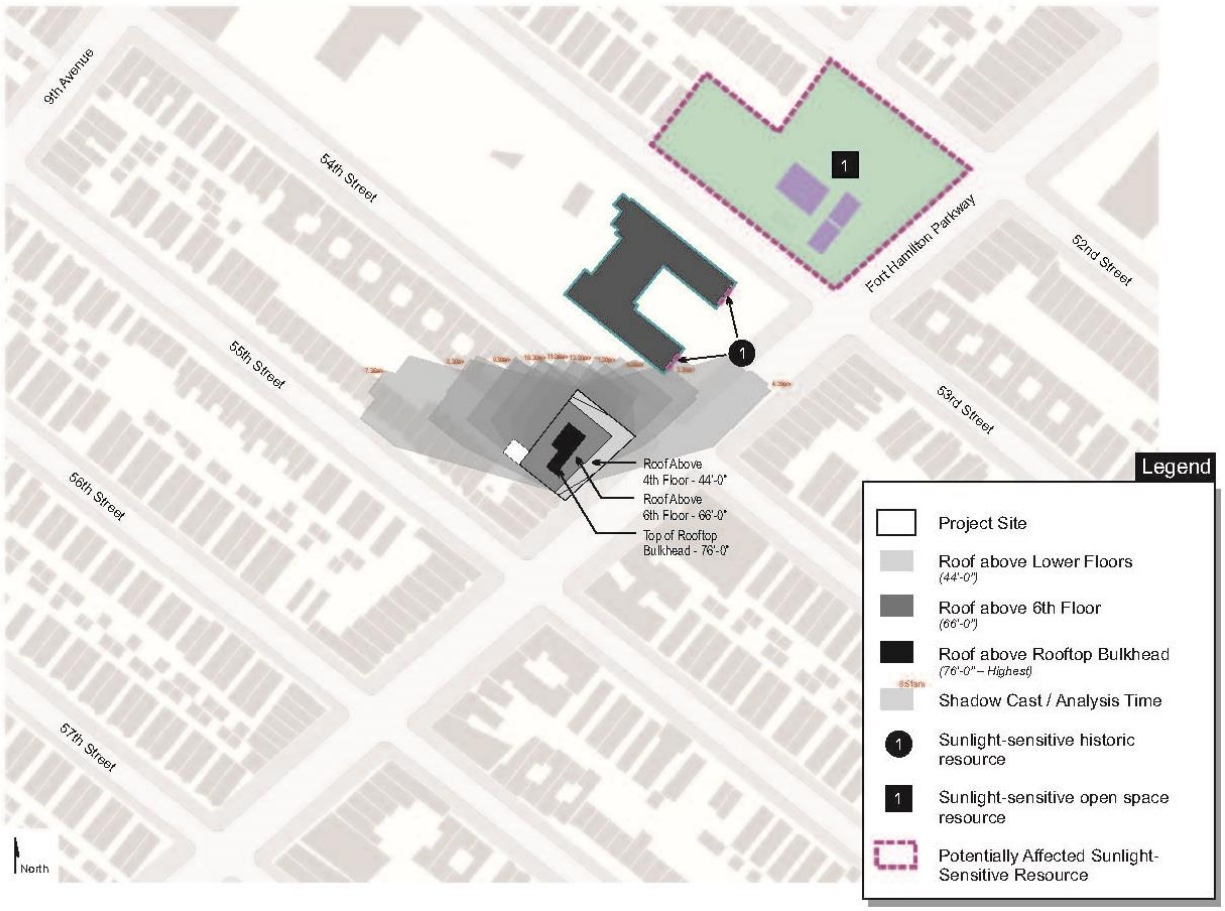


Figure B-3c: Tier 3 Assessment May 6

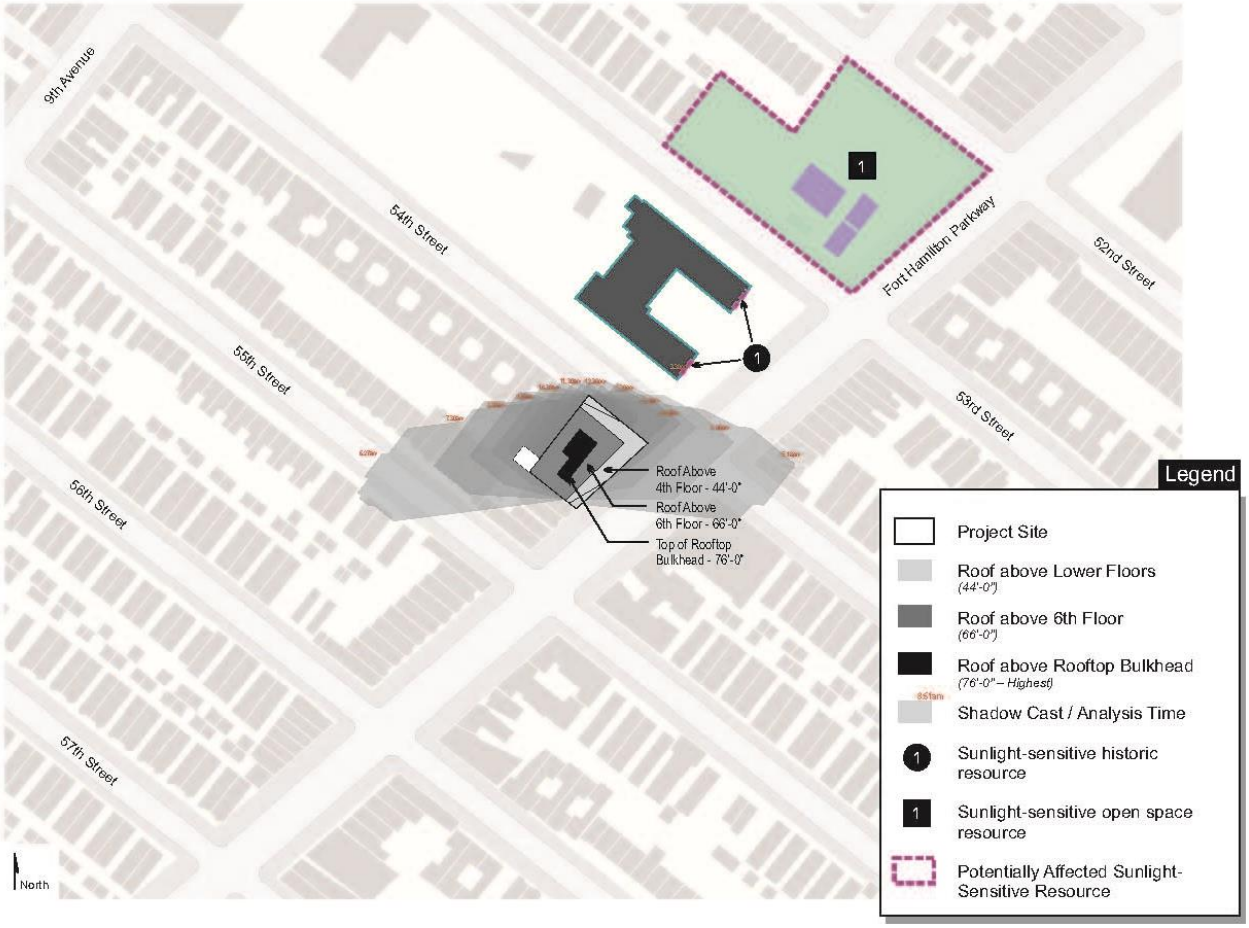


Figure B-3d: Tier 3 Assessment June 21

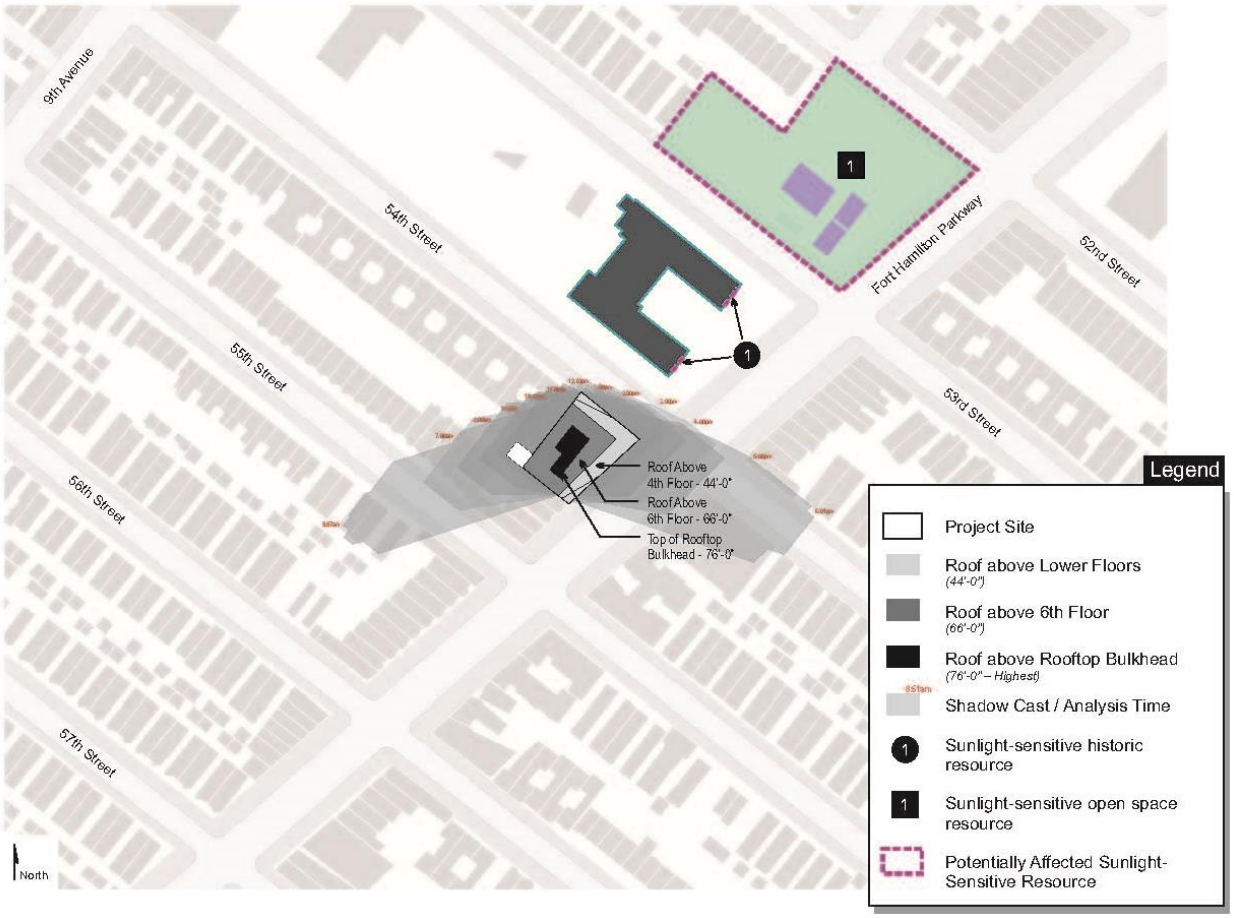
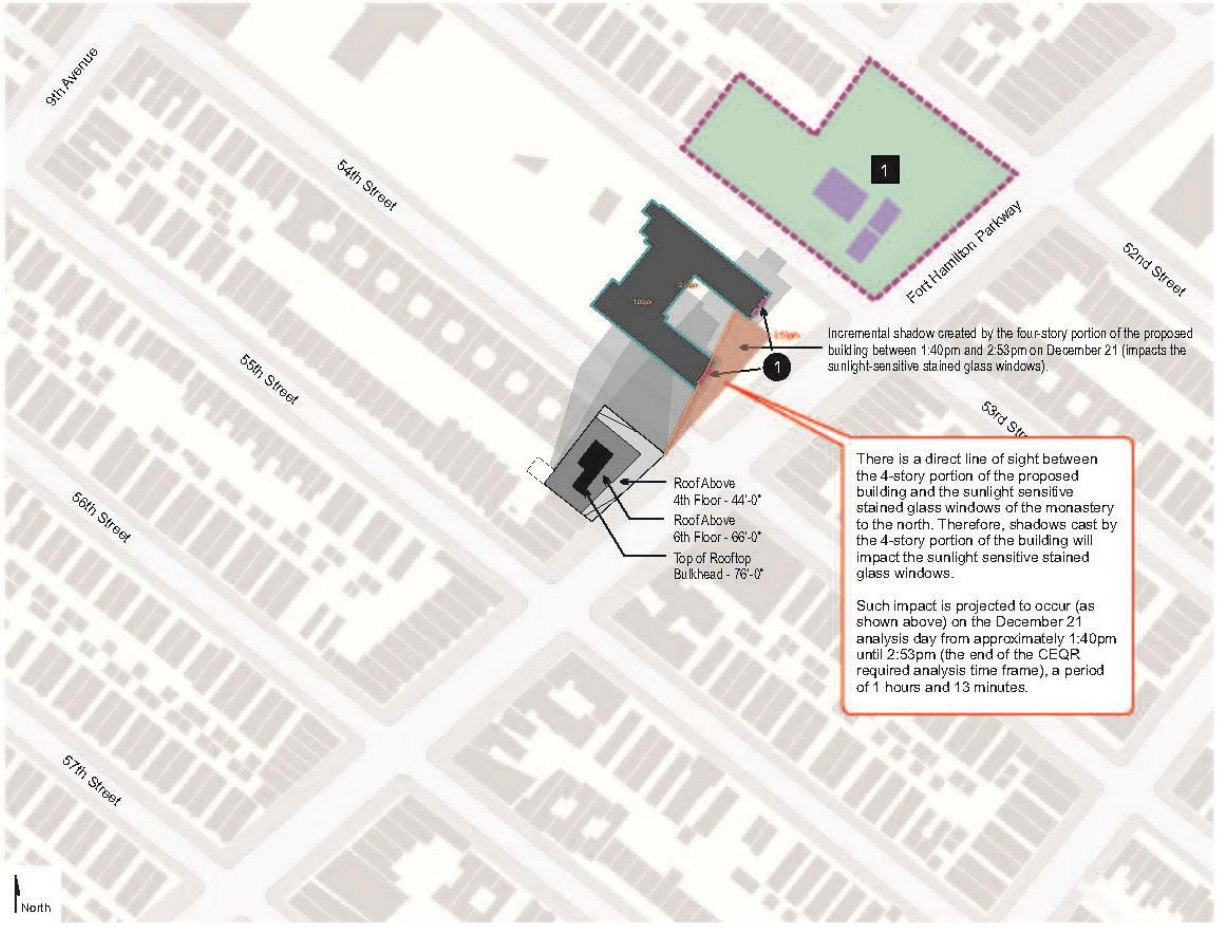


Figure B-3e: Tier 3 Assessment 6th Floor Analysis December 21

Figure B-3f: Tier 3 Assessment 4th Floor Analysis December 21



2.C HISTORIC AND CULTURAL RESOURCES

INTRODUCTION

This section considers the Proposed Action's potential impact on archaeological and architectural resources. Archaeological resources are artifacts or other remains, from either the prehistoric (Native American) or the historic (colonial or post-colonial) period that might provide information about the period from which they date or the society that produced them. Architectural resources include designated New York City landmarks and buildings within a designated New York City historic district, properties calendared for consideration by the New York City Landmarks Preservation Commission (LPC), properties listed on or determined to be eligible for listing on the State or National Register of Historic Places, National Historic Landmarks, and other properties that meet the eligibility criteria for such designations.

As discussed in Section 1, Project Description, and Section 2A, Land Use, Zoning, and Public Policy, the project site will be redeveloped by the 2016 build year whether or not the Proposed Action is taken, and no redevelopment or enlargement of existing uses is anticipated on either of the two other properties that would be affected by the proposed rezoning.

The proposed project would consist of a single six-story building with a roof height of 66 feet and a maximum height of about 76 feet to the top of the mechanical bulkhead. The building's lower floors would cover the entire site, except for a rear yard of approximately 475 square feet at the southwest corner of the property, but the building would be set back 23 feet 2 inches from 54th Street and 17 feet 3 inches from Fort Hamilton Parkway above the fourth floor (44 feet in height). The building would contain 53,604 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The proposed project would also include a cellar level (with 9,900 square feet of additional medical center space) and up to three sub-cellar levels in which approximately 151 accessory parking spaces would be provided.

In the future without the Proposed Action, a medical center building with ground floor commercial space and a below-grade garage would also be built, but the development would follow the R5/C1-3 rather than R6/C1-3 zoning regulations. The new building would have the same footprint as the proposed project, but the building would be three stories in height (about 33 feet to the roof, plus an additional 11 feet of height for the mechanical bulkhead). The building would be set back 30 feet from 54th Street and 27 feet one inch from Fort Hamilton Parkway above the second floor (22 feet in height). The building would contain 22,879 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The building would also include a cellar level (with 9,900 square feet of additional medical center space) and up to two additional sub-cellar levels in which approximately 82 accessory parking spaces would be provided.

PRELIMINARY ASSESSMENT AND CONCLUSION

In correspondence dated December 17, 2013, the LPC stated its conclusion that the project site is neither archaeologically nor architecturally sensitive. The out parcels within the proposed rezoning area may be archaeologically sensitive, but they have not been determined to be potential development parcels. The Monastery of the Precious Blood, which occupies an out parcel within the proposed rezoning area, has been determined to be eligible for listing on the National and State Registers of Historic Places, but redevelopment or alteration of that parcel as a result of the Proposed Action is not anticipated. Although the monastery has sunlight-sensitive stained glass windows and is located to the north of the project site, the proposed project would not have a significant adverse shadow impact on the monastery, as is

determined in the shadows section of this report. The Proposed Action would therefore not have a significant adverse impact on historic and cultural resources.

2.D URBAN DESIGN AND VISUAL RESOURCES

INTRODUCTION

This section describes the visual character of the project site and its environs, as well as other aspects of urban design. Visual character consists of features such as building types, height and massing, street walls, lot coverage, landscaping, street layout, view corridors, and important natural or built resources that serve as visual resources. Other aspects of urban design include the questions of whether open spaces and natural features would be preserved and whether the arrangement and massing of buildings would exacerbate wind conditions. The section assesses the proposed project's potential impact in terms of how compatible it would be with its urban context, how it would affect the various aspects of the area's urban design, and whether it would diminish views or adversely affect the setting of identified visual resources. To put this more concisely, this section assesses whether and how the proposed project would change the experience of a pedestrian in the project area.

The Proposed Action is the rezoning of portions of two blocks located within the Borough Park neighborhood of Brooklyn's Community District 12. The proposed rezoning entails the extension of an existing R6 zoning district into what is now an R5 district. The zoning map change would not affect the boundaries of an existing C1-3 commercial overlay that covers part of the proposed rezoning area. The rezoning area includes the project site (identified on the New York City Tax Map as Block 5673, Lots 42 and 50) and two out parcels (portions of Block 5673, Lot 41, and Block 5666, Lot 20). As discussed in Section 1, Project Description, and Section 2A, Land Use, Zoning, and Public Policy, the project site will be redeveloped by the 2016 build year whether or not the Proposed Action is taken, and no redevelopment or enlargement of existing uses is anticipated on either of the out parcels.

PRINCIPAL CONCLUSIONS

The Proposed Action would not affect the study area's street system, block forms, building arrangements, or topography. Although the Action condition building would be taller than the No-Action condition building, it still would be visually compatible with other buildings in its immediate vicinity. The Proposed Action would not create significant adverse urban design impacts within the study area. Owing to the lack of visual resources in the area, the proposed project would not result in significant adverse impacts to these resources.

DETERMINING WHETHER AN URBAN DESIGN AND VISUAL RESOURCES ASSESSMENT IS REQUIRED

A preliminary urban design and visual resources assessment is required because the Proposed Action would include a zoning map change that would alter the rules regulating development within the proposed rezoning area, allowing the construction of a building that is different in scale both from those that are now there and from those that would be allowed under existing zoning regulations.

PRELIMINARY ASSESSMENT

Study Area

The study area for the preliminary assessment is the same as that for the land use assessment, which is the area within a 400-foot radius from the proposed rezoning area.

The two blocks affected by the proposed rezoning are bounded by Fort Hamilton Parkway, 55th Street, 9th

Avenue, and 53rd Street. The proposed rezoning entails the extension of an existing R6 zoning district, which south of 53rd Street now extends east to a line 100 feet from the western frontage of Fort Hamilton Parkway, and north of 53rd Street extends further east across Fort Hamilton Parkway. An R5 district now covers the area south and east of the R6 district, spanning Fort Hamilton Parkway south of 53rd Street, and including the proposed rezoning area. The Proposed Action would extend the R6 district eastwards and southwards, to the western edge of Fort Hamilton Parkway between 53rd Street and the middle of the blockfront between 54th and 55th Streets. In addition, a C1-3 commercial overlay covers the western blockfront of Fort Hamilton Parkway between 54th and 55th Streets, to a depth of 100 feet. It is proposed that the existing C1-3 commercial overlay continue to be mapped over the portion of that block to be rezoned. The rezoning area includes the project site (identified on the New York City Tax Map as Block 5673, Lots 42 and 50) and two out parcels (portions of Block 5673, Lot 41, and Block 5666, Lot 20).

Figure D-1 shows the project site, the proposed rezoning area, and the study area boundaries

Methodology

The purpose of the preliminary assessment is to determine whether any physical changes proposed by the project may raise the potential to significantly and adversely affect elements of urban design. In accordance with the *CEQR Technical Manual*, the preliminary assessment provides the following information:

- A concise narrative of the existing project area, the future With-Action condition, and the future No-Action condition;
- An aerial photograph of the study area;
- Zoning calculations of existing and the future With-Action conditions;
- Floor area calculations;
- Lot and tower coverage;
- Building heights;
- Ground-level photographs of the site area with the immediate context;
- A three-dimensional representation of the future With-Action condition streetscape; and
- If view corridors exist within the study area, a description of the proposed project as it relates to visual resources including, as appropriate, proximity, orientation, height, bulk, etc.

Pedestrian Wind Conditions

The *CEQR Technical Manual* calls for a separate preliminary assessment to determine whether an analysis of pedestrian wind conditions is appropriate, since the construction of large buildings at locations that experience high wind conditions may result in channelization or downwash effects that could affect pedestrian safety.

The proposed rezoning area is not subject to unusual wind conditions. It is not in an exposed area on or near the waterfront, and it is not on high ground or on the upper portion of an exposed slope. It is within a fully developed area with a relatively flat topography.

The proposed building would be a single six-story building with high lot coverage. There would therefore not be a freestanding tower on the site that could cause pedestrian level vortex effects. The building would be oriented to the existing streets, and there would be no breaks in the street wall.

Figure D-1: Urban Design Study Area

5402 FORT HAMILTON PARKWAY REZONING

Brooklyn, New York

For these reasons, the Proposed Action would not have a significant adverse impact on pedestrian wind conditions, and a detailed wind conditions assessment is not required.

Existing Conditions

Urban Design

Overview

An aerial photo is presented in Figure D-2. Street level photos taken in 2011 are keyed to the map in Figure D-3. In terms of built form, there is a considerable contrast between the midblocks along the side streets, and the area along Fort Hamilton Parkway. The side streets are characterized by two- and three-story residential buildings, usually constructed with brick facades. Fort Hamilton Parkway, however, is far more varied in nature in terms of building types and building heights. Along Fort Hamilton Parkway within the study area, there is a mix of residential, commercial, institutional, and recreational uses. The residences are in three- and four-story apartment buildings, two-story rowhouses, and two-story buildings with single residential units above ground floor stores. The commercial uses are small retail, restaurant, and service establishments that all occupy the ground floors of otherwise residential buildings; there are no entirely commercial buildings. The recreational use is a mapped park, Rappaport Playground, on the west side of the parkway between 52nd and 53rd Streets. The institutional uses consist of a large monastery set within spacious grounds, a four-story religious school, and a ground floor storefront synagogue beneath residential units.

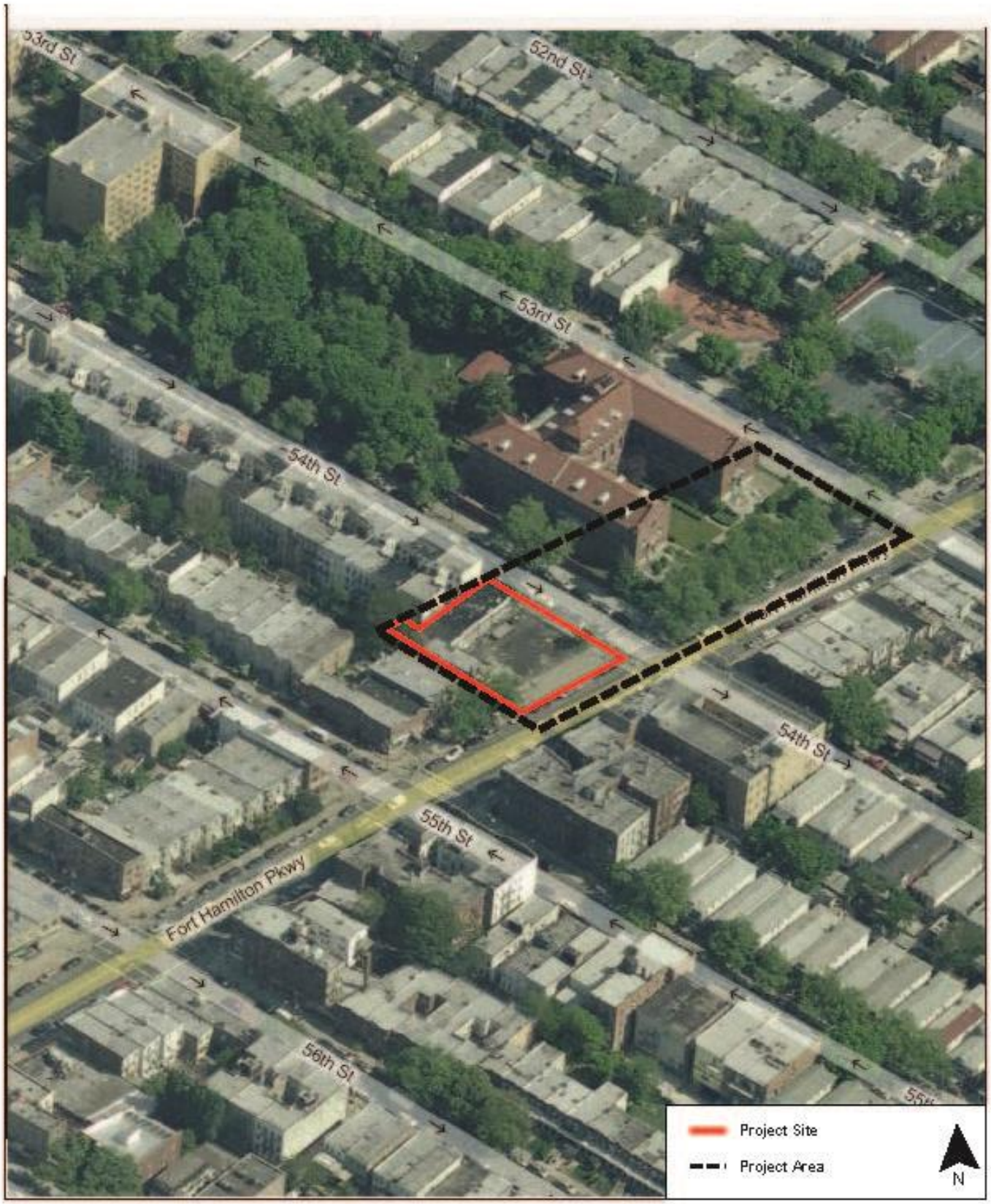
Project Site

The project site consists of two adjacent lots. The larger lot (Lot 42), at the southwest corner of Fort Hamilton Parkway and 54th Street, is a former auto repair establishment, consisting of a vacant garage building and paved lot area that is fenced and unused. The other lot (Lot 50), located to the south of the corner lot and fronting on Fort Hamilton Parkway, contains a narrow, vacant three-story building that formerly contained two residential units above a ground floor commercial space. Existing development consists of 4,300 square feet within the vacant three-story building on Lot 50 and 2,900 square feet within the former auto repair garage on Lot 42. In all about 7,200 square feet of building area exists on the 11,167.5 square foot project site, for an existing floor area ratio (FAR) of 0.64.

Immediate Context of the Project Site

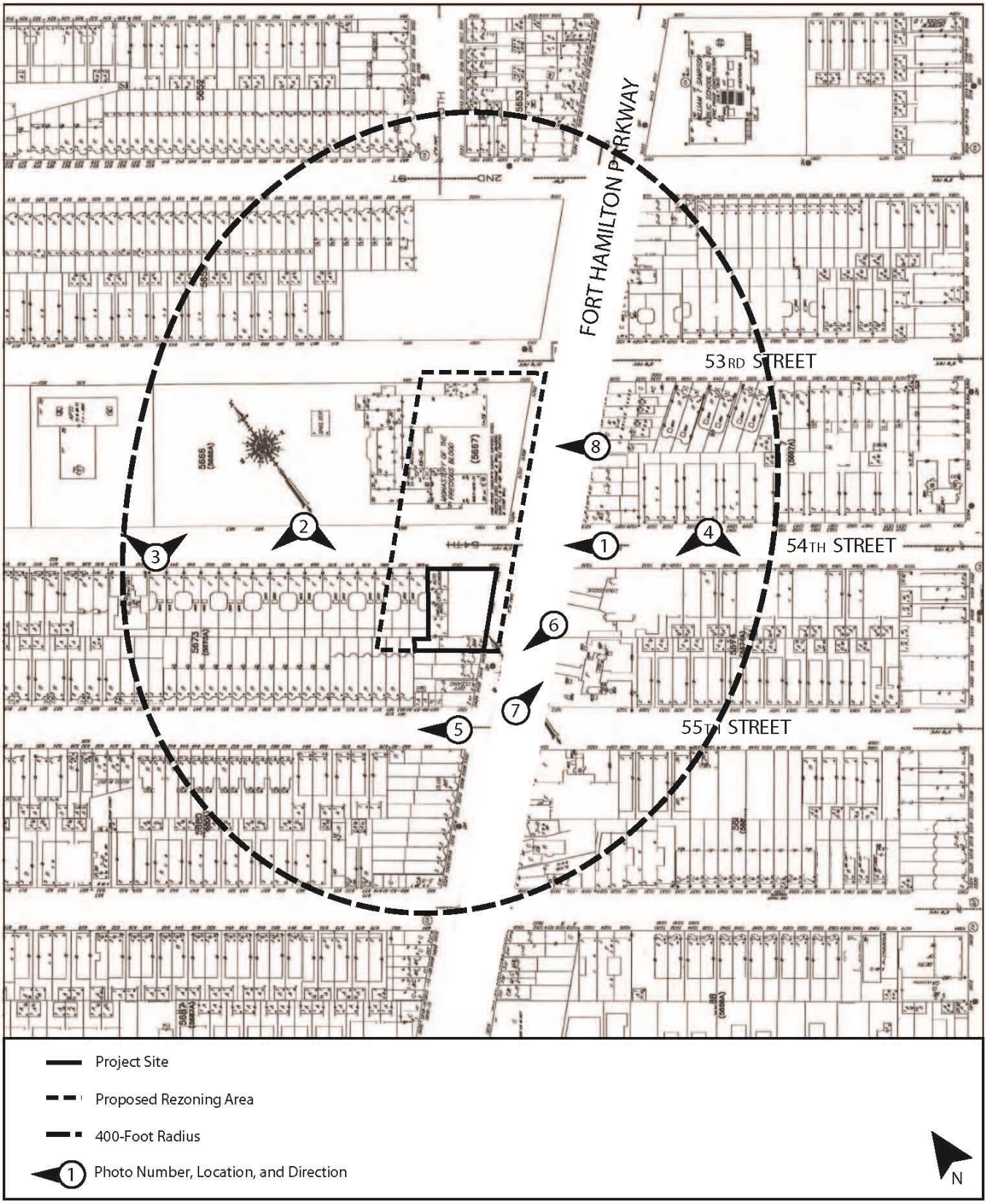
To the immediate west of the former auto repair shop is one of the two out parcels within the proposed rezoning area, fronting on 54th Street. It contains a three-story brick residential building, with six residential units. Similar attached small multifamily residential buildings continue westward along the southern blockfront of 54th Street.

To the north of the project site, across 54th Street, is a large lot that contains the entire Fort Hamilton Parkway frontage between 53rd and 54th Streets and that extends 500 feet back from the parkway frontage. The eastern part of the lot is the other out parcel within the proposed rezoning area. The lot accommodates the building and grounds of the Monastery of the Precious Blood. The monastery is a large patterned red brick building with a height of 56 feet to its pitched main roof and of 79 feet to the roof of its bell tower (according to elevation drawings by the project architect). The building's main façade faces Fort Hamilton Parkway and is set back behind a spacious lawn. The open grounds behind the monastery are shielded by brick walls along the 54th and 53rd Street property lines, affording privacy to the cloistered nuns who occupy the monastery.



5402 FORT HAMILTON PARKWAY RE ZONING

Brooklyn, New York



5402 FORT HAMILTON PARKWAY REZONING

Brooklyn, New York

Photo D-1: View West to 54th Street Blockfront Adjacent to the Project Site

Photo D-2: 54th Street Elevation West of Fort Hamilton Parkway, Looking South

Photo D-3: 54th Street Elevation West of Fort Hamilton Parkway, Looking North

Photo D-4: 54th Street Elevation East of FortHamilton Parkway, Looking South

Photo D-5: 55th Street West of Fort Hamilton Parkway, Looking West

Photo D-6: View West to Fort Hamilton Parkway Blockfront Adjacent to the Project Site

Photo D-7: View Northeast (from 55th Street) to Fort Hamilton Blockfront Facing the Project Site

Photo D-8: Monastery of the Precious Blood between 53rd and 54th Street on Fort Hamilton Parkway, Looking West

To the east of the project site, across Fort Hamilton Parkway, is a Jewish religious school. The orange and beige brick building is four stories in height but appears to be a full story taller than the adjacent four-story brick apartment building that occupies the southern part of the blockfront. (See Photo D-7.) The religious school has a roof height of 51 feet (according to elevation drawings by the project architect).

To the south of the vacant three-story building on the project site are two attached 2½-story attached brick rowhouse residential buildings, with curved bay window facades. South of these, at the 55th Street corner, are two attached brick buildings with commercial ground floors and residential second floors.

Street System and Block Form

The streets in the vicinity of the study area form a regular grid, sliced through on a diagonal by Fort Hamilton Parkway. The side streets are 60 feet in width, and Fort Hamilton Parkway is 100 feet wide. Because Fort Hamilton Parkway is not perpendicular to the cross streets, the blocks within the study area are trapezoidal in shape. The blocks are 200 feet wide in cross section from street to street, slightly longer along the Fort Hamilton Parkway frontage from street to street, and considerably longer from Fort Hamilton Avenue to the nearest avenue, which is outside the study area boundaries.

Building Arrangement

Most structures along Fort Hamilton Parkway are built to the front lot line. The one notable exception is the Monastery of the Precious Blood, which is set back from all street frontages, with the largest setbacks from Fort Hamilton Parkway. The buildings along the side streets are generally set back about 15 feet from the front lot line.

Topography

The topography in the study area is generally flat, with a slight rise from east to west.

Visual Resources

According to the *CEQR Technical Manual*, visual resources are defined as follows: "***Visual resources.*** A visual resource is the connection from the public realm to significant natural or built features, including

views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources." There are no visual resources in the study area.

The Future without the Proposed Action

In the future without the Proposed Action, the project site would continue to be zoned R5/C1-3. For community facility uses, the maximum permitted FAR is 2.0. No maximum lot coverage provisions apply. The maximum street wall height is the lesser of 35 feet or three stories, at which height the building must set back a minimum of 15 feet from a wide street (such as Fort Hamilton Parkway) and 20 feet from a narrow street (such as 54th Street) . Sky exposure planes slanting upwards and rearwards at a 45 degree angle from a line 30 feet above the front property line regulate building height on the interior of the lot.

The applicant intends to redevelop the site with a single mixed-use building containing a medical center, ground floor retail space, and a below-grade accessory parking garage whether or not the Proposed Action is taken. In the future without the Proposed Action, there would be a total of 22,879 square feet above grade, including 17,265 square feet of community facility (medical center) space and 5,614 square feet of commercial (retail) space. Another 9,900 square feet of medical center space would occupy the cellar. There would also be an accessory automated parking garage with an entrance on 54th Street and 82 parking spaces on up to two sub-cellar levels, occupying up to 19,594 square feet. (The amount of required garage space depends on the technology that is used.) The building's main entrance would be on Fort Hamilton Parkway.

The building would be three stories tall, with a roof height of 33 feet and a maximum height of 44 feet to the top of the mechanical bulkhead. The building's lower two floors would cover the entire site, except for a rear yard of approximately 475 square feet at the southwest corner of the property, but the third floor would be set back 30 feet from 54th Street and 27 feet one inch from Fort Hamilton Parkway. The street wall height, to the top of the second floor, would be 22 feet. Figure D-4 shows a site plan of the future No-Action condition building.

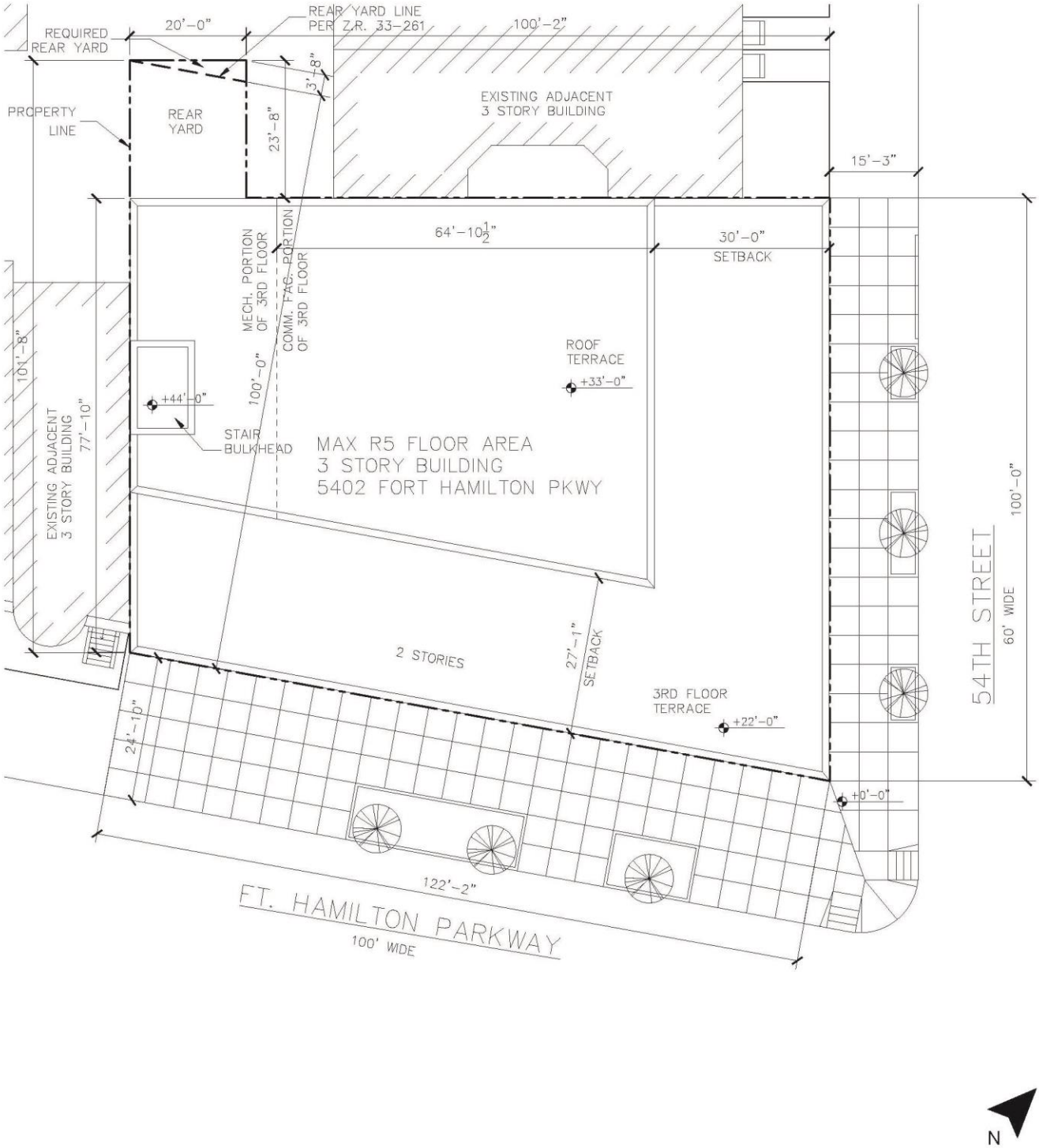
The building would eliminate a hole within the existing urban fabric (the fenced, vacant former gas station site) and would maintain the street wall along Fort Hamilton Parkway. Along 54th Street the building would be constructed to the street line, whereas the buildings to its west set back about 15 feet; this is typical of corner buildings at the intersection of a commercial thoroughfare and a side street. The building would be slightly taller than the adjacent 2½- and three-story buildings on Fort Hamilton Parkway and 54th Street but shorter than the buildings that face it across these two streets, the religious school and the monastery.

The building would not alter the street system or block form.

The Future with the Proposed Action

The Proposed Project

The project site would be rezoned from R5/C1-3 to R6/C1-3 as a result of the Proposed Action, and the two out parcels would be partially rezoned from R5 to R6. For a community facility use on the project site, the maximum permitted FAR would increase from 2.0 to 4.8. As under existing and future No-Action conditions, no maximum lot coverage provisions would apply. The maximum permitted street


REQUIRED REAR YARD
20'-0"
REAR YARD LINE PER Z.R. 33-261
100'-2"
3'-8"
PROPERTY LINE
REAR YARD
23'-8"
EXISTING ADJACENT 3 STORY BUILDING
15'-3"
64'-10½"
30'-0" SETBACK
MECH. PORTION OF 3RD FLOOR
COMM. FAC. PORTION OF 3RD FLOOR
ROOF TERRACE
+33'-0"
101'-8"
EXISTING ADJACENT 3 STORY BUILDING 77'-10"
+44'-0"
100'-0"
STAIR BULKHEAD
MAX R5 FLOOR AREA
3 STORY BUILDING
5402 FORT HAMILTON PKWY
2 STORIES
27'-1" SETBACK
3RD FLOOR TERRACE
+22'-0"
24'-10"
54TH STREET
60' WIDE
100'-0"
+0'-0"
122'-2"
FT. HAMILTON PARKWAY
100' WIDE
N

wall height would increase from 35 feet or three stories to the lesser of 60 feet or four stories, at which height the building must set back a minimum of 15 feet from a wide street (such as Fort Hamilton Parkway) and 20 feet from a narrow street (such as 54th Street). Sky exposure planes slanting upwards and rearwards from a line 60 feet above the front property line regulate building height on the interior of the lot. Along a narrow street, the plane rises 2.7 feet for every foot of setback; along a wide street, the plane rises 5.6 feet for every foot of setback.

As explained in Section 1, Project Description, this EAS assumes a building with the maximum permitted FAR of 4.8. That is the "proposed project" described below, which is somewhat bulkier than the building the applicant actually intends to build, with more floor area and narrower setbacks at the maximum street wall height.

The proposed project would consist of a single six-story building with a roof height of 66 feet and a maximum height of about 76 feet to the top of the mechanical bulkhead. The building's lower floors would cover the entire site, except for a rear yard of approximately 475 square feet at the southwest corner of the property, but the building would be set back 20 feet from 54th Street and 17 feet 3 inches from Fort Hamilton Parkway above the fourth floor. The street wall height, to the top of the fourth floor, would be 44 feet. The building would contain 53,604 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The proposed project would also include a cellar level (with 9,900 square feet of additional medical center space) and up to three sub-cellar levels in which approximately 151 accessory parking spaces would be provided, with the garage's entrance on 54th Street. The building's main entrance would be on Fort Hamilton Parkway. Figure D-5 shows a site plan of the proposed building. (See Appendix 1, Architectural Plan for the Proposed Building, for a full set of architectural drawings and zoning calculations.)

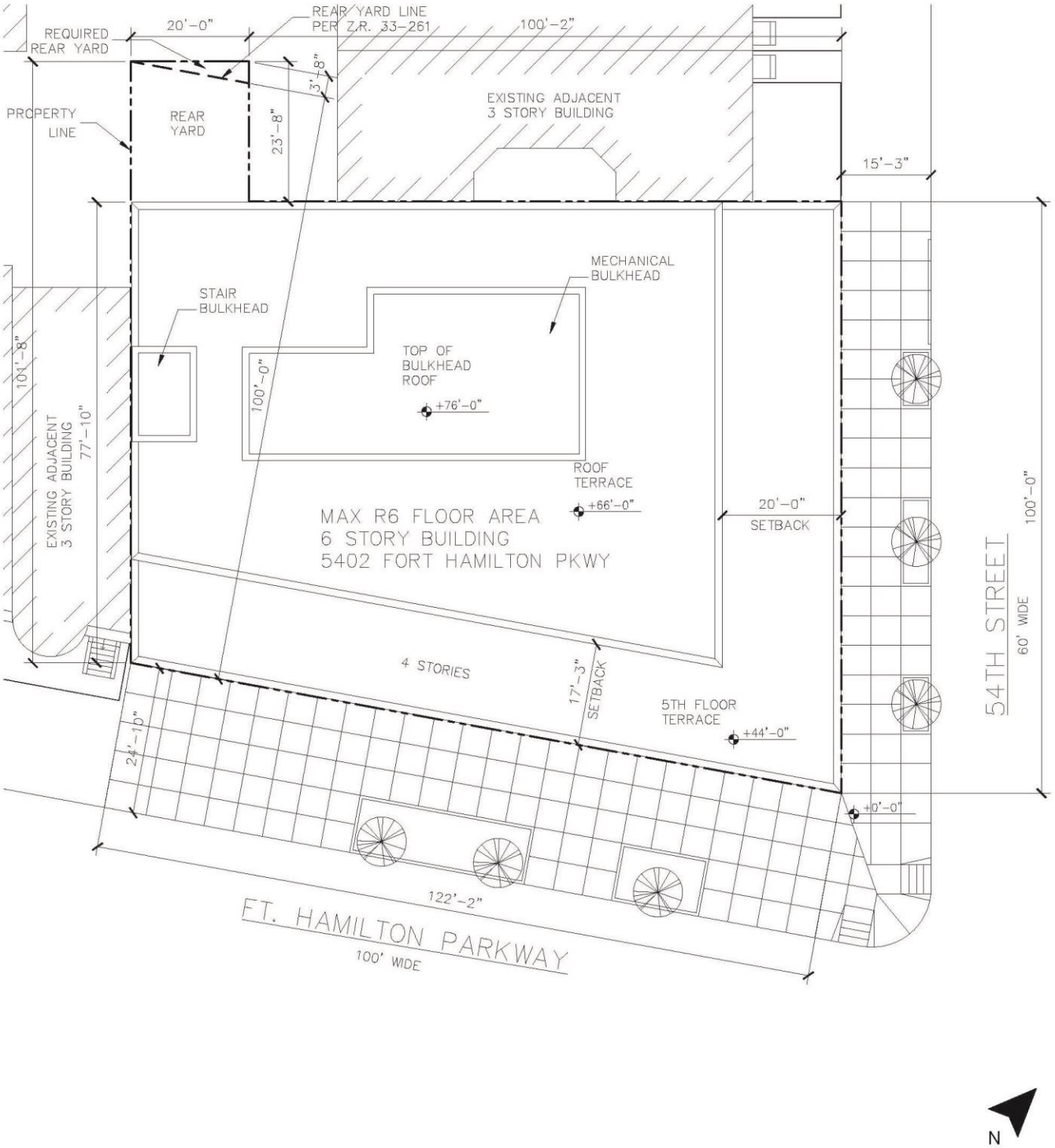
Compared with the No-Action building, the proposed project would contain 30,725 square feet more above-grade space. The building's footprint would be the same. The street wall height would be 22 feet (two stories) taller, at which height the building's setback from 54th Street would be 10 feet less, and its setback from Fort Hamilton Parkway would be 3 feet 11 inches less. The roof height would be 33 feet (three stories) taller. Figure D-6 provides a visual comparison between the No-Action building and the proposed project.

Urban Design

Like the No-Action building, the Action condition building would be constructed to the street lines, with its street wall locations and lengths the same as those of the No-Action building. The proposed project's relation to existing building arrangement on the block and within the study area would therefore be the same as has been noted for the future without the Proposed Action. The building would eliminate a hole within the existing urban fabric (the fenced, vacant former gas station site) and would maintain the street wall along Fort Hamilton Parkway. Along 54th Street the building would be constructed to the street line, whereas the buildings to its west set back about 15 feet; this is typical of corner buildings at the intersection of a commercial thoroughfare and a side street.

Because the proposed project would be a single building constructed on two adjacent tax lots, it would have no impact on the street system or block form within the study area.

Although the new building would be taller than the adjacent existing 2½ - and three-story buildings, the setbacks of the upper floors from both streetfronts would greatly reduce the visual effect of the building's height. The new building would be somewhat taller than the two buildings that face it across Fort Hamilton Parkway and 54th Street. Its roof height would be 15 feet above that of the religious school at the southeast corner of the intersection. However, the religious school's street walls rise 51 feet without


REQUIRED REAR YARD
20'-0"
REAR YARD LINE PER Z.R. 33-261
100'-2"
3'-8"
PROPERTY LINE
REAR YARD
23'-8"
EXISTING ADJACENT 3 STORY BUILDING
15'-3"
MECHANICAL BULKHEAD
STAIR BULKHEAD
TOP OF BULKHEAD ROOF
+76'-0"
100'-0"
101'-8"
EXISTING ADJACENT 3 STORY BUILDING 77'-10"
ROOF TERRACE
+66'-0"
MAX R6 FLOOR AREA
6 STORY BUILDING
5402 FORT HAMILTON PKWY
20'-0" SETBACK
4 STORIES
17'-3" SETBACK
5TH FLOOR TERRACE
+44'-0"
24'-10"
+0'-0"
54TH STREET
60' WIDE
100'-0"
122'-2"
FT. HAMILTON PARKWAY
100' WIDE
N

setback, whereas the proposed building would set back at a height of 44 feet, 20 feet from the 54th Street property line and approximately 17 feet from the Fort Hamilton Parkway property line. The building's roof height would be ten feet lower than that of the main roof of the monastery that occupies the western Fort Hamilton Parkway blockfront between 53rd and 54th Streets, but lower than the roof of its bell tower. The tallest part of the proposed building, the rooftop mechanical penthouse, would be three feet lower than the monastery's bell tower. The proposed project would therefore not substantially change the scale of this portion of Fort Hamilton Parkway and this portion of the study area. This conclusion is demonstrated by Figures D-7 and D-8, elevation drawings that show the comparative heights of the proposed project and the monastery and religious school, and by Figures D-9 through D-11, which are perspective drawings.

In summary, the Proposed Action would not have a significant adverse impact on urban design.

Visual Resources

Because of the absence of visual resources within the study area, the Proposed Action would not have a significant adverse impact on visual resources.

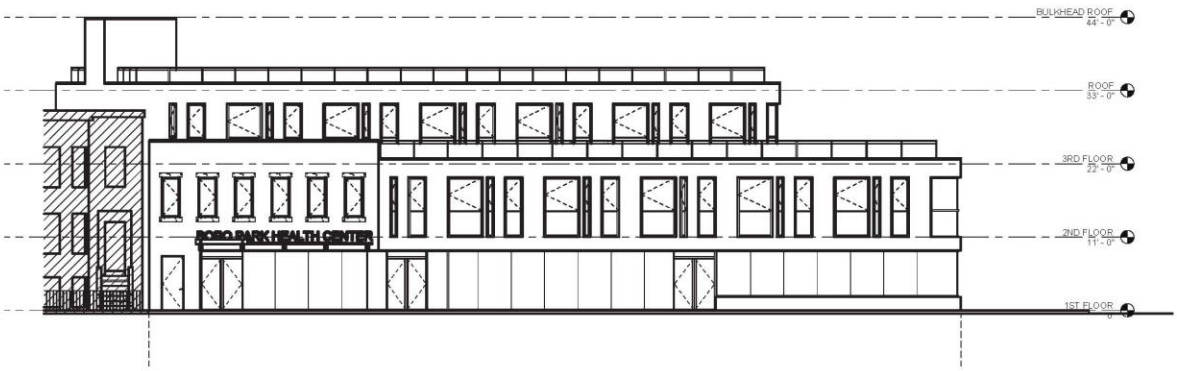
CONCLUSION

The Proposed Action would not affect the study area's street system, block forms, building arrangements, or topography. Although the Action condition building would be taller than the No-Action condition building, it still would be visually compatible with other buildings in its immediate vicinity. The Proposed Action would not create significant adverse urban design impacts within the study area. Owing to the lack of visual resources in the area, the proposed project would not result in significant adverse impacts to these resources.

Figure D-6: Comparative Heights of the No-Action Building and the Proposed Project

PROPOSED PROJECT (FORT HAMILTON PARKWAY ELEVATION)

NO-ACTION BUILDING (FORT HAMILTON PARKWAY ELEVATION)



NO-ACTION BUILDING (54TH STREET ELEVATION)

PROPOSED PROJECT (54TH STREET ELEVATION)

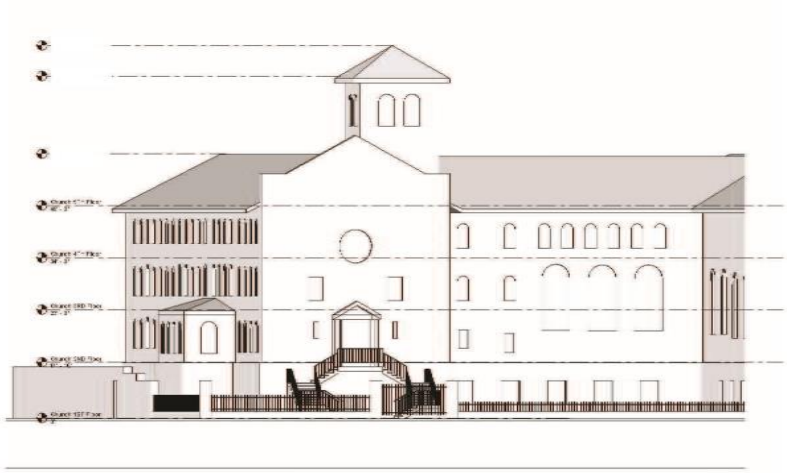
5402 FORT HAMILTON PARKWAY REZONING

Brooklyn, New York

Figure D-7: Comparative Heights of the Monastery and the Proposed Project

PROPOSED PROJECT

MONASTERY



5402 FORT HAMILTON PARKWAY REZONING

Brooklyn, New York

Figure D-8: Comparative Heights of the Religious School and the Proposed Project

PROPOSED PROJECT

RELIGIOUS SCHOOL

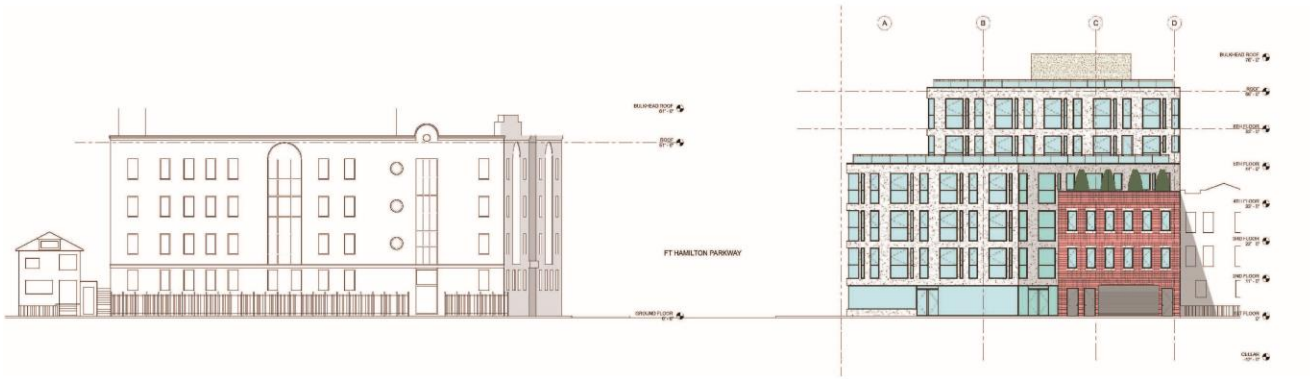


Figure D-9: Perspective of the Proposed Project Looking South Along Ft. Hamilton Parkway

Figure D-10: Perspective of the Proposed Project Looking West Along 54th Street

Figure D-11: Perspective of the Proposed Project Looking East Along 54th Street

2.E HAZARDOUS MATERIALS

INTRODUCTION

A hazardous materials assessment is conducted to determine whether the proposed project may increase the exposure of people or the environment to hazardous materials and, if so, whether this increased exposure would result in potential significant public health or environmental impacts.
This section examines the Proposed Action's potential to cause a significant adverse hazardous materials impact by leading to redevelopment or other activities that could expose people to hazardous materials, either by introducing land uses that would involve the use or storage of such materials or by increasing pathways to exposure to existing hazardous materials that contaminate portions of the proposed rezoning area as a result of current or past activities. A hazardous material is any substance that poses a threat to human health or the environment; such substances typically include heavy metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, dioxins, and other toxic, corrosive, or flammable waste products of industrial or other processes. Manufacturing operations, automotive repair shops, gasoline service stations, dry cleaners, exterminators, chemical laboratories, junk yards, solid waste transfer stations, welding shops, and printers are among those land uses that may be associated with subsequent hazardous materials contamination of soil or groundwater, as well as any land use with underground fuel storage tanks.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Introduction

Sandstone Environmental Associates, Inc., prepared a Phase I Environmental Site Assessment (ESA) for the project site during the autumn of 2013, in accordance with ASTM E 1527-13. The Phase I report, dated November 14, 2013, is summarized below.

Site Reconnaissance

The project site consists of two adjacent lots. Block 5673, Lot 42, at the southwest corner of Fort Hamilton Parkway and 54th Street, is a former automotive repair facility that is no longer in active use. A vacant one-story building is located at the western edge of the property, and the rest of the lot consists of a paved area that was formerly used for parking and storage. The perimeter is marked by a chaiG-link fence about ten feet high. The vacant building has three bays, which were formerly used as an auto repair shop, a carwash, and a small office. Block 5673, Lot 50, to the immediate south along Fort Hamilton Parkway, is developed with a vacant three-story building that formerly contained two residential units above a ground floor commercial unit.

Review of Historical Records

Historical Sanborn maps, aerial photographs, city directories, and certificates of occupancy were reviewed to obtain information about the use history of the project site and nearby properties.

The 1926 Sanborn map shows that Lots 42 and 50 were then a single lot occupied by a gasoline service station, with the gasoline pumps located on a part of the property that is now part of Lot 42. The 1942 map still shows the gas station but also shows the two existing buildings. The three-story building was labeled as a store. That building was identified as "underwear sewing" on the 1952 map, a store again on the 1970 map, and residences over commercial space on the 1976 map and all subsequent maps. The 1990 map shows that the gas station was gone by then, with the carwash and auto repair facility remaining on

Lot 42.

City directories show that the three-story building had been constructed by 1934 and that residential tenants occupied the upper floors from that time onwards. Commercial tenants included a beauty salon during the 1960s and a tailor shop during the 1970s.

Sanborn maps and city directories show a history of residential and commercial uses on nearby properties, as well as the monastery on the far side of 54th Street and the religious school on the far side of Fort Hamilton Parkway.

Review of Government Records

A search was conducted of the federal Resource Conservation and Recovery Information System (RCRA Info) List, conditionally exempt small quantity generators (CESQG) list, and RCRA NonGen/ NLR list and the New York State Petroleum Bulk Storage (PBS) database, manifest database, list of registered drycleaners, and SPILLS Information Database. The PBS database lists the gas station formerly located on the project site, which had eight 550-gallon underground storage tanks (USTs) installed in 1973. The SPILLS Information Database lists an incident in 1986 in which oil leaked from the piping of a 275-gallon fuel oil tank containing #2 heating oil at the project site.

Proprietary lists maintained by Environmental Data Resources, Inc. (EDR) were also reviewed for listings for manufactured gas plants, auto stations, and dry cleaners. A dry cleaner is listed at 5420 Fort Hamilton Parkway, a location just 83 feet away from the project site and of equal or higher elevation.

It is not known whether the USTs were ever removed from the project site. The presence or former presence of underground storage tanks at the project site, the reported spill incident at the project site, and the presence of a dry cleaner nearby and upgradient of the project site all constitute "recognized environmental conditions," which are sources of concern.

Opinion

The former presence of a gasoline station on the project site may have contaminated the soils with solvents, petroleum hydrocarbons, and BTEX compounds.

The presence of a dry cleaning use dating to 1949 at 5420 Fort Hamilton Parkway, which is at a higher elevation less than 100 feet from the project site, may have contaminated soil and groundwater with chemicals such as perchloroethylene (tetrachloroethylene) and vinyl chloride.

CONCLUSION

The Phase I ESA concluded that, as a result of a gasoline service station with underground storage tanks formerly located on the project site and a dry cleaner located upgradient and close to the project site, soil and groundwater at the site may be contaminated with petroleum products and perchloroethylene. To determine whether this is the case, soil and groundwater testing (that is, a Phase II investigation) must be performed. If contamination is found, appropriate remediation must be completed before redevelopment may occur.

These environmental concerns also pertain to the adjacent Block 5673, Lot 41, an out parcel within the proposed rezoning area. They do not pertain to the other out parcel, Block 5666, Lot 20, because that property is farther away from the dry cleaner and the former gas station site and separated from them by an intervening street.

An (E) designation (E-341) will be mapped on the project site (Block 5673, Lots 42 and 50), binding the applicant to perform the following actions:

Task 1-Sampling Protocol

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

Task 2-Remediation Determination and Protocol

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

If OER determines that remediation is necessary based on test results, a proposed remediation plan must be submitted to OER for review and approval. The fee owner of the lots must complete such remediation as determined necessary by OER. The fee owner of the lots shall then provide proper documentation that the work has been satisfactorily completed.

A construction-related health and safety plan must be submitted to OER for approval and then implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil, groundwater and/or soil vapor.

This course of action would ensure that a significant adverse impact related to hazardous materials would not occur as a result of the Proposed Action.

2.F TRANSPORTATION

INTRODUCTION

This chapter provides a discussion of potential impacts that new traffic, parking, transit and pedestrian trips associated with the Proposed Project will have on transportation facilities in the vicinity of the project site. The chapter describes existing (2011) and projected (2016) transportation conditions in the future without the Proposed Project (the "No Action" condition) and the future with the Proposed Project (the "Action" condition). The analyses contained herein were conducted in accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*.

As described in the Project Description Chapter, the applicant, Fort Hamilton LLC, is applying for a zoning map amendment affecting Block 5666, Lot 20 and Block 5673, Lots 41, 42, and 50 in the Borough Park neighborhood of Brooklyn (the "Proposed Action"). The two blocks proposed for rezoning are bounded by Fort Hamilton Parkway, 55th Street, 9th Avenue, and 53rd Street, with 54th Street running between the blocks. Under existing conditions, the proposed rezoning area is within an R5 zoning district; a C1-3 overlay covers the Fort Hamilton Parkway blockfront between 54th and 55th Streets to a depth of 100 feet. The proposed rezoning entails the extension of an existing R6 zoning district to replace the R5 district. It is also proposed that the existing C1-3 overlay remain in place.

Table F-1 provides a summary of the building program. The proposed rezoning would facilitate construction of a single-building, mixed-use development containing community facility space, ground floor commercial space and an automated below grade off-street parking facility (the "Proposed Project") located at 5402 Fort Hamilton Parkway. The Proposed Project is comprised of 54,955 gross square feet (GSF) of community facility space (a medical facility six stories tall), 5,614 GSF of ground floor local retail use fronting on Fort Hamilton Parkway, and an 150 vehicle (100 passenger cars and 50 SUVs) below grade off-street parking facility. The Proposed Project has a zoning floor area of 50,669 zoning square feet (ZSF) on a lot area of 11,167.5 square feet, translating to a Floor Area Ratio (FAR) of 4.54. However, since the zoning floor area (under R-6/C1-3 rezoning) could achieve a slightly higher FAR of 4.8 (resulting in a slightly larger zoning floor area of 53,604 ZSF), the reasonable worst-case development scenario (RWCDS) for analysis assumes the larger square footage which would result from adoption of the proposed rezoning action. Therefore, the Proposed Project (for analysis purposes) assumes a rezoned building consisting of 57,890 GSF of community facility space (a medical facility[1] six stories tall), 5,614 GSF of local retail use fronting on Fort Hamilton Parkway, and an 150 vehicle (100 passenger cars and 50 SUVs) below grade automated off-street parking facility.

Additionally, it is expected that if the Proposed Action is not approved, the applicant will develop the 5402 Fort Hamilton Parkway site under existing R-5/C1-3 zoning (an as-of-right or No Action building). This as-of-right building will consist of approximately 27,165 GSF of community facility space (a medical facility[2] three stories tall) and 5,614 GSF of local retail use fronting on Fort Hamilton Parkway. The site will also include a below grade automated off-street parking facility with capacity for up to 82 vehicles.

1 It is assumed that, for trip generation purposes, the proposed 57,890 GSF Action medical facility will be allocated to patients and staff as follows – a 42,280 GSF medical facility (both staff and patient use) and a 15,610 Medical Laboratory (staff usage only); this results in a total of 42,280 GSF allocated towards patient use and 57,890 GSF allocated towards staff use. Trips were equally split between cardiology and OB/GYN trip rates for both patients and staff in order to reflect a hybrid medical facility that provides multiple types of medical services (21,140 GSF and 28,945 GSF for patient and staff cardiology trip use and 21,140 GSF and 28,945 GSF for patient and staff OB/GYN trip use, assuming the equal split between cardiology and OB/GYN trip uses).

2 It is assumed that, for trip generation purposes, the proposed 27,165 GSF No Action medical facility will function as a cardiology facility, with the equivalent amount of square footage allocated for both patients and staff.

It should be noted that, for this chapter, the 2016 No Action conditions incorporate the construction of the afore mentioned as-of-right building and the 2016 Action conditions represent the incremental impact of the Proposed Project (under the RWCDS) compared with the as-of-right building.

Table F-1
No Action and Action Building Program

Project Components	No Action (As-of-Right) R-5 / C1-3		Proposed Project (Existing Zoning) R-6 / C1-3		Proposed Project Action (RWCDS) R-6 / C1-3	
	GSF	ZSF	GSF	ZSF	GSF	ZSF
Community Facility (Medical Facility, includes Cellar)	27,165	17,265	54,955	45,055	57,890	47,990
Commercial (Local Retail)	5,614	5,614	5,614	5,614	5,614	5,614
Total (Including Cellar)	32,779	-	60,569	-	63,504	-

Notes: GSF – Gross Floor Area (square feet), ZSF – Zoning Floor Area (square feet)
Total ZSF not shown since it excludes Cellar and Sub-Cellar square footage.
Values indicate the maximum SF permitted under respective zoning districts.
Both the Proposed Project and the Action Program provide an automated below grade off-street parking facility with a capacity for 150 vehicles (100 passenger cars and up to 50 SUVs). The No Action Program provides an automated below grade off-street parking facility with a capacity for 82 vehicles.

Based on the analysis contained herein, the level of new transportation demand generated by the Proposed Action is not expected to result in any significant adverse impacts to traffic, parking, transit or pedestrian conditions in the vicinity of the rezoning area.

SCREENING ASSESSMENT METHODOLOGY

The methodology for a transportation analysis begins with a comparison of the Proposed Project's development densities versus the CEQR development thresholds outlined in Table 16-1 in the *CEQR Technical Manual*. However, the *CEQR Technical Manual* also states that if a project involves a mix of land uses, it is appropriate to prepare a preliminary trip generation analysis. Therefore, the two-level screening procedure contained within the *CEQR Technical Manual* was utilized to determine whether further detailed transportation analyses are warranted.

The CEQR screening procedure is comprised of a Level 1 (trip generation) and Level 2 (trip assignment) screening assessment. The Level 1 screening assessment estimates the number of person and vehicle trips generated by the Proposed Project[3]. According to the *CEQR Technical Manual*, if the proposed project is expected to result in fewer than 50 peak hour vehicle trips, fewer than 200 peak hour subway/rail or bus transit riders, or fewer than 200 peak hour pedestrian trips, further analyses are not necessary. When these thresholds are exceeded, a Level 2 screening assessment is warranted in order to project the incremental person and vehicle trips that could be added onto specific transportation elements. If the trip assignments show that the Proposed Project would generate 50 or more peak hour vehicle trips at an

3 The number of trips generated by the Proposed Project corresponds to the incremental impact associated from the Proposed Project (the difference between the No Action and Action developments). Although incremental No Action trips were developed as part of the screening assessment, it should be noted that only incremental Action trips will be subject to the screening thresholds cited within the *CEQR Technical Manual*.

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 sidewalk, corner area or crosswalk, then further detailed analyses may be warranted to assess the potential for significant adverse impacts on transportation elements within the study area.

Level 1 Screening Assessment

A Level 1 trip generation screening assessment was conducted to project the number of person and vehicle trips generated by the Proposed Project during the weekday AM, midday, and PM peak hours. These estimates were then compared to the *CEQR Technical Manual* analysis thresholds in order to determine whether a Level 2 trip assignment screening assessment was warranted. The transportation planning factors utilized for this screening assessment are discussed below.

Transportation Planning Factors

Table F-2 presents the transportation planning factors used for the travel demand forecast of trips generated by the Proposed Project during the weekday AM, midday, and PM peak hours. These include trip generation rates, temporal and directional distributions, mode choice factors, vehicle occupancies and truck trip factors for the proposed medical clinic.

Since trip generation, temporal distribution, directional split, modal split, and truck trip information at medical facilities in southwest Brooklyn were not readily available and the applicant will likely utilize the space to provide cardiology and obstetrics/gynecology (OB/GYN) services, surveys were conducted on April 21, 2010 of the patients and staff served by five existing medical facilities – four providing cardiology services and one providing OB/GYN services (services similar to what would be in operation under both 2016 No Action and 2016 Action Conditions) – to produce transportation planning factors for the proposed cardiology and OB/GYN medical facilities during a typical weekday. Weekend surveys were not conducted since the existing cardiology and OB/GYN medical facilities are closed on both weekend days and it is anticipated that the proposed cardiology and OB/GYN facility (under both No Action and Action Conditions) would establish hours of operation similar to the surveyed cardiology and OB/GYN facilities. Using hour-by-hour estimates of the vehicular trips likely to be generated by the Proposed Project, results indicate that trip generation would be greatest during the 9 to 10 AM (morning), 12 to 1 PM (midday), and 5 to 6 PM (evening) peak hours. These hours, therefore, were selected for analysis of weekday traffic conditions as part of this screening assessment.

These surveys were utilized in the absence of available medical facility data for the immediate study area and provide a reasonable representation of local cardiology and OB/GYN medical facility trip generation and travel patterns. It should be noted that the transportation planning assumptions derived from the April 21, 2010 surveys are only representative of local Cardiology and OB/GYN medical facility uses (e.g., not representative of a general medical facility) as the applicant has indicated these uses would be the likely specific uses for the Proposed Project. Staff and patient vehicle occupancy for the medical facilities were based on the *Jamaica Plan FEIS*.

The future without the Proposed Project (No Action) includes 5,614 GSF of local retail. The forecasts of weekday travel demand (person trip rate) and temporal distribution for a project's local retail component were obtained from the 2014 CEQR Technical Manual. Weekday directional distributions, modal split, and vehicle occupancy were obtained from the Rheingold Development Rezoning FEIS. Local retail truck trip generation rates, temporal distributions and directional distributions were obtained from the 2014 *CEQR Technical Manual*.

It should be noted that there is no incremental change to the proposed ground level local retail space

between the No Action and Action build programs. Appendix 4 of the EAS contains the travel demand factor memorandum for the Proposed Project, which summarizes project generated person and vehicle trips for all peak hours.

Table F-2
Transportation Planning Factors

Land Use	Medical Facility				Medical Facility				Local Retail	
	Cardiology Office				OB/GYN Office				per 1000 SF	
Future Land Use										
	TRIPS per 1000 GSF (1)				**TRIPS per 1000 GSF** (1)				(4)	
Trip Generation	**STAFF**		**PATIENTS**		**STAFF**		**PATIENTS**		**Weekday**	
Daily Person Trips	4.3		21.2		11.0		43.5		205	
Net Daily Person Trips	4.3		21.2		11.0		43.5		205	
	(1)		(1)		(1)		(1)		(4)	
Temporal Distribution	**STAFF**		**PATIENTS**		**STAFF**		**PATIENTS**		**ALL**	
AM (9 AM - 10 AM)	16.7%		8.1%		28.9%		0.0%		3.0%	
MD (12 PM - 1 PM)	0.0%		10.5%		0.0%		16.0%		19.0%	
PM (5 PM - 6 PM)	33.3%		4.1%		3.9%		20.2%		10.0%	
	(1)		(1)		(1)		(1)		(5)	
In / Out Directional Split	**STAFF**		**PATIENTS**		**STAFF**		**PATIENTS**		**ALL**	
	In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
AM (9 AM - 10 AM)	100%	0%	77%	23%	100%	0%	-	-	50%	50%
MD (12 PM - 1 PM)	-	-	44%	56%	-	-	73%	27%	50%	50%
PM (5 PM - 6 PM)	0%	100%	57%	43%	0%	100%	64%	36%	50%	50%
	(1)				(1)				(5)	
Modal Split	**STAFF**				**STAFF**				**ALL**	
Mode	**AM**	**MD**	**PM**	**ALL**	**AM**	**MD**	**PM**	**ALL**		
Auto (All)	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	2.0%	
Auto Self Park	46%	-	42%	49%	32%	-	33%	42%	-	
Auto Drop Off	8%	-	4%	5%	9%	-	67%	16%	-	
Taxi / Black Car	0%	-	0%	0%	5%	-	0%	5%	3.0%	
Ambulette	0%	-	0%	0%	0%	-	0%	0%	-	
Subway	23%	-	31%	26%	9%	-	0%	8%	6.0%	
Bus	23%	-	19%	13%	23%	-	0%	16%	5.0%	
Walk	0%	-	4%	8%	23%	-	0%	13%	84.0%	
	100%	-	100%	100%	100%	-	100%	100%	100%	
	(1)				(1)					
	PATIENTS				**PATIENTS**					
Mode	**AM**	**MD**	**PM**	**ALL**	**AM**	**MD**	**PM**	**ALL**		
Auto Self Park	35%	30%	21%	28%	-	40%	37%	43%		
Auto Drop Off	14%	19%	14%	16%	-	20%	24%	22%		
Taxi / Black Car	10%	0%	7%	6%	-	13%	8%	7%		
Ambulette	10%	30%	0%	17%	-	3%	0%	1%		
Subway	0%	0%	0%	3%	-	3%	8%	4%		
Bus	24%	14%	48%	19%	-	7%	3%	4%		
Walk	7%	8%	10%	10%	-	13%	21%	18%		
	100%	100%	100%	100%	0%	100%	100%	100%		
	(2)				(2)				(5)	
Vehicle Occupancy	**STAFF**		**PATIENTS**		**STAFF**		**PATIENTS**		**ALL**	
Auto (All)	**-**		**-**		**-**		**-**		2.00	
Auto Self-Park	1.00		1.65		1.00		1.65		-	
Auto Drop-off	1.20		1.20		1.20		1.20		-	
Taxi and Ambulette	1.40		1.20		1.40		1.20		2.00	
Truck Trip Generation										
	(1) (3)				(1) (3)				(4)	
	Weekday				**Weekday**				**Weekday**	
Daily Vehicle Trips	0.0				0.0				0.35	
Temporal Distribution	(1)				(1)				(4)	
AM (9 AM - 10 AM)	-				-				8.0%	
MD (12 PM - 1 PM)	-				-				11.0%	
PM (5 PM - 6 PM)	-				-				2.0%	
	(1)		(1)		(1)		(1)		(4)	
In / Out Directional Split	In		Out		In		Out		**In**	**Out**
	-		-		-		-		50%	50%

Sources:

(1) Stantec survey of medical facilities in vicinity of Study Area, April 2010.

(2) Medical office vehicle occupancy based on medical office vehicle occupancies, The Jamaica Plan FEIS, June 2007.

(3) No trucks were observed serving the surveyed cardiology and OB/GYN medical facilities.

(4) New York City Environmental Quality Review (CEQR) Technical Manual, Table 16-2, 2014.

(5) Local Retail directional splits based on directional splits for local retail in the Rheingold Development Rezoning FEIS, 2013.
Local Retail modal split and vehicle occupancy based on local retail land use in the Rheingold Development Rezoning FEIS, 2013.

Travel Demand Forecast

Incremental No Action and Action person and vehicular trips forecasted as part of the Proposed Project (and based on the factors illustrated in Table F-2) are respectively presented in Tables F-3 and F-4. These values represent the incremental change in weekday peak hour person and vehicle trips due to the Proposed Project under both No Action and Action conditions.

It is assumed that, for trip generation purposes, the proposed 27,165 GSF No Action medical facility will function as a cardiology facility, with the equivalent amount of square footage allocated for both patients and staff. Therefore, trips were developed using cardiology office trip generation data. Additionally, the No Action building contains 5,614 GSF of ground level local retail. As illustrated in Table F-3, the No Action building is projected to respectively generate approximately 100, 279 and 178 person trips during the weekday AM, midday and PM peak hours. The No Action building is projected to produce 40, 49 and 34 vehicle trips (auto and taxi/black car and ambulette trips) during the weekday AM, midday, and PM peak hours, respectively.

It is assumed that, for trip generation purposes, the proposed 57,890 GSF Action medical facility will be allocated to patients and staff as follows – a 42,280 GSF medical facility (both staff and patient use) and a 15,610 Medical Laboratory (staff usage only); this results in a total of 42,280 GSF allocated towards patient use and 57,890 GSF allocated towards staff use. Trips were equally split between cardiology and OB/GYN trip rates for both patients and staff in order to reflect a hybrid medical facility that provides multiple types of medical services (21,140 GSF and 28,945 GSF for patient and staff cardiology trip use and 21,140 GSF and 28,945 GSF for patient and staff OB/GYN trip use, assuming the equal split between cardiology and OB/GYN trip uses). As illustrated in Table F-4, the Action building is projected to respectively generate approximately 93, 137, and 198 person trips during the weekday AM, midday, and PM peak hours. Vehicle trips (auto and taxi/black car and ambulette trips) are projected to total approximately 50, 82, and 133 during the weekday AM, midday, and PM peak hours, respectively.

The Proposed Project is expected to generate greater than the *CEQR Technical Manual* analysis threshold of 50 peak hour vehicle trips during the weekday midday and PM peak hours. Therefore, a Level 2 vehicle trip assignment screening assessment is required.

The Proposed Project is projected to generate fewer than the *CEQR Technical Manual* analysis threshold of 200 peak hour transit or pedestrian trips. Therefore, further quantified transit analyses are not required.

Table F-3
Transportation Demand Forecast
Incremental No Action (as-of-right) Person and Vehicle Trip Summary
27,165 GSF No Action (as-of-right) Medical Facility with 5,614 GSF of Local Retail

No Action Person Trips	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Subway		Bus		Walk		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	16	0	5	2	0	5	3	1	0	0	7	5	1	2	32	14
Staff	AM	9	0	1	0	0	0	0	0	4	0	4	0	0	0	19	0
Local Retail	AM	0	0	0	0	1	1	0	0	1	1	1	1	15	15	17	17
Total	AM	25	0	6	2	1	5	3	1	5	1	12	5	16	16	69	31
Patient	MD	7	12	3	8	0	0	12	6	0	0	5	3	3	2	30	31
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Retail	MD	2	2	0	0	3	3	0	0	7	7	5	5	92	92	109	109
Total	MD	9	14	3	8	3	3	12	6	7	7	10	9	95	93	139	140
Patient	PM	2	3	3	0	0	2	0	0	0	0	8	3	0	2	13	11
Staff	PM	0	16	0	1	0	0	0	0	0	12	0	7	0	1	0	39
Local Retail	PM	1	1	0	0	2	2	0	0	3	3	3	3	48	48	58	58
Total	PM	3	21	3	1	2	3	0	0	3	15	11	14	48	52	71	107

Note: Numbers may not directly add up due to rounding.

No Action	Peak Hour	Auto Self park		Auto Dropoff		Balanced Auto Dropoff		Taxi/ Black Car & Ambulete		Balanced Taxi/ Black Car & Ambulete		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	10	0	4	1	4	4	3	5	5	5	19	9
Staff	AM	9	0	1	0	1	1	0	0	0	0	10	1
Local Retail	AM	0	0					0	0	0	0	0	0
Total	AM	19	0	5	1	5	5	3	5	5	5	29	11
Patient	MD	4	7	3	7	7	7	10	5	10	10	20	23
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0
Local Retail	MD	1	1					2	2	2	2	3	3
Total	MD	5	8	3	7	7	7	11	7	11	11	23	26
Patient	PM	1	2	3	0	3	3	0	1	1	1	5	6
Staff	PM	0	16	0	1	1	1	0	0	0	0	1	18
Local Retail	PM	1	1					1	1	1	1	2	2
Total	PM	2	19	3	1	4	4	1	2	2	2	8	26

Note: Numbers may not directly add up due to rounding. All local retail auto trips are assumed to use the off-street parking facility.

Table F-4
Transportation Demand Forecast
Incremental Action Person and Vehicle Trip Summary
42,280 GSF Patient / 57,890 GSF Staff Action Medical Facility w/5,614 GSF Local Retail

Action Person Trips	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Subway		Bus		Walk		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	AM	30	0	8	0	4	0	0	0	9	0	21	0	21	0	93	0
Total	AM	30	0	8	0	4	0	0	0	9	0	21	0	21	0	93	0
Patient	MD	52	2	14	13	15	5	0	3	5	0	0	9	14	5	100	37
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	MD	52	2	14	13	15	5	0	3	5	0	0	9	14	5	100	37
Patient	PM	44	24	34	10	10	5	0	0	10	5	0	4	15	24	112	71
Staff	PM	0	5	0	8	0	0	0	0	0	1	0	0	0	0	0	15
Total	PM	44	29	34	18	10	5	0	0	10	6	0	5	15	24	112	86

Note: Numbers may not directly add up due to rounding.

Action Vehicle Trips	Peak Hour	Auto Self park		Auto Dropoff		Balanced Auto Dropoff		Taxi/ Black Car & Ambulete		Balanced Taxi/ Black Car & Ambulete		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	0	0	0	0	0	0	0	0	0	0	0	0
Staff	AM	30	0	7	0	7	7	3	0	3	3	40	10
Total	AM	30	0	7	0	7	7	3	0	3	3	40	10
Patient	MD	32	1	12	11	12	12	13	7	13	13	56	26
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0
Total	MD	32	1	12	11	12	12	13	7	13	13	56	26
Patient	PM	26	14	28	8	28	28	8	4	8	8	63	50
Staff	PM	0	5	0	7	7	7	0	0	0	0	7	12
Total	PM	26	20	28	15	35	35	8	4	8	8	70	63

Note: Numbers may not directly add up due to rounding.

Level 2 Screening Assessment

A Level 2 trip assignment screening assessment was conducted to project the number of person and vehicle trips generated by the Proposed Project onto the study area street network during the weekday AM, midday, and PM peak hours. These estimates were then compared to the *CEQR Technical Manual* analysis thresholds in order to determine whether a more detailed transportation analysis was warranted.

Traffic

CEQR Technical Manual guidelines suggest that developments which generate greater than 50 vehicles within any peak hour should be analyzed as the basis for determining project impacts. To identify the scale of the traffic study area and proposed analysis locations, project-generated weekday vehicle trips were assigned to the Brooklyn roadway network and the projected number of project-generated vehicle trips that would travel through each intersection was summarized for reasonable worst-case conditions. No Action and Action auto and taxi / black car and ambulette trips were assigned to and from the project site. No Action AM, midday and PM peak hour incremental traffic volumes are presented in Figures F-1, F-2 and F-3.

Figure F-1
2016 No Action (as-of-right) Incremental Traffic Volumes – Weekday AM Peak Hour

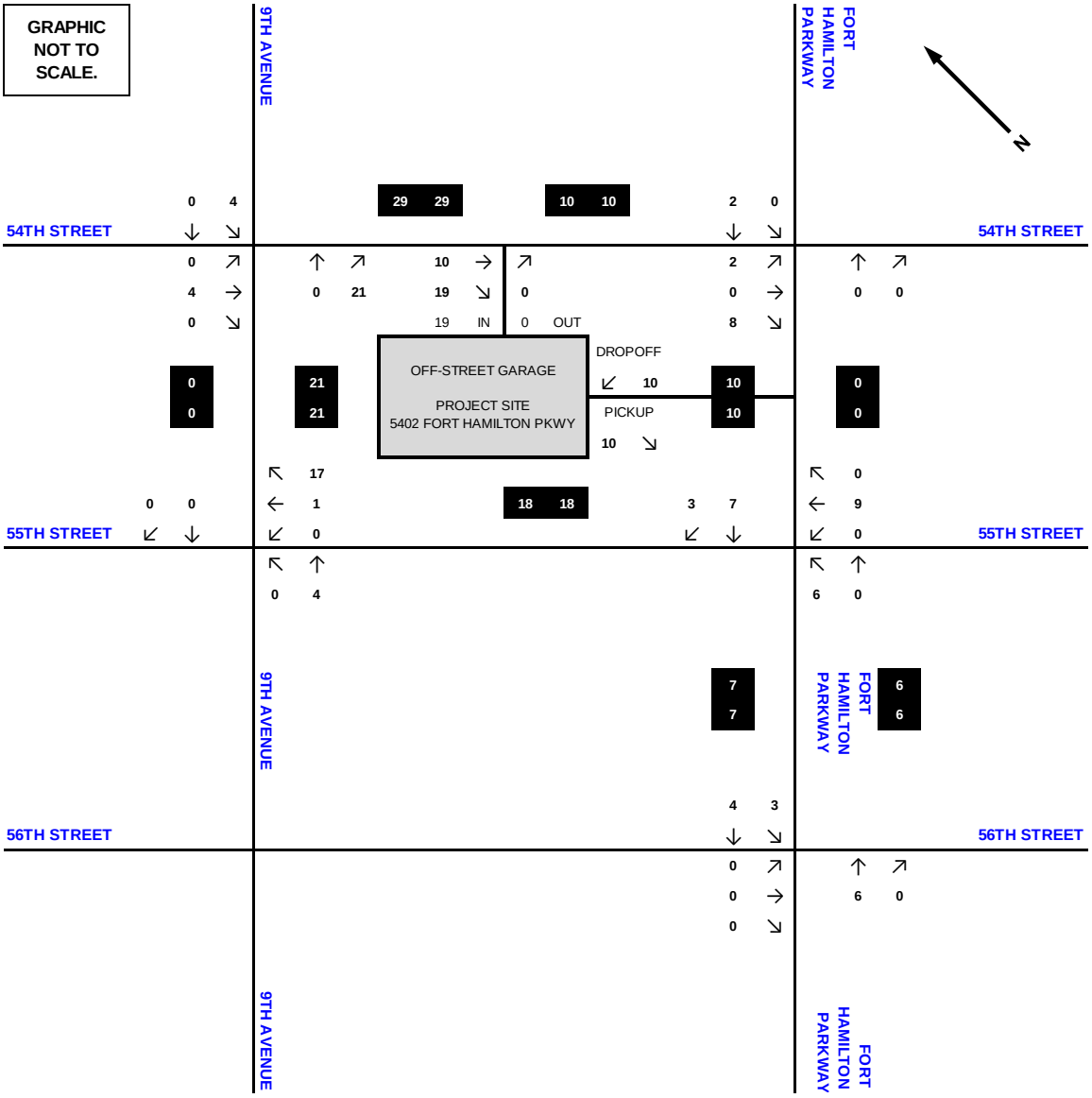


Figure F-2
2016 No Action (as-of-right) Incremental Traffic Volumes – Weekday MD Peak Hour

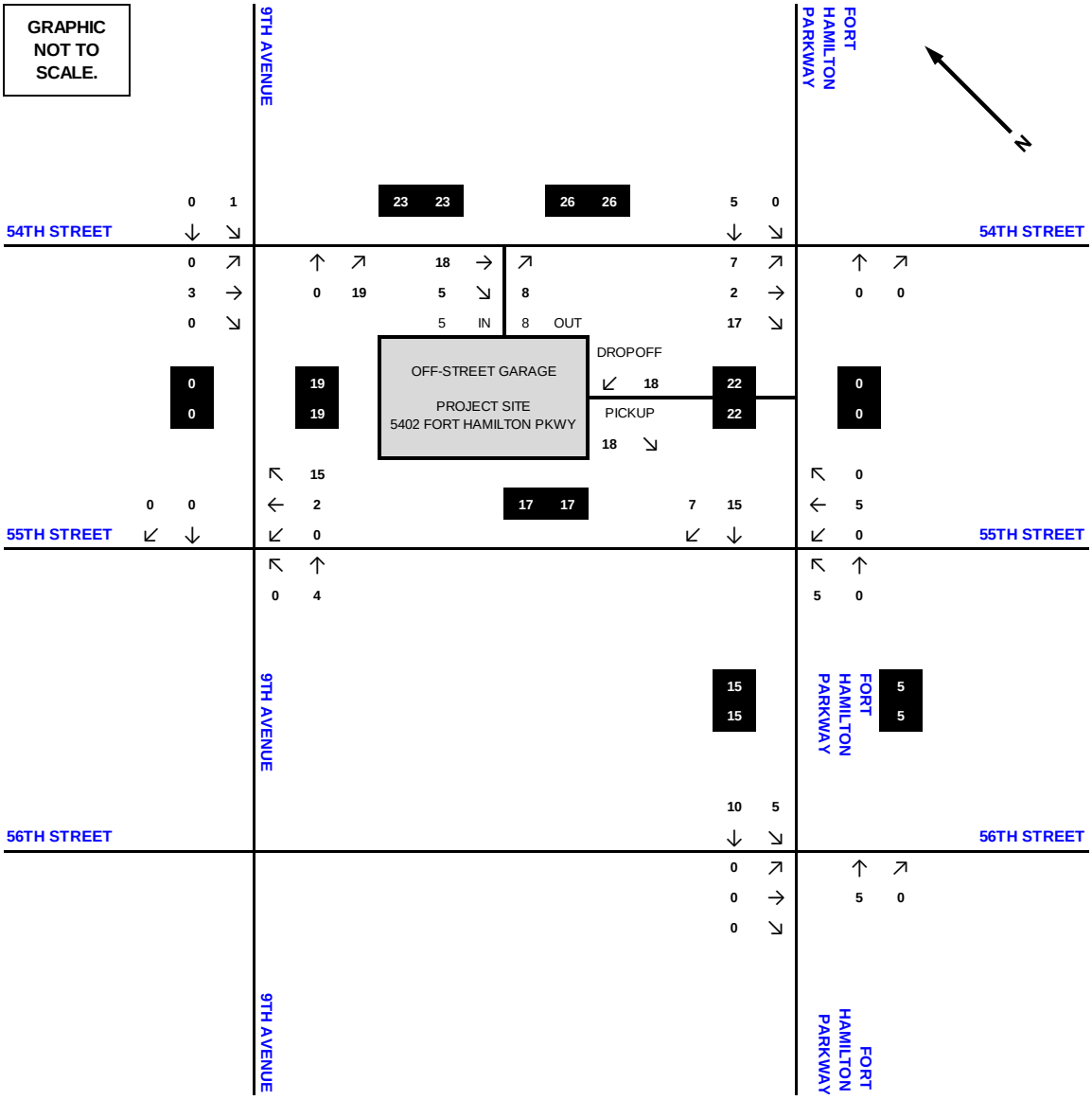
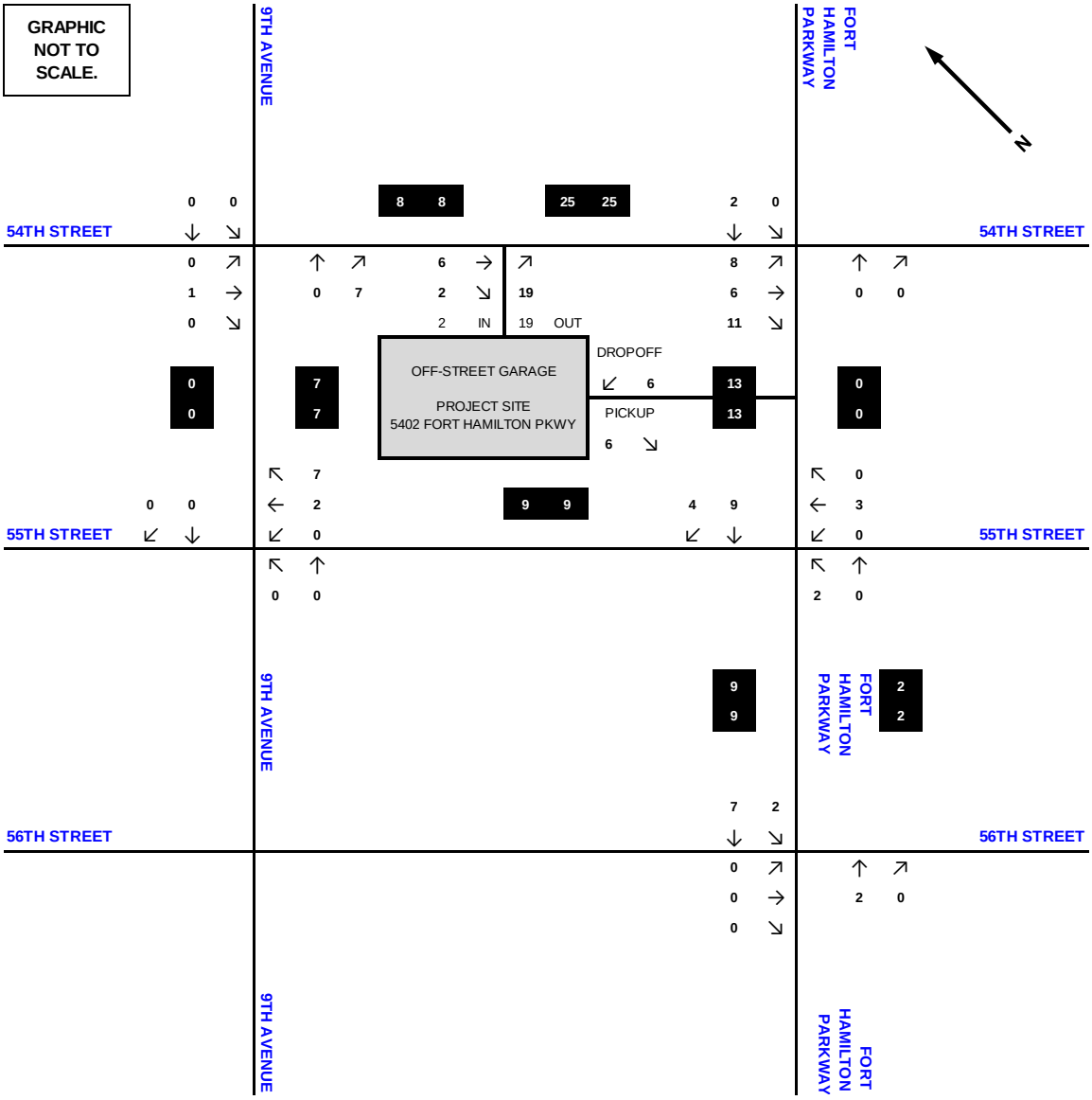


Figure F-3
2016 No Action (as-of-right) Incremental Traffic Volumes – Weekday PM Peak Hour



AM, midday and PM peak hour incremental traffic volumes projected under the Action condition are presented in Figures F-4 through F-6. The Level 2 screening analysis found that the site-generated incremental trip threshold of 50 vehicles would be exceeded by one intersection during the weekday midday peak hour and five intersections during the weekday PM peak hour. None of the five intersections would exceed the 50 vehicle trip threshold during the weekday AM peak hour, however, it is proposed that these intersections would be analyzed during the AM peak hour. Therefore, the following intersections have been selected for detailed analysis during the weekday AM, midday, and PM peak hours:

- Fort Hamilton Parkway at 54th Street
- Fort Hamilton Parkway at 55th Street
- Fort Hamilton Parkway at 56th Street
- 9th Avenue at 54th Street
- 9th Avenue at 55th Street

Quantitative analyses of existing and future traffic conditions are provided in this EAS.

Pedestrians

Although the Level 1 screening assessment found that peak hour pedestrian trips are well below the CEQR threshold, a Level 2 pedestrian trip assignment screening assessment was performed in order to verify that linked pedestrian trips (e.g., auto self-park and transit trips which are expected to walk to the project site), when superimposed on walk only trips, do not exceed the 200 peak hour trip threshold. Incremental No Action and Action pedestrian trips are presented in Tables F-5 and F-6, respectively. The totals presented in Tables F-5 and F-6 are a conservative assumption as this assumes no internal connection between the below grade automated off-street parking facility and the project site (that is, individuals whom self-park will have to walk along both 54th Street and Fort Hamilton Parkway in order to access the project site). As presented in Table F-6, a maximum of 198 pedestrian trips are projected to converge at the entrance to the project site (midblock along Fort Hamilton Parkway between 54th Street and 55th Street) during any of the analyzed peak hours, which is below the CEQR threshold for detailed pedestrian analyses. Therefore, the Proposed Action is not expected to result in any significant adverse impacts to pedestrian facilities based on *CEQR Technical Manual* guidelines, and a detailed pedestrian analysis is not provided in this EAS.

Table F-5
Transportation Demand Forecast – Incremental No Action Pedestrian Trips
27,165 GSF No Action (as-of-right) Medical Facility with 5,614 GSF of Local Retail

No Action Ped Trips	Medical Facility						Local Retail					Total
	Self Park	Subway	Bus	Walk	Dropoff	Taxi / Ambulette	Self Park	Subway	Bus	Walk	Taxi / Ambulette	
AM	25	4	16	3	8	5	1	2	2	29	1	96
MD	18	0	8	5	11	0	4	13	11	184	7	261
PM	21	12	19	4	5	2	2	7	6	97	3	178

Note: Totals may not directly add up due to rounding.

Table F-6
Transportation Demand Forecast - Incremental Action Pedestrian Trips
42,280 GSF Patient / 57,890 GSF Staff Action Medical Facility w/5,614 GSF of Local Retail

Action Ped Trips	Medical Facility						Total
	Self Park	Subway	Bus	Walk	Dropoff	Taxi / Ambulette	
AM	30	9	21	21	9	4	93
MD	55	5	9	19	27	20	133
PM	73	15	5	39	52	14	198

Note: Totals may not directly add up due to rounding.

Figure F-4
2016 Action Incremental Traffic Volumes – Weekday AM Peak Hour

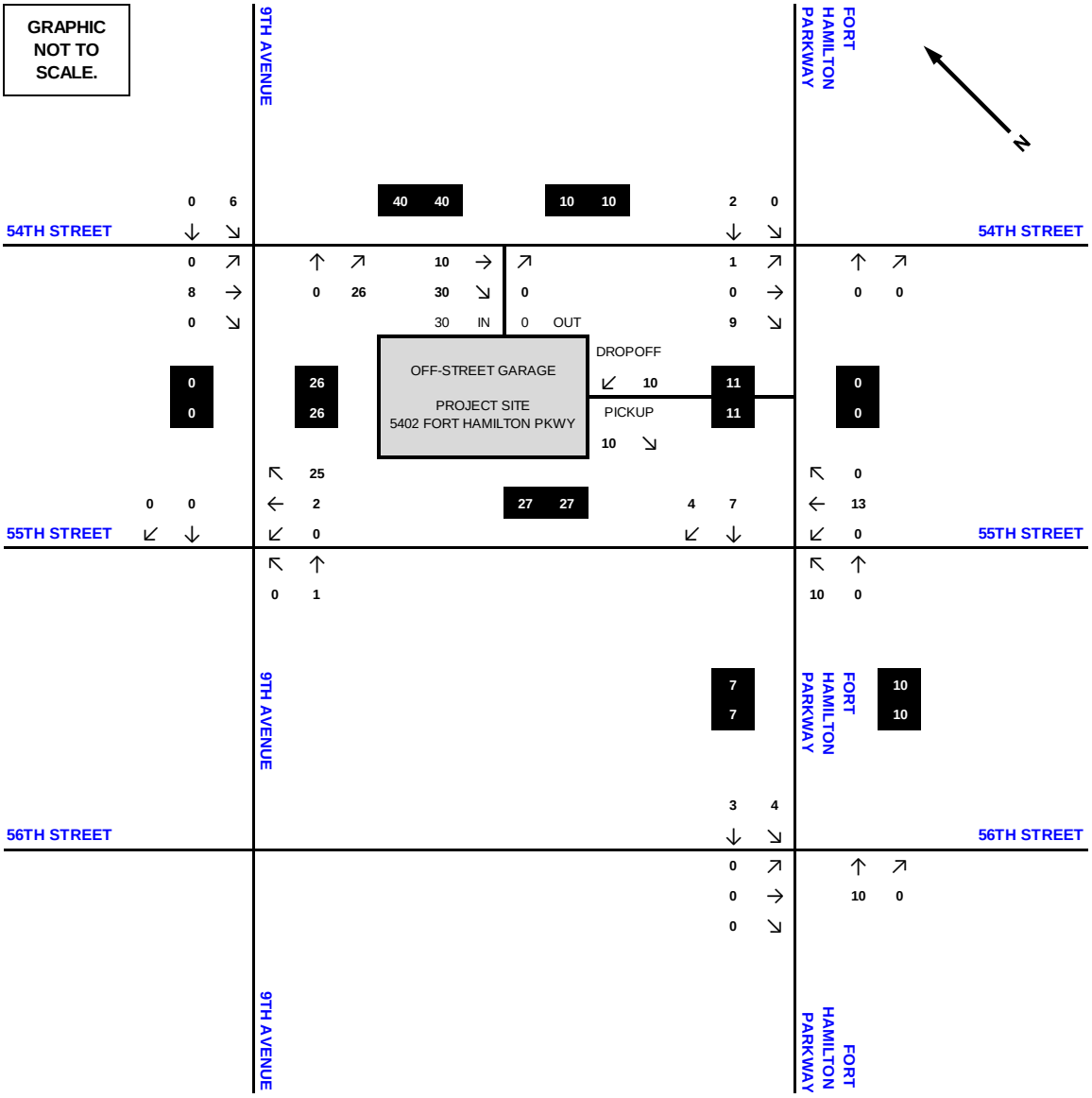


Figure F-5
2016 Action Incremental Traffic Volumes – Weekday MD Peak Hour

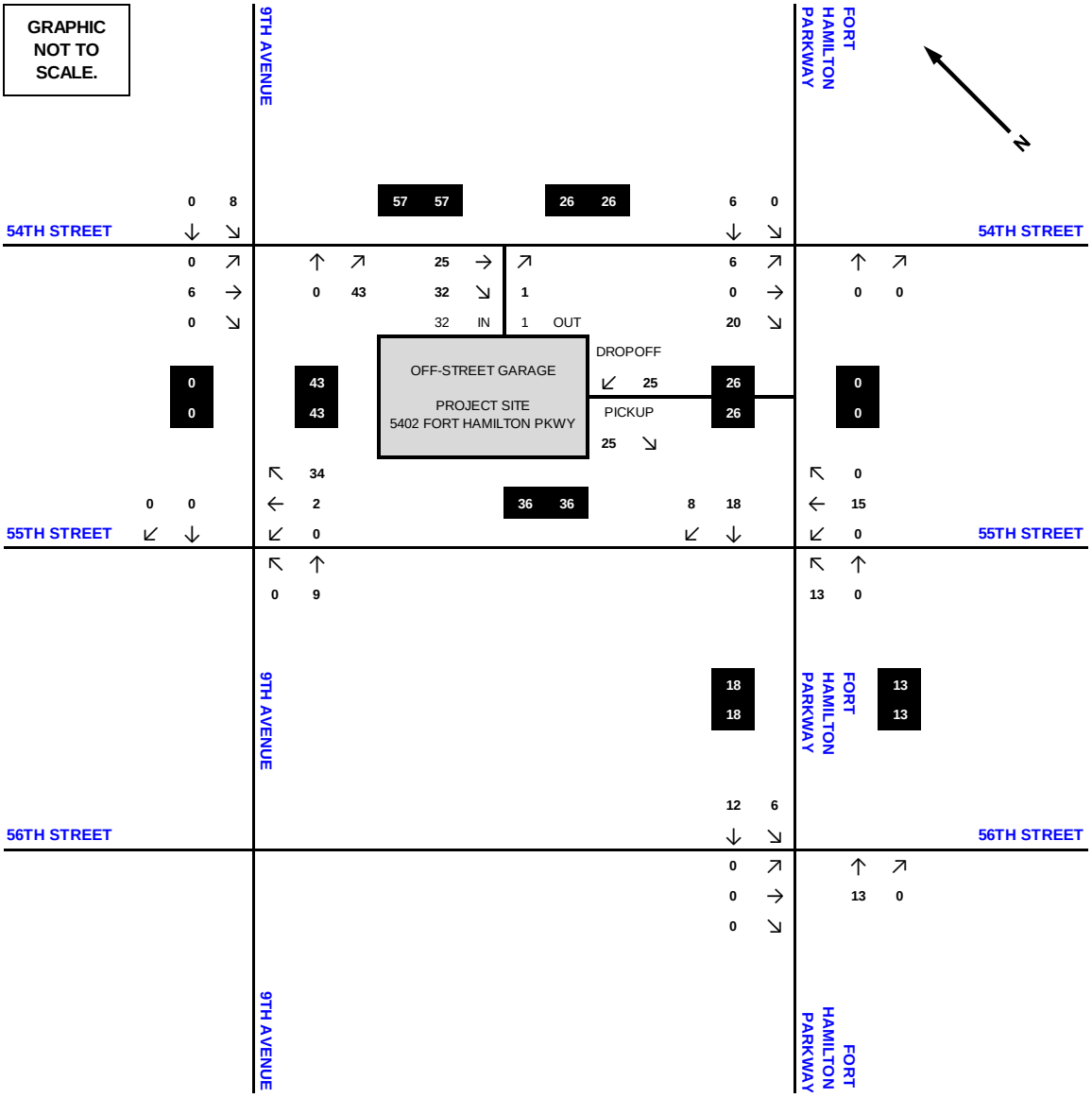
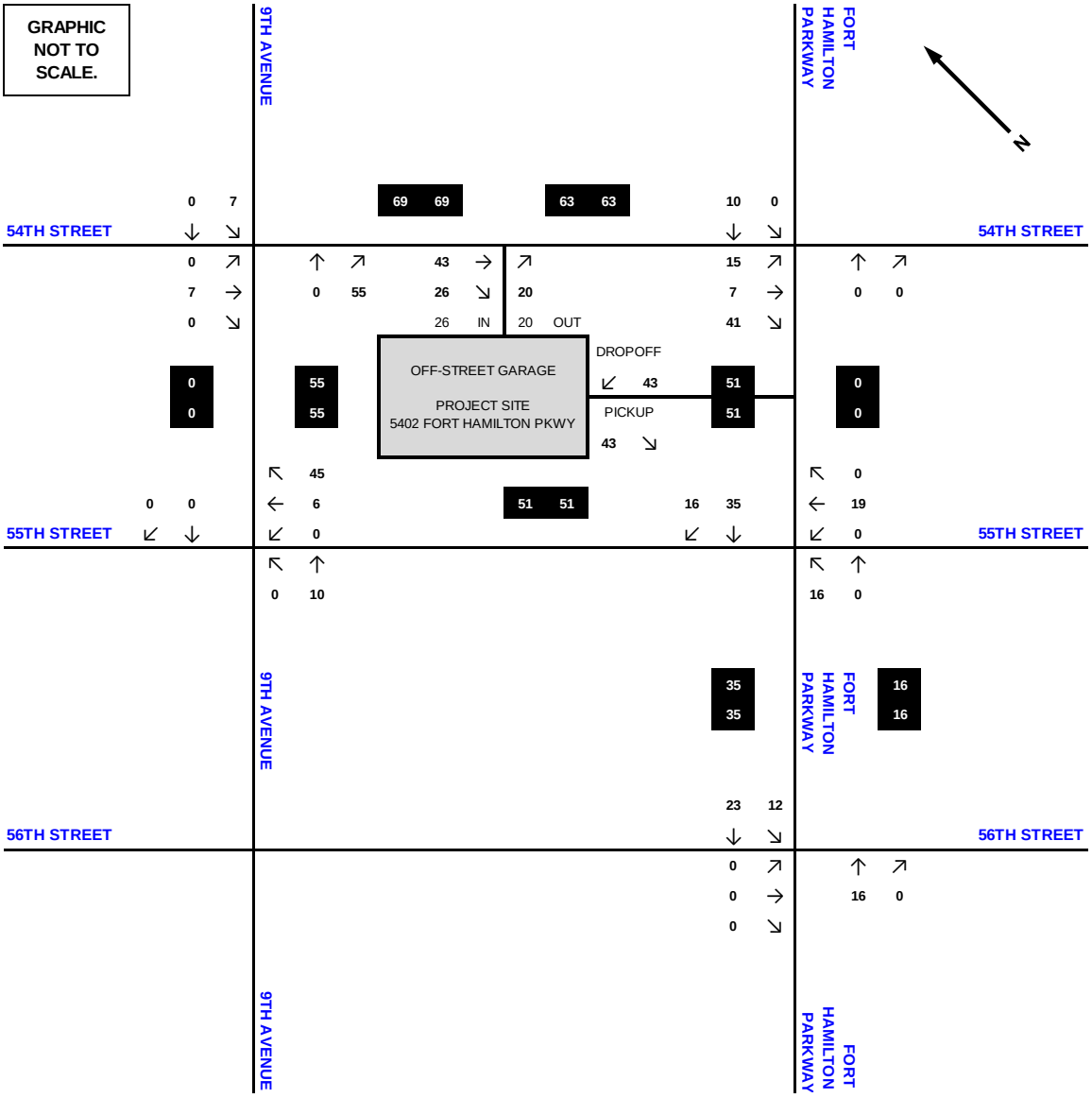


Figure F-6
2016 Action Incremental Traffic Volumes – Weekday PM Peak Hour



Parking

As a quantitative traffic analysis is necessary based on the Level 1 and Level 2 screening assessments, an analysis of on- and off-street parking conditions is necessary. Future projections of off-street parking demand were developed using the data obtained from the April 21, 2010 survey of self-parked vehicle entries and exits at each of the surveyed sites along with the and the No Action and Action trip generation methodology previously described in this memo.

As previously stated, the proposed No Action and Action off-street automated parking facility is expected to have a respectively capacity of 82 vehicles and 150 vehicles. It is expected that patients and staff of the proposed medical facility that arrive to the site by automobile and normally park their cars will park in the proposed off-street automated parking facility. A review of the first floor site plan for the Proposed Project shows that a total of 2,900 SF is allocated for parking use. A general area of 100 feet of space by 20 feet wide will be allocated as reservoir space for inbound motorists waiting to park their vehicles using the single elevator automated parking facility (it should be noted that the space is wide enough to accommodate vehicles simultaneously entering and leaving the automated parking facility). Using the *CEQR Technical Manual* recommended 20 feet for a parking space (Section 382.1 of the Transportation Chapter), it is projected that up to five vehicles will be able to queue inside of the building without blocking either pedestrian or vehicular traffic on 54th Street. Although an operator has yet to be selected, automated parking systems generally vary on both the design and the clients specifications (for instance, similar systems being explored at another, unrelated site can process vehicles every 90 seconds). It is anticipated that the system will be designed to accommodate the necessary demand generated by the Proposed Project without causing an impact to traffic on 54th Street.

Using the data obtained from the April 21, 2010 medical facility surveys, hourly parking accumulation tables were developed to determine whether the proposed below grade off-street parking facility would be able to accommodate the projected demand. If so, further analyses of on- and off-street parking conditions would not be necessary.

Incremental No Action[4] and Action Condition parking demand at the proposed off-street automated parking facility are presented in Tables F-7 and F-8. Action condition parking demand at the proposed off-street automated parking facility is presented in Table F-9. Under the Action condition, a maximum of 137 parking spaces would be needed to fulfill project-related parking demand during the day, which is less than the 150 space capacity of the proposed parking garage. Appendix 4 of the EAS (Proposed Project Travel Demand Factor Memorandum) contains a supplemental analysis of parking conditions.

4 Since the off-street automated parking facility is proposed under the No Action condition, the parking demand generated by the new parking facility also represents incremental No Action parking demand (the existing site is vacant and not considered a traffic generator).

Table F-7
Transportation Demand Forecast
Incremental No Action Automated Off-Street Parking Facility Accumulation
27,165 GSF No Action (as-of-right) Medical Facility with 5,614 GSF of Local Retail

TIME PERIOD	STAFF AUTO-PARKED VEHICLE TRIPS CARDIO In	STAFF AUTO-PARKED VEHICLE TRIPS CARDIO Out	STAFF AUTO-PARKED VEHICLE TRIPS OBGYN In	STAFF AUTO-PARKED VEHICLE TRIPS OBGYN Out	PATIENT AUTO-PARKED VEHICLE TRIPS CARDIO In	PATIENT AUTO-PARKED VEHICLE TRIPS CARDIO Out	PATIENT AUTO-PARKED VEHICLE TRIPS OBGYN In	PATIENT AUTO-PARKED VEHICLE TRIPS OBGYN Out	5,614 GSF LOCAL RETAIL AUTO-PARKED VEHICLE TRIPS[1] DAILY PERSON TRIPS	TEMP. DIST.	MODAL SPLIT (AUTO)	AUTO PERSON TRIPS	VEHICLE OCC.	AUTO VEHICLE TRIPS	% IN	%OUT	IN VEHICLE TRIPS	OUT VEHICLE TRIPS	TOTAL VEHICLE TRIPS In	TOTAL VEHICLE TRIPS Out	PARKING ACCUMULATION
12:00 AM – 1:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
1:00 AM – 2:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
2:00 AM – 3:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
3:00 AM – 4:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
4:00 AM – 5:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
5:00 AM – 6:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
6:00 AM – 7:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
7:00 AM – 8:00 AM	1	0	0	0	0	0	0	0		0.0%		0		0			0	0	1	0	1
8:00 AM – 9:00 AM	16	0	0	0	0	0	0	0		3.1%		1		0			0	0	17	0	18
9:00 AM – 10:00 AM	9	0	0	0	10	0	0	0		3.0%		1		0			0	0	19	0	36
10:00 AM – 11:00 AM	0	0	0	0	8	7	0	0		4.1%		1		0			0	0	8	7	38
11:00 AM – 12:00 PM	1	0	0	0	4	7	0	0		7.2%		2		1			0	0	6	7	36
12:00 PM – 1:00 PM	0	0	0	0	4	7	0	0	205	19.0%	2.0%	4	2.000	2	50.0%	50.0%	1	1	5	8	33
1:00 PM – 2:00 PM	0	0	0	0	3	2	0	0		18.8%		4		2			1	1	4	3	34
2:00 PM – 3:00 PM	0	0	0	0	9	5	0	0		10.7%		2		1			1	1	10	6	39
3:00 PM – 4:00 PM	0	0	0	0	5	6	0	0		6.8%		2		1			0	0	5	7	37
4:00 PM – 5:00 PM	0	3	0	0	3	6	0	0		6.7%		2		1			0	0	3	9	31
5:00 PM – 6:00 PM	0	16	0	0	1	2	0	0		10.0%		2		1			1	1	2	19	14
6:00 PM – 7:00 PM	0	7	0	0	2	3	0	0		6.9%		2		1			0	0	2	11	6
7:00 PM – 8:00 PM	0	0	0	0	0	1	0	0		3.0%		1		0			0	0	0	1	5
8:00 PM – 9:00 PM	0	1	0	0	0	3	0	0		1.1%		0		0			0	0	0	5	0
9:00 PM – 10:00 PM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
10:00 PM – 11:00 PM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
11:00 PM – 12:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
	28	28	0	0	49	49	0	0									6	6	83	83	

Note: Numbers may not directly add up due to rounding.

[1] Temporal distribution for local retail taken from 24 hour temporal distribution data used in the 15 Penn Plaza FEIS, 2010. AM, MD and PM peak hour temporal distributions comply with Table 16-2 of the 2014 CEQR Technical Manual. Hourly local retail trips were developed by applying the hourly temporal distributions to daily vehicle trips, assuming that the assumed local retail modal split, in / out directional split and vehicle occupancy were held consistent throughout each hour of the day. See the Transportation Planning Assumptions table for more information.

Table F-8
Transportation Demand Forecast
Incremental Action Automated Off-Street Parking Facility Accumulation
42,280 GSF Patient / 57,890 GSF Staff Action Medical Facility w/5,614 GSF of Local Retail

TIME PERIOD	STAFF AUTO-PARKED VEHICLE TRIPS CARDIO In	STAFF AUTO-PARKED VEHICLE TRIPS CARDIO Out	STAFF AUTO-PARKED VEHICLE TRIPS OBGYN In	STAFF AUTO-PARKED VEHICLE TRIPS OBGYN Out	STAFF AUTO-PARKED VEHICLE TRIPS CARDIO In	STAFF AUTO-PARKED VEHICLE TRIPS CARDIO Out	STAFF AUTO-PARKED VEHICLE TRIPS OBGYN In	STAFF AUTO-PARKED VEHICLE TRIPS OBGYN Out	TOTAL VEHICLE TRIPS In	TOTAL VEHICLE TRIPS Out	PARKING ACCUMULATION
12:00 AM – 1:00 AM	0	0	0	0	0	0	0	0	0	0	0
1:00 AM – 2:00 AM	0	0	0	0	0	0	0	0	0	0	0
2:00 AM – 3:00 AM	0	0	0	0	0	0	0	0	0	0	0
3:00 AM – 4:00 AM	0	0	0	0	0	0	0	0	0	0	0
4:00 AM – 5:00 AM	0	0	0	0	0	0	0	0	0	0	0
5:00 AM – 6:00 AM	0	0	0	0	0	0	0	0	0	0	0
6:00 AM – 7:00 AM	0	0	0	0	0	0	0	0	0	0	0
7:00 AM – 8:00 AM	0	0	4	0	0	0	0	0	4	0	4
8:00 AM – 9:00 AM	1	0	21	0	0	0	0	0	22	0	26
9:00 AM – 10:00 AM	1	0	29	0	0	0	0	0	30	0	56
10:00 AM – 11:00 AM	0	0	8	0	0	0	0	0	9	0	64
11:00 AM – 12:00 PM	0	0	4	0	0	0	6	0	10	0	74
12:00 PM – 1:00 PM	0	0	0	0	0	0	33	3	33	3	103
1:00 PM – 2:00 PM	0	0	0	0	0	0	9	21	9	20	92
2:00 PM – 3:00 PM	0	0	0	4	0	0	0	24	0	28	64
3:00 PM – 4:00 PM	0	0	0	4	0	0	18	0	18	4	78
4:00 PM – 5:00 PM	0	0	0	0	0	0	15	12	15	12	82
5:00 PM – 6:00 PM	0	1	0	4	0	0	27	15	26	20	88
6:00 PM – 7:00 PM	0	0	0	21	0	0	12	18	11	40	60
7:00 PM – 8:00 PM	0	0	0	29	0	0	0	24	0	53	8
8:00 PM – 9:00 PM	0	0	0	0	0	0	0	3	0	3	4
9:00 PM – 10:00 PM	0	0	0	4	0	0	0	0	0	4	0
10:00 PM – 11:00 PM	0	0	0	0	0	0	0	0	0	0	0
11:00 PM – 12:00 AM	0	0	0	0	0	0	0	0	0	0	0
	2	2	67	67	0	0	119	119	188	188	

Note: Numbers may not directly add up due to rounding.

Table F-9
Transportation Demand Forecast
Automated Off-Street Parking Facility Accumulation – Action Condition
42,280 GSF Patient / 57,890 GSF Staff Action Medical Facility w/5,614 GSF of Local Retail

TIME PERIOD			STAFF AUTO-PARKED VEHICLE TRIPS				PATIENT AUTO-PARKED VEHICLE TRIPS				LOCAL RETAIL AUTO-PARKED VEHICLE TRIPS		TOTAL VEHICLE TRIPS		PARKING ACCUMULATION
			CARDIO		OBGYN		CARDIO		OBGYN						
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	2	0	4	0	0	0	0	0	0	0	6	0	6
8:00 AM	–	9:00 AM	17	0	21	0	0	0	0	0	0	0	39	0	44
9:00 AM	–	10:00 AM	9	0	29	0	10	0	0	0	0	0	49	0	92
10:00 AM	–	11:00 AM	0	0	8	0	8	7	0	0	0	0	17	8	102
11:00 AM	–	12:00 PM	2	0	4	0	4	7	6	0	0	0	16	8	110
12:00 PM	–	1:00 PM	0	0	0	0	4	7	33	3	1	1	38	12	137
1:00 PM	–	2:00 PM	0	0	0	0	3	2	9	21	1	1	13	23	126
2:00 PM	–	3:00 PM	0	0	0	4	9	5	0	24	1	1	10	33	103
3:00 PM	–	4:00 PM	0	0	0	4	5	6	18	0	0	0	23	10	116
4:00 PM	–	5:00 PM	0	3	0	0	3	6	15	12	0	0	19	21	113
5:00 PM	–	6:00 PM	0	17	0	4	1	2	27	15	1	1	28	39	102
6:00 PM	–	7:00 PM	0	8	0	21	2	3	12	18	0	0	14	50	66
7:00 PM	–	8:00 PM	0	0	0	29	0	1	0	24	0	0	0	54	12
8:00 PM	–	9:00 PM	0	2	0	0	0	3	0	3	0	0	0	8	4
9:00 PM	–	10:00 PM	0	0	0	4	0	0	0	0	0	0	0	4	0
10:00 PM	–	11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
			30	30	67	67	49	49	119	119	6	6	271	271	

Note: Numbers may not directly add up due to rounding.

Transit

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

TRAFFIC ANALYSIS METHODOLOGY

To evaluate existing traffic conditions within the study area, a combination of manual turning movement, vehicle classification, and automatic traffic recorder (ATR) counts were conducted during the weekday AM, midday, and PM peak periods in June 2011. Additionally, field surveys of parking regulations, lane configurations, and other physical and operational characteristics of the street network, which impact overall traffic operations, were also conducted in June 2011. A qualitative assessment of on-street parking conditions was also conducted in June 2011. Additionally, official signal timing plans for study area intersections were obtained from the New York City Department of Transportation (NYCDOT) and verified in the field.

The traffic analysis evaluates conditions in the weekday AM, midday, and PM peak hours when traffic demand (and congestion) is expected to be the greatest. Based on existing peak traffic volumes at study area intersections as well as the peak hour traffic demand projected by the Proposed Project, the 8 to 9 AM, 12 to 1 PM, and 5 to 6 PM hours were selected for weekday AM, midday, and PM peak hour traffic analyses, respectively. To be conservative, peak hour traffic demand projected by the Proposed Project (9 to 10 AM, 12 to 1 PM and 5 to 6 PM hours) will be applied to peak hour traffic demand at study area intersections (8 to 9 AM, 12 to 1 PM and 5 to 6 PM hours) to conservatively evaluate future year traffic conditions.

Signalized Intersection Capacity Analysis

The operation of signalized intersections in the study area was analyzed in accordance with CEQR guidelines by applying the methodologies presented in the 2000 Highway Capacity Manual (HCM). Version 5.5 of the Highway Capacity Software (HCS) was utilized to determine average delay per vehicle and level of service (LOS) at each of the analysis intersections.

LOS for signalized intersections is based on the average stopped delay per vehicle for each of the lane group movements within the intersection. This delay is the basis for an 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-10.

Table F-10
LOS Criteria for Signalized Intersections

Level of Service	Average Control Delay per Vehicle
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 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. The mid-point of this service level (45 seconds of delay) is considered the threshold of acceptable operating conditions. Conditions at LOS E and F reflect poor service levels, and cycle failures are frequent. The HCM methodology provides for a summary of the total intersection operating conditions by identifying the two critical movements (the worst-case from each roadway) and calculating a summary of critical v/c ratio, delay, and LOS.

Significant Traffic Impact Criteria

According to the criteria presented in the *CEQR Technical Manual*, impacts are considered significant if they result in an increase of 5 or more seconds of delay in a lane group over No Action levels beyond mid-LOS D. For No Action LOS E, a 4-second increase in delay is considered significant. For No Action 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 Action 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 Action (Future with the Proposed Project) Condition.

TRAFFIC ANALYSIS

2011 Existing Conditions

The base year traffic conditions described in this section represent 2011 traffic volumes. A comprehensive data collection program, including manual turning movement and vehicle classification counts, travel time, and an inventory of roadway geometry and intersection signal timing, was undertaken in June 2011. The intersection signal timing inventory was verified against official NYCDOT signal timing data also received in June 2011.

Study Area Roadways and Peak Hour Traffic Volumes

The traffic study area, identified in Figure F-7, extends south from the development site to 56th Street and north to 54th Street. In the east-west direction, the study area extends from 9th Avenue to Fort Hamilton Parkway. The total study area includes 5 signalized intersections for analysis.

Fort Hamilton Parkway

Fort Hamilton Parkway is a southwest to northeast arterial roadway with one lane of moving traffic in each direction. It defines the eastern boundary of the proposed project site between 54th and 55th Streets. Within the study area, there are three signalized intersection analysis locations on Fort Hamilton Parkway. On typical weekdays, northbound Fort Hamilton Parkway generally carries 570 to 600 vehicles per hour (vph) during the AM peak hour, 465 to 475 vph during the MD peak hour, and 535 to 545 vph during the PM peak hour. In the southbound direction, Fort Hamilton Parkway generally carries 480 to 495 vehicles per hour (vph) during the AM peak hour, 440 to 450 vph during the MD peak hour, and 630 to 635 vph during the PM peak hour.

9th Avenue

9th Avenue is a southwest to northeast local roadway with one lane of moving traffic in each direction, passing immediately west of the proposed project site. Within the study area, there are two signalized intersections on 9th Avenue. On typical weekdays, northbound 9th Avenue generally carries 285 to 315 vehicles per hour (vph) during the AM peak hour, 215 to 245 vph during the MD peak hour, and 205 to 215 vph during the PM peak hour. In the southbound direction, 9th Avenue generally carries 215 to 220 vehicles per hour (vph) during the AM peak hour, 240 to 275 vph during the MD peak hour, and 325 to 350 vph during the PM peak hour.

Figure F-7
Traffic Study Area

54th Street

54th Street is a southeast bound local street with one lane of moving traffic. It passes through the northern boundary of the proposed project site just to the west of Fort Hamilton Parkway. Within the study area there are two signalized intersection analysis locations on 54th Street. On weekdays within the traffic study area, southeast bound 54th Street generally carries 125 vehicles per hour (vph) during the AM peak hour, 115 to 165 vph during the MD peak hour, and 115 to 150 vph during the PM peak hour.

55th Street

55th Street is a northwest bound local street with one lane of moving traffic. Within the study area there are two signalized analysis intersections. On weekdays within the traffic study area, northwest bound 55th Street generally carries 140 vehicles per hour (vph) during the AM peak hour, 115 to 125 vph during the midday peak hour, and 110 to 115 vph during the PM peak hour.

56th Street

56th Street is a southeast bound local street with one lane of moving traffic. Within the study area there is one signalized analysis intersection (at Fort Hamilton Parkway). On typical weekdays within the traffic study area, southeast bound 56th Street generally carries 125 vehicles per hour (vph) during the AM peak hour, 135 vph during the midday peak hour, and 175 vph during the PM peak hour.
Balanced 2011 traffic volumes for the AM, MD, and PM peak hours are presented in Figures F-8 through F-10, respectively.

Level of Service Analysis

An intersection capacity and level of service analysis was conducted for the five (5) signalized study area intersections. Detailed analysis results, including the v/c ratio, delay, and LOS for each of the five intersections are provided in Table F-11 for the weekday AM, MD, and PM peak hours. All intersections within the traffic study area operate at overall acceptable levels during the three analysis peak hours under 2011 Existing Conditions.

Table F-11
2011 Existing Conditions Level of Service Analysis

Intersection	Approach / Lane Group		AM Peak				MD Peak				PM Peak			
			Volume	v/c Ratio	Delay (sec)	LOS	Volume	v/c Ratio	Delay (sec)	LOS	Volume	v/c Ratio	Delay (sec)	LOS
54th Street and 9th Ave	EB	LTR	125	0.26	12.1	B	165	0.34	13.1	B	150	0.35	13.1	B
	NB	TR	285	0.53	15.9	B	215	0.37	13.3	B	205	0.33	12.7	B
	SB	LT	220	0.41	14.0	B	240	0.46	14.8	B	325	0.59	17.2	B
	Intersection		630		14.5	B	620		13.8	B	680		14.9	B
55th Street and 9th Ave	WB	LTR	140	0.28	12.8	B	115	0.25	12.4	B	110	0.22	12.1	B
	NB	LT	315	0.66	20.4	C	245	0.53	17.0	B	215	0.43	14.8	B
	SB	TR	215	0.41	14.4	B	275	0.54	16.6	B	350	0.63	18.9	B
	Intersection		670		16.8	B	635		16.0	B	675		16.4	B
54th Street and Fort Hamilton Pkwy	EB	LTR	125	0.40	37.3	D	115	0.27	23.5	C	115	0.37	36.5	D
	NB	TR	570	0.70	19.4	B	475	0.62	17.1	B	535	0.68	18.7	B
	SB	LT	480	0.60	16.8	B	440	0.64	17.9	B	630	0.77	22.4	C
	Intersection		1,175		20.4	C	1,030		18.1	B	1,280		22.2	C
55th Street and Fort Hamilton Pkwy	WB	LTR	140	0.49	39.6	D	125	0.36	25.1	C	115	0.36	36.2	D
	NB	TR	580	0.78	24.0	C	465	0.66	18.5	B	535	0.68	19.0	B
	SB	LT	485	0.56	15.4	B	450	0.62	17.0	B	630	0.70	19.2	B
	Intersection		1,205		22.8	C	1,040		18.8	B	1,280		20.8	C
56th Street and Fort Hamilton Pkwy	EB	LTR	125	0.38	36.9	D	135	0.35	24.8	C	175	0.54	41.1	D
	NB	TR	600	0.77	22.5	C	475	0.62	17.1	B	545	0.67	18.3	B
	SB	LT	495	0.64	17.7	B	450	0.65	18.1	B	635	0.74	21.1	C
	Intersection		1,220		22.1	C	1,060		18.5	B	1,355		22.8	C

Figure F-8
2011 Existing Traffic Volumes – Weekday AM Peak Hour

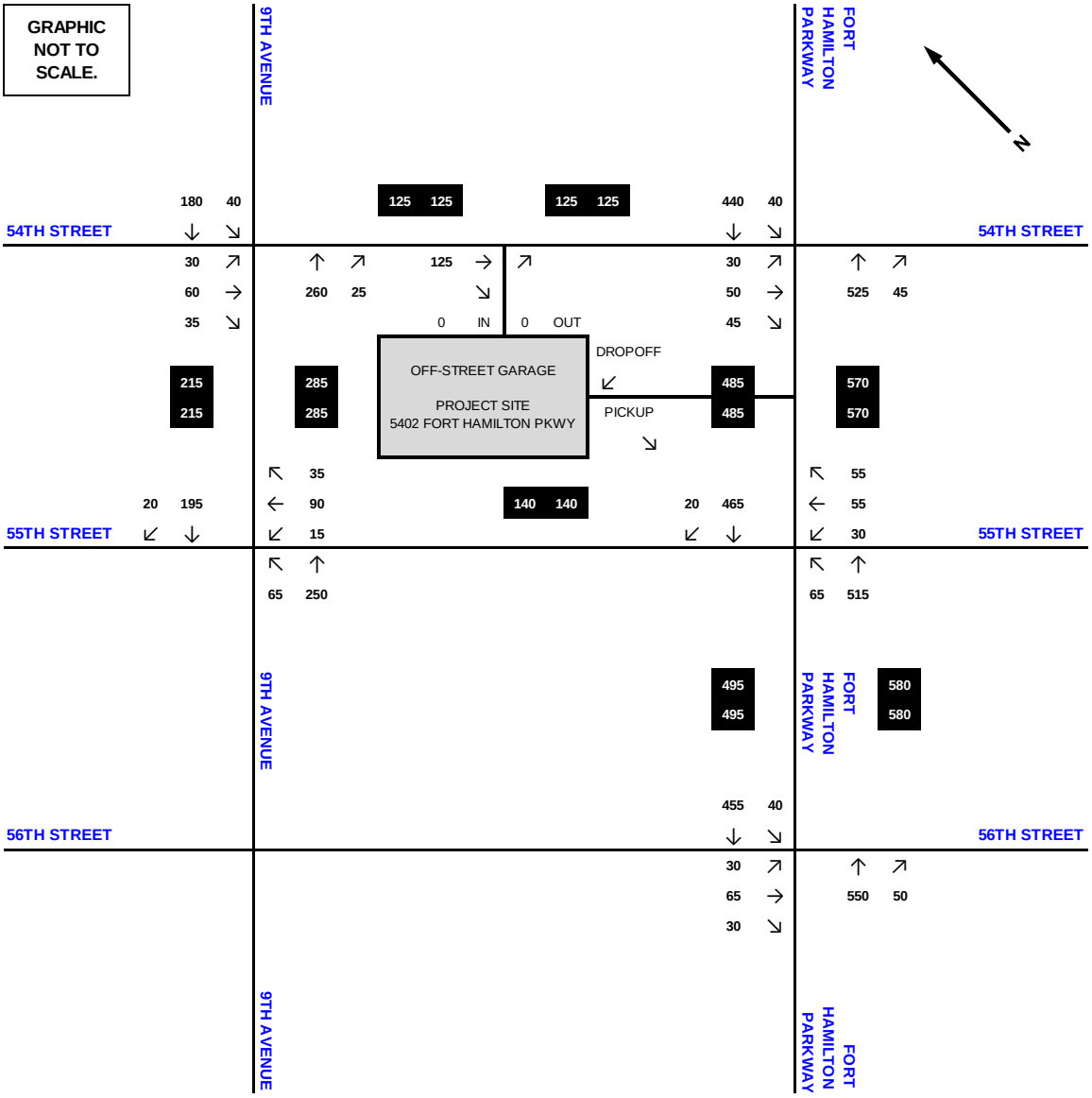


Figure F-9
2011 Existing Traffic Volumes – Weekday MD Peak Hour

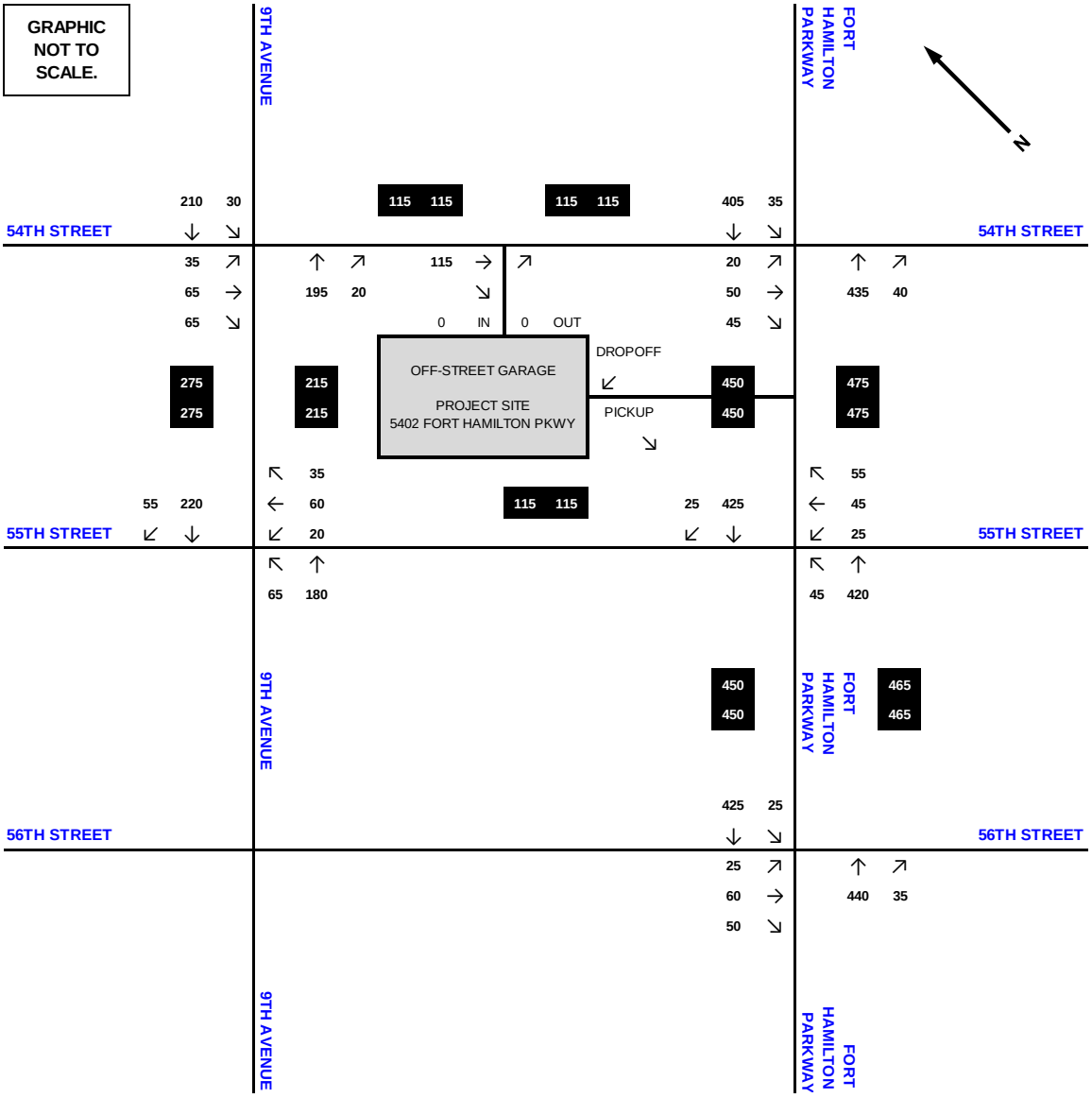
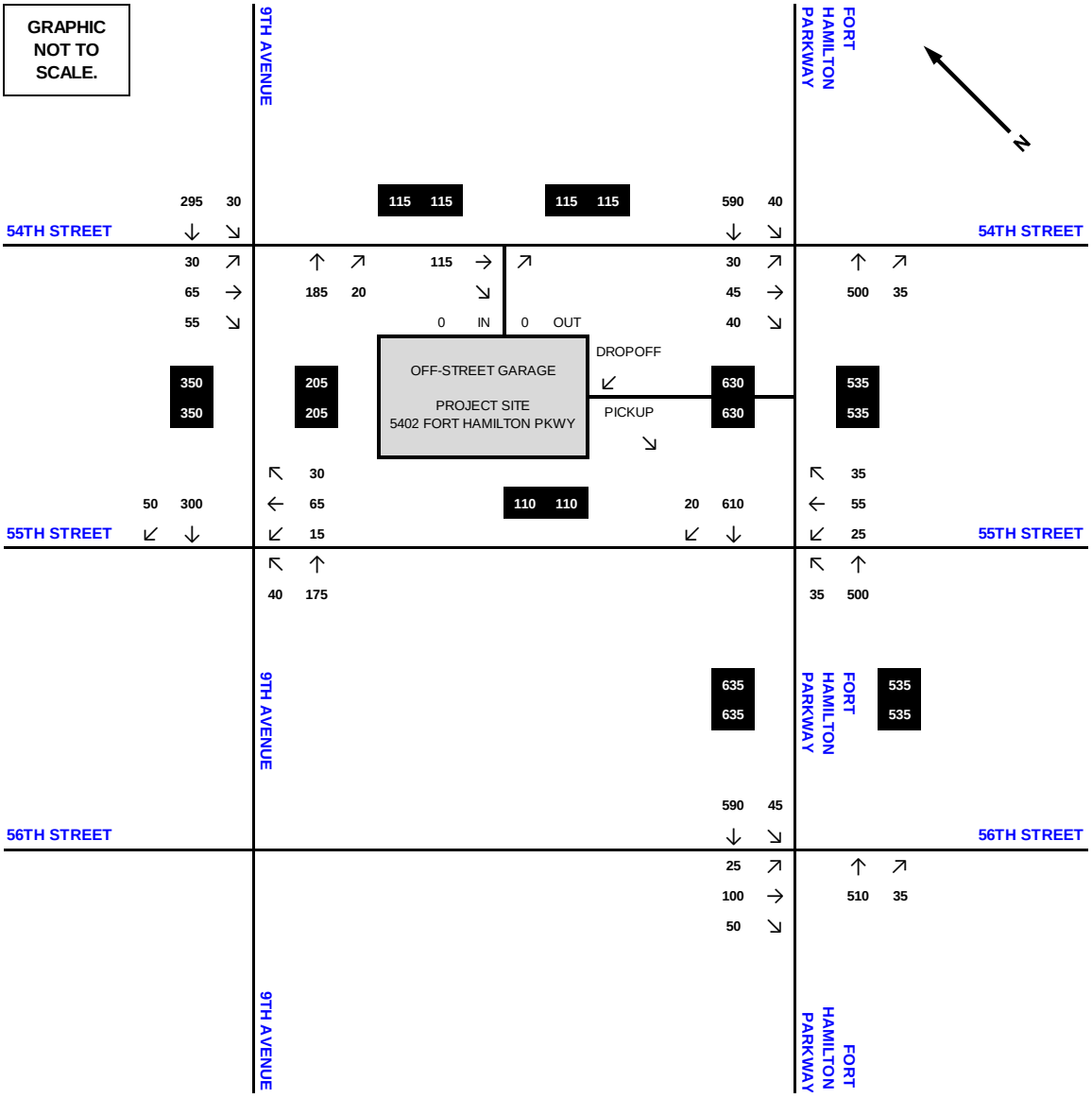


Figure F-10
2011 Existing Traffic Volumes – Weekday PM Peak Hour



Future Conditions without the Proposed Project (No Action)

Street Network Modifications

In late 2011, NYCDOT completed the redesign of the Fort Hamilton Parkway corridor within the traffic study area in order to improve traffic and pedestrian flow. The traffic study area is within the Borough Park Pedestrian Senior Focus Area. The redesigned corridor, which generally includes one 11 foot moving lane per direction, one 9 foot parking lane per direction and a 10 foot flush center median with left turn bays, will be incorporated into the analysis of No Action traffic conditions. Additionally, the analysis of No Action traffic conditions incorporates modifications to official NYCDOT signal timing plans (obtained in September 2014).

Peak Hour Traffic Volumes

Traffic volumes on the study area roadway network in the 2016 No Action condition were derived through a combination of background traffic growth and incremental vehicle trips generated by the Proposed Project[5] (as-of-right building). For the 2016 No Action traffic analysis forecasts, general background growth rates were applied as set forth in the *CEQR Technical Manual*. A cumulative background growth rate of 2.5 percent was applied to 2011 existing conditions to represent background growth occurring over the 2011 to 2016 period (a compounded annual background growth rate of 0.50 percent). Appendix 4 of the EAS (Proposed Project Travel Demand Factor Memorandum) contains the assumptions and methodology supporting the development of projected peak hour person and vehicle trips generated by the Proposed (as-of-right) Project.

There are no proposed developments within the study area that are expected to contribute to the increase in traffic demand. Appendix 5 of the EAS (No Action Development Travel Demand Factor Memorandum) discusses the appropriateness of considering planned No Action developments as part of the general projected background growth in traffic.

Figures F-11 to F-13 provide the 2016 No Action traffic volumes for the typical weekday AM, MD, and PM peak hours, respectively, in the study area.

Level of Service Analysis

An intersection capacity and level of service analysis was conducted for the five signalized study area intersections. Detailed analysis results, including the v/c ratio, delay, and LOS for intersections are provided in Table F-12 for the weekday AM, MD, and PM peak hours. All intersections within the traffic study area operate at overall acceptable levels (that is, mid-LOS D or better) during the three analysis peak hours under 2016 No Action Conditions.

5 The No Action incremental traffic diagrams were developed as part of the Level 2 Screening Assessment and are presented in Figures F-1 through F-3.

Table F-12
2016 No Action (As-of-Right) Conditions Level of Service Analysis

Intersection	Approach / Lane Group		AM Peak				MD Peak				PM Peak			
			Volume	v/c Ratio	Delay (sec)	LOS	Volume	v/c Ratio	Delay (sec)	LOS	Volume	v/c Ratio	Delay (sec)	LOS
54th Street and 9th Ave	EB	LTR	133	0.29	12.9	B	173	0.38	14.2	B	155	0.38	14.1	B
	NB	TR	314	0.61	18.4	B	240	0.44	14.8	B	218	0.37	13.7	B
	SB	LT	230	0.46	15.4	B	247	0.50	16.1	B	334	0.63	18.9	B
	Intersection		677		16.3	B	660		15.1	B	707		16.2	B
55th Street and 9th Ave	WB	LTR	162	0.33	13.5	B	136	0.30	13.1	B	122	0.25	12.4	B
	NB	LT	328	0.69	21.5	C	256	0.57	18.0	B	221	0.45	15.1	B
	SB	TR	221	0.42	14.5	B	282	0.56	17.2	B	359	0.65	19.5	B
	Intersection		711		17.5	B	674		16.6	B	702		16.9	B
54th Street and Fort Hamilton Pkwy	EB	LTR	139	0.45	38.7	D	145	0.36	25.0	C	144	0.48	39.3	D
	NB	TR	584	0.71	20.1	C	487	0.64	17.7	B	549	0.70	19.3	B
	SB	L	41	0.12	9.8	A	36	0.12	10.2	B	41	0.12	9.8	A
		T	454	0.52	14.7	B	421	0.57	15.9	B	607	0.69	18.9	B
	Intersection		1,218		20.1	C	1,089		17.7	B	1,341		21.2	C
55th Street and Fort Hamilton Pkwy	WB	LTR	152	0.53	40.9	D	134	0.40	25.8	C	121	0.38	36.7	D
	NB	L	73	0.19	10.7	B	51	0.16	10.8	B	38	0.12	9.9	A
		T	528	0.63	17.4	B	431	0.56	15.6	B	513	0.61	16.5	B
	SB	TR	508	0.59	16.1	B	484	0.67	18.5	B	659	0.73	20.5	C
	Intersection		1,261		19.8	B	1,100		18.1	B	1,331		20.3	C
56th Street and Fort Hamilton Pkwy	EB	LTR	129	0.40	37.4	D	139	0.37	25.3	C	180	0.56	42.0	D
	NB	TR	621	0.79	24.0	C	492	0.65	17.8	B	561	0.69	19.0	B
	SB	L	44	0.14	10.2	B	31	0.10	10.1	B	48	0.13	9.9	A
		T	471	0.55	15.2	B	446	0.62	17.1	B	612	0.66	17.9	B
	Intersection		1,265		21.8	C	1,108		18.2	B	1,401		21.5	C

Figure F-11
2016 No Action Traffic Volumes – Weekday AM Peak Hour

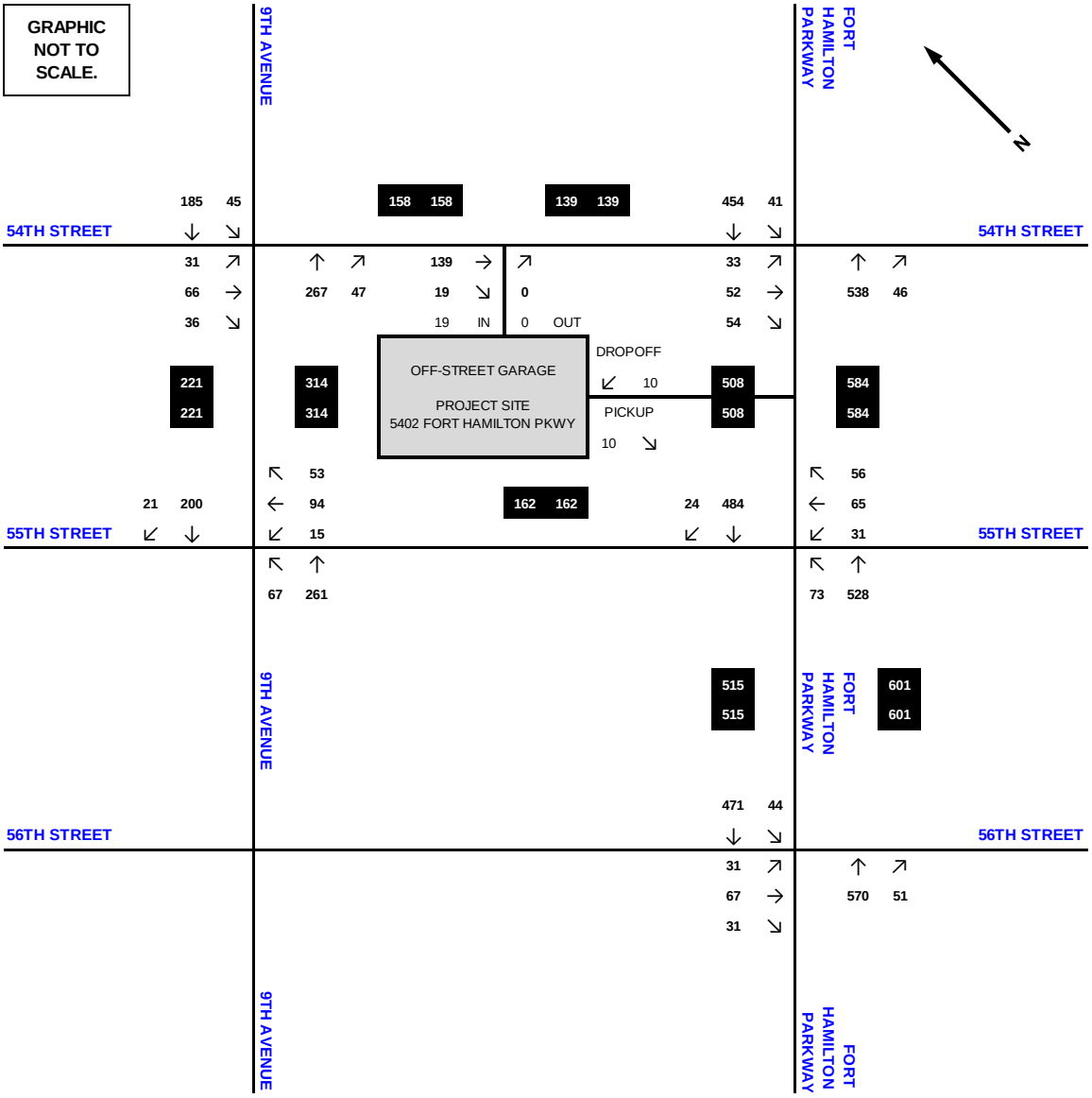


Figure F-12
2016 No Action Traffic Volumes – Weekday MD Peak Hour

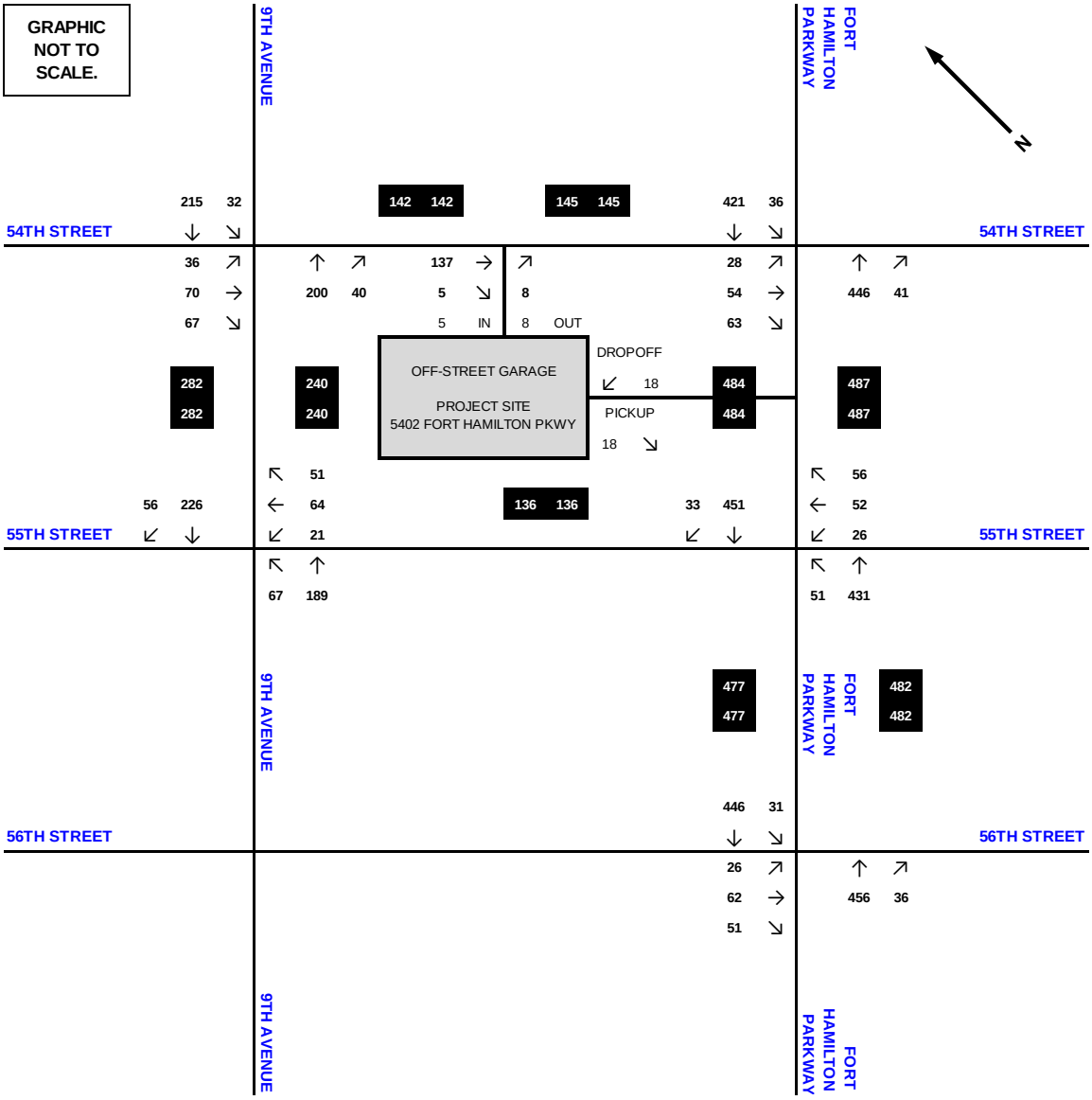
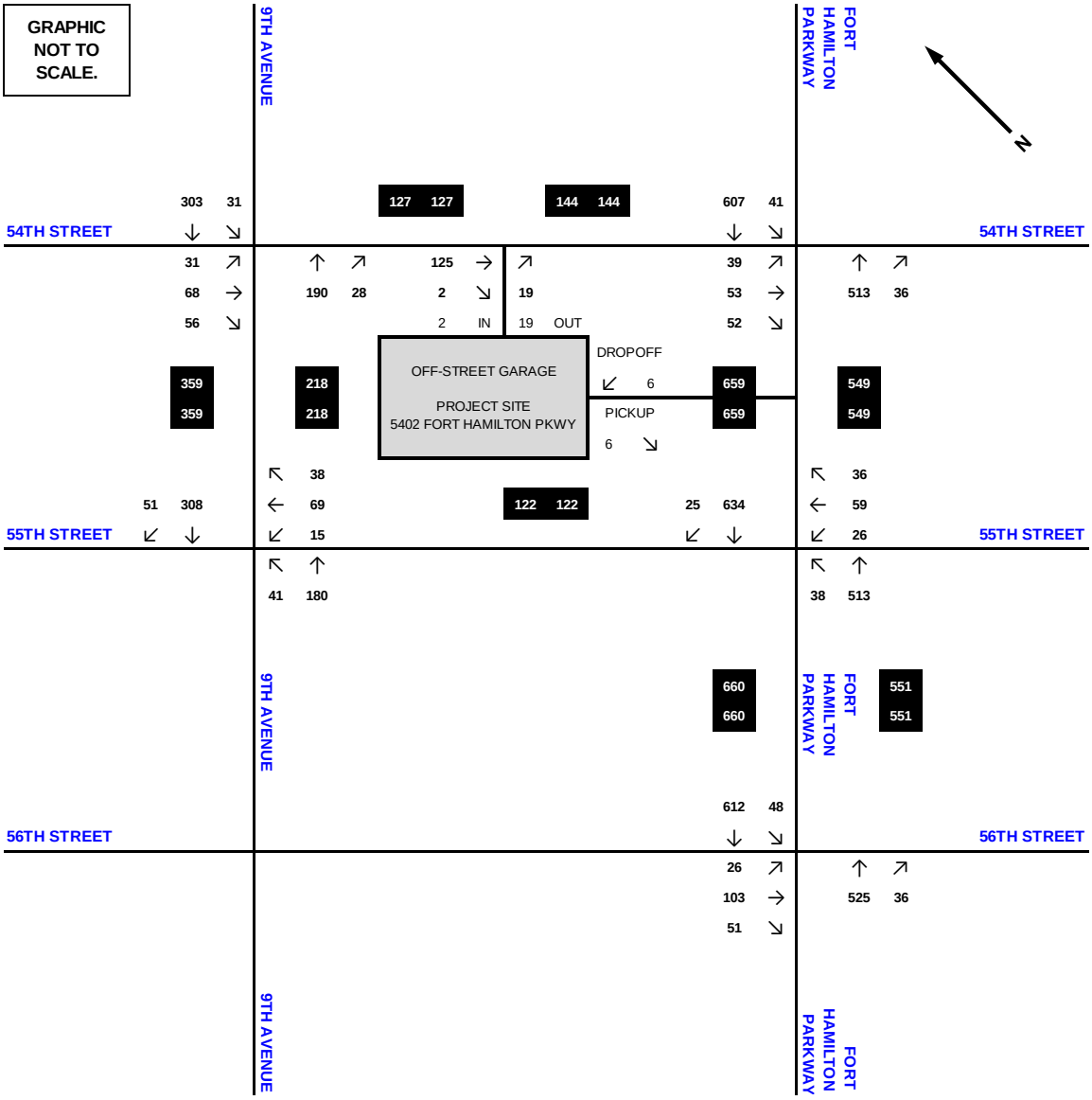


Figure F-13
2016 No Action Traffic Volumes – Weekday PM Peak Hour



Future Conditions with the Proposed Action (Action)

Street Network Modifications

As in the No Action condition, the analysis of Action traffic conditions will incorporate the NYCDOT redesign of the Fort Hamilton Parkway corridor within the traffic study area in order to improve traffic and pedestrian flow. Additionally, the analysis of Action traffic conditions incorporates modifications to official NYCDOT signal timing plans (obtained in September 2014).

Peak Hour Traffic Volumes

Traffic volumes on the study area roadway network in the Action Condition were derived through the addition of incremental vehicle trips generated by the Proposed Project (developed as part of the Level 2 Screening Assessment and presented in Figures F-4 through F-6) to the 2016 No Action traffic volumes. Appendix 4 of the EAS (Proposed Project Travel Demand Factor Memorandum) contains the assumptions and methodology supporting the development of projected peak hour person and vehicle trips generated by the Proposed (RWCDS) Project.

Figures F-14 through F-16 provide the 2016 Action Condition traffic volumes for the typical weekday AM, MD, and PM peak hours, respectively, in the study area.

Level of Service Analysis

An intersection capacity and level of service analysis was conducted for the five study area intersections. Detailed analysis results, including the v/c ratio, delay, and LOS for intersections are provided in Table F-13 for the weekday AM, MD, and PM peak hours.

Table F-13
2016 Action Conditions Level of Service Analysis

Intersection	Approach / Lane Group		AM Peak				MD Peak				PM Peak			
			Volume	v/c Ratio	Delay (sec)	LOS	Volume	v/c Ratio	Delay (sec)	LOS	Volume	v/c Ratio	Delay (sec)	LOS
54th Street and 9th Ave	EB	LTR	141	0.30	13.1	B	179	0.40	14.4	B	162	0.40	14.4	B
	NB	TR	340	0.67	20.3	C	283	0.54	16.8	B	273	0.49	15.8	B
	SB	LT	236	0.50	16.3	B	255	0.54	16.9	B	341	0.66	19.8	B
	Intersection		717		17.6	B	717		16.2	B	776		17.2	B
55th Street and 9th Ave	WB	LTR	189	0.39	14.4	B	172	0.40	14.5	B	173	0.37	14.0	B
	NB	LT	329	0.69	21.6	C	265	0.59	18.5	B	231	0.47	15.5	B
	SB	TR	221	0.42	14.5	B	282	0.56	17.2	B	359	0.66	19.7	B
	Intersection		739		17.6	B	719		17.0	B	763		17.1	B
54th Street and Fort Hamilton Pkwy	EB	LTR	149	0.49	39.8	D	171	0.43	26.5	C	207	0.72	49.8	D
	NB	TR	584	0.71	20.1	C	487	0.64	17.7	B	549	0.70	19.4	B
	SB	L	41	0.12	9.8	A	36	0.12	10.2	B	41	0.12	9.8	A
		T	456	0.53	14.7	B	427	0.58	16.1	B	617	0.70	19.3	B
	Intersection		1,230		20.4	C	1,121		18.1	B	1,414		23.9	C
55th Street and Fort Hamilton Pkwy	WB	LTR	165	0.57	42.4	D	149	0.44	26.7	C	140	0.44	38.2	D
	NB	L	83	0.22	11.1	B	64	0.22	11.7	B	54	0.19	11.0	B
		T	528	0.63	17.4	B	431	0.56	15.6	B	513	0.61	16.5	B
	SB	TR	519	0.60	16.4	B	510	0.71	19.9	B	710	0.79	23.5	C
	Intersection		1,295		20.3	C	1,154		18.9	B	1,417		22.1	C
56th Street and Fort Hamilton Pkwy	EB	LTR	129	0.40	37.4	D	139	0.37	25.4	C	180	0.57	42.3	D
	NB	TR	631	0.81	24.8	C	505	0.66	18.3	B	577	0.71	19.8	B
	SB	L	48	0.16	10.4	B	37	0.13	10.4	B	60	0.17	10.5	B
		T	474	0.55	15.3	B	458	0.64	17.5	B	635	0.68	18.7	B
	Intersection		1,282		22.2	C	1,139		18.6	B	1,452		22.0	C

All intersections in the traffic study area with the exception of one are projected to operate at overall acceptable levels during the three analysis peak hours under 2016 Action Conditions. The lone exception is the shared left, through and right turn lane on the eastbound approach of 54th Street and Fort Hamilton Parkway during the PM peak hour, which is projected to deteriorate to mid-LOS D (49.8 seconds of

average delay per vehicle) in the Action Condition from LOS D (39.3 seconds of average delay per vehicle) in the No Action Condition.

Figure F-14
2016 Action Condition Traffic Volumes – Weekday AM Peak Hour

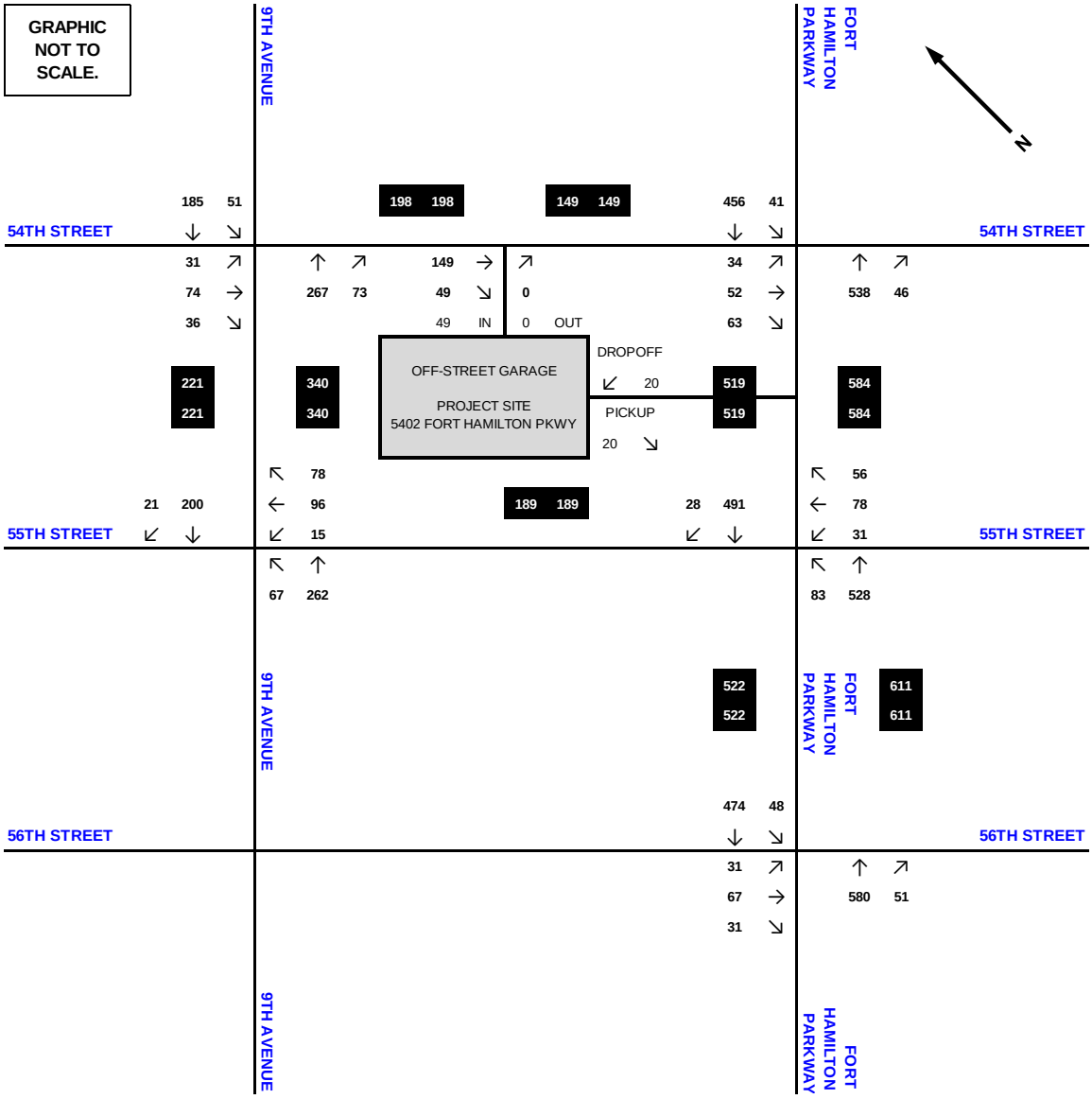


Figure F-15
2016 Action Condition Traffic Volumes – Weekday MD Peak Hour

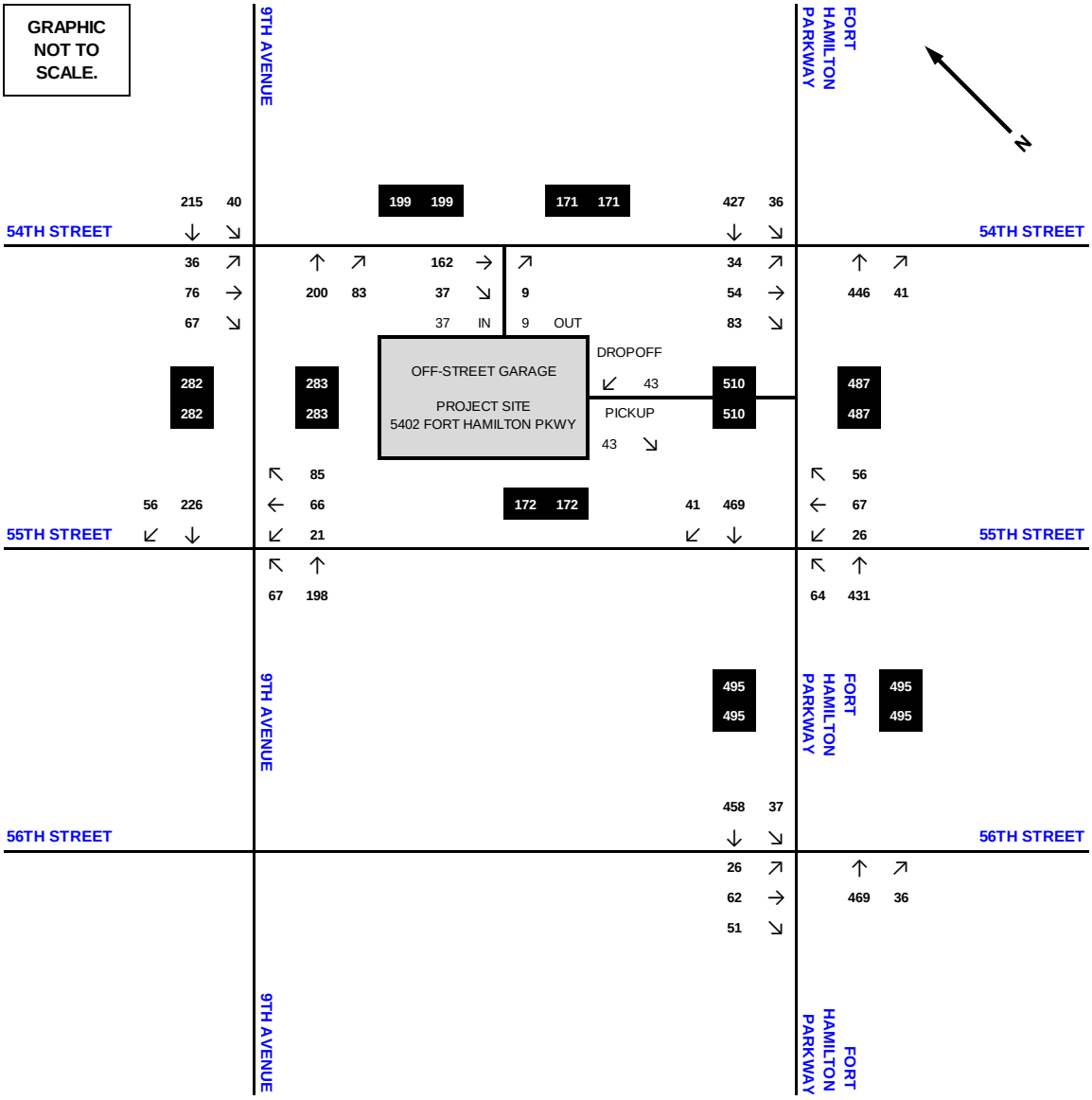
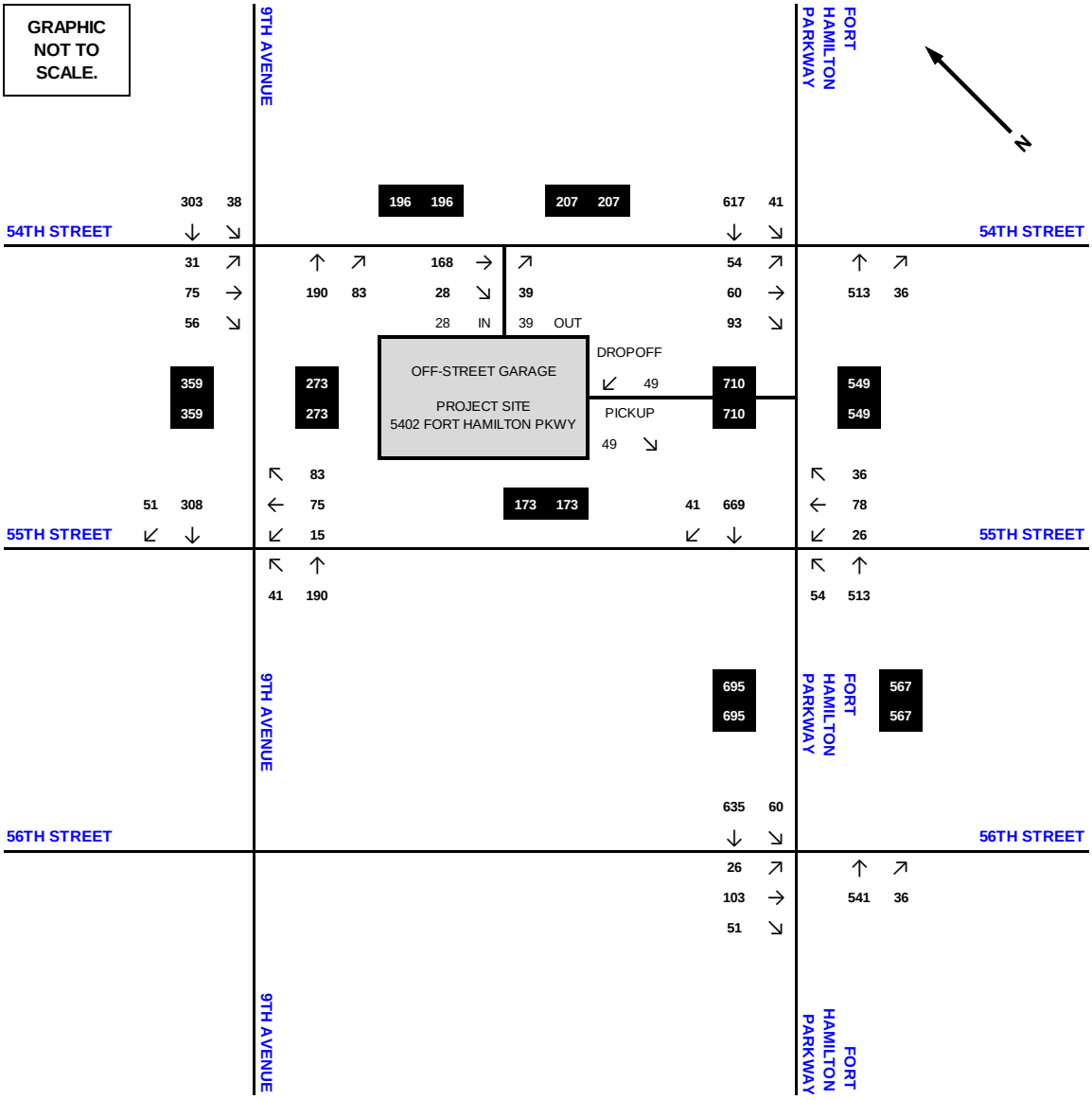


Figure F-16
2016 Action Condition Traffic Volumes – Weekday PM Peak Hour



PROPOSED PROJECT MITIGATION

The traffic analysis indicates that project-generated traffic has the potential to generate a significant adverse impact. The proposed traffic mitigation measures, including signal timing modifications and revisions to on-street parking regulations, would fully mitigate the potential impact. In consultation with NYCDOT, these measures were deemed to be reasonable and appropriate. A Restrictive Declaration will be recorded against the project site to ensure that the proposed traffic mitigation measures are implemented at the time of development to avoid a significant adverse impact.

Traffic

The Proposed Project contains one approach movement (the eastbound approach of the intersection of 54th Street and Fort Hamilton Parkway during the PM peak hour) which is projected to deteriorate below overall acceptable operating levels. Therefore, the Proposed Project would require a modification of signal timing as a component of the project in order to avoid potential significant traffic impacts. The proposed traffic improvement measure presented in Table F-14 (a three second signal timing shift) would be implemented in accordance with the anticipated conditional negative declaration for the Proposed Action and restore the eastbound approach of the intersection of 54th Street and Fort Hamilton Parkway (during the PM peak hour) to overall acceptable operating levels. The Proposed Project would not result in significant adverse traffic impacts at study area intersections during the three analyzed peak hours
.

Table F-14
Proposed Project Mitigation (Traffic)
2016 No Action Conditions and 2016 Action Conditions (with & without Improvements) LOS Analysis

Intersection	Approach / Lane Group		2016 No Action PM Peak (without Traffic Improvement Measure)				2016 Action PM Peak (without Traffic Improvement Measure)				2016 Action PM Peak (with Traffic Improvement Measure)				Proposed Traffic Improvement Measure
			Volume	v/c Ratio	Delay (sec)	LOS	Volume	v/c Ratio	Delay (sec)	LOS	Volume	v/c Ratio	Delay (sec)	LOS	
54th Street and Fort Hamilton Pkwy	EB	LTR	144	0.48	39.3	D	207	0.72	49.8	D	207	0.66	43.8	D	EXISTING SIGNAL TIMING: NB/SB: 75s G / 3s Y / 2s R EB: 35s G / 3s Y / 2s R PROPOSED SIGNAL TIMING: NB/SB: 72s G / 3s Y / 2s R (-3s G) EB: 38s G / 3s Y / 2s R (+3s G)
	NB	TR	549	0.70	19.3	B	549	0.70	19.4	B	549	0.73	22.3	C	
	SB	L	41	0.12	9.8	A	41	0.12	9.8	A	41	0.13	11.2	B	
		T	607	0.69	18.9	B	617	0.70	19.3	B	617	0.73	22.2	C	
	Intersection		1,121		21.2	C	1,414		23.9	C	1,414		25.4	C	

Note: The proposed signal timings would be applied during 3PM-7:30PM Monday-Friday in order to conform with existing NYCDOT signal timing plans.

Parking

The Proposed Project would also require two modifications of on-street parking regulations. One modification would serve to provide acceptable access to/from the proposed below grade automated off-street parking facility and the other modification would accommodate ambulette parking along the west side of Fort Hamilton Parkway fronting the entrance to the Proposed Project.

It is proposed that a portion of existing on-street parking regulations (approximately 50 feet in length and as close as possible to the entrance to the Proposed Project) on the west side of Fort Hamilton Parkway from 54th Street to 55th Street be revised from the existing "No Parking 8:30-10 AM Monday" to "No Standing 7AM-7PM Monday to Friday except Authorized Vehicles, Ambulettes". This modification is projected to result in the loss of two (2) on-street parking spaces but will ensure that ambulettes will not impede traffic flow along Fort Hamilton Parkway.

Additionally, it is proposed that "No Standing Anytime" signage be posted approximately 20 feet west and east of the access to the proposed below grade automated off-street parking facility (on the south side of 54th Street, west of Fort Hamilton Parkway). This modification is projected to result in the loss of two (2) on-street parking spaces but will ensure acceptable ingress and egress to the off-street parking facility.

In total, the Proposed Project would require a removal of four (4) on-street parking spaces. To be certain that the proposed removal of four parking spaces will not result in a parking impact, a supplemental parking analysis was performed. The analysis (contained in Appendix 4) determined that there is sufficient on-street parking capacity to accommodate the loss of four parking spaces.

TRAFFIC SAFETY

Existing Study Area Accident Patterns

Accident data for intersections within the traffic study area were obtained from NYCDOT. This information provides available accident data from 2008 to 2012 and is presented in Table F-15. The table provides, by intersection, the total number of accidents, the number of fatalities and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related injuries or fatalities at each intersection.

Table F-15
Study Area Accident History – January 1, 2008 through December 31, 2012

Intersection		2008-2012			Injuries or Fatalities by Year																			
		Overall Accidents[1]			Pedestrian					Bicyclist					Motor Vehicle Occupant					Combined[2]				
Main Street	Cross Street	Total Accidents[3]	Fatalities	Injuries	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
54th Street	9th Avenue	**6**	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	1	0
54th Street	Fort Hamilton Parkway	**9**	0	8	0	0	2	2	1	0	0	0	0	0	1	0	0	2	0	1	0	2	4	1
55th Street	9th Avenue	**5**	0	4	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	3	1	0	0	0
55th Street	Fort Hamilton Parkway	**6**	0	7	1	0	1	0	0	0	0	0	0	0	0	1	1	2	1	1	1	2	2	1
56th Street	Fort Hamilton Parkway	**9**	0	7	1	1	0	0	2	0	0	0	0	0	1	0	0	2	0	2	1	0	2	2

Notes:

[1] Overall accidents include accidents involving one or more motor vehicles or a motor vehicle with a pedestrian or bicycle.

[2] A combined total of five or more pedestrian and/or bicycle related accidents in any one year is the CEQR criteria for identifying a high crash location.

[3] A combined total of 48 or more reportable and non-reportable accidents in any one year is the CEQR criteria for identifying a high crash location.

Source: NYCDOT

As indicated in Table F-15, no intersections in the study area exceed the CEQR criteria for a high crash location; that is, five or more pedestrian-related accidents during any one year over the three-year accident history period and 48 or more total reportable and non-reportable accidents during any one year over the three-year accident history period. The proposed project would not reasonably be expected to significantly increase the number of accidents in the study area.

2.G AIR QUALITY

INTRODUCTION

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources;" or by fixed facilities, usually referenced as "stationary sources," or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project.

As discussed in Section 1, Project Description, and Section 2.A, Land Use, Zoning, and Public Policy, the project site will be redeveloped by the 2015 build year whether or not the Proposed Action is taken, and no redevelopment or enlargement of existing uses is anticipated on either of the two other properties that would be affected by the proposed rezoning.

The proposed project would consist of a single six-story building with a roof height of 66 feet and a maximum height of about 76 feet to the top of the mechanical bulkhead. The building's lower floors would cover the entire site, except for a rear yard of approximately 475 square feet at the southwest corner of the property, but the building would be set back 20 feet from 54th Street and 17 feet 3 inches from Fort Hamilton Parkway above the fourth floor (44 feet in height). The building would contain 53,604 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The proposed project would also include a cellar level (with 9,900 square feet of additional medical center space) and up to three sub-cellar levels in which approximately 151 accessory parking spaces would be provided.

In the future without the Proposed Action, a medical center building with ground floor commercial space and a below-grade garage would also be built, but the development would follow the R5/C1-3 rather than R6/C1-3 zoning regulations. The new building would have the same footprint as the proposed project, but the building would be three stories in height (about 33 feet to the roof, plus an additional 11 feet of height for the mechanical bulkhead). The building would be set back 30 feet from 54th Street and 27 feet one inch from Fort Hamilton Parkway above the second floor (22 feet in height). The building would contain 22,879 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The building would also include a cellar level (with 9,900 square feet of additional medical center space) and up to two additional sub-cellar levels in which approximately 82 accessory parking spaces would be provided.

This section assesses the potential for the Proposed Action to result in significant mobile source air quality impacts by increasing traffic on nearby streets or by adding new parking facilities. It assesses the Action's potential to result in significant adverse stationary source air quality impacts because of exhaust vented from the new building's heating, ventilation, and air conditioning (HVAC) systems or because the new building would be subject to existing HVAC emissions, air toxics, or odors.

PRINCIPAL CONCLUSIONS

The Proposed Action would not result in violations of ambient air quality standards or exceedances of health-related guideline values, and the proposed building would not be subject to unhealthful pollutant concentrations, air toxics, or odors from nearby emissions sources. The Proposed Action would therefore not result in any significant adverse air quality impacts.

STANDARDS AND GUIDELINES

National and State Ambient Air Quality Standards

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

- Carbon monoxide (CO) is a colorless, odorless gas produced from the incomplete combustion of gasoline and other fossil fuels. The primary source of CO in urban areas is from motor vehicles. Because this gas disperses quickly, CO concentrations can vary greatly over relatively short distances.

- Fine particulates (PM_{10}, $PM_{2.5}$) also are known as inhalable or respirable particulates. Particulate matter is a generic term for a broad range of discrete liquid droplets or solid particles of various sizes. The PM_{10} standard covers particles with diameters of 10 micrometers or less, which are the ones most likely to reach the lungs. The $PM_{2.5}$ standard covers particles with diameters of 2.5 micrometers or less.

- Lead (Pb) is a heavy metal. Emissions are principally associated with industrial sources and motor vehicles that use gasoline containing lead additives. Most U.S. vehicles produced since 1975, and all produced after 1980, are designed to use unleaded fuel. As a result, ambient concentrations of lead have declined significantly.

- Nitrogen dioxide (NO_2) is a highly oxidizing, extremely corrosive toxic gas. It is formed by chemical conversion from nitric oxide (NO), which is emitted primarily by industrial furnaces, power plants, and motor vehicles.

- Ozone (O_3) is a principal component of smog. It is not emitted directly into the air, but is formed through a series of chemical reactions between hydrocarbons and nitrogen oxides in the presence of sunlight.

- Sulfur dioxides (SO_2) are heavy gases primarily associated with the combustion of sulfur-containing fuels such as coal and oil. No significant quantities are emitted from mobile sources.

In addition to NAAQS, New York State Ambient Air Quality Standards further regulate concentrations of the criteria pollutants discussed above. The New York State Department of Environmental Conservation (DEC), Air Resources Division, is responsible for air quality monitoring in the state. Monitoring is performed for each of the criteria pollutants to assess compliance. Table G-1 shows the New York and National Ambient Air Quality Standards, as well as monitored values at the monitoring stations closest to the project site.

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

Pollutant	Averaging Period	Standard	2012 Value	Monitor
Sulfur Dioxide	1-hour average[e]	197 μg/m^3(75 ppb)	64.7 μg/m^3 (24.7 ppb)	Queens College 2
	3-hour average	1,300 μg/m^3 (500 ppb)	44.8 μg/m^3 (17.1 ppb)	
Inhalable Particulates (PM10)	24-hour average	150 μg/m^3	33 μg/m^3	Queens College 2
Inhalable Particulates (PM2.5)	3-yr average annual mean	12 μg/m^3	9.1 μg/m^3	Queens College
	Maximum 24-hr. 3-yr. avg.[d]	35 μg/m^3	24 μg/m^3	
Ozone	Maximum daily 8-hr avg.[b]	0.075 ppm	0.081 ppm	Queens College 2
Carbon Monoxide	8-hour average[a]	9 ppm	1.1 ppm	Queens College 2
	1-hour average[a]	35 ppm	1.7 ppm	
Nitrogen Dioxide	12-month arithmetic mean	100 μg/m^3(53 ppb)	32.9 μg/m^3 (17.5 ppb)	Queens College 2
	1-hr average[e]	188 μg/m^3(100 ppb)	120.3 μg/m^3 (64 ppb)	
Lead	Quarterly mean	0.15 μg/m^3	0.008 μg/m^3	Morrisania (2011)

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

New York City De Minimis Criteria

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

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

New York City has also established *de minimis* criteria for $PM_{2.5}$ analyses at the microscale level. According to these criteria, a significant impact is defined as follows:

- A predicted increase of half the difference between the background concentration and the 24-hour standard;

- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.1 ug/m^3 at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately one 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

- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 $\mu g/m^3$ at a discrete or ground-level microscale receptor location for stationary sources.

The de minimis value for 24-hour $PM_{2.5}$ was based on the 98th percentile concentrations averaged over 3 years (2010-2012). Based on the 2014 *CEQR Technical Manual*, this average is 24 ug/m^3. It was subtracted from the standard of 35 ug/m^3 and divided by 2. Therefore, the de minimis is 5.5 ug/m^3. Annual incremental concentrations of $PM_{2.5}$ from mobile sources at intersection locations are only assessed on a neighborhood, rather than local, scale.

State Implementation Plan (SIP)

The Clean Air Act (CAA), as amended in 1990, (1) defines non-attainment areas (NAA) as geographic regions that have been designated as not meeting one or more of the NAAQS; and (2) requires states to submit to the EPA a State Implementation Plan (SIP) delineating how the state plans to achieve air quality that meets the NAAQS, followed by a plan for maintaining attainment status once the area is in attainment. Kings County is part of the New York City CO maintenance area, a marginal NAA for ozone, and an NAA for PM_{10} and $PM_{2.5}$. The State is under mandate to develop SIPs to address ozone, carbon monoxide, and PM_{10}; a SIP to address non-attainment of the 2008 ozone NAAQS will be due in 2015. The State is also working with the EPA to formulate standard practices for regional haze and $PM_{2.5}$.

Based on recent monitoring data from 2006-2009 and 2007-2011, annual and 24-hour average concentrations of $PM_{2.5}$ no longer exceed the standard. To reflect the recent $PM_{2.5}$ 24-hour average monitoring data, New York submitted a "Clean Data" request to the EPA. On August 29, 2013, EPA proposed to determine that the area has attained that standard, and on April 18, 2014, the EPA redesignated Bronx, Kings, New York, Queens, and Richmond Counties as $PM_{2.5}$ maintenance areas. Now that this determination has been finalized, some requirements for related SIP submissions may be suspended.

New York State Department of Environmental Conservation Guideline Concentrations

In addition to criteria pollutants, a wide range of non-criteria air pollutants known as toxic air pollutants may be emitted from industrial sources. These pollutants, ranging from high to low toxicity, can be grouped into two categories: carcinogenic air pollutants and non-carcinogenic air pollutants. DEC has established Short-Term Guideline Concentrations (SGCs) and Annual Guideline Concentrations (AGCs) for numerous toxic or carcinogenic non-criteria pollutants for which the EPA has no established standards. They are maximum allowable 1-hour and annual guideline concentrations, respectively, that are considered acceptable concentrations below which there should be no adverse effects on the health of the general public. SGCs are intended to protect the public from acute, short-term effects of pollutant exposures, and AGCs are intended to protect the public from chronic, long-term effects of the exposures. Pollutants with no known acute effects have no SGC criteria but do have AGC criteria. DEC's *DAR-1 AGC/SGC Tables* (October 18, 2010) contains the most recent compilation of the SGC and AGC guideline concentrations.

If the DEC-established AGC is based on a health risk criterion (e.g., a one in a million cancer risk), and the source has Best Available Control Technology (BACT) installed, the New York City Department of Environmental Protection (DEP) may consider the potential impact to be insignificant if the projected ambient concentration is less than ten times the AGC. This is because DEC developed the AGCs for these pollutants by reducing the health risk criterion by a factor of ten as an added safety measure.

No NAAQs, SGCs, or AGCs exist for emissions of pollutants that are grouped together, such as total solid particulates, total hydrocarbons, or total organic solvents. Therefore, as recommended by DEP, all

solid particulates are assumed to be PM_{10}. For total organic solvents or total hydrocarbons, the SGCs and AGCs for specific compounds should be obtained and used in an analysis.

Based on SGCs and AGCs, the EPA also developed methodologies that can be used to estimate the potential impacts of air toxic pollutants from multiple emission sources. The "Hazard Index Approach" can be used to estimate the potential impacts of non-carcinogenic pollutants. If the combined ratio of estimated pollutant concentrations divided by the respective SGCs or AGCs value for each of the toxic pollutants is found to be less than 1, no significant air quality impacts are predicted to occur. Using these factors, the potential cancer risk associated with each carcinogenic pollutant, as well as the total cancer risk of the releases of all of carcinogenic toxic pollutants combined, can be estimated. If the total incremental cancer risk of all of the carcinogenic toxic pollutants combined is less than one in one million, no significant air quality impacts are predicted to occur due to these pollutant releases.

EXISTING CONDITIONS

As stated previously, Kings County is part of a CO maintenance area and is nonattainment (moderate) for the 8-hour ozone standard and nonattainment for PM_{10} and $PM_{2.5}$. It is in compliance with all other NAAQS.

For SO_2, NO_x, PM_{10}, the background concentrations were obtained from the CEQR Technical Manual as follows:

- 65 $\mu g/m^3$ for the 1-hour SO_2 concentration,
- 89 $\mu g/m^3$ for the 3-hour SO_2 concentration,
- 42 $\mu g/m^3$ for the annual NO_2 average,
- 120 ug/m^3 for the 1-hour NO_2 average,
- 50 $\mu g/m^3$ for the 24-hour PM_{10} average, and,

No background value is applicable to $PM_{2.5}$ because the criteria are based on the incremental differences between No Build and Build Conditions.

As a conservative approach for CO, the highest value from the past five years of monitored values is used as the background value. Based on the 2014 *CEQR Technical Manual*, the CO background concentration is 3.4 ppm for the 1-hour average and 1.7 ppm for the 8-hour average, as shown in Table G-2.

Table G-2
Monitored CO Concentrations (ppm)

Monitor	1-Hour Value	8-Hour Value
Queens College, Queens	3.4	1.7

Source: NYC CEQR Technical Manual (2014).

THE FUTURE WITHOUT THE PROPOSED ACTION

No nearby development would introduce a large emission source (e.g., solid waste or medical waste incinerator, cogeneration facility, asphalt or concrete plant, or power generating plant); a medical,

chemical, or research laboratory; a manufacturing or processing facility; or an odor-producing facility in the vicinity of the project site.

THE FUTURE WITH THE PROPOSED ACTION

Mobile Source Emissions

Parking Garage

The proposed project would include an accessory parking garage with an entrance on 54th Street and 151 parking spaces in up to three sub-cellar levels, occupying up to 35,530 square feet. Table G-3 shows the projected trips into and out of the garage for the AM, midday, and PM peak hours, based on calculations in Section 2.F, Transportation. The number of vehicles entering the garage would be greatest during the AM period (49 vehicles), and the number leaving the garage would be greatest during the PM period (39 vehicles). As a worst case, the analysis is based on a scenario in which 49 vehicles enter and 39 vehicles leave the garage during a single hour.

Table G-3
Parking Garage Demand

Location	Time Period	2016 With-Action Volumes		
		In	Out	Total
Garage entrance/exit	AM	49	0	49
	MD	37	9	46
	PM	28	39	67
Worst Case		**49**	**39**	**88**

Source: Stantec Consulting Services Inc., October 2014

The parking analysis was based on the guidelines provided in the *CEQR Manual Technical Appendices* for parking lots. Per guidance from DEP, a persistence factor of 0.70 was used to convert 1-hour CO values to 8-hour CO values. The EPA's MOVES2010b emissions model was used to obtain emission factors for entering and exiting vehicles as well as idling vehicles. Exiting vehicles were assumed to idle for one minute before departing, and speeds within the parking lot were 5 miles per hour. As indicated previously, the 8-hour background value would be 1.7 ppm.

The vent stack was conservatively assumed to be 12 feet directly above ground level at the vehicle entry site on 54th Street. Receptor points included the near and far sidewalks and a window directly above the vent. A pedestrian on the near sidewalk would be 7.5 feet away from the garage vent, while a pedestrian standing on the far sidewalk across 54th Street would be 53 feet away. The window above the vent was assumed to be 5 feet higher, or 17 feet above ground level. Carbon monoxide emissions from vehicles on 54th Street were calculated from the formula in the *CEQR Technical Manual Appendices*.

Table G-4 shows the results. For the 8-hour averaging period, the total CO concentrations would be 1.9 ppm for the near sidewalk, the far sidewalk, and a window above the vent. Table G-4 also shows the results for $PM_{2.5}$ concentrations. All values for the two pollutants are within the NAAQS and the NYC *de minimis* criterion. Exhaust from vehicles entering and leaving the garage would therefore not result in a significant adverse air quality impact.

Table G-4
Pollutant Concentrations from the Garage

Stack above 54th Street Entrance						
CO Concentrations	**Near Sidewalk**		**Far Sidewalk**		**Window Above**	
Distance to Vent (ft.)	7.5		53		0	
Vent Height (ft.)	12.0		12.0		12.0	
Receptor Height (ft.)	6.0		6.0		17.0	
Averaging Period	**1-Hour**	**8-Hour**	**1-Hour**	**8-Hour**	**1-Hour**	**8-Hour**
Garage CO (ppm)	0.3	0.2	0.2	0.1	0.3	0.2
Line Source (ppm)	NA	NA	0.1	0.1	NA	NA
Background Value (ppm)	3.4	1.7	3.4	1.7	3.4	1.7
Total Concentration (ppm)	**3.7**	**1.9**	**3.7**	**1.9**	**3.7**	**1.9**
NAAQS, CO (ppm)	35.0	9.0	35.0	9.0	35.0	9.0
Impact	No		No		No	
Stack above 54th Street Entrance						
$PM_{2.5}$ Concentrations	**Near Sidewalk**		**Far Sidewalk**		**Window Above**	
Distance to Vent (ft.)	7.5		53		0	
Vent Height (ft.)	12.0		12.0		12.0	
Receptor Height (ft.)	6.0		6.0		17.0	
Averaging Period	**24-Hour**	**Annual**	**24-Hour**	**Annual**	**24-Hour**	**Annual**
Garage $PM_{2.5}$ (ug/m3)	0.0000021	0.0000004	0.0000012	0.0000002	0.0000012	0.0000002
Line Source (ug/m^3)	NA	NA	1.8634000	0.0900000	NA	NA
Background Value (ug/m^3)	NA	NA	NA	NA	NA	NA
Total Concentration (ug/m^3)	**0.0000021**	**0.0000004**	**1.8634012**	**0.0900002**	**0.0000012**	**0.0000002**
NYC De Minimis (ug/m^3)						
Impact	No		No		No	

+

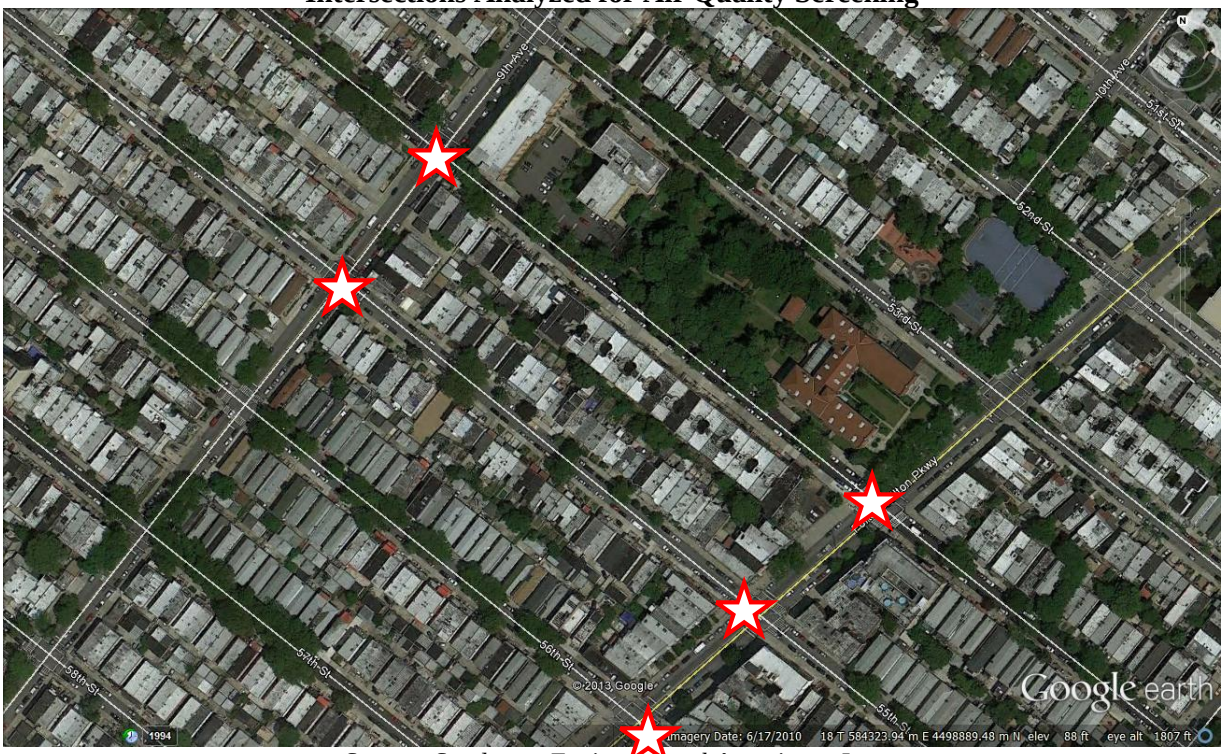
Source: Sandstone Environmental Associates, Inc.

STREET TRAFFIC

PRELIMINARY SCREENING

The analysis focused on the six signalized intersections that were analyzed in Section 2.F, Transportation, which are shown in Figure G-1. The projected future No-Action and With-Action condition traffic volumes for these intersections are shown in Table G-5.

Figure G-1
Intersections Analyzed for Air Quality Screening



Source: Sandstone Environmental Associates, Inc.

Table G-5
Future No-Action and With-Action Condition Traffic Volumes

Intersection/Period	Intersection Type	Traffic Volume			NYSDOT Functional Class
		No-Action	With-Action	Project Increment	
AM Period					
54th Street and 9th Avenue	Signalized	677	717	40	19/19
55th Street and 9th Avenue	Signalized	711	739	28	19/19
54th Street and Fort Hamilton Parkway	Signalized	1,218	1,230	12	19/14
55th Street and Fort Hamilton Parkway	Signalized	1,261	1.295	34	19/14
56th Street and Fort Hamilton Parkway	Signalized	1,265	1.282	17	19/14
Midday Period					
54th Street and 9th Avenue	Signalized	660	717	57	19/19
55th Street and 9th Avenue	Signalized	674	719	45	19/19
54th Street and Fort Hamilton Parkway	Signalized	1,089	1,122	33	19/14
55th Street and Fort Hamilton Parkway	Signalized	1,100	1,154	54	19/14
56th Street and Fort Hamilton Parkway	Signalized	1,108	1,139	31	19/14
PM Period					
54th Street and 9th Avenue	Signalized	707	776	69	19/19
55th Street and 9th Avenue	Signalized	702	763	61	19/19
54th Street and Fort Hamilton Parkway	Signalized	1,346	1,414	73	19/14
55th Street and Fort Hamilton Parkway	Signalized	1,331	1,417	86	19/14
56th Street and Fort Hamilton Parkway	Signalized	1,401	1,452	51	19/14

Notes: 14= urban principal arterial; 19= local street; NA=functional class not available
Source: Stantec Consulting Services Inc., October 2013

CO screen. Localized increases in CO levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of the Proposed Action. The mobile source analysis outlined in the *CEQR Technical Manual* considers actions that add new vehicles to roadways or change traffic patterns, either of which may have significant adverse air quality impacts. The primary pollutant of concern is carbon monoxide. For this area of the city, the threshold volume for modeling CO concentrations using MOVES2010b and CAL3QHC is a With-Action-induced increment of 170 vehicles during a peak hour.

The intersection that would experience the largest project-generated traffic volumes is 55th Street and Fort Hamilton Parkway. It would experience an increment of 85 vehicles for the peak PM period, a number that is below the 170-vehicle CO threshold. Therefore, no further analysis of CO is required, and no violations of the NAAQS for CO are anticipated as a result of the Proposed Action.

$PM_{2.5}$ screen. A $PM_{2.5}$ screening analysis was conducted using the spreadsheet referenced on page 17-10 of the *CEQR Technical Manual*. The algorithm uses traffic volume according to vehicular class and determines the equivalent number of heavy-duty diesel vehicles (HDDVs) by type of road. Based on guidance from DEP, the minor leg of an intersection determines its classification as a local road, collector, arterial, or expressway. A more detailed analysis is required if the Proposed Action would meet or exceed any of the following thresholds:

- 12 HDDVs for paved roads with average daily traffic fewer than 5,000 vehicles,
- 19 HDDVs for collector-type roads,
- 23 HDDVs for principal and minor arterial roads, or
- 23 HDDVs for expressways and limited-access roads.

Table G-5 above shows the roadway volumes and increments for the three peak periods and the New York State Department of Traffic (NYSDOT) functional classes of the roadways. All are local roads except for Fort Hamilton Parkway, which is a principal arterial.

The greatest traffic increment at an intersection is 89 vehicles, which occurs at 54th Street and the garage during the peak PM period. The $PM_{2.5}$ screen provided by DEP does not pass for 89 vehicles on a local road. This driveway was therefore modeled as a worst case for mobile source PM_{10} and $PM_{2.5}$.

MODELING WITH CAL3QHCR

The EPA's CAL3QHCR model was used to determine future CO, PM_{10}, and $PM_{2.5}$ concentrations from traffic. CAL3QHCR is a Gaussian dispersion model that determines pollutant concentrations at specified receptor points. It accounts for pollutant emissions from both free-flowing vehicles and vehicles idling at signalized intersections. However, following USEPA guidance, the queuing algorithm is not used with the CAL3QHCR model. Therefore, average speeds that included intersection delay were calculated for the roadway links.

Inputs to the model included coordinates for receptors and free-flow approach and departure links, as well as peak hour traffic volumes, speeds, and vehicular emission factors for each link. MOVES2010b was used to obtain pollutant emission factors for each roadway link. MOVES2010b can calculate emission factors for free-flow links in grams/vehicle-mile and for queue links in grams per hour per vehicle. The vehicular mix and speeds used in MOVES2010b were based on field classification counts and speed runs. Inputs pertaining to inspection/maintenance, anti-tampering programs, age distribution, meteorology, etc., were obtained from NYCDEP. The pollutant processes included running exhaust and crankcase running exhaust for all three pollutants, and brake and tire wear for PM_{10} and $PM_{2.5}$.

MOVES2010b was run for January 1st for the Build year of 2016 for the peak PM period. Post-processing was carried out to obtain emission factors for use in a Tier I analysis with CAL3QHCR. A Tier I analysis assumes that the traffic is the same for every hour of the day. A more refined Tier II analysis would use traffic volumes and emission factors specific to each hour of the day.

Fugitive dust from re-entrainment of dust was calculated using the formulas from Section 13.2.1-3 of EPA's AP-42 Document. The formulas were based on an average fleet weight that varied according to the vehicular mix for a given roadway and a silt loading factor of 0.4 g/m^2 for local roads, 0.015 g/m^2 for expressways, and 0.1 g/m^2 for arterials, as recommended by the CEQR Technical Manual (2014). The resulting fugitive dust emissions for PM_{10} and $PM_{2.5}$ were added to the emission factors calculated by MOVES2010b.

As noted above, all links were set up as free-flowing traffic links in CAL3QHCR. Free-flow links were modeled for a distance of 1,000 feet from the intersection in each direction. The mixing zone for free-flow links was equal to the width of the traveled way plus an additional 10 feet (3 meters) on each side of the roadway.

Sensitive receptors are homes, parks, schools, or other land uses where people congregate and which would be sensitive to air quality impacts. For the purposes of the air quality analysis, any point to which

the public has continuous access can be deemed a sensitive receptor site. Numerous receptor points are typically modeled at each intersection to identify the points of maximum potential pollutant concentrations. Receptor points were modeled on the corners of the intersections, and additional points were modeled at 20-foot intervals for a distance of 100 feet along both sides of each intersection leg. Receptors were placed at mid-sidewalk and outside the air quality mixing zone.

CAL3QHCR was run with five years of meteorological data from La Guardia Airport from 2009 through 2013. Each computer run covered wind angles from 0 to 360 degrees and identified the worst-case wind angle for each receptor point. A surface roughness of 175 cm was used in the modeling.

CAL3QHCR provides maximum 24-hour and annual concentrations for fine particulates. The 24-hour results for PM_{10} were added to background concentrations and compared with the NAAQS. For $PM_{2.5}$, 24-hour and annual impacts were determined from the differences between the modeled No Action and With-Action concentrations. The differences were compared with the NYCDEP de minimis for criteria

Table G-6 and G-7 shows the results of the modeling. For PM_{10} under No Action conditions, the worst-case receptor point was at Receptor 101 which is south of the eastbound link and 92 feet east of the intersection of 54th Street and the garage exit of the proposed building. The modeled concentration was equivalent to 5.0 ug/m^3, and the total concentration with background would be 55.0 ug/m^3. This total concentration of PM_{10} is below the NAAQS of 150 ug/m^3. Under Action conditions, the worst-case receptor point was at Receptor 96 which is also south of the eastbound link and 62 feet east of the intersection of 54th Street and the garage exit of the proposed building . The modeled concentration was equivalent to 6.8 ug/m^3, and the total concentration with background would be 56.8 ug/m^3. This total concentration of PM_{10} is below the NAAQS of 150 ug/m^3.

For $PM_{2.5}$, under the No Action conditions, the highest modeled value was 1.3 ug/m^3 at Receptor 101 for the 24-hour period and 0.03 ug/m^3 at Receptor 1 for the Annual period. Receptor 1 is located 370 feet north of the intersection of 54^{th} Street and the garage entrance. Under the With-Action conditions, the highest modeled value was 1.8 ug/m^3 for the 24-hour period and 0.04 ug/m^3 for the Annual period. The receptors with the highest concentrations are the same as for No Action conditions. Therefore, the highest incremental concentration of $PM_{2.5}$ would be equivalent to 0.5 for the 24-hour period, which is below the de minimis of 5.5 ug/m^3 and 0.01 for the Annual period, which is below the de minimis of 0.1 ug/m^3. Therefore, no impacts from PM_{10} or $PM_{2.5}$ due to mobile sources are projected.

Table G-6
Mobile Source Air Quality Analysis for PM_{10}, No Action and With-Action Condition

PM_{10} 24-hour	Modeled Value (ug/m^3)	Background (ug/m^3)	Total (ug/m^3)	NAAQS (ug/m^3)
No Action				
2009	4.5	50.0	54.5	150
2010	**5.0**		**55.0**	
2011	4.6		54.6	
2012	4.4		54.4	
2013	4.5		54.5	
Action				
2009	6.1	50.0	56.1	150
2010	**6.8**		**56.8**	
2011	6.2		56.2	
2012	6.1		56.1	
2013	6.2		56.2	

Note: Numbers in bold type are highest.
Source: Sandstone Environmental Associates, Inc.

Table G-7
Mobile Source Air Quality Analysis for $PM_{2.5}$, No Action and With-Action Conditions

Pollutant	Time Period	No Action Concentration (ug/m3)	With Action Concentration (ug/m3)	Increment
2009	24-Hour	1.2	1.6	0.4
2009	Annual	0.03	0.04	0.01
2010	24-Hour	**1.3**	**1.8**	**0.5**
2010	Annual	**0.03**	**0.04**	**0.01**
2011	24-Hour	1.2	1.6	0.4
2011	Annual	0.03	0.04	0.01
2012	24-Hour	1.2	1.6	0.5
2012	Annual	0.03	0.04	0.01
2013	24-Hour	1.2	1.7	0.5
2013	Annual	0.03	0.04	0.01
$PM_{2.5b}$ Interim Guidance	24-Hour	**5.5**		
	Annual	**>0.1**		

Source: Sandstone Environmental Associates, Inc.

In summary, the Proposed Action would not have a significant adverse air quality impact as a result of mobile source emissions.

Stationary Source Emissions

Heating, Ventilation, and Air Conditioning (HVAC) Emissions from the Proposed Project

An action can result in stationary source air quality impacts by introducing a new stationary source of pollutants that can adversely affect nearby sensitive receptors or by introducing a new sensitive receptor (such as a school, medical facility, or residential building) near existing stationary sources of pollutants. A building's HVAC systems constitute such a stationary source, producing exhaust that vents from a rooftop stack. Air quality impacts from HVAC major and large sources are unlikely at distances of 1,000 feet from the rezoning boundaries.

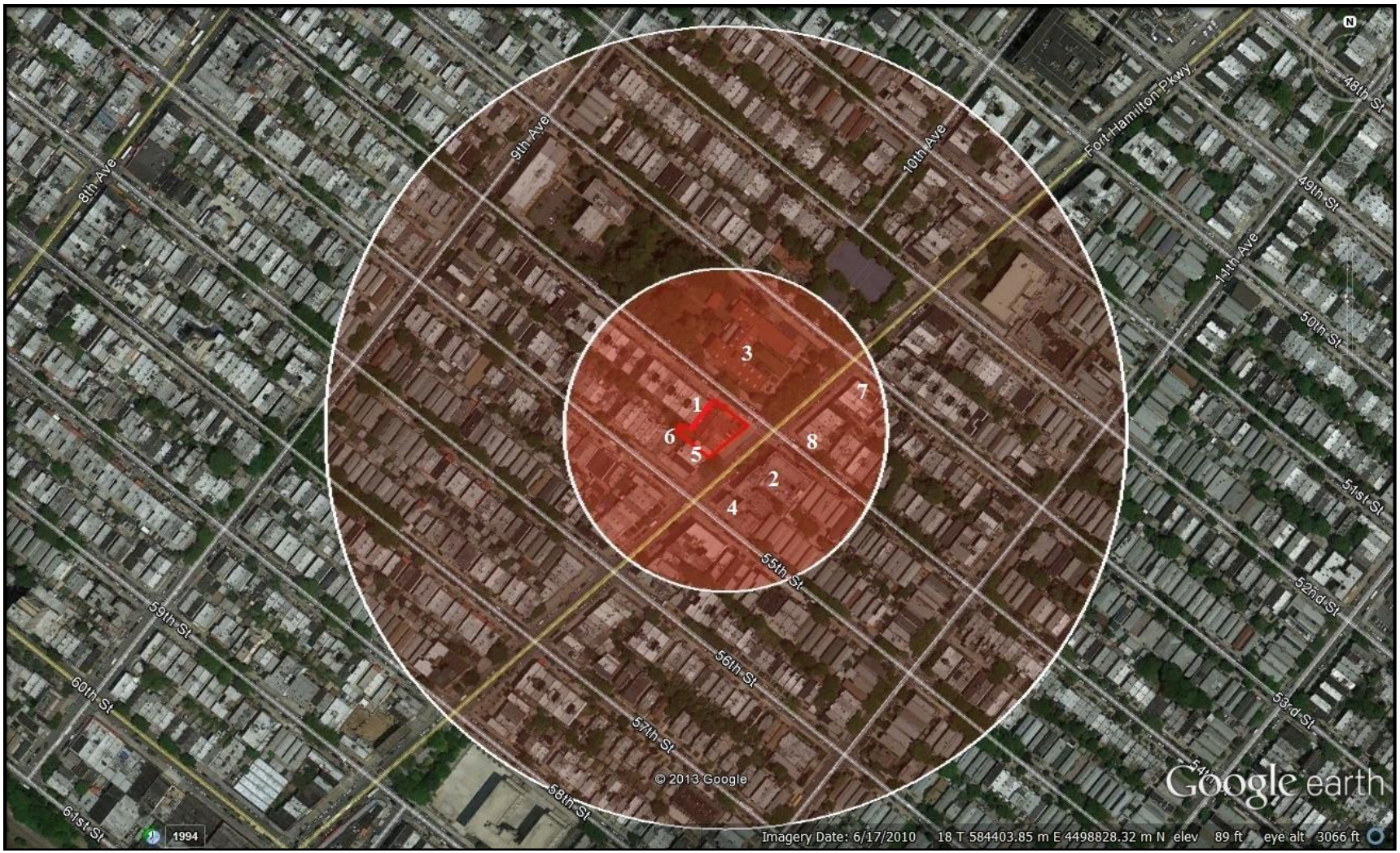
Effect of the Proposed Project's HVAC Emissions

Under the With-Action condition, the boiler stack for the proposed six-story building would be approximately the same height as the monastery tower at 5324 Fort Hamilton Parkway. As a worst-case analysis, the distance between the two lot lines is approximately 60 feet. A screening analysis was carried out using Figure 17-8 (NO_2 Boiler Screen for Commercial and Non-Residential - Natural Gas) from the *CEQR Technical Manual Appendices*. The size of the development is plotted against the distance in feet to the edge of the receptor building. Figure 17-8 is applicable to buildings where the boiler stack is at least 30 feet from the nearest building of similar or greater height. If the distance is less than 30 feet, the analysis must be carried out using AERMOD modeling. If the plotted point is on or above the applicable curve, the potential for a significant air quality impact exists, and further analysis is required using AERSCREEN or AERMOD modeling. Based on this screening analysis, the proposed action would screen out for impacts. Thus, further analysis using AERMOD is not required.

The analysis determined the site would require an (E) designation that would specify the type of fuel to be used. The proposed (E) designation for the project site with respect to HVAC systems is presented below. The (E) designation is based on the proposed site plan, as shown in Figure G-5. Any changes to the height or configuration of the building may necessitate revisions to the (E) designations.

> **Block 5673, Lots 42 and 50:** Any new residential and/or commercial development on the above-referenced properties must use natural gas for HVAC systems to avoid any potential significant adverse air quality impacts.

With (E) designation in place, the potential impacts from the project site building's heating systems would not exceed the applicable NAAQS or *de minimis* criteria and would therefore not have potential significant adverse environmental impacts on air quality.



Note: Numbers indicate locations of buildings in Table G-7
Source: Sandstone Environmental Associates. Inc.

Air Toxics

Potential adverse effects on the proposed new development from existing industrial emissions are a source of concern. According to the *CEQR Technical Manual*, existing facilities with the potential to cause adverse air quality impacts are those that would require permitting under City, State, or federal regulations. The Manual lists the following types of uses as sources of concern:

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

To identify facilities in the categories listed above, a manufacturing survey was done, which included on-line searches of DEC's Air Permit Facilities Registry and the EPA's Facility Registry System for permitted facilities, data provided by the New York City Department of Buildings, New York City's Open Accessible Space Information System Cooperative (OASIS) data base, telephone directory listings, available aerial photos provided by Google and Bing, internet websites, DEC's DAR-1, and a search for DEP Bureau of Air Resources permits. No large industrial emission sources, laboratories, or odor-producing facilities were identified within 1,000 feet of the proposed rezoning boundaries.

Based on the online survey and the OASIS data base, a list of industrial and commercial sites was submitted to DEP for a permit search. DEP identified a total of nine permits for boilers (previously evaluated) or industrial operations. Onlyone operational permit was listed as being active: N & C Cleaners at 5323 Fort Hamilton Parkway. In compliance with current legislation, the equipment used is a totally enclosed cleaning machine with a closed loop system. No permit was found for Annie Cleaners at 5420 Fort Hamilton Parkway, although a cancelled permit was found for a previous tenant at this address: Trans-Lux Cleaners. As is shown Table G-8, these are the only two nearby facilities that are a potential source of concern for air toxics emissions. To ensure that no adverse impacts would occur to the project site, a generic analysis for tetrachloroethylene using the Industrial Source Screen from the 2014 CEQR Technical Manual was carried out. The results showed that the two facilities would not exceed the NYSDEC SGC or AGC concentrations. For the one-hour averaging period, N&C Cleaners, which is 121 feet from the proposed action, would have an estimated concentration of 28.0 ug/m^3 at the site, and Annie Cleaners, which is 58 feet away, would generate an estimated concentration of 293.2 ug/m^3 at the site. The potential cumulative concentration of tetrachloroethylene is 321.2 ug/m^3, which is below the NYSDEC SGC of 1,000 ug/m^3. The annual concentrations at the site would be 0.03 ug/m^3 from N&C Cleaners and 0.30 ug/m^3 from Annie cleaners. The cumulative concentration of 0.33 ug/m^3 would be below the NYSDEC AGC of 1.0 ug/m^3. These two cleaners would therefore not have an adverse impact on the proposed building.

Table G-8
Sites of Interest for Air Toxics

Block	Lot	Address(es)	Observed Land Use
5667	1	5323 Fort Hamilton Parkway, Brooklyn,NY 11219	N&C Cleaners
5673	53	5420 Fort Hamilton Parkway, Brooklyn, NY 11219	Annie Cleaners

Source: Sandstone Environmental Associates, Inc.

CONCLUSION

The Proposed Action would not result in violations of ambient air quality standards or exceedances of health-related guideline values, and the proposed building would not be subject to unhealthful pollutant

concentrations, air toxics, or odors from nearby emissions sources. The Proposed Action would therefore not result in any significant adverse air quality impacts.

2.H NOISE

INTRODUCTION

The purpose of a noise assessment under CEQR is to determine whether an action would (1) raise noise levels significantly at existing or anticipated sensitive noise receptors (such as residences or schools) or (2) introduce new sensitive uses (such as residential buildings or schools) at locations subject to unacceptably high ambient noise levels.

The assessment is concerned with both mobile and stationary noise sources. Mobile sources are those that move in relation to a noise-sensitive receptor. They include automobiles, buses, trucks, aircraft, and trains. Stationary sources of noise do not move in relation to a noise-sensitive receptor. Typical stationary noise sources of concern include machinery or mechanical equipment associated with industrial and manufacturing operations; building heating, ventilating, and air conditioning (HVAC) systems; speakers for public address and concert systems; playground noise; and spectators at concerts or sporting events. An action could raise noise levels either by introducing new stationary noise sources (such as outdoor playgrounds or rooftop air conditioning compressors) or by increasing mobile source noise (generally by generating additional traffic). Similarly, an action could introduce new residences or other sensitive receptors that would be subject to noise from either stationary or mobile sources.

As discussed in Section 1, Project Description, and Section 2.A, Land Use, Zoning, and Public Policy, the project site will be redeveloped by the 2015 build year whether or not the Proposed Action is taken, and no redevelopment or enlargement of existing uses is anticipated on either of the two other properties that would be affected by the proposed rezoning.

The proposed project would consist of a single six-story building with a roof height of 66 feet and a maximum height of about 76 feet to the top of the mechanical bulkhead. The building's lower floors would cover the entire site, except for a rear yard of approximately 475 square feet at the southwest corner of the property, but the building would be set back 20 feet from 54th Street and 17 feet 3 inches from Fort Hamilton Parkway above the fourth floor (44 feet in height). The building would contain 53,604 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The proposed project would also include a cellar level (with 9,900 square feet of additional medical center space) and up to three sub-cellar levels in which approximately 151 accessory parking spaces would be provided.

In the future without the Proposed Action, a medical center building with ground floor commercial space and a below-grade garage would also be built, but the development would follow the R5/C1-3 rather than R6/C1-3 zoning regulations. The new building would have the same footprint as the proposed project, but the building would be three stories in height (about 33 feet to the roof, plus an additional 11 feet of height for the mechanical bulkhead). The building would be set back 30 feet from 54th Street and 27 feet one inch from Fort Hamilton Parkway above the second floor (22 feet in height). The building would contain 22,879 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The building would also include a cellar level (with 9,900 square feet of additional medical center space) and up to two additional sub-cellar levels in which approximately 82 accessory parking spaces would be provided.

PRINCIPAL CONCLUSIONS

Because the proposed project would consist of a medical center and ground floor retail space, and because all rooftop mechanical equipment, including air conditioner compressors, would be enclosed and would comply with New York City Noise Code requirements, the Proposed Action would not introduce a substantial new stationary noise source. The proposed project would generate additional vehicular traffic,

which would raise ambient noise levels slightly; however, because these increases would be less than the 3 dBA threshold established by the *CEQR Technical Manual*, the Proposed Action would not cause a significant adverse noise impact as a result of increasing ambient noise levels. Because the Action condition noise levels would not exceed the Marginally Acceptable levels, the Proposed Action would not cause a significant adverse noise impact by introducing a new sensitive receptor at a location subject to unacceptably high ambient noise levels. The minimum required attenuation to ensure acceptable indoor noise levels would be 28 dBA, and the proposed project would provide at least that level of attenuation. For these reasons, the Proposed Action would not cause a significant adverse noise impact.

DETERMINING WHETHER A NOISE ASSESSMENT IS REQUIRED

According to the *CEQR Technical Manual*, a noise impact assessment is required if a project would (1) generate any mobile or stationary sources of noise or (2) introduce new sensitive noise receptors in an area with existing high ambient noise levels. The proposed project would introduce new uses (a medical center and retail stores) on a now vacant site that would generate additional automobile traffic. Although these uses would be introduced whether or not the Proposed Action is taken, the medical center would be larger, and therefore could be expected to generate more traffic, under Action rather than no-Action conditions. The new uses would also constitute new sensitive receptors. A noise impact assessment has therefore been performed to determine both (1) to determine whether the project would generate sufficient noise to cause a significant adverse impact to existing sensitive receptors or (2) be located in an area characterized by existing high ambient noise levels and, if so, to determine the amount of noise attenuation that would have to be incorporated into the project to prevent a significant adverse impact.

Unlike playgrounds, truck loading docks, loudspeaker systems, car washes, stationary diesel engines, or similar uses, a medical center and enclosed retail spaces are not substantial stationary noise sources. All rooftop mechanical equipment, including air conditioner compressors, would be enclosed and would comply with New York City Noise Code requirements, which limit noise levels generated by such equipment to 65 decibels (dBA) during the daytime (7AM to 10 PM) and 55 dBA during the nighttime. The Proposed Action would therefore not have the potential to cause a significant adverse stationary source noise impact. The assessment therefore concentrates on existing and anticipated ambient noise levels and projection of the anticipated increase in noise levels as a result of project-generated traffic.

NOISE FUNDAMENTALS

Noise is measured in sound pressure level (SPL), which is converted to a decibel scale. The decibel is a relative measure of the sound level pressure with respect to a standardized reference quantity. Decibels on the A-weighted scale are termed "dBA." The A-weighted scale is used for evaluating the effects of noise in the environment because it most closely approximates the response of the human ear. On this scale, the threshold of discomfort is 120 dB, and the threshold of pain is about 140. Table H-1 shows the range of noise levels for a variety of indoor and outdoor noise levels.

Table H-1
Sound Pressure Level and Loudness of Typical Noises in Indoor and Outdoor Environments

Noise Level (dBA)	Subjective Impression	Typical Sources		Relative Loudness (Human Response)
		Outdoor	Indoor	
120-130	Uncomfortably Loud	Air raid siren at 50 feet (threshold of pain)	Oxygen torch	32 times as loud
110-120	Uncomfortably Loud	Turbo-fan aircraft at take-off power at 200 feet	Riveting machine Rock band	16 times as loud
100-110	Uncomfortably Loud	Jackhammer at 3 feet		8 times as loud
90-100	Very Loud	Gas lawn mower at 3 feet Subway train at 30 feet Train whistle at crossing Wood chipper shredding trees Chain saw cutting trees at 10 feet	Newspaper press	4 times as loud
80-90	Very Loud	Passing freight train at 30 feet Steamroller at 30 feet Leaf blower at 5 feet Power lawn mower at 5 feet	Food blender Milling machine Garbage disposal Crowd noise at sports event	2 times as loud
70-80	Moderately Loud	NJ Turnpike at 50 feet Truck idling at 30 feet Traffic in downtown urban area	Loud stereo Vacuum cleaner Food blender	Reference loudness (70 dBA)
60-70	Moderately Loud	Residential air conditioner at 100 feet Gas lawn mower at 100 feet Waves breaking on beach at 65 feet	Cash register Dishwasher Theater lobby Normal speech at 3 feet	2 as loud
50-60	Quiet	Large transformers at 100 feet Traffic in suburban area	Living room with TV on Classroom Business office Dehumidifier Normal speech at 10 feet	1/4 as loud
40-50	Quiet	Bird calls, Trees rustling, Crickets, Water flowing in brook	Folding clothes Using computer	1/8 as loud
30-40	Very quiet		Walking on carpet Clock ticking in adjacent room	1/16 as loud
20-30	Very quiet		Bedroom at night	1/32 as loud
10-20	Extremely quiet		Broadcast and recording studio	
0-10	Threshold of hearing			

Sources: Noise Assessment Guidelines Technical Background, by Theodore J. Schultz, Bolt Beranek and Newman, Inc., prepared for the US Department of Housing and Urban Development, Office of Research and Technology, Washington, D.C., undated; Sandstone Environmental Associates, Inc.; Highway Noise Fundamentals, prepared by the Federal Highway Administration, US Department of Transportation, September 1980; Handbook of Environmental Acoustics, by James P. Cowan, Van Nostrand Reinhold, 1994.

Because the scale is logarithmic, a relative increase of 10 decibels represents a sound pressure level that is 10 times higher. However, humans don't perceive a 10 dBA increase as 10 times or louder; they perceive it as twice as loud. The following is typical of human response to relative changes in noise level:

- 3 dBA change is the threshold of change detectable by the human ear;
- 5 dBA change is readily noticeable; and
- 10 dBA increase is perceived as a doubling of noise level.

The sound pressure level (SPL) that humans experience typically varies from moment to moment. Therefore, a variety of descriptors are used to evaluate environmental noise levels over time. Some typical descriptors are defined below:

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating sound pressure levels is averaged over time to create a single number to describe the mean energy or intensity level. High noise levels during a monitoring period will have greater effect on the L_{eq} than low noise levels. The L_{eq} has an advantage over other descriptors because L_{eq} values from different noise sources can be added and subtracted to determine cumulative noise levels.

1.

- L_{max} is the highest SPL measured during a given period of time. It is useful in evaluating L_{eq}s for time periods that have an especially wide range of noise levels.

- L_{10} is the SPL exceeded 10% of the time. Similar descriptors are the L_{50}, L_{01}, and L_{90}.

2.

- L_{dn} is the day-night equivalent sound level. It is similar to a 24-hour L_{eq}, but with 10 dBA added to SPL measurements between 10 pm and 7 am to reflect the greater intrusiveness of noise experienced during these hours. L_{dn} is also termed DNL.

Although the SPL heard in the environment typically is composed of many different frequencies, it can be broken down into the numerous individual frequencies. These frequencies are grouped into octave bands. An octave band is a group of frequencies in the interval between a given frequency (such as 350 Hz) and twice that frequency (e.g., 710 Hz). The standard octave bands are each named by their center frequencies. Thus, each octave band will be represented by a single SPL. When the representative SPLs from the individual octave bands are added together, they are weighted so that the resulting total SPL will represent dBA. Octave bands are used in some noise models because the different components of a noise source will have different frequencies. For example, a truck traveling downhill will have a different set of frequencies than a truck traveling uphill.

For mobile source noise from vehicular traffic, passenger car equivalents (PCEs) are the number of autos that would generate the same noise level as the observed vehicular mix of autos, medium trucks, and heavy trucks. PCEs are useful for comparing the effects of traffic noise on different roadways or for different future scenarios. The *CEQR Technical Manual* uses the following formulas for converting motor vehicles into PCEs:

- auto and light trucks = 1 passenger car;
- medium trucks = 13 passenger cars;
- heavy trucks = 47 passenger cars; and
- buses = 18 passenger cars.

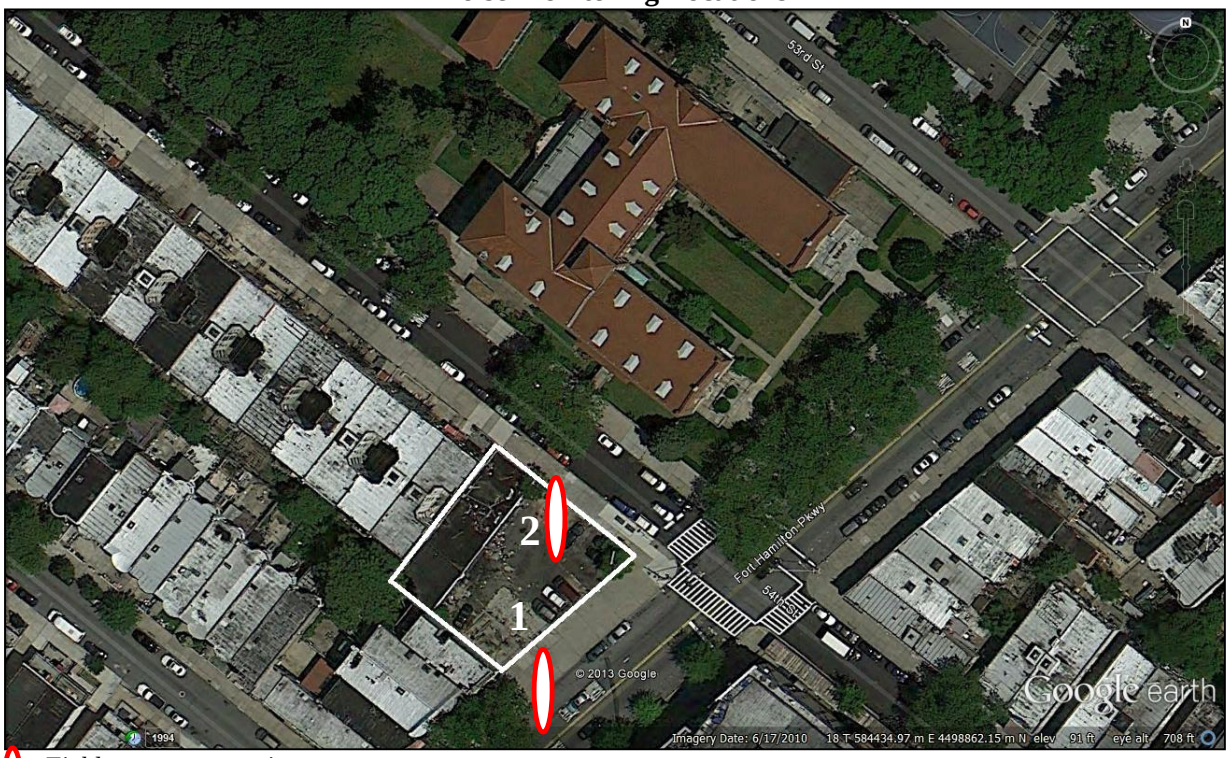
METHODOLOGY

Noise Monitoring

Noise levels were monitored for 20-minute periods during the peak AM (8:00-9:00 a.m.), midday (12:00-1:00 p.m.), and PM (5:00-6:00 p.m.) periods. The noise levels were monitored according to the procedures outlined in the *CEQR Technical Manual*. The instrument used was a Brüel & Kjær Sound Level Meter Type 2250, an ANSI Type I instrument. It was mounted on a tripod at a height of five feet above the ground. The noise monitor was calibrated before and after use. A wind screen was used during all sound measurements except for calibration. All measurement procedures conformed to the requirements of ANSI Standard S1.13-1971 (R1976). Traffic classification counts were taken concurrently with the noise measurements.

Noise monitoring was performed at new locations adjacent to the project site, one along Fort Hamilton Parkway (Site 1) and the other along 54th Street (Site 2). The two monitoring locations are shown in Figure H-1.

Figure H-1
Noise Monitoring Locations



= *Field measurement sites.*

Source: Google Earth.

Modeling of Future Noise Levels

To project future no-action condition noise levels at the monitoring locations, proportional modeling techniques, as described in the *CEQR Technical Manual*, were used to determine anticipated incremental changes in noise levels resulting from the expected increases in traffic volumes. This technique was also used to project the differences in noise levels between the future no-action and action conditions that would result from the changes in traffic volumes caused by the proposed project's anticipated trip generation. The change in future noise levels is calculated using the following equation:

$FNL = ENL + 10 \times \log_{10}(FPCE/EPCE)$,

where:

FNL = Future Noise Level
ENL = Existing Noise Level
FPCE = Future PCEs
EPCE = Existing PCEs

Because sound levels use a logarithmic scale, this model proportions logarithmically with traffic change ratios. For example, at a location where traffic is the dominant noise source, if the existing traffic volume on a street is 100 PCEs and the future traffic volume would increase to 150 PCEs, the noise level would increase by 1.8 dBA. If the future traffic would instead double to 200 PCEs, the noise level would increase by 3.0 dBA.

Impact Determination and Noise Standards and Guidelines

In 1983 the New York City Department of Environmental Protection (DEP) adopted the City Environmental Protection Order-City Environmental Quality Review (CEQR) noise standards for exterior noise levels. These standards are the basis for classifying noise exposure into four categories based on the L_{10}: Acceptable, Marginally Acceptable, Marginally Unacceptable, and Clearly Unacceptable, as shown in Table H-2.

Table H-2
CEQR Noise Exposure Guidelines for use in City Environmental Impact Review[1]

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

Notes:

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

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

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

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

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

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

For sensitive receptors introduced by the Proposed Action, Action condition noise levels in dB(A) $L_{10(1)}$ are compared with the values contained in the Noise Exposure Guidelines. If these noise levels would exceed the Marginally Acceptable levels, a significant impact would occur unless the building design provides a composite building attenuation that would be sufficient to reduce these levels to an acceptable interior noise level. These values are shown in Table H-3.

Table H-3
Required Attenuation Values to Achieve Acceptable Interior Noise Levels

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

Note: [A]The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dBA less in each category. All the above categories require a closed window situation and hence alternate means of ventilation.
[B]Required attenuation values increase by 1 dBA increments for L_{10} values greater than 80 dBA.
Source: New York City Department of Environmental Protection, 2012.

For noise increases caused by project-induced traffic, or for stationary noise sources introduced by the Proposed Action, if the no-Action levels are less than 60 dB(A) $L_{eq(1)}$ and the analysis period is not at nighttime, an increase of 5 dB(A) $L_{eq(1)}$ or more in the future with the project would be considered a significant impact. In order for the 5 dB(A) threshold to be valid, the resultant Action condition noise level would have to be equal to or less than 65 dB(A). If the no-Action noise level is equal to or greater than 62 dB(A) $L_{eq(1)}$, or if the analysis period is a nighttime analysis period, the incremental significant impact threshold would be 3 dB(A) Leq(1). If the no-Action noise level is 61dB(A) $L_{eq(1)}$, the maximum incremental increase would be 4 dB(A), since an increase higher than this would result in a noise level higher than the 65 dB(A) $L_{eq(1)}$ threshold and be considered significant.

EXISTING CONDITIONS

Noise monitoring was carried out on Thursday, May 26, 2011. During the monitoring periods, the temperatures ranged from the high 60s (°F) in the morning to the low 70s during the peak PM period, and the conditions were clear with light haze. Local traffic along Fort Hamilton Parkway and 54th Street were the primary sources of noise. Other sources of noise included aircraft flyovers and pedestrian voices.

Table H-4 shows the noise monitoring results, and Table H-5 summarizes the traffic for the equivalent one-hour period. Traffic classification counts were carried out separately for total vehicle movements on Fort Hamilton Parkway and 54th Street. The highest observed L_{10} at Site 1 is 68.9 dBA, which occurred during the peak AM period. Since this is lower than the L_{eq} of 69.5 dBA, the L_{10} was adjusted to show a noise level 3 dBA higher than the L_{eq}, or 72.5 dBA. The highest observed L_{10} for Site 2 is 64.6 dBA, which occurred during the peak AM period, but the L_{10} is lower than the L_{eq} for the peak PM period. Adjusting this by adding 3 dBA to the L_{eq} results in an L_{10} of 67.6 dBA as the highest L_{10} for that site. Based on the observed L_{10} noise levels, Site 1 would be in the Marginally Unacceptable I CEQR category while Site 2 would be in the Acceptable category.

Table H-4
Monitored Noise Levels (dBA)

ID	Site	Time of Day	L_{eq}	L_{10}	L_{min}	L_{max}	L_{01}	L_{90}
1	5402 Ft. Hamilton Pkwy, (facing Ft. Hamilton Pkwy)	8:15 a.m. - 8:35 a.m.	69.5	***72.5**	52.4	93.9	78.5	55.4
		12:04 p.m.- 12:24 p.m.	65.5	67.6	50.2	81.7	76.1	53.8
		5:15p.m. - 5:35 p.m.	65.7	68.1	51.5	81.9	76.3	53.9
2	5402 Ft. Hamilton Pkwy, (facing 54th St.)	8:38 a.m. - 8:58 a.m.	62.6	64.6	52.2	77.9	68.6	55.8
		12:27p.m. - 12:47 p.m.	63.8	62.9	50.1	85.8	75.0	53.5
		5:36p.m. - 5:56p.m.	64.6	***67.6**	49.8	86.3	75.5	54.2

Notes: Numbers in bold type are the highest for that period.
**L_{10} adjusted to be 3 dBA higher than L_{eq}.*
Source: Sandstone Environmental Associates, Inc.

Table H-5
One-Hour Equivalent Traffic Volumes

ID	Site	Peak Period	Auto	Medium Trucks	Heavy Trucks	Buses	Motor-cycles	Total
1	5402 Ft. Hamilton Pkwy, (facing Ft. Hamilton Pkwy)	AM	1,140	15	30	21	0	1,206
		MD	924	24	21	6	0	975
		PM	861	24	24	3	9	921
2	5402 Ft. Hamilton Pkwy, (facing 54th St.)	AM	207	0	0	0	0	207
		MD	126	0	0	0	0	126
		PM	171	0	0	0	0	171

Source: Sandstone Environmental Associates, Inc.

FUTURE WITHOUT THE PROPOSED ACTION

In the future without the Proposed Action, in the 2015 build year, the project site would be redeveloped with a three-story medical center building containing ground floor retail space and a below-grade accessory parking garage. The building would have a rooftop height of 33 feet and a total height of 44 feet to the top of the rooftop mechanical bulkhead. The gross rentable area would be 32,779 square feet and the building's maximum total gross floor area would be 52,373 square feet.

The proportionality equation described earlier was used to compare PCEs for projected traffic tabulated under no-Action conditions with existing traffic to determine the incremental increase in noise levels. The resulting noise levels are slightly higher than under existing conditions, with noise levels greatest for the peak AM period. As Table H-6 shows, both Sites 1 and 2, on Fort Hamilton Parkway and on 54th Street, would be in the Marginally Acceptable CEQR category.

Table H-6
No-Action Noise Levels (dBA)

ID	Site	Peak Period	L_{eq}	L_{10}	Change from Existing (L_{10})	CEQR Noise Category
1	Fort Hamilton Parkway	AM	69.6	**72.6**	0.1	M.U.I
		MD	65.6	67.7	0.1	M.A.
		PM	65.7	68.1	0.0	M.A.
2	54th Street	AM	63.5	65.5	0.9	M.A.
		MD	65.0	64.1	1.2	A.
		PM	64.6	**67.6**	0.0	A.

A: Acceptable; M.A.: Marginally Acceptable; M.U.I: Marginally Unacceptable I
Note: Noise levels in bold type are the highest for that site.
Source: Sandstone Environmental Associates, Inc.

FUTURE WITH THE PROPOSED ACTION

In the future with the Proposed Action, the project site would be redeveloped with a six-story medical center building containing ground floor retail space and a below grade accessory parking garage. The building would have a rooftop height of 66 feet and a total height of 76 feet to the top of the rooftop mechanical bulkhead. The gross rentable area would be 63,504 square feet, and the building's maximum total gross floor area would be 99,034 square feet.

Table H-7 shows the projected future noise levels along Fort Hamilton Parkway and 54th Street. Additional traffic due to the Proposed Action would be minimal, and the projected noise levels would be substantially similar to those under the no-Action condition. Therefore, no significant adverse impacts to the surrounding environment would occur. Sites 1 would be under the Marginally Unacceptable (I) CEQR category while Site 2 would be in the Marginally Acceptable CEQR category, as under the no-Action condition.

Table H-7
Action Noise Levels (dBA)

D	Site	Peak Period	L_{eq}	L_{10}	Change from No-Action (L_{10})	CEQR Noise Category
1	Fort Hamilton Parkway	AM	**69.6**	**72.6**	0.1	M.U(I)
		MD	65.7	67.8	0.1	M.A.
		PM	65.9	68.3	0.2	M.A.
2	54th Street	AM	64.3	66.3	0.8	M.A.
		MD	66.4	65.5	1.4	M.A.
		PM	**66.7**	**69.7**	2.1	M.A.

M.A.: Marginally Acceptable; M.U.: Marginally Unacceptable
Note: Noise levels in bold type are the loudest for that site.
Source: Sandstone Environmental Associates, Inc.

A comparison between Tables P-6 and P-7 shows that the Proposed Action would elevate the L_{eq} by a maximum of 0.2 dBA (from 65.7 dBA to 65.9 dBA during the peak PM period) at Site 1 and by a maximum of 2.1 dBA (from 64.6 dBA to 66.7 dBA during the peak PM period). Because these increases would be less than the 3 dBA threshold established by the *CEQR Technical Manual*, the Proposed Action would not cause a significant adverse noise impact as a result of increasing ambient noise levels.

As is discussed above under Impact Determination and Noise Standards and Guidelines, if the Action condition noise levels would exceed the Marginally Acceptable levels, a significant impact would occur unless the building design provides a composite building attenuation that would be sufficient to reduce

these levels to an acceptable interior noise level. Because the Action condition noise levels would exceed the Marginally Acceptable levels, the Proposed Action would require 28 dBA of attenuation on all facades of the building.

As is shown in Table H-8, the minimum required attenuation to ensure acceptable indoor noise levels would be 28 dBA. The proposed project would provide at least that level of attenuation.

Table H-8
Minimum CEQR Attenuation Requirements for the Proposed Development

Façade	Action L_{10}	Based on Monitoring Site ID	CEQR Noise Abatement Category	Minimum Required Attenuation
Fort Hamilton Parkway	73 dBA	1	Marginally Unacceptable (I)	28 dBA
54th Street	70 dBA	2	Marginally Unacceptable I	28 dBA

*

Source: Sandstone Environmental Associates, Inc.

Window/wall attenuation can be described in terms of sound transmission class (STC), transmission loss (TL), and outdoor-indoor transmission class (OITC). Although these terms are sometimes used interchangeably, they are distinguishable from each other. Transmission loss refers to how many decibels of sound a façade (wall) or façade accessory (window or door) can stop at a given frequency. The TL for a given construction material varies with the individual frequencies of the noise. To simplify the noise attenuation properties of a wall, the STC rating was developed. It is a single number that describes the sound isolation performance of a given material for the range of test frequencies between 125 and 4,000 Hz. These frequencies sufficiently cover the range of human speech. Higher STC values reflect greater efficiencies to block airborne sound. The OITC is similar to the STC, except that it is weighted more towards the lower frequencies associated with aircraft, rail, and truck traffic. It considers frequencies down to 80 Hz. In selecting suitable window material, the final attenuation level depends upon a variety of factors, among which include the type of material selected, the thickness of the panel, and quality of the installation.

The analysis determined the site would require an (E) designation that would specify the interior to exterior to be provided by the windows. The text for the (E) designation is as follows:

> "To ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum OITC rating of 28 dBA window/wall attenuation to maintain an interior noise level of 45 dBA. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning." For commercial uses, the requirement would be 5 dBA lower, or 23 dBA.

Based on the projected noise levels, these design measures would provide sufficient attenuation to satisfy CEQR requirements. With the specified attenuation measures, the proposed project would not have any significant adverse noise impacts and would comply with all CEQR noise requirements.

CONCLUSION

Because the proposed project would consist of a medical center and ground floor retail space, and because all rooftop mechanical equipment, including air conditioner compressors, would be enclosed and would comply with New York City Noise Code requirements, the Proposed Action would not introduce a substantial new stationary noise source. The proposed project would generate additional vehicular traffic,

which would raise ambient noise levels slightly; however, because these increases would be less than the 3 dBA threshold established by the *CEQR Technical Manual*, the Proposed Action would not cause a significant adverse noise impact to existing land uses as a result of increasing ambient noise levels. Although the Action condition noise levels would exceed the Marginally Acceptable levels for a new sensitive receptor at the project site, the Proposed Action would not cause a significant adverse noise impact provided that the windows and walls provide a minimum exterior to interior noise attenuation of 28 dBA. For these reasons, the Proposed Action would not cause a significant adverse noise impact.

2.I CONSTRUCTION IMPACTS

INTRODUCTION

Construction impacts, although temporary, can sometimes result in significant adverse impacts. Determination of significance is generally based on the duration and magnitude of the effects. Construction impacts are generally important when construction activity would affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, or air quality conditions.

As discussed in Section 1, Project Description, and Section 2A, Land Use, Zoning, and Public Policy, the project site will be redeveloped by the 2016 build year whether or not the Proposed Action is taken, and no redevelopment or enlargement of existing uses is anticipated on either of the two other properties that would be affected by the proposed rezoning.

The proposed project would consist of a single six-story building with a roof height of 66 feet and a maximum height of about 76 feet to the top of the mechanical bulkhead. The building's lower floors would cover the entire site, except for a rear yard of approximately 475 square feet at the southwest corner of the property, but the building would be set back 20 feet from 54th Street and 17 feet 3 inches from Fort Hamilton Parkway above the fourth floor (44 feet in height). The building would contain 53,604 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The proposed project would also include a cellar level (with 9,900 square feet of additional medical center space) and up to three sub-cellar levels in which approximately 151 accessory parking spaces would be provided. Each sub-cellar would add an additional eight feet of depth.

In the future without the Proposed Action, a medical center building with ground floor commercial space and a below-grade garage would also be built, but the development would follow the R5/C1-3 rather than R6/C1-3 zoning regulations. The new building would have the same footprint as the proposed project, but the building would be three stories in height (about 33 feet to the roof, plus an additional 11 feet of height for the mechanical bulkhead). The building would be set back 30 feet from 54th Street and 27 feet one inch from Fort Hamilton Parkway above the second floor (22 feet in height). The building would contain 22,879 square feet of above-grade floor area, consisting of a medical center and 5,614 square feet of ground floor commercial space. The building would also include a cellar level (with 9,900 square feet of additional medical center space) and up to two additional sub-cellar levels in which approximately 82 accessory parking spaces would be provided.

PRINCIPAL CONCLUSIONS

The Proposed Action would not cause significant construction impacts. Construction of a new building will occur on the project site whether or not the Proposed Action is taken, and similar construction activities of comparable duration, phasing, and effects would occur under the no-Action and Action scenarios. The Proposed Action would add approximately two months to the construction period, which would not be a significant difference, and in either case the construction period would be less than two years. The Proposed Action would not affect the number of workers or the amount or type of equipment at the site at any time. Although the building's foundation would be eight feet deeper under the Action scenario, excavation and construction techniques would be the same under both scenarios; in neither case would blasting be necessary, and in either case screw pile driving would be used.

DETERMINING WHETHER A CONSTRUCTION IMPACT ASSESSMENT IS REQUIRED

The potential for significant adverse construction impacts should be assessed for any action that would or could induce construction.

As is explained above, construction of a new building would occur on the project site whether or not the Proposed Action is taken. Under no-Action conditions, construction activities generally similar to those associated with the proposed project would occur with the construction of a mixed-use building, including a medical center, ground floor retail space, and an underground accessory parking garage, which would comply with the bulk regulations of the existing R5/C1-3 district. The no-Action development would be smaller in scale than the proposed project, with 30,725 fewer square feet of above-grade floor area and with eight feet less of excavation, but the duration, phases, and effects would be comparable to those of the Action scenario. The Proposed Action would add approximately two months to the construction period, which would not be a significant difference, and in either case the construction period would be less than two years. The Proposed Action would not affect the number of workers or the amount or type of equipment at the site at any time. Although the building's foundation would be eight feet deeper under the Action scenario, excavation and construction techniques would be the same under both scenarios; in neither case would blasting be necessary, and in either case screw pile driving would be used.

Under either the no-Action or the Action scenario, all construction activities would be carried out in accordance with applicable building codes and regulations, and all required permits would be obtained. All necessary measures would be implemented to ensure that the New York City Noise Code and the New York City Air Pollution Control Code regulating construction-related dust emissions would be followed. In accordance with the Noise Code and New York City Department of Buildings regulations, construction work would occur Mondays through Fridays beginning at 7 AM and ending by 6 PM, although it is possible that the delivery or installation of certain critical equipment could occur on weekend days or later than 6 PM. Construction staging would occur on the project site, and construction is not expected to adversely affect surrounding land uses. As required by City regulations, sidewalk protection bridges and full height plywood barriers would be installed to protect the public right-of-way. Standard practices would be followed to ensure safe pedestrian and vehicular access to nearby buildings and along affected streets and sidewalks. Precautions, including the underpinning of adjacent buildings, would be taken to prevent damage to those structures. Because the project site has been determined to be not archaeologically or architecturally sensitive, there would be no adverse impact on archaeological or architectural resources.

Under either the no-Action or the Action scenario, the construction may result in temporary disruptions, including noise, dust, and traffic associated with the delivery of materials, the removal of debris, and the arrival and departure of workers. These temporary effects would not constitute significant impacts.

For these reasons, no further analysis is required to determine that the Proposed Action would not have a significant adverse impact as a result of construction activities.

CONCLUSION

The Proposed Action would not cause significant construction impacts. Construction of a new building will occur on the project site whether or not the Proposed Action is taken, and similar construction activities of comparable duration, phasing, and effects would occur under the no-Action and Action scenarios. The Proposed Action would add approximately two months to the construction period, which would not be a significant difference, and in either case the construction period would be less than two years. The Proposed Action would not affect the number of workers or the amount or type of equipment at the site at any time. Although the building's foundation would be eight feet deeper under the Action scenario, excavation and construction techniques would be the same under both scenarios; in neither case

would blasting be necessary, and in either case screw pile driving would be used.

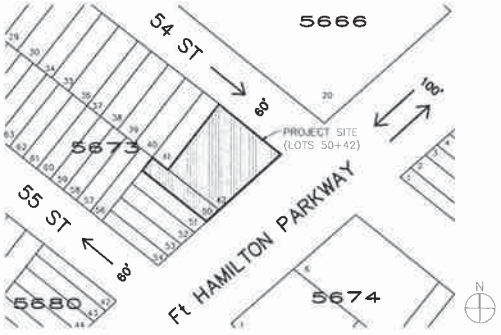
APPENDICES

APPENDIX 1:
ARCHITECTURAL PLANS FOR THE PROPOSED BUILDING

5402 FT. HAMILTON PARKWAY
BROOKLYN, NEW YORK 11219

LIST OF ARCHITECTURAL DRAWINGS		ISSUED	REVISED
CPT-1	LIST OF DRAWINGS & PLOT PLAN	09 AUG 10	22 AUG 12
CPT-2	SITE PLAN	12 JUL 10	22 AUG 12
CPZ-1	ZONING CALCULATIONS	26 JUL 10	22 AUG 12
CPZ-2	EXISTING AND PROPOSED ZONING MAPS	03 SEP 09	22 AUG 12
CPZ-3	SITE PLAN OF MAX R6/C1-3 BUILDING	11 MAY 11	03 FEB 12
CPZ-4	SITE PLAN AS-OF-RIGHT MAX R5/C1-3 BLDG.	16 MAY 11	--
CP-2	CELLAR PLAN	12 JUL 10	16 MAR 11
CP-3	1ST FLOOR PLAN	04 AUG 10	22 AUG 12
CP-4	2ND FLOOR PLAN	12 JUL 10	16 MAR 11
CP-5	3RD FLOOR PLAN	03 SEP 09	16 MAR 11
CP-6	4TH FLOOR PLAN	03 SEP 09	16 MAR 11
CP-7	5TH FLOOR PLAN	03 SEP 09	16 MAR 11
CP-8	6TH FLOOR PLAN	03 SEP 09	16 MAR 11
CP-9	ROOF PLAN	03 SEP 09	16 MAR 11
CP-10	PROPOSED BUILDING SECTION	12 JUL 10	22 AUG 12
CP-11	PROPOSED BUILDING SECTION	12 JUL 10	22 AUG 12
CP-12	54TH STREET ELEVATION	26 JUL 10	22 AUG 12
CP-13	FT HAMILTON PKWY ELEVATION	03 SEP 09	22 AUG 12
CP-14	SITE PICTURES	03 SEP 09	--
CP-15	SITE PICTURES	03 SEP 09	--
CP-16	SITE PICTURES	03 SEP 09	--
CP-17	SITE PICTURES	03 SEP 09	--
CP-18	ELEVATION RENDERINGS	26 JUL 10	--
CP-19	FT HAMILTON PKWY/54 ST. RENDERING	03 SEP 09	--
CP-20	FT HAMILTON PKWY RENDERING	09 AUG 10	--
CP-21	54 STREET RENDERING	09 AUG 10	--
CP-22	SUBCELLAR 1 PLAN	12 JUL 10	06 FEB 12
CP-23	SUBCELLAR 2 PLAN	12 JUL 10	16 MAR 11
CP-24	SUBCELLAR 3 PLAN	12 JUL 10	16 MAR 11

LOCATION PLAN



BLOCK:	5673
LOT:	42 + 50
MAP:	22a + 22c
ZONE:	R6 / C1-3
USE GROUP:	4A, 6A, 6C, OR 6E

PROJECT
5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

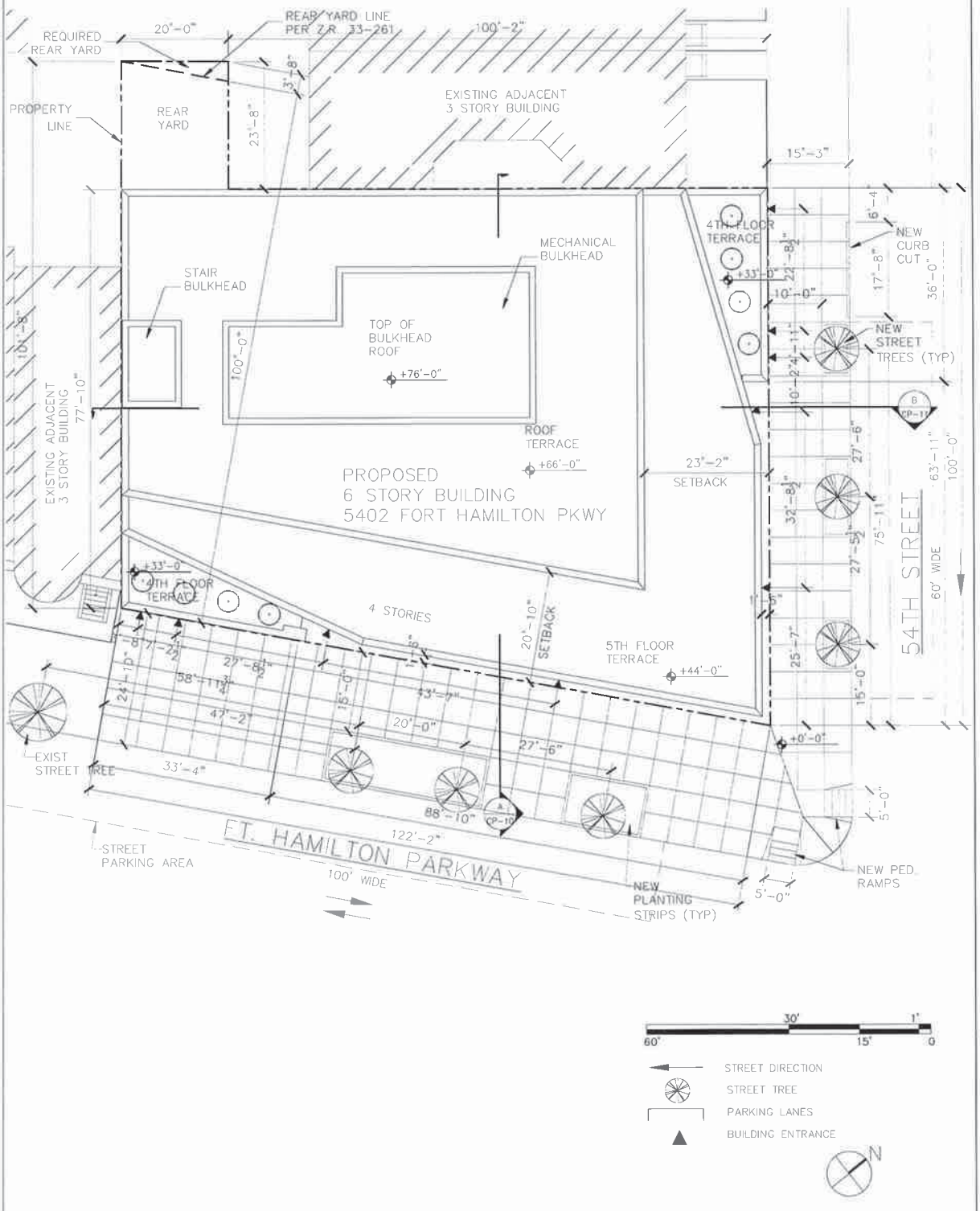
DRAWING TITLE
LIST OF DRAWINGS &
PLOT PLAN

ARPAD BAKSA
ARCHITECT, P.C.
Architecture, Preservation and Interiors since 1984
99 Wall Street, Suite 1600
New York, N.Y. 10005-4301
Tel: 212-768-4191
Fax: 212-768-4473
E-mail: info@arpad-baksa-architect.com
www.arpad-baksa-architect.com

PROJECT NO.	1470
DATE	09 AUG 10
REVISED	22 AUG 12
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CPT-1

SITE PLAN

BLOCK:	5673	MAP:	22a & 22c	USE GROUP: 4A, 6A, 6C OR 6E
LOT:	42 + 50	ZONE:	R6/C1-3	



PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

SITE PLAN

ARPAD BAKSA
ARCHITECT, P.C.
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99 Wall Street, Suite 1600
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PROJECT NO.	1470
DATE	12 JUL 10
REVISED	22 AUG 12
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CPT-2

ZONING CALCULATIONS FOR 5402 FORT HAMILTON PARKWAY

A. BLOCK — 5673

B. LOTS — 42, 50

C. ZONING — R6 / C1-3

D. MAP NUMBER — 22a & 22c

E. LOT AREA — 11,167.5 SF

F. ZONING USE GROUP SEC.22-10 THRU SEC.22-14/ SEC.32-10 THRU SEC.32-25

1. PERMITTED AS OF RIGHT
   1, 2, 3, 4, 5, 6
2. EXISTING
   USE GROUP 2, 16B
3. PROPOSED
   USE GROUP 6 - 1ST FLOOR - RETAIL
   USE GROUP 4A - CELLAR THRU 6TH FL - AMBULATORY DIAGNOSTIC OR TREATMENT HEALTHCARE FACILITY

G. FLOOR AREA RATIO (F.A.R.)
SEC. 33-121

(a) PERMITTED
4.80
F.A.R. X LOT AREA = PERMITTED BUILDABLE
4.80 X 11,167.5 SF = 53,604 SF

(b) EXISTING
APPROX. 5,700 SF / 11,167.5 SF = 0.51 F.A.R.

(c) PROPOSED
COMMUNITY FACILITY: 45055 SF / 11,167.5 SF = 4.03 F.A.R.
COMMERCIAL: 5,614 SF / 11,167.5 SF = 0.50 F.A.R.
TOTAL: 50,669 SF /11,167.5 SF = 4.54 F.A.R.

H. AREA SUMMARY

FLOOR		PROPOSED FLOOR AREA	PROPOSED MECHANICAL DEDUCTIONS	PROPOSED ZONING FLOOR AREA
SUBCELLAR 3 (AUTOMATED CAR STORAGE)		10,624 SF	---	0 SF
SUBCELLAR 2 (AUTOMATED CAR STORAGE)		10,624 SF	---	0 SF
SUBCELLAR 1 (AUTOMATED CAR STORAGE)		10,624 SF	---	0 SF
CELLAR	(COM. FACILITY)	9,900 SF	---	0 SF
	(PARKING - NO F.A.)	724 SF		0 SF
1st FLOOR	(COM. FACILITY)	1,839 SF	- SF	1,839 SF
	(COMMERCIAL)	5,614 SF		5,614 SF
	(PARKING - NO F.A.)	2,934 SF		0 SF
2nd FLOOR	(COM. FACILITY)	10,387 SF	- SF	10,387 SF
3rd FLOOR	(COM. FACILITY)	10,387 SF	- SF	10,387 SF
4th FLOOR	(COM. FACILITY)	9,734 SF	- SF	9,734 SF
5th FLOOR	(COM. FACILITY)	6,354 SF	- SF	6,354 SF
6th FLOOR	(COM. FACILITY)	6,354 SF	- SF	6,354 SF
TOTAL (COM. FACILITY)		54,955 SF	- SF	45,055 SF
TOTAL (COMMERCIAL)		5,614 SF	- SF	5,614 SF
TOTAL (EXC. CELLAR/SUBCELLAR)		50,669 SF	- SF	50,669 SF
TOTAL (INC. CELLAR)		60,569 SF	- SF	60,569 SF

50,669 SF PROPOSED < 53,604 SF PERMITTED

		REQUIRED	PROPOSED
I.	FRONT YARD	N.R.	0'-0"
J.	SIDE YARD SEC. 33-25	N.R.	0'-0"
K.	REAR YARD SEC. 33-301	N.R. WITHIN 100'-0" OF CORNER	23'-10"
L.	REAR YARD SEC. 33-302	N.R. WITHIN 100'-0" OF SHORT DIM. OF BLOCK	23'-10"
M.	REAR YARD SEC. 33-303	N.R. (PURSUANT TO ZR 33-302)	23'-10"
N.	STREET WALL HEIGHT SEC. 33-431	4 STORIES OR 60'-0" WHICHEVER IS LESS	4 STORIES AND 44'-0"
O.	SETBACK (WIDE STREET) SEC 33-431	15'-0"	20'-10"
P.	SETBACK (NARROW STREET) SEC 33-431	20'-0"	23'-2"
Q.	SKY EXP. PLANE (WIDE STREET) SEC 33-431	5.6 TO 1	5.6 TO 1
R.	SKY EXP. PLANE (NARROW STREET) SEC 33-431	2.7 TO 1	2.7 TO 1
S.	MAX PARKING SEC. 36-12	PERMITTED 150 SPACES MAX.	PROPOSED 150
T.	REQUIRED PARKING SEC. 36-21	REQUIRED 1/400 SF FLOOR AREA 60,569 SF/400 = 151 SPACES	PROPOSED 150 COMPLIES WITH 36-12
U.	SIZE OF PARKING SPACES SEC. 36-52	REQUIRED MIN 200 SF PER SPACE ATTENDED	PROPOSED 10624 SF x 3 FLOORS = 31872 SF TOTAL 31872 SF/150 SPACES = 212 SF PER SPACE
V.	LOADING BERTH SEC. 36-62	REQUIRED 0	PROPOSED 0
W.	REQUIRED BICYCLE PARKING SEC. 36-711	REQUIRED 1/10,000 SF FLOOR AREA 60,569 SF/10,000 = 6 SPACES	PROPOSED 6

PROJECT NO. 1470
DATE 26 JUL 10
REVISED 22 AUG 12
DRAWN BY AB
SCALE N.T.S.
SHEET NO CPZ-1

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PROJECT
5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE
ZONING CALCULATIONS

ZONING CHANGE MAP

CURRENT ZONING MAP (22a & 22c)

PROPOSED ZONING MAP (22a & 22c)

- AREA BEING REZONED IS OUTLINED WITH DOTTED LINES

N

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

NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

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EXISTING AND PROPOSED
ZONING MAPS

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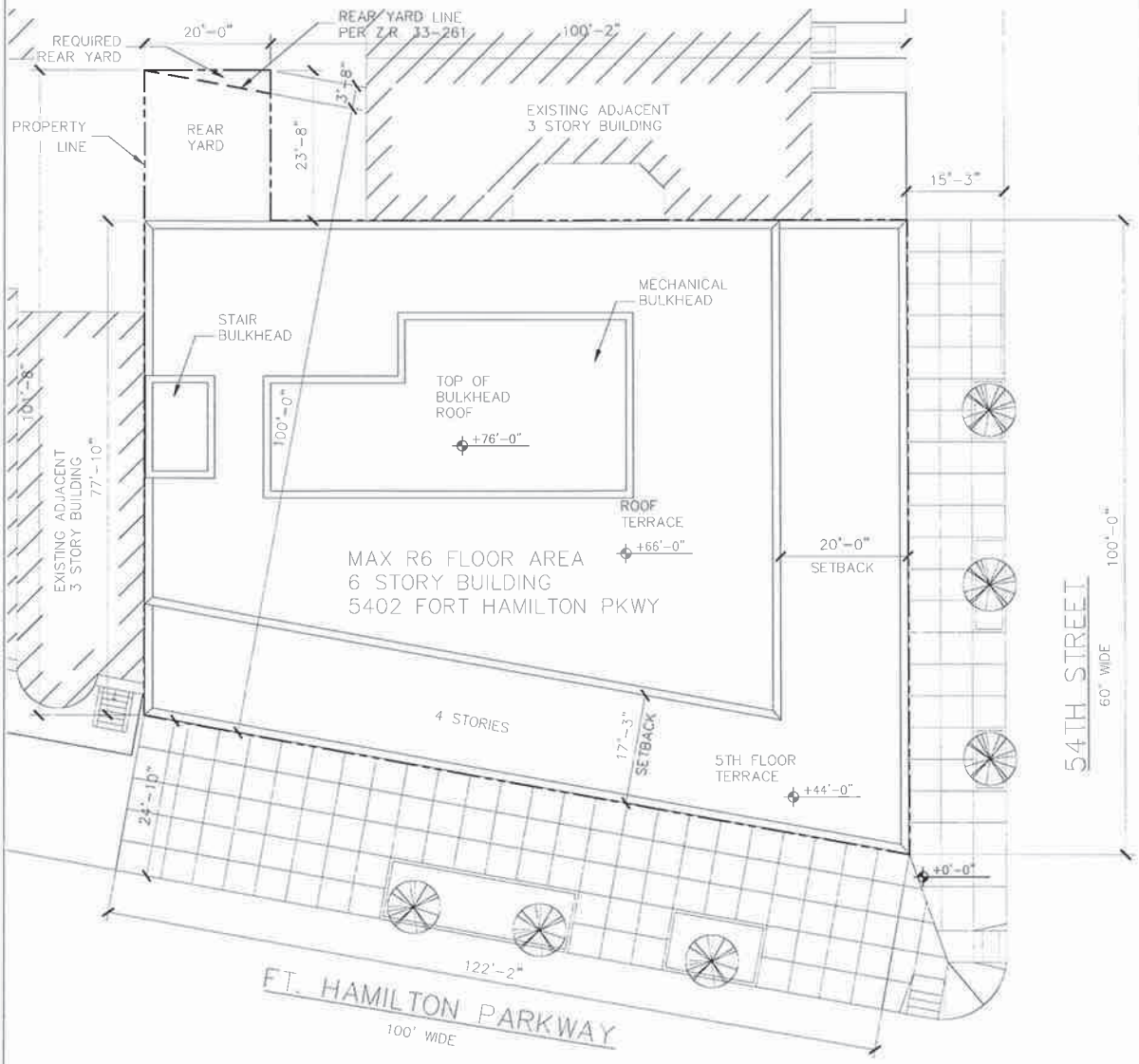
PROJECT NO.	1470
DATE	03 SEP 09
REVISED	22 AUG 12
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CPZ-2

SITE PLAN

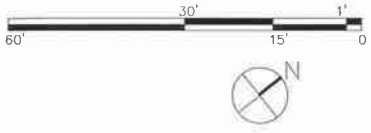
BLOCK: 5673 | MAP: 22a & 22c | USE GROUP: 4A, 6A, 6C OR 6E

LOT: 42 + 50 | ZONE: R6/C1-3



AREA SUMMARY FLOOR		GROSS FLOOR AREA	ZONING FLOOR AREA
SUBCELLAR 3	(AUTOMATED CAR STORAGE)	10,624 SF	0 SF
SUBCELLAR 2	(AUTOMATED CAR STORAGE)	10,624 SF	0 SF
SUBCELLAR 1	(AUTOMATED CAR STORAGE)	10,624 SF	0 SF
CELLAR	(COM. FACILITY)	9,900 SF	0 SF
	(PARKING – NOT F.A.)	724 SF	0 SF
1st FLOOR	(COM. FACILITY)	2,111 SF	2,111 SF
	(COMMERCIAL)	5,614 SF	5,614 SF
	(PARKING – NOT F.A.)	2,934 SF	0 SF
2nd FLOOR	(COM. FACILITY)	10,659 SF	10,659 SF
3rd FLOOR	(COM. FACILITY)	10,659 SF	10,659 SF
4th FLOOR	(COM. FACILITY)	10,659 SF	10,659 SF
5th FLOOR	(COM. FACILITY)	6,951 SF	6,951 SF
6th FLOOR	(COM. FACILITY)	6,951 SF	6,951 SF
TOTAL	(COM. FACILITY)	57,890 SF	47,990 SF
TOTAL	(COMMERCIAL)	5,614 SF	5,614 SF
TOTAL	(EXC. CELLAR/SUBCELLAR)	53,604 SF	53,604 SF
TOTAL	(INC. CELLAR)	63,504 SF	

53,604 SF PROPOSED = 53,604 SF PERMITTED



PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

SITE PLAN OF MAX. FL. AREA
R-6/C1-3 BUILDING

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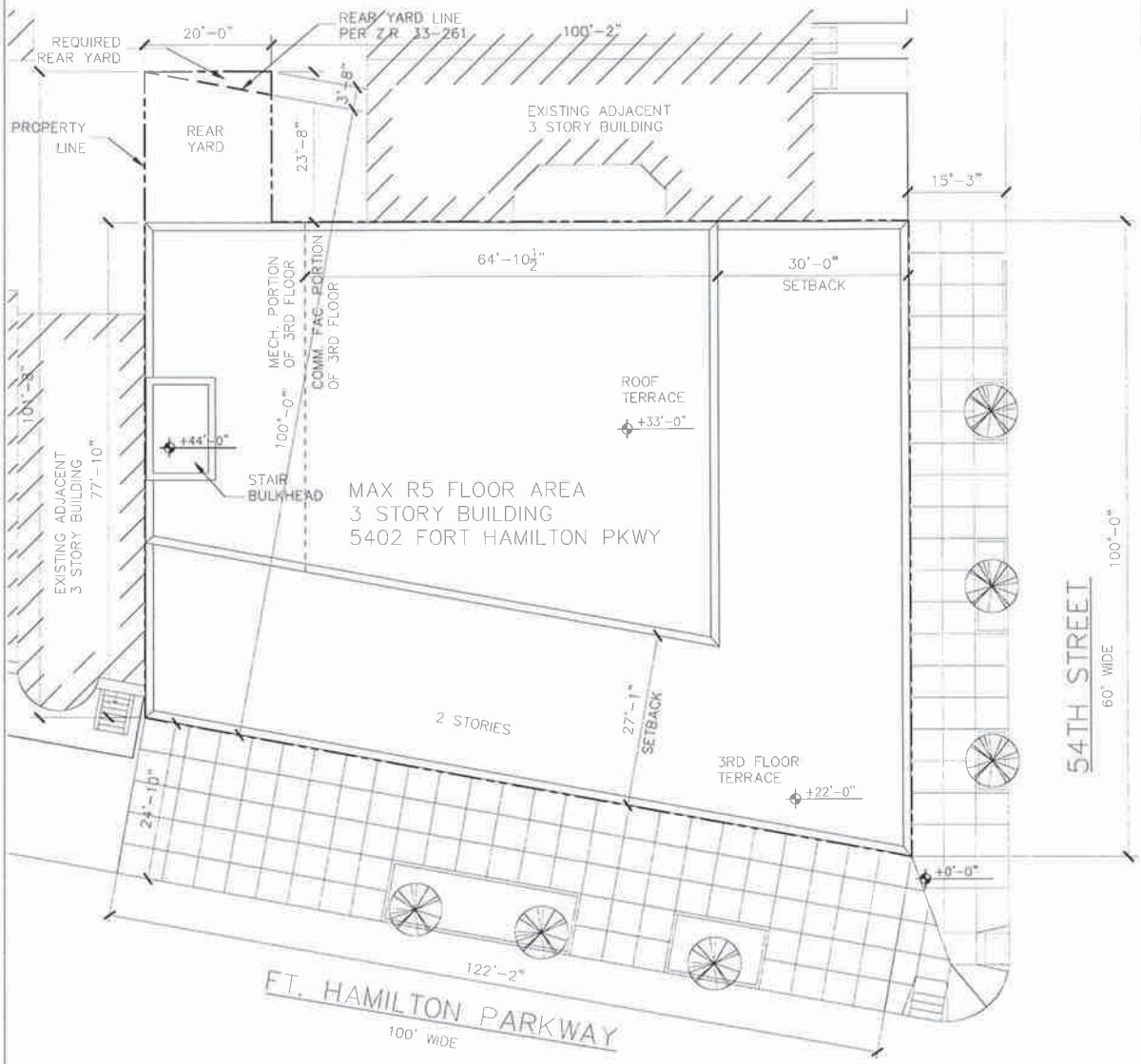
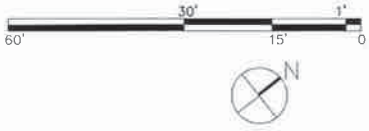
PROJECT NO.	1470
DATE	11 MAY 11
REVISED	03 FEB 12
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CPZ-3

SITE PLAN

BLOCK:	5673	MAP:	22a & 22c	USE GROUP: 4A, 6A, 6C OR 6E
LOT:	42 + 50	ZONE:	R5/C1-3	



AREA SUMMARY FLOOR		GROSS FLOOR AREA	ZONING FLOOR AREA
SUBCELLAR 2 (AUTOMATED CAR STORAGE)		5,312 SF	0 SF
SUBCELLAR 1 (AUTOMATED CAR STORAGE)		10,624 SF	0 SF
CELLAR	(COM. FACILITY)	9,900 SF	0 SF
	(PARKING – NOT F.A.)	724 SF	0 SF
1st FLOOR	(COM. FACILITY)	2,111 SF	2,111 SF
	(COMMERCIAL)	5,614 SF	5,614 SF
	(PARKING – NOT F.A.)	2,934 SF	0 SF
2nd FLOOR	(COM. FACILITY)	10,659 SF	10,659 SF
3rd FLOOR	(COM. FACILITY)	4,495 SF	3,951 SF
TOTAL (COM. FACILITY)		27,165 SF	17,265 SF
TOTAL (COMMERCIAL)		5,614 SF	5,614 SF
TOTAL (EXC. CELLAR/SUBCELLAR)		22,879 SF	22,335 SF
TOTAL (INC. CELLAR)		32,779 SF	
22,335 SF PROPOSED = 22,335 SF PERMITTED			



PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

SITE PLAN OF MAX. FL. AREA
R-5/C1-3 BLDG. (AS-OF RIGHT)

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PROJECT NO.	1470
DATE	16 MAY 11
REVISED	31 JUL 12
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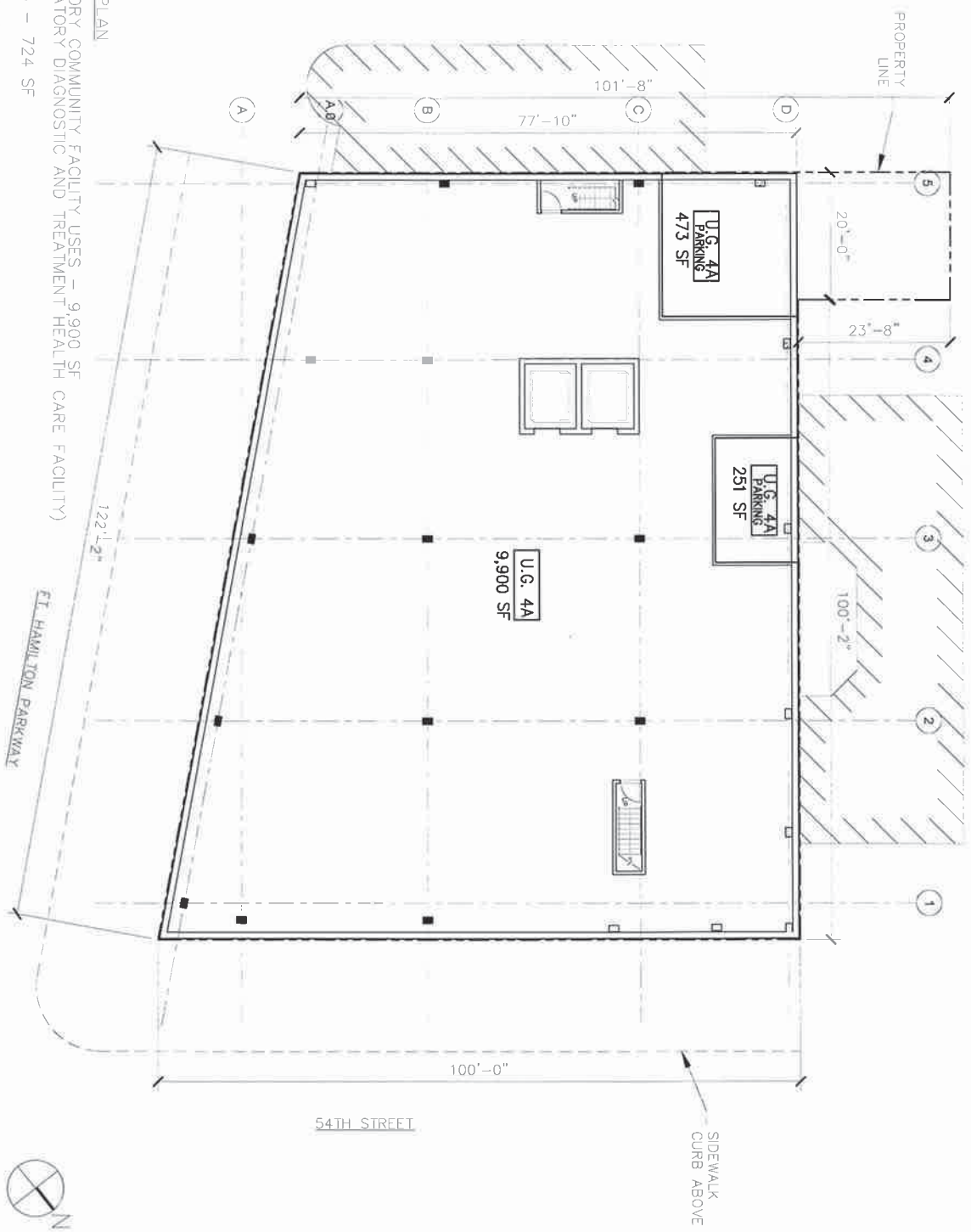
SHEET NO	CPZ-4

CELLAR FLOOR PLAN

U.G. 4A ACCESSORY COMMUNITY FACILITY USES – 9,900 SF
(AMBULATORY DIAGNOSTIC AND TREATMENT HEALTH CARE FACILITY)

U.G. 4A PARKING PARKING – 724 SF

INTERIOR PARTITIONS SHOWN ARE FOR ILLUSTRATION ONLY.



NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

CELLAR PLAN

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PROJECT NO.	1470
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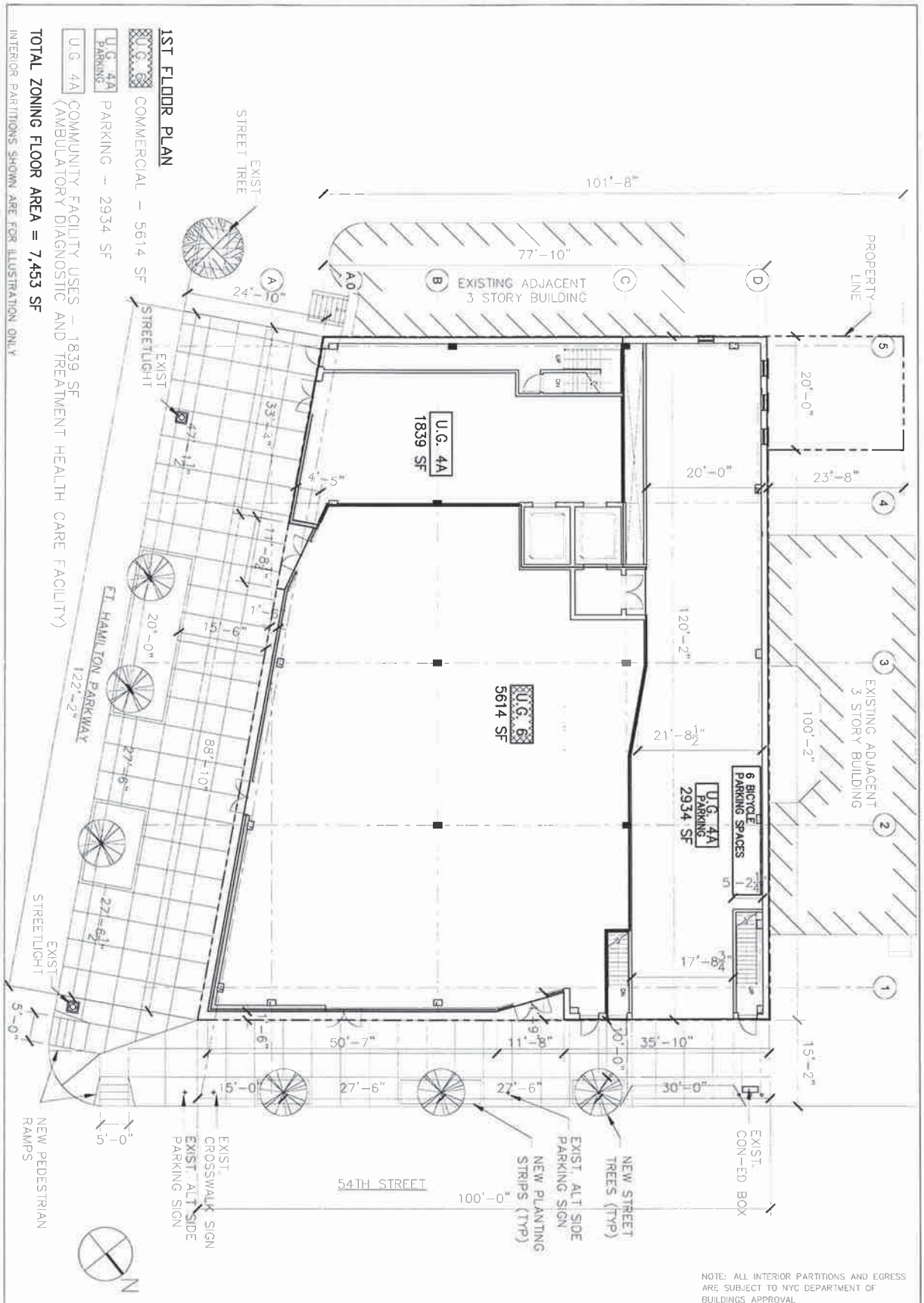

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5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE
1ST FLOOR PLAN

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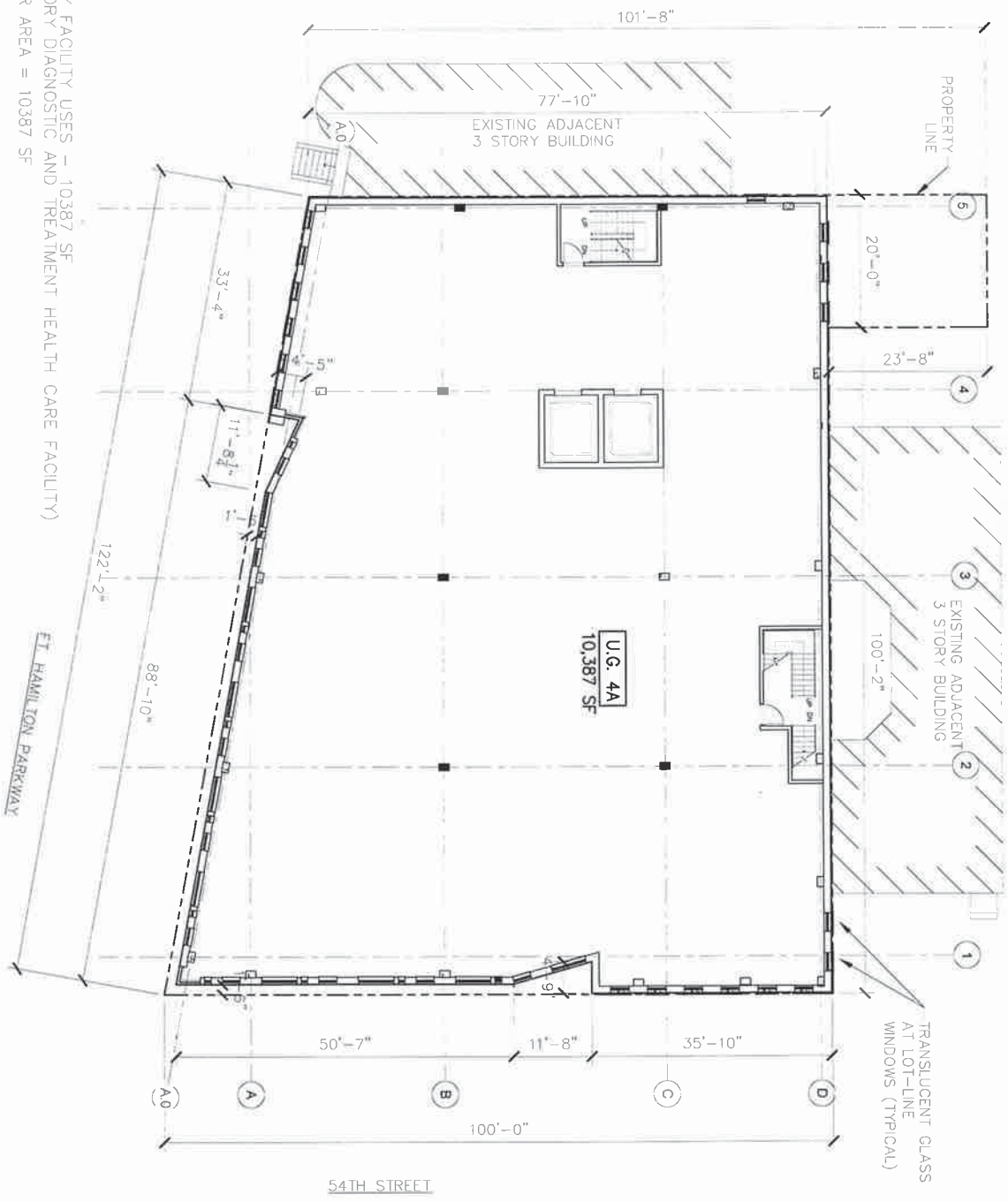
PROJECT NO.	1470
DATE	04 AUG 10
REVISED	22 AUG 12
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-3

2ND FLOOR PLAN

U.G. 4A COMMUNITY FACILITY USES – 10387 SF
(AMBULATORY DIAGNOSTIC AND TREATMENT HEALTH CARE FACILITY)

TOTAL ZONING FLOOR AREA = 10387 SF

INTERIOR PARTITIONS SHOWN ARE FOR ILLUSTRATION ONLY.



NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

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2ND FLOOR PLAN

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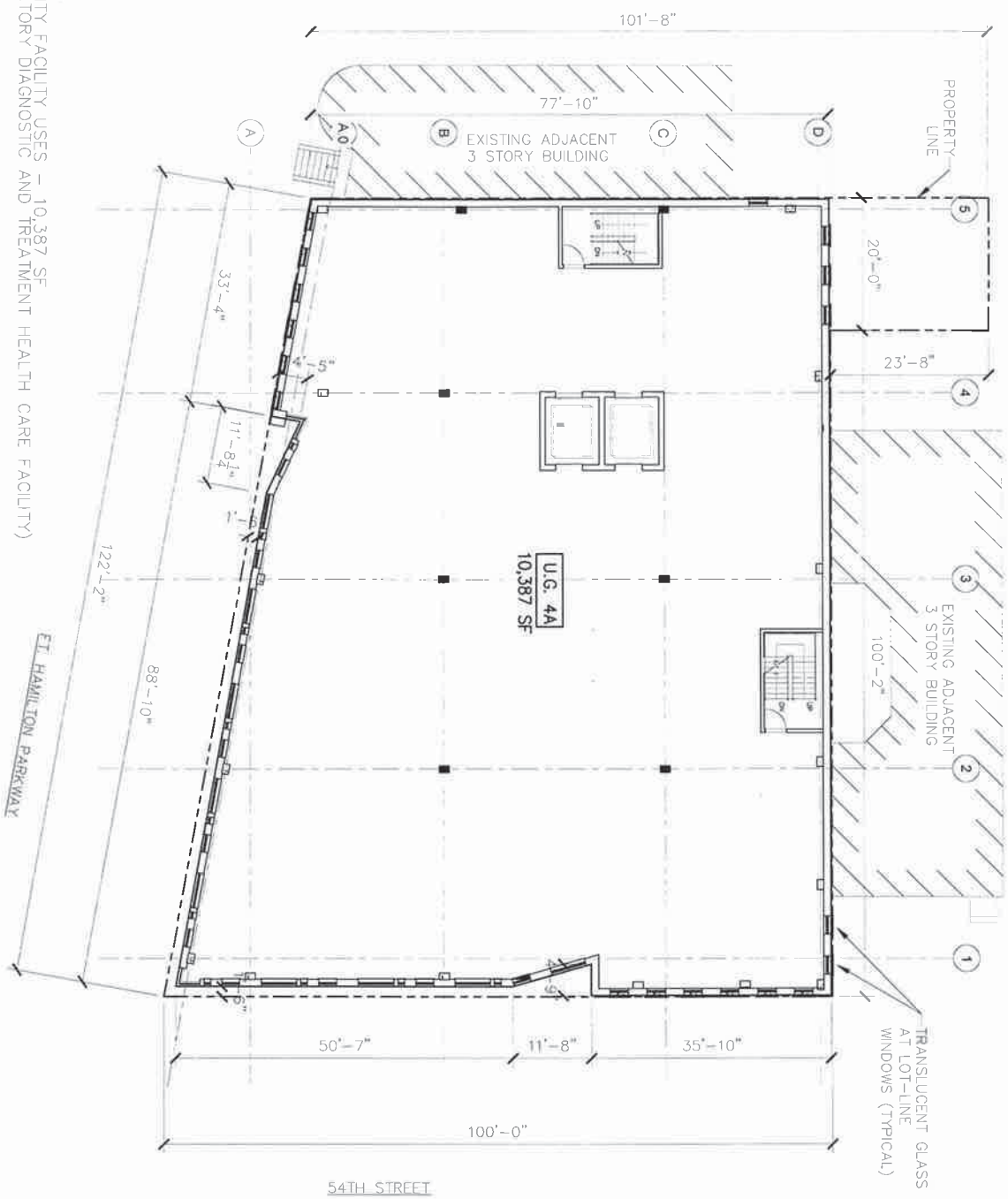
PROJECT NO.	1470
DATE	12 JUL 10
REVISED	16 MAR 11
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-4

3RD FLOOR PLAN

U.G. 4A COMMUNITY FACILITY USES – 10,387 SF
(AMBULATORY DIAGNOSTIC AND TREATMENT HEALTH CARE FACILITY)

INTERIOR PARTITIONS SHOWN ARE FOR ILLUSTRATION ONLY.



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3RD FLOOR PLAN

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SHEET NO	CP-5

4TH FLOOR PLAN

U.G. 4A COMMUNITY FACILITY USES – 9,734 SF
(AMBULATORY DIAGNOSTIC AND TREATMENT HEALTH CARE FACILITY)

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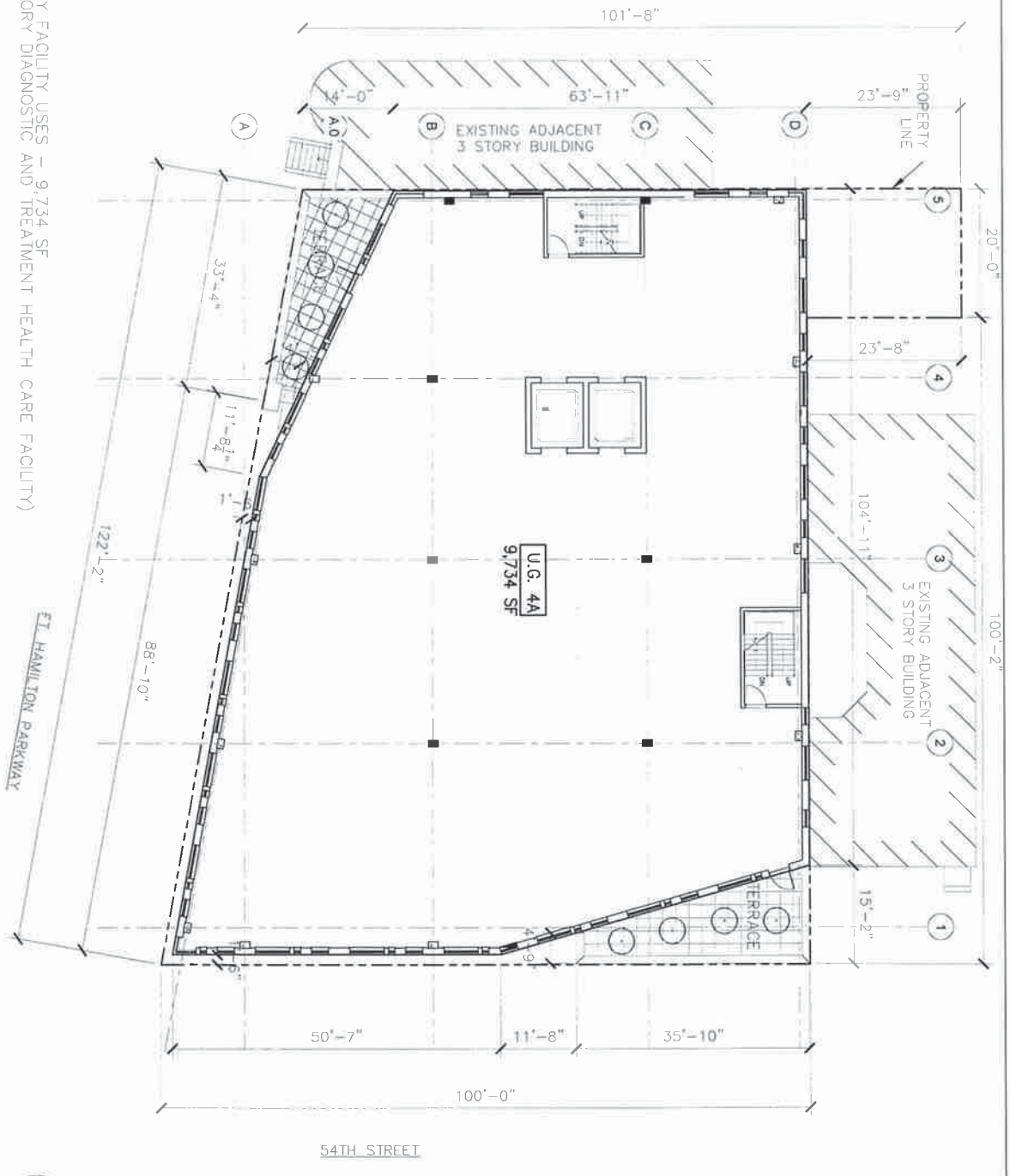

NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

PROJECT
5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE
4TH FLOOR PLAN

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PROJECT NO.	1470
DATE	03 SEP 09
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SCALE	1/16"=1'-0"
SHEET NO	CP-6

5TH FLOOR PLAN

U.G. 4A COMMUNITY FACILITY USES – 6,354 SF
(AMBULATORY DIAGNOSTIC AND TREATMENT HEALTH CARE FACILITY)

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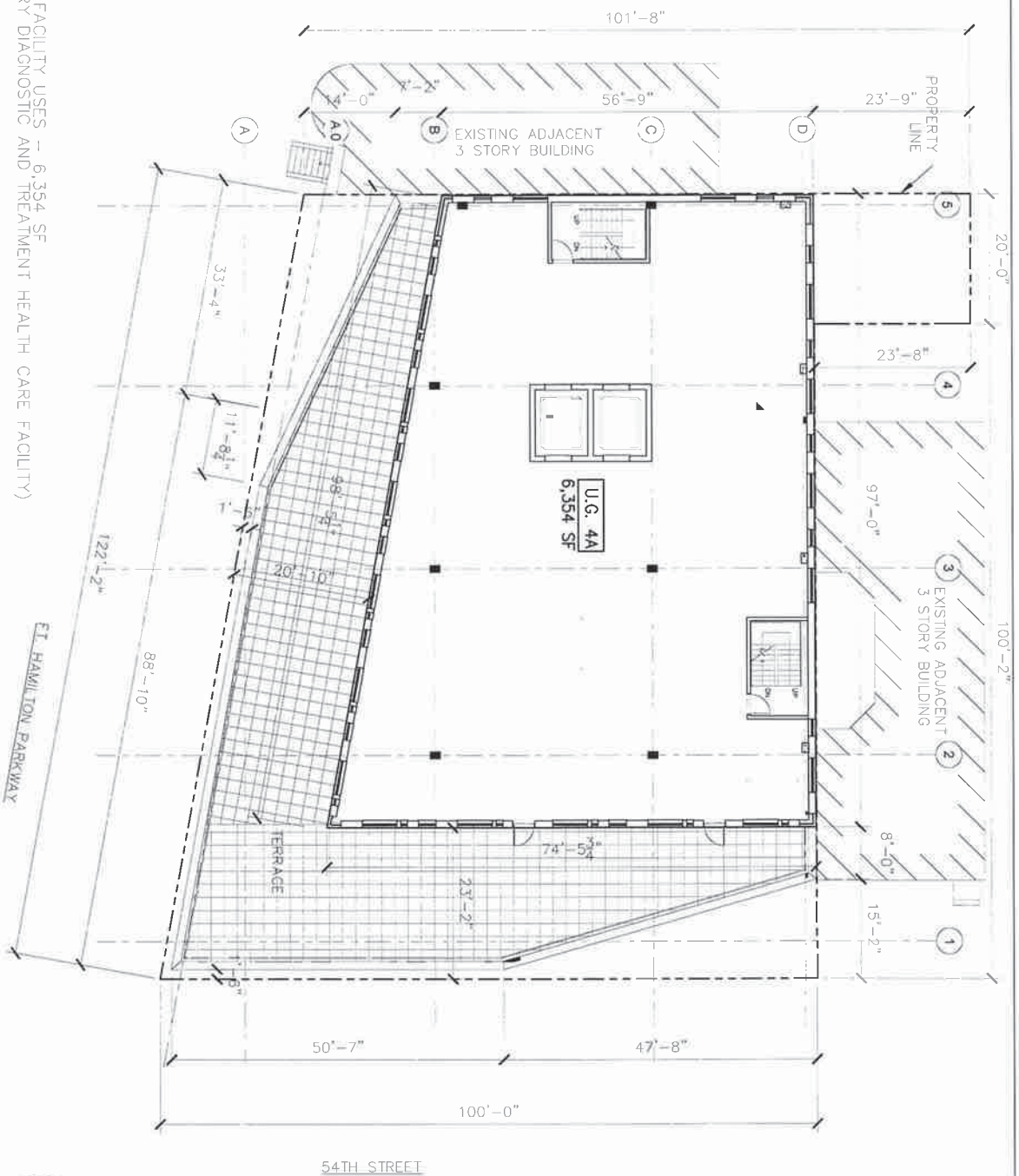

NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

PROJECT

5402 FT HAMILTON PARKWAY
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5TH FLOOR PLAN

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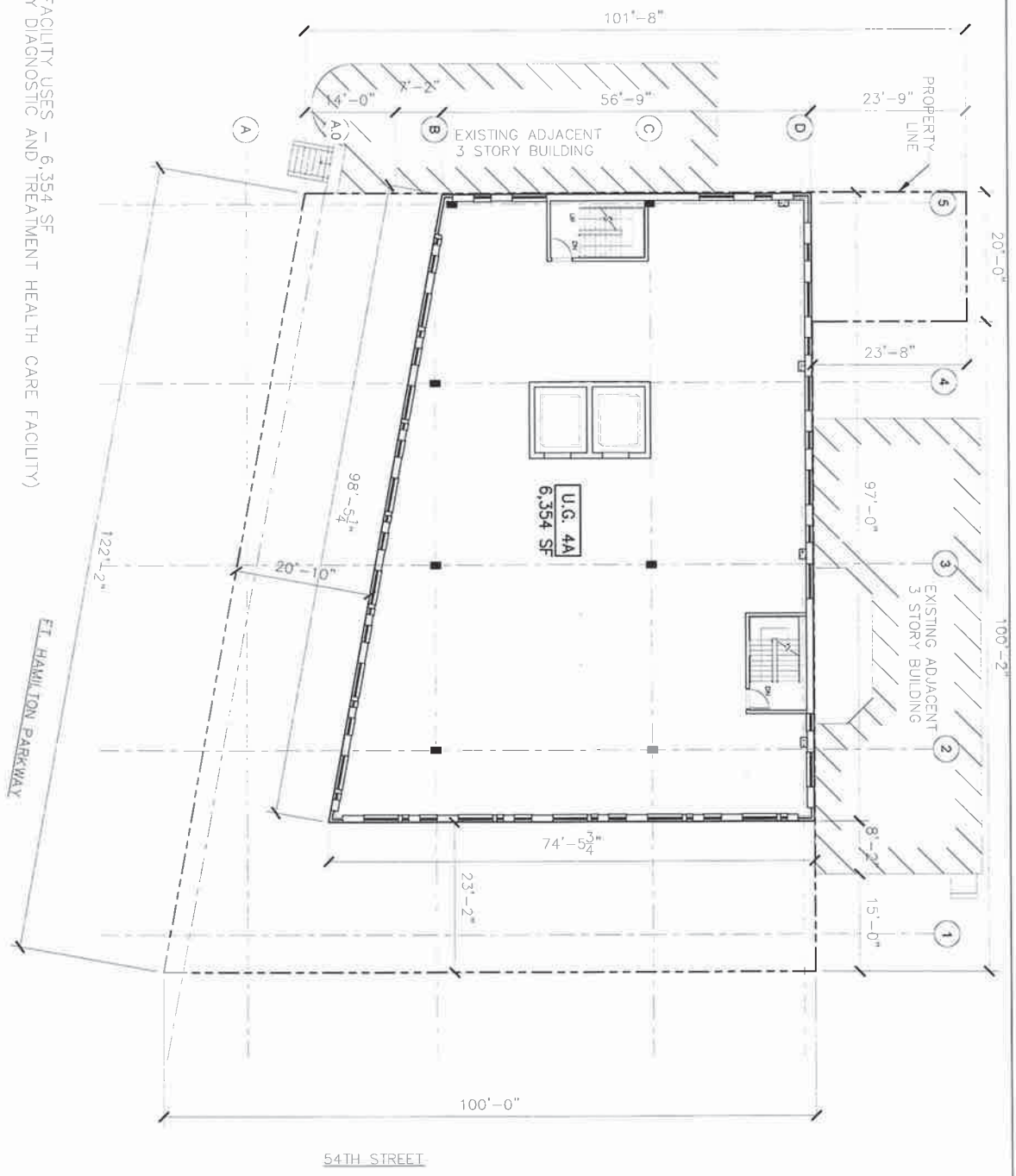
PROJECT NO.	1470
DATE	03 SEP 09
REVISED	16 MAR 11
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-7

6TH FLOOR PLAN

U.G. 4A COMMUNITY FACILITY USES – 6,354 SF
(AMBULATORY DIAGNOSTIC AND TREATMENT HEALTH CARE FACILITY)

INTERIOR PARTITIONS SHOWN ARE FOR ILLUSTRATION ONLY.



NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

PROJECT
5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE
6TH FLOOR PLAN

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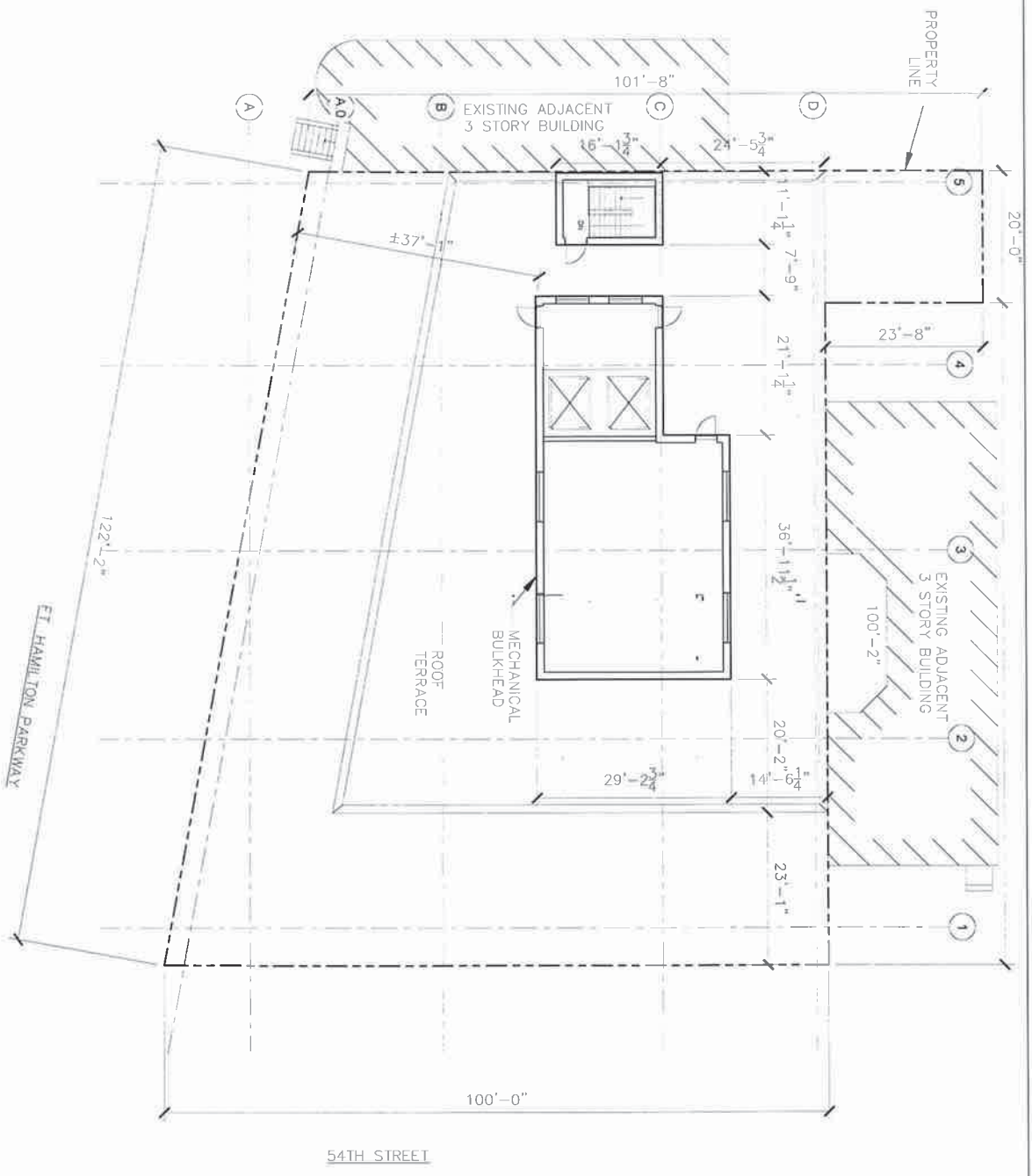
PROJECT NO.	1470
DATE	03 SEP 09
REVISED	16 MAR 11
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-8

INTERIOR PARTITIONS SHOWN ARE FOR ILLUSTRATION ONLY.



NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

ROOF PLAN

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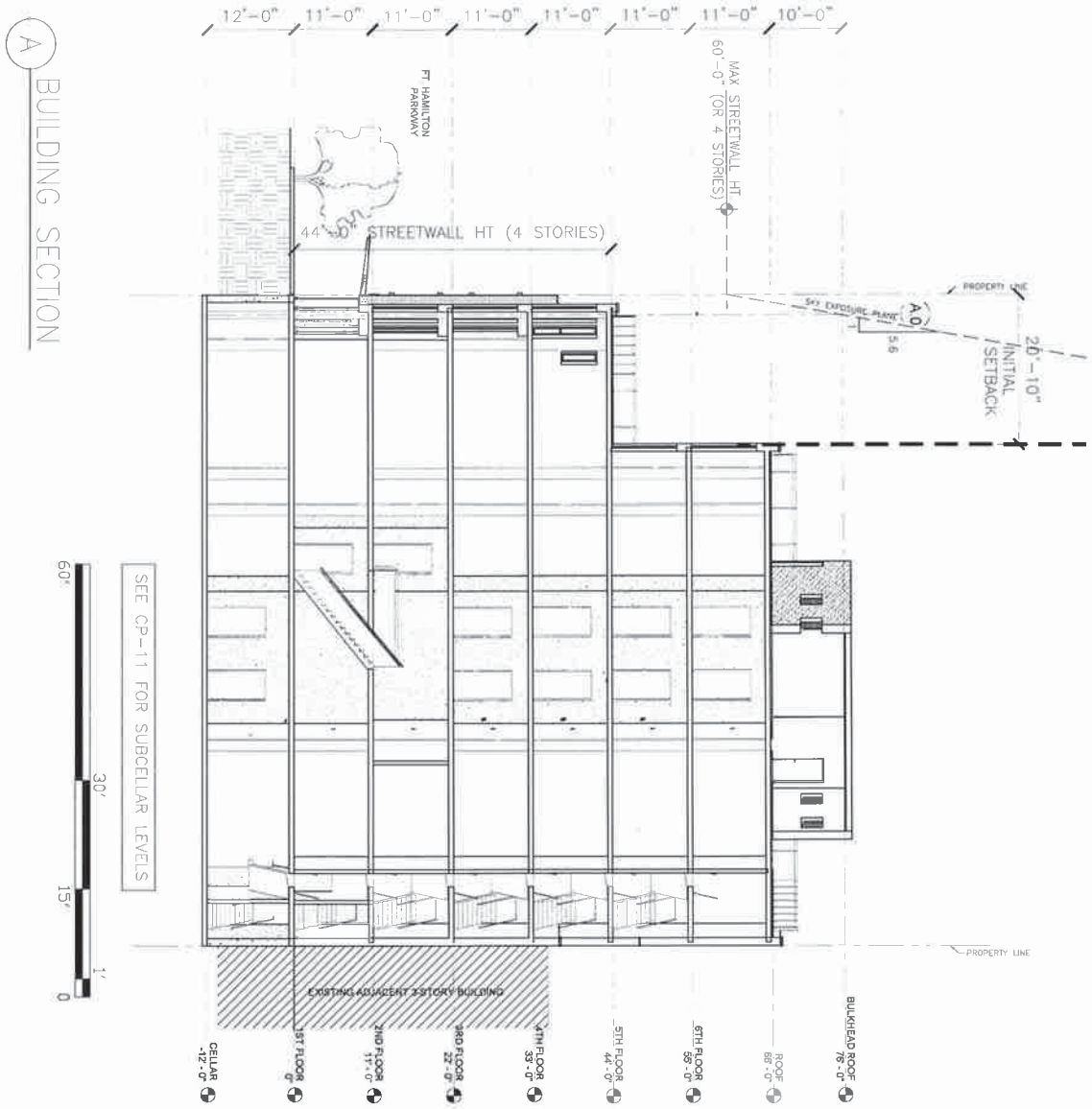
PROJECT NO.	1470
DATE	03 SEP 09
REVISED	16 MAR 11
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-9



PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

PROPOSED BUILDING SECTION

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PROJECT NO.	1470
DATE	12 UJL 10
REVISED	22 AUG 12
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-10

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

PROPOSED BUILDING SECTION

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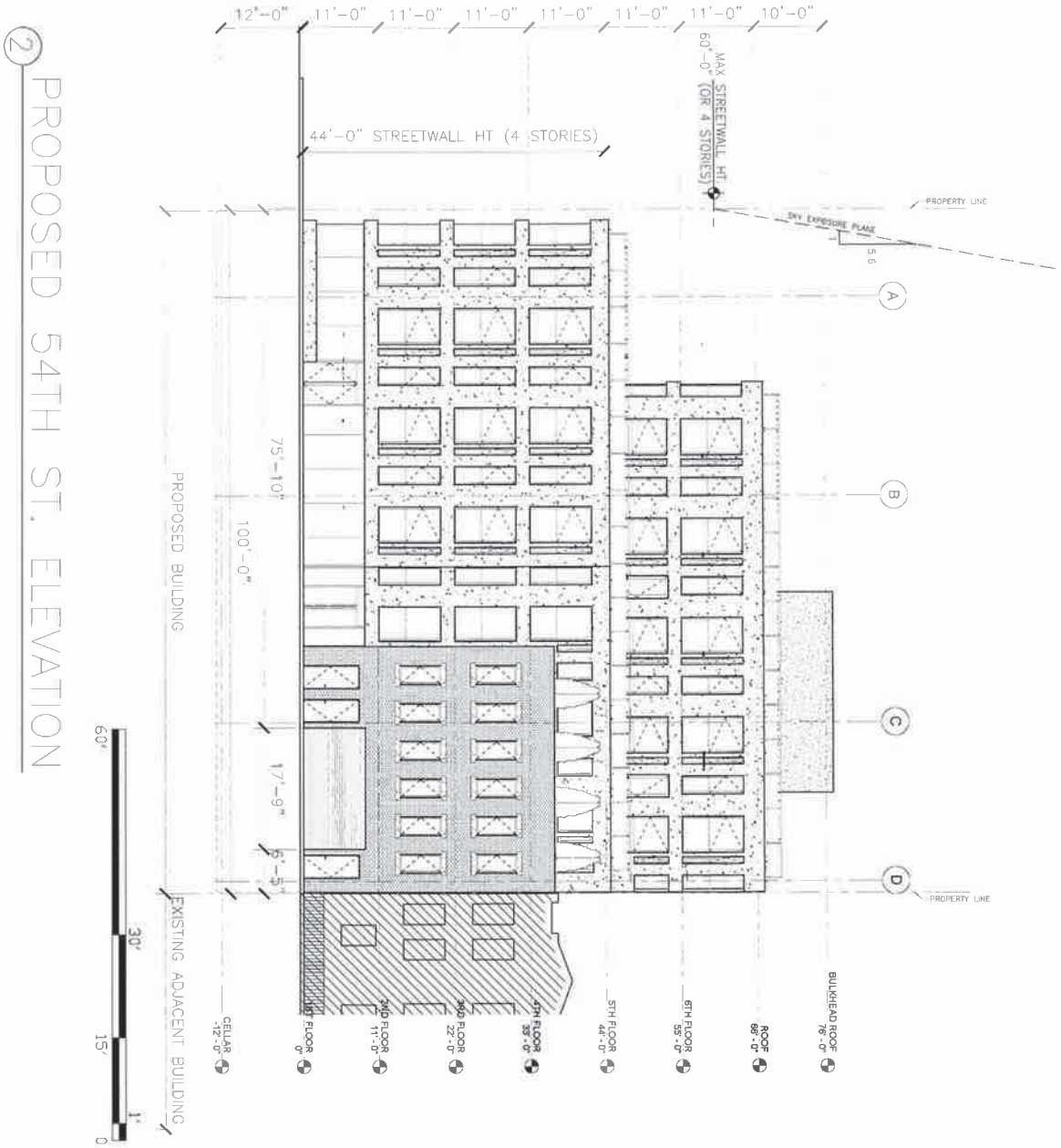
PROJECT NO.	1470
DATE	12 JUL 10
REVISED	22 AUG 12
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-11



2 PROPOSED 54TH ST. ELEVATION

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

54TH STREET ELEVATION

ARPAD BAKSA
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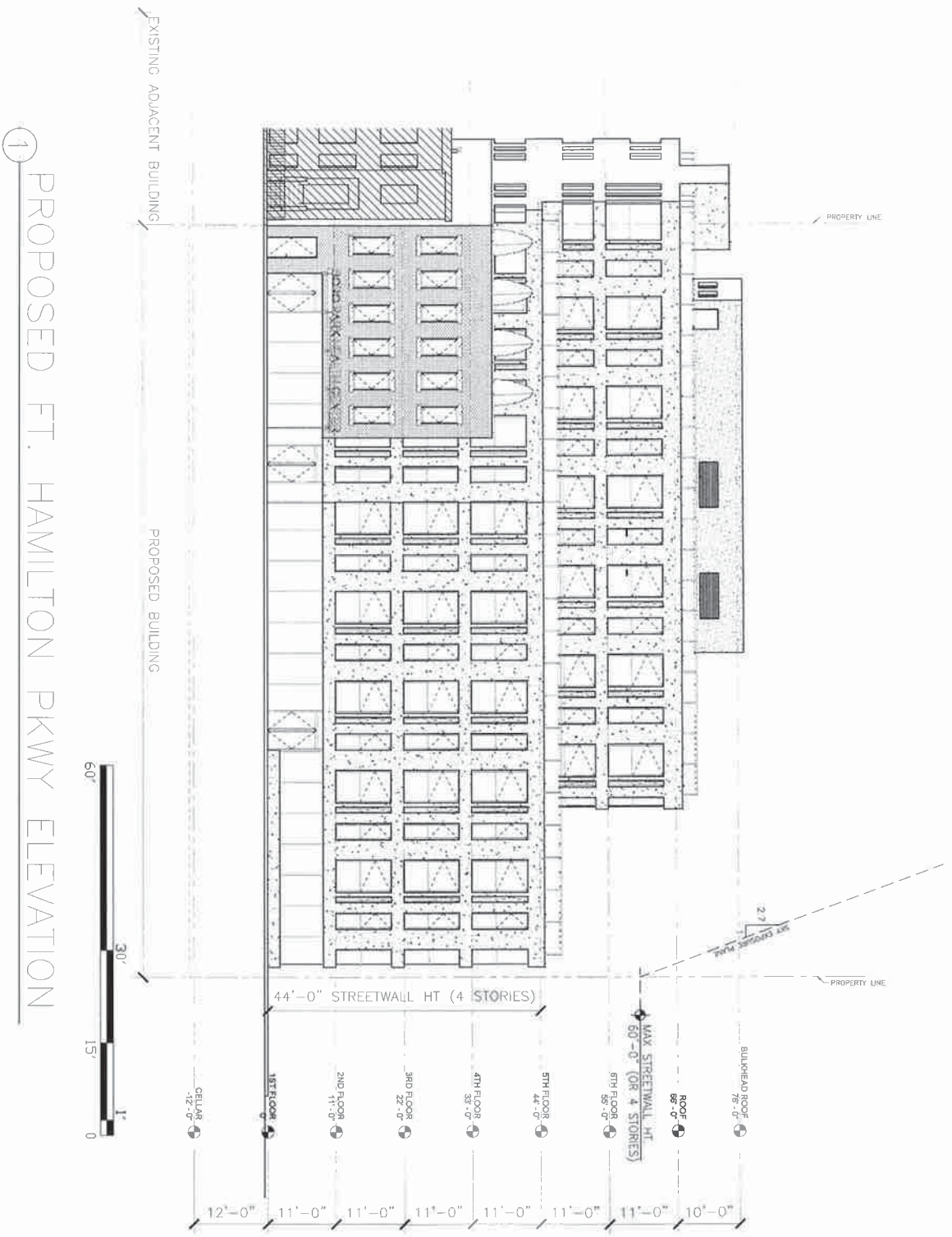
PROJECT NO.	1470
DATE	26 JUL 10
REVISED	22 AUG 12
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CP-12



PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

FT HAMILTON PKWY ELEVATION

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PROJECT NO.	1470
DATE	03 SEP 09
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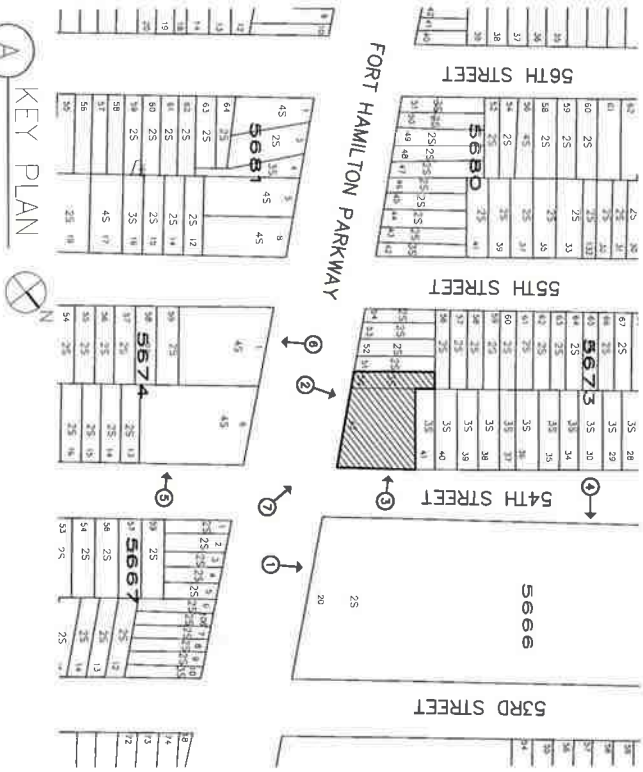
SCALE	N.T.S.
SHEET NO	CP-13

(2) ADJACENT BUILDINGS ON FT. HAMILTON PARKWAY

(A) KEY PLAN



(1) FORT HAMILTON PARKWAY BETWEEN 53RD AND 54TH STREET

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

SITE PICTURES

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PROJECT NO.	1470
DATE	03 SEP 09
REVISED	--
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CP-14

4 BUILDINGS ON 54TH STREET, NORTH OF FT. HAMILTON PKWY LOOKING EAST

4 BUILDINGS ON 54TH STREET, NORTH OF FT. HAMILTON PKWY LOOKING EAST

3 BUILDINGS ON 54TH STREET, NORTH OF FT. HAMILTON PKWY LOOKING WEST

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

SITE PICTURES

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PROJECT NO.	1470
DATE	03 SEP 09
REVISED	--
DRAWN BY	AB
SCALE	N.T.S.

SHEET NO

CP-15

6 ACROSS FROM SITE, FT. HAMILTON PKWY BETWEEN 53RD AND 54TH STREET

5 BUILDINGS ON 54TH STREET, SOUTH OF FT. HAMILTON PKWY LOOKING WEST

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

SITE PICTURES

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PROJECT NO.	1470
DATE	03 SEP 09
REVISED	--
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CP-16

7 PROJECT SITE, CORNER OF FORT HAMILTON PARKAWAY AND 54TH STREET

PROJECT
5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE
SITE PICTURES

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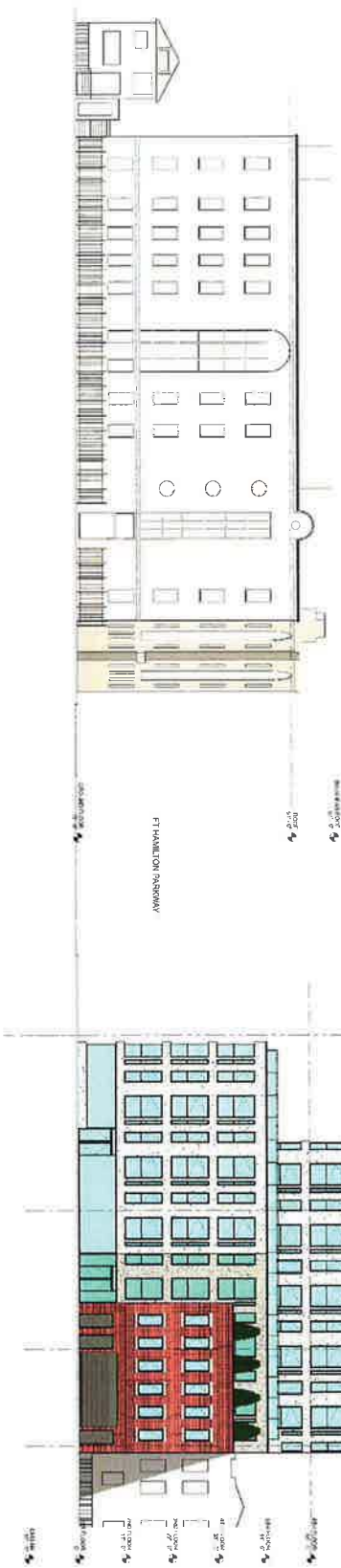
PROJECT NO.	1470
DATE	03 SEP 09
REVISED	--
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CP-17

2 PROPOSED 54TH STREET ELEVATION



1 PROPOSED FORT HAMILTON PARKWAY ELEVATION

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

ELEVATION RENDERINGS

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PROJECT NO.	1470
DATE	26 JUL 10
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DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CP-18

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

FT HAMILTON PKWY/54 ST.
RENDERING

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PROJECT NO.	1470
DATE	03 SEP 09
REVISED	--
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CP-19

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

FT HAMILTON PKWY RENDERING

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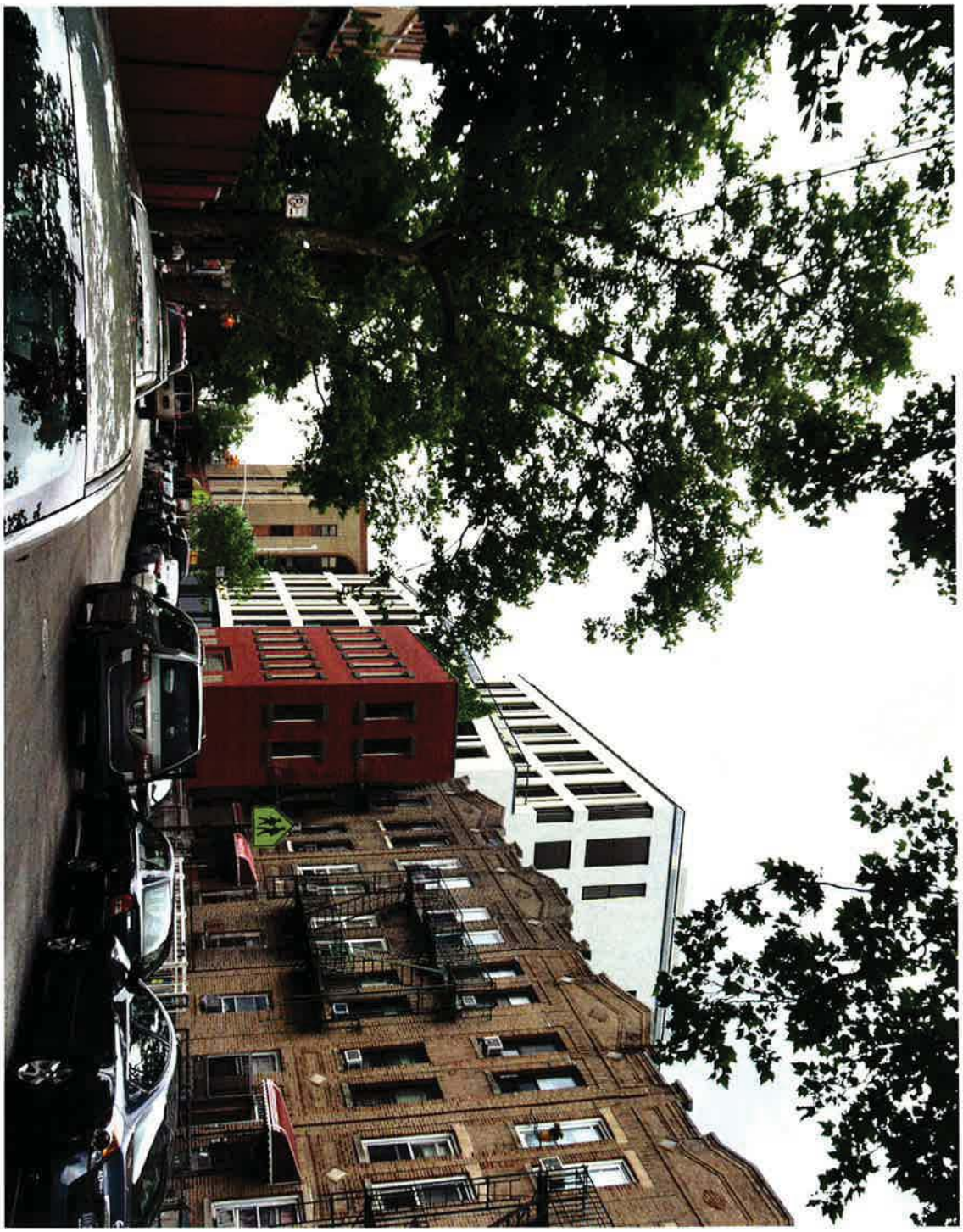
PROJECT NO.	1470
DATE	09 AUG 10
REVISED	--
DRAWN BY	AB
SCALE	N.T.S.

SHEET NO

CP-20



PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

54 STREET RENDERING

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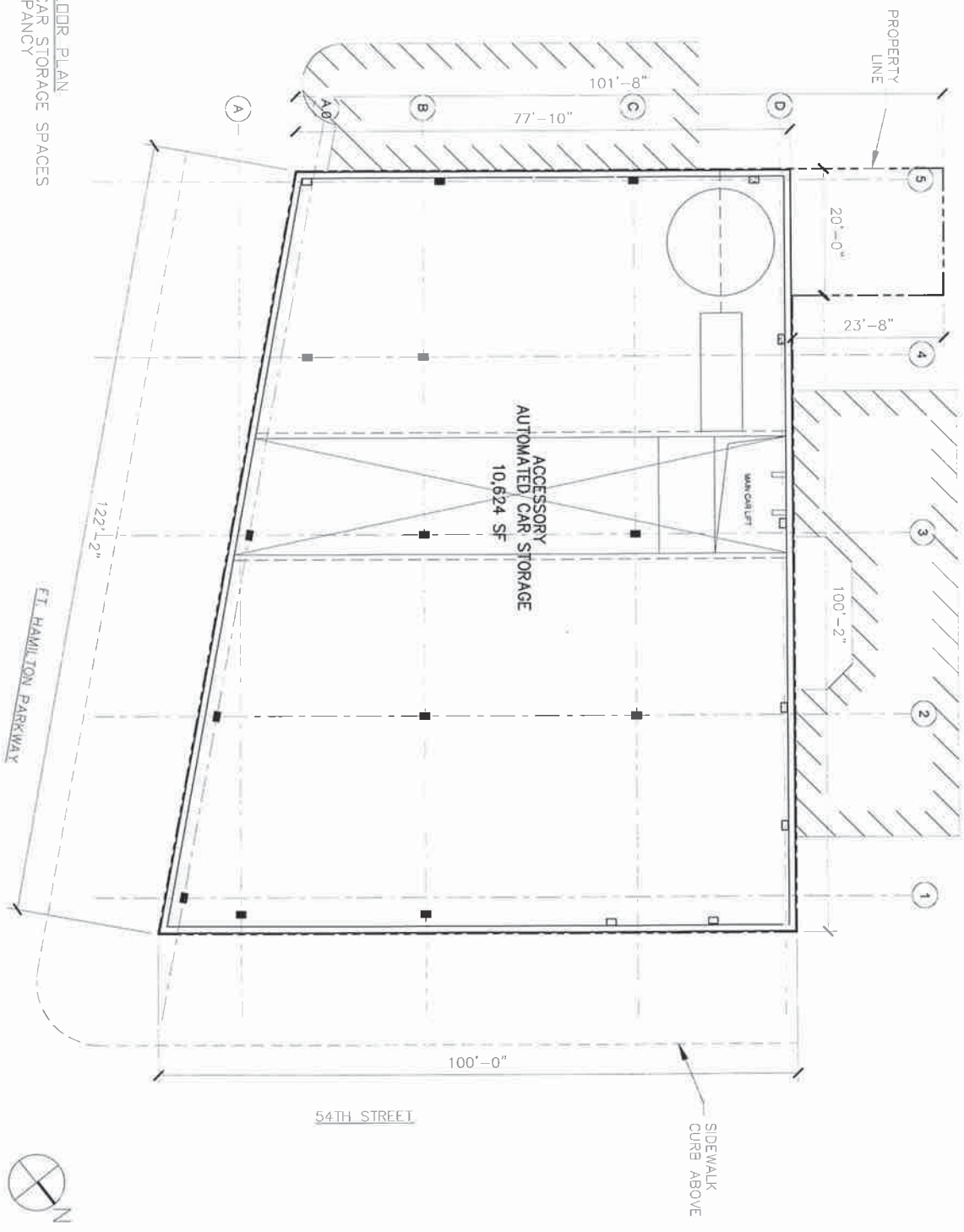
PROJECT NO.	1470
DATE	09 AUG 10
REVISED	--
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CP-21

SUBCELLAR 1 FLOOR PLAN
50 AUTOMATED CAR STORAGE SPACES
NO HUMAN OCCUPANCY

INTERIOR PARTITIONS SHOWN ARE FOR ILLUSTRATION ONLY.



NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

PROJECT
5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE
SUBCELLAR 1 PLAN

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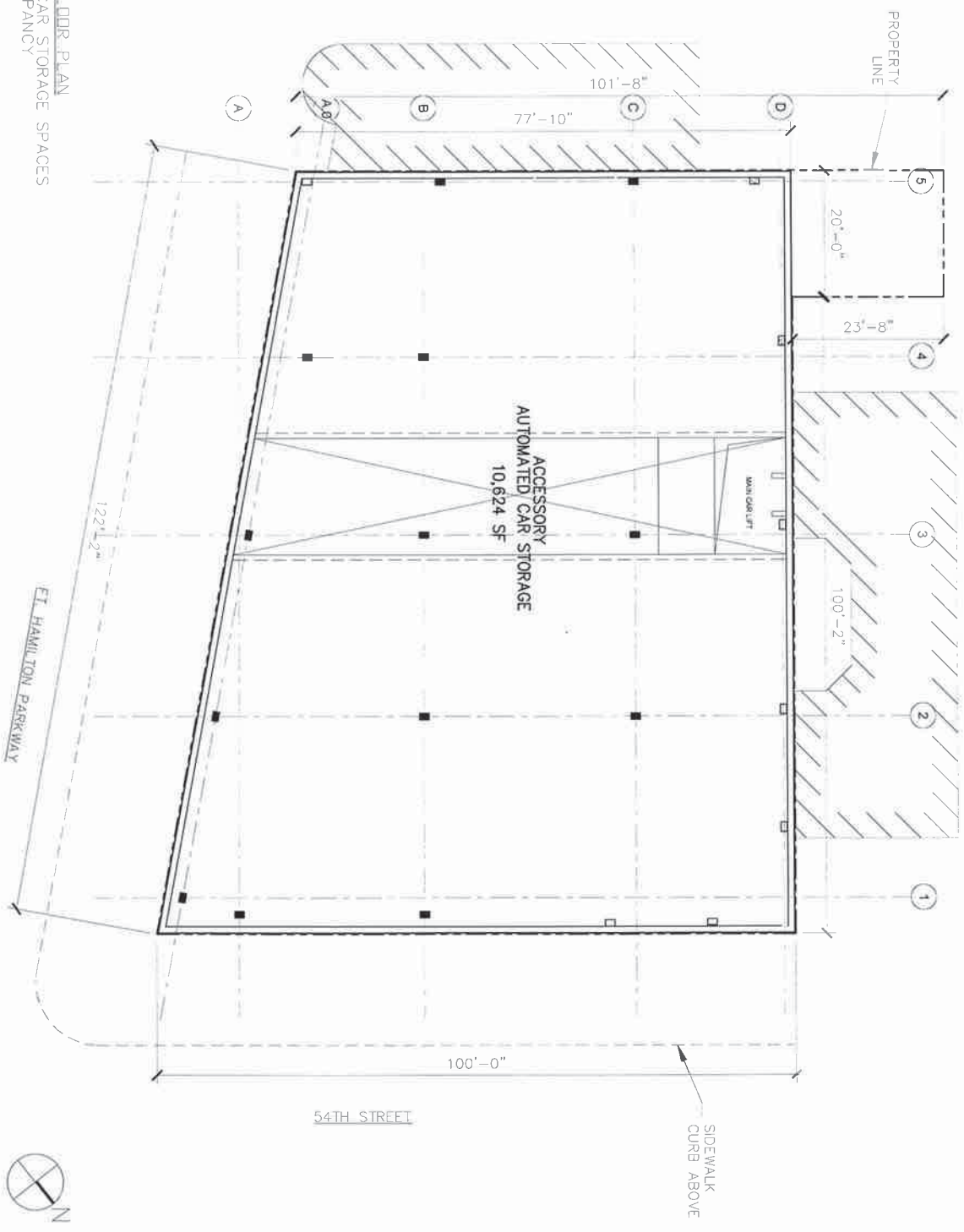
PROJECT NO.	1470
DATE	12 JUL 10
REVISED	06 FEB 12
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-22

SUBCELLAR 2 FLOOR PLAN
50 AUTOMATED CAR STORAGE SPACES
NO HUMAN OCCUPANCY

INTERIOR PARTITIONS SHOWN ARE FOR ILLUSTRATION ONLY



NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

PROJECT
5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE
SUBCELLAR 2 PLAN

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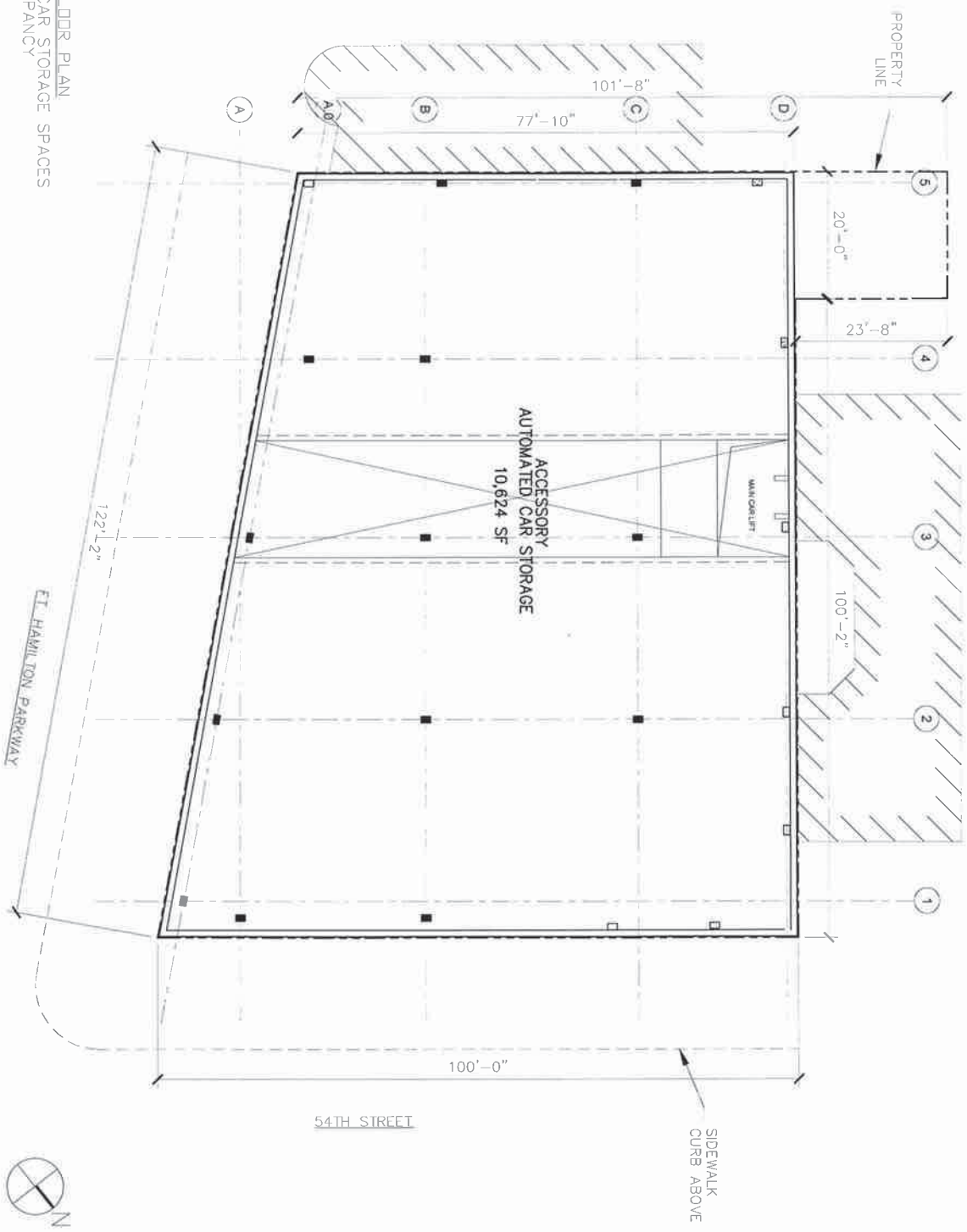
PROJECT NO.	1470
DATE	12 JUL 10
REVISED	16 MAR 11
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-23

SUBCELLAR 3 FLOOR PLAN
50 AUTOMATED CAR STORAGE SPACES
NO HUMAN OCCUPANCY

INTERIOR PARTITIONS SHOWN ARE FOR ILLUSTRATION ONLY



NOTE: ALL INTERIOR PARTITIONS AND EGRESS ARE SUBJECT TO NYC DEPARTMENT OF BUILDINGS APPROVAL

PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

SUBCELLAR 3 PLAN

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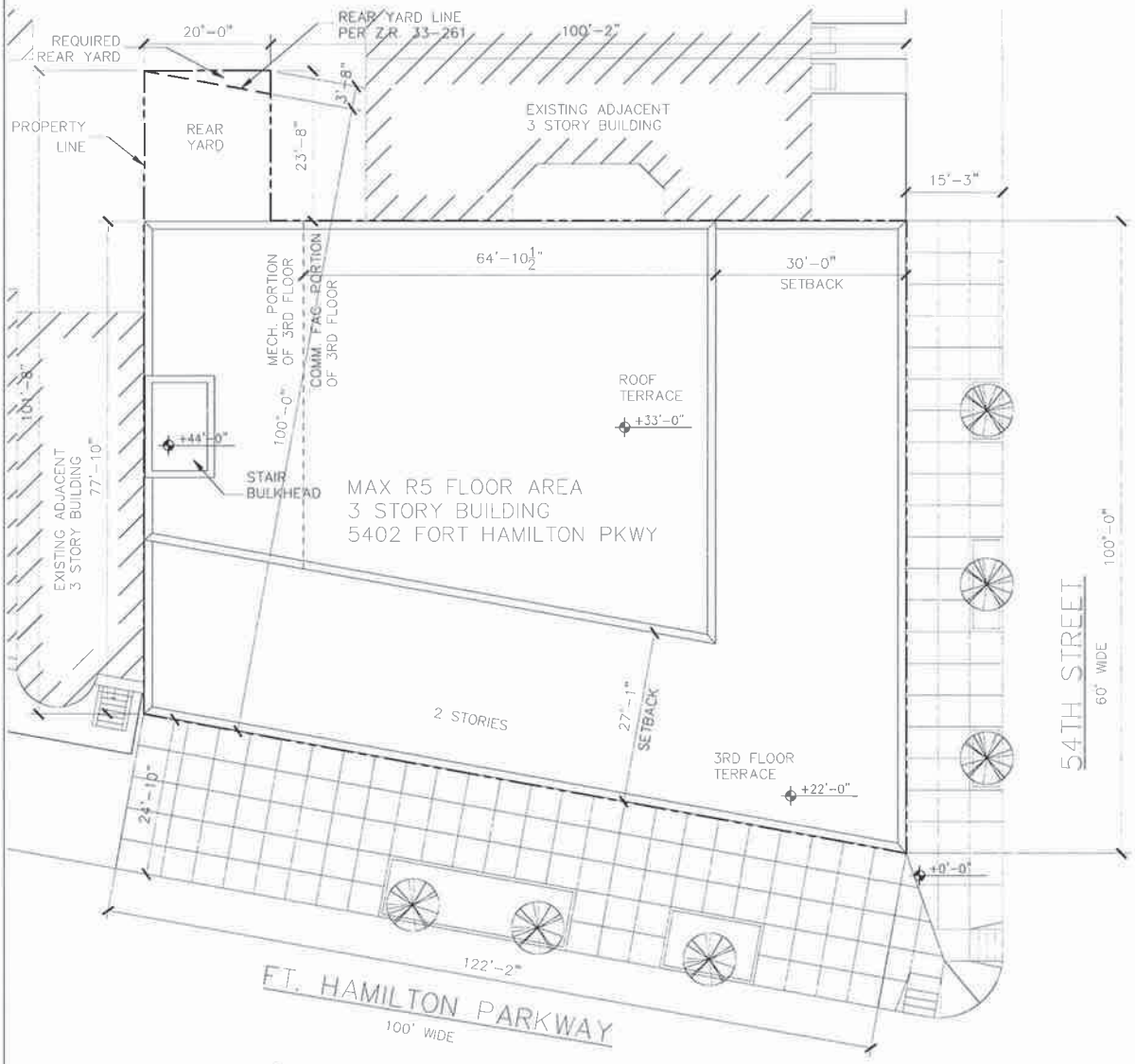
PROJECT NO.	1470
DATE	12 JUL 10
REVISED	16 MAR 11
DRAWN BY	AB
SCALE	1/16"=1'-0"
SHEET NO	CP-24

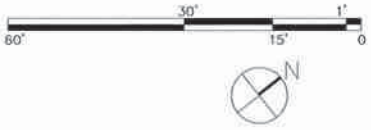
APPENDIX 2:
NO-ACTION BUILDING SITE PLAN

SITE PLAN

BLOCK: 5673	MAP: 22a & 22c	USE GROUP: 4A, 6A, 6C OR 6E
LOT: 42 + 50	ZONE: R5/C1-3	



AREA SUMMARY FLOOR		GROSS FLOOR AREA	ZONING FLOOR AREA
SUBCELLAR 2 (AUTOMATED CAR STORAGE)		5,312 SF	0 SF
SUBCELLAR 1 (AUTOMATED CAR STORAGE)		10,624 SF	0 SF
CELLAR	(COM. FACILITY)	9,900 SF	0 SF
	(PARKING – NOT F.A.)	724 SF	0 SF
1st FLOOR	(COM. FACILITY)	2,111 SF	2,111 SF
	(COMMERCIAL)	5,614 SF	5,614 SF
	(PARKING – NOT F.A.)	2,934 SF	0 SF
2nd FLOOR	(COM. FACILITY)	10,659 SF	10,659 SF
3rd FLOOR	(COM. FACILITY)	4,495 SF	3,951 SF
TOTAL (COM. FACILITY)		27,165 SF	17,265 SF
TOTAL (COMMERCIAL)		5,614 SF	5,614 SF
TOTAL (EXC. CELLAR/SUBCELLAR)		22,879 SF	22,335 SF
TOTAL (INC. CELLAR)		32,779 SF	
22,335 SF PROPOSED = 22,335 SF PERMITTED			



PROJECT

5402 FT HAMILTON PARKWAY
BROOKLYN, NY 11219

DRAWING TITLE

SITE PLAN OF MAX. FL. AREA
R-5/C1-3 BLDG. (AS-OF RIGHT)

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PROJECT NO.	1470
DATE	16 MAY 11
REVISED	31 JUL 12
DRAWN BY	AB
SCALE	N.T.S.
SHEET NO	CPZ-4

APPENDIX 3:
LPC CORRESPONDENCE

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 / 77DCP050K
Project: FORT HAMILTON PARKWAY REZONING
Date received: 12/17/2013

Comments: as indicated below. Properties that are individually LPC designated or in LPC historic districts require permits from the LPC Preservation department. Properties that are S/NR listed or S/NR eligible require consultation with SHPO if there are State or Federal permits or funding required as part of the action.

The lead agency has requested a review of two additional bbls: 5673/41 and 5666/20.

Properties with no Architectural or Archaeological significance:
1) ADDRESS: 5402 FT HAMILTON PARKWAY, BBL: 3056730042
2) ADDRESS: 5414 FT HAMILTON PARKWAY, BBL: 3056730050
3) ADDRESS: 986 54 STREET, BBL: 3056730041
4) ADDRESS: 5324 FT HAMILTON PARKWAY, BBL: 3056660020, lot in part, within project site

Properties with Archaeological significance in study area outside of project site:
1) ADDRESS: 5324 FT HAMILTON PARKWAY, BBL: 3056660020, lot in part, outside of project site

Properties with Architectural significance:
1) ADDRESS: 5324 FT HAMILTON PARKWAY, BBL: 3056660020, LPC FINDINGS: NO INTEREST, STATE/NATIONAL REGISTER FINDINGS: ELIGIBLE FOR NATIONAL REGISTER LIST.

Comments:
LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from 19th Century and Native American occupation for the following Borough, Block and Lot location(s) outside of the project site but within the study area of BBL: 3056660020. In the event that the project scope is changed to include additional portions of BBL: 3056660020 lot in part within the project site, the Commission recommends that an archaeological documentary study be performed for these location(s) to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary (see CEQR Technical Manual 2012).

Portions of the project site appear to be disturbed by 20th century construction of building(s) on the front and rear portions of the lot(s). There are no further archeological concerns for the following Borough, Block and Lot location(s) within the project site BBL: 3056730041, 3056730042, 3056730050 and 3056660020 lot in part.

The EAS RWCDS states that redevelopment of 5666/20 appears highly unlikely as a result of this action, therefore no adverse impacts are anticipated to this property.

Gina Santucci

12/18/2013

SIGNATURE DATE

Gina Santucci, Environmental Review Coordinator

File Name: 27693_FSO_GS_12182013.doc

APPENDIX 4:
PROPOSED PROJECT TRAVEL DEMAND FACTOR/TPA MEMO

Memo

Stantec

To:	Mehdi Amjadi New York City Department of City Planning	From:	Steve Abendschein, P.E. Christopher Mojica, P.E.
File:	193410287	Date:	July 2, 2013 Revised August 20, 2014

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

The purpose of this memorandum describes the screening methodology used for identifying transportation elements that would require a more detailed analysis as part of the Environmental Assessment Statement for a proposed six-story medical facility building at Fort Hamilton Parkway and 54th Street in Brooklyn, NY ("The Project"). For purposes of this assessment, it is assumed that the existing site is vacant and unoccupied and would not be considered a traffic generator. It is also assumed that if the proposed project is not approved, the project applicant will develop the site under existing R-5/C1-3 zoning with an as-of-right (No Action) building. The proposed (Action) building would be rezoned to R-6/C1-3 and used primarily as a diagnostic and treatment medical facility. In addition, the proposed development would include a local retail component and a below grade off-street parking facility.

Included within this memorandum are the assumed travel demand factors which were utilized to complete the screening analyses. Analyses were completed in conjunction with the 2012 City Environmental Quality Review Technical Manual (CEQR) guidelines, which is the accepted process of the New York City Department of Transportation (NYCDOT).

UPDATES FROM THE MAY 24, 2011 MEMORANDUM SUBMISSION TO NYCDCP

The Reasonable Worst Case Development Scenario (RWCDS) for the proposed project was submitted to the New York City Department of City Planning (NYCDCP) on November 16, 2012 and approved on February 11, 2013. With the exception of minor changes in the proposed build program, there have been no other changes in the building envelope, access points, or other elements pertinent to the transportation screening analyses or travel demand factors since the May 24, 2011 submission of Stantec's memorandum to NYCDCP.

The revised build program is presented in Table 1. The No Action program would consist of 27,165 gross square feet (GSF) of community facility space (three stories tall) and 5,614 GSF of local retail use fronting on Fort Hamilton Parkway. The Proposed Project is comprised of 54,955 GSF of community facility space (six stories tall) and 5,614 GSF of local retail use fronting on Fort Hamilton Parkway. The Proposed Project has a zoning floor area of 50,669 zoning square feet (ZSF) on a lot area of 11,167.5 square feet, translating to a Floor Area Ratio (FAR) of 4.54. However, since the zoning floor area (under R-6/C1-3 rezoning) could achieve a slightly higher FAR of 4.8 (resulting in a slightly larger zoning floor area of 53,604 ZSF), the Action program will assume the larger square footage which would result from adoption of the proposed rezoning action. Therefore, the Action program assumes a rezoned building consisting of 57,890 GSF of community facility space (six stories tall) and 5,614 GSF of local retail use fronting on Fort Hamilton Parkway. All building programs assume an automated below grade off-street parking facility with a capacity of 82 vehicles (No Action) or 150 vehicles (Proposed Project / Action).

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Under both the No Action and Action building programs, it is assumed that the primary use of the building will be medical facilities, though the exact mix of uses does vary. In addition, it should be noted that while the Proposed Project does not utilize the maximum allowable GSF on the site, our transportation analyses assume the full potential GSF as to present a conservative analysis.

Table 1
No Action, Proposed Project, and Action Building Program

Project Components	No Action (As-of-Right) R-5 / C1-3		Proposed Project R-6 / C1-3		Action R-6 / C1-3	
	GSF	ZSF	GSF	ZSF	GSF	ZSF
Community Facility (Medical Facility, includes Cellar)	27,165	17,265	54,955	45,055	57,890	47,990
Commercial (Local Retail)	5,614	5,614	5,614	5,614	5,614	5,614
Total (Including Cellar)	32,779	-	60,569	-	63,504	-

Notes: GSF – Gross Floor Area (square feet), ZSF – Zoning Floor Area (square feet)
Total ZSF not shown since it excludes Cellar and Sub-Cellar square footage.
Values indicate the maximum SF permitted under respective zoning districts.
Both the Proposed Project and the Action Program provide an automated below grade off-street parking facility with a capacity for 150 vehicles (100 passenger cars and up to 50 SUVs). The No Action Program provides an automated below grade off-street parking facility with a capacity for 82 vehicles.

Source: November 16, 2012 RWCDS Text Submitted to and Approved by NYCDCP.

SUMMARY OF FINDINGS

A screening assessment was conducted to determine the number of peak hour trips generated by the proposed development. It should be noted that the screening analyses did not include weekend peak periods of travel since the existing medical facilities are closed on both weekend days and it is anticipated that the proposed medical facility (under both No Action and Action building programs) would establish hours of operation similar to each of the surveyed facilities. Additionally, it should be noted that a screening analysis was not performed for the retail component of the Proposed Project as per the direction of NYCDCP since there is no incremental retail development between the As-of-Right and Proposed developments.

The screening analyses found that one intersection during the weekday midday peak hour (12-1 PM) and five intersections during the weekday PM peak hour (5-6 PM) would require detailed analysis due to the proposed project adding 50 or more vehicle trips to these intersections. During the AM (9-10 AM) peak hour, none of the five intersections would exceed the 50 vehicle trip threshold. However, to be conservative, the five intersections listed below would be studied during the AM, midday, and PM peak hours:

1) Fort Hamilton Parkway and 54th Street
2) Fort Hamilton Parkway and 55th Street
3) Fort Hamilton Parkway and 56th Street
4) 9th Avenue and 54th Street
5) 9th Avenue and 55th Street

The proposed project would result in an additional two vehicles utilizing available on-street parking during any of the peak hours (in order to provide space for ambulettes and vehicles picking up and discharging patients at the facility and not impede traffic flow along Fort Hamilton Parkway). This is not expected to pose a significant impact. Transit and pedestrian trips

generated by the proposed project are estimated to be under the 200 peak hour trip threshold and would not require further detailed analysis. The capacity of the proposed off-street automated parking facility is projected to be able to handle all of the peak hour traffic and and a further detailed analysis is not required.

SOFT SITE ANALYSIS

There are plans to rezone properties within the project study area from R5 to R6. A soft site analysis was performed for the affected properties and the analysis was approved by NYCDCP on February 11, 2013. It was determined that all of the affected properties would be expected to continue their current land uses despite a potential rezoning.

Additionally, there are soft site developments within the project study area which may generate additional traffic prior to the assumed No Action/Action analysis year of 2016. A map and a listing of the planned developments within ½ mile of the project study area follow this technical memo.

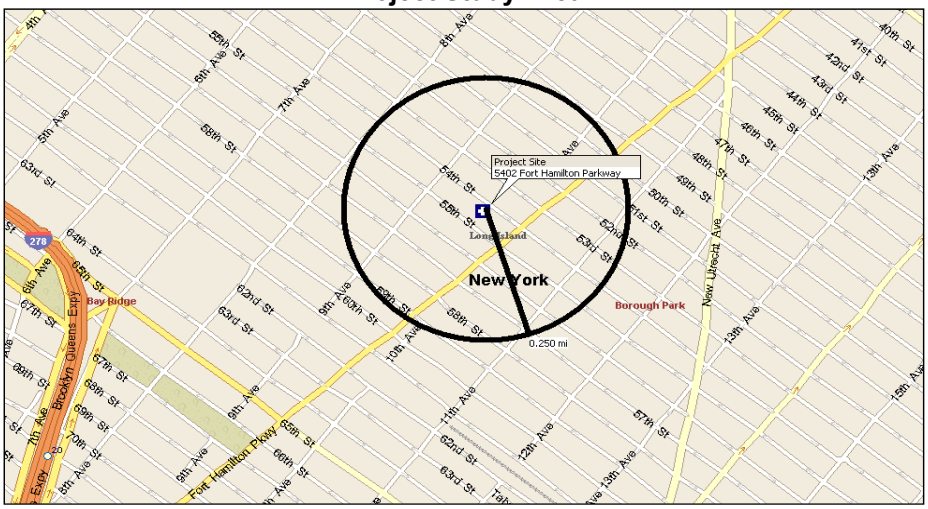
METHODOLOGY

The following section presents details and results of the screening methodology.

Proposed Site Information

The project site is located on Fort Hamilton Parkway at 54th Street in Borough Park neighborhood of Brooklyn, New York. It is bounded by 54th Street to the north, 55th Street to the south, 9th avenue to the west, and Fort Hamilton Parkway to the east. Figure 1 illustrates the location of the site along with a ¼-mile study area radius.

Figure 1
Project Study Area



The proposed project involves the development of an existing, vacant site to a new community facility building and local retail base. However, it is expected that if the proposed project is not approved, the project applicant will develop the site under existing zoning with an as-of-right (No Action) building.

Table 2 below provides a summary of the No Action and Action programs. The No Action program would consist of 27,165 GSF of community facility space (three stories tall) and 5,614 GSF of local retail use fronting on Fort Hamilton Parkway. It is assumed that all of the community facility space would be utilized as a Medical Facility (providing cardiology services) for both staff and patients.

The Action program would allow for a rezoned building, consisting of 57,890 GSF of community facility space (six stories tall) and 5,614 GSF of local retail use fronting on Fort Hamilton Parkway. Based upon discussions with the client, the Action program assumes that certain floors (or portions of floors) within the proposed six story building will be allocated for staff only (these uses include a birthing center and medical laboratories), resulting in a total of 42,280 GSF for both staff and patient use (labeled as Medical Facility in Table 2 below) and a total of 15,610 GSF for staff use only (labeled as Medical Laboratory in Table 2 below). Both the No Action and Action programs would include an automated below grade off-street parking facility with capacities of 82 vehicles (No Action building) and 150 vehicles (Action building).

Table 2
No Action and Action Building Program

Project Components	No Action (As-of-Right) R-5 / C1-3		Action R-6 / C1-3	
	GSF	ZSF	GSF	ZSF
Community Facility (Medical Facility, includes Cellar)	27,165	17,265	42,280	32,380
Community Facility (Medical Laboratory)	0	0	15,610	15,610
Total Community Facility	27,165	17,265	57,890	47,990
Commercial (Local Retail)	5,614	5,614	5,614	5,614
Total (Including Cellar)	32,779	-	63,504	-
Notes: GSF – Gross Floor Area (square feet), ZSF – Zoning Floor Area (square feet) Total ZSF not shown since it excludes Cellar and Sub-Cellar square footage. **Values** indicate the maximum SF permitted under respective zoning districts. Both the Proposed Project and the Action Program provide a below grade off-street parking facility with a capacity for 150 vehicles (100 passenger cars and up to 50 SUVs). The No Action Program provides a below grade off-street parking facility with a capacity for 82 vehicles.				
Source: November 16, 2012 RWCDS Text Submitted to and Approved by NYCDCP.				

Medical Facility Surveys

Since trip generation, mode split, and trip assignment information at medical facilities in southwest Brooklyn were not readily available, surveys were conducted on April 21, 2010 of the patients and staff served by five existing medical facilities – four providing cardiology services and one providing obstetrics/gynecology (OB/GYN) services. It should be noted these surveys were utilized in the absence of available medical facility data for the immediate study area. Data collected from these surveys and presented herein provide a reasonable representation of local medical facility trip generation and travel patterns, and were utilized to forecast traffic volumes for the proposed No Action or Action program. The five medical facilities surveyed along with their gross floor area, as reported by medical office staff, are listed below and shown in Figure 2.

1) Cardiology office at 421 Ocean Parkway (two offices), 6,200 square feet
2) Cardiology office at 4802 10th Avenue (two offices), 5,900 square feet
3) Cardiology office at 848 49th Street, 3,200 square feet
4) Cardiology office at 9001 3rd Avenue, 3,000 square feet
5) OB/GYN office at 5925 15th Avenue, 9,100 square feet

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Figure 2
Existing and Proposed Medical Facilities Surveyed

The surveys were designed to produce trip generation, modal split, and temporal distribution information for patients and staff on a typical weekday[1]. At each facility, a count of people entering and exiting each facility was conducted. Surveys identified, amongst other information, whether the person was a patient or staff member, the time of entry and exit, the mode used to travel, and location of trip's origin. The mode used to travel to and from the facility was identified as either: an auto trip where the person parked their vehicle (auto self-park); an auto trip where the person was dropped off in front of the facility (auto drop-off); a trip by taxi or black car; a trip by an ambulette service; a subway trip, a bus trip, or a walk trip. Since only a portion of people entering the medical facilities were surveyed, the responses were scaled to reflect the total number of people counted as entering and exiting at the medical facilities. Tables 3A through 3F present this normalized cardiology and OB/GYN survey data, which found that the AM peak hour is from 9-10 AM, the midday peak hour is from 12-1 PM, and the PM peak hour is from 5-6 PM.

[1] Surveys were not conducted for weekend peak periods since the existing medical facilities are closed on both weekend days and it is anticipated that the proposed medical facility (under both No Action and Action building programs) would establish hours of operation similar to each of the surveyed facilities.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 3A
Patient Person Trip Accumulation (Cardiology Offices)

TIME PERIOD			PATIENT AUTO - PARKED GENERATED TRIPS		PATIENT AUTO - DISCHARGED GENERATED TRIPS		PATIENT TAXI / BLACK CAR GENERATED TRIPS		PATIENT AMBULETTE GENERATED TRIPS		PATIENT SUBWAY GENERATED TRIPS		PATIENT BUS GENERATED TRIPS		PATIENT WALK GENERATED TRIPS		PATIENT TOTAL GENERATED TRIPS	
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	–	9:00 AM	0	0	1	0	3	0	1	0	2	0	4	0	1	0	13	0
9:00 AM	–	10:00 AM	11	0	3	1	0	3	2	1	0	0	5	3	1	1	22	10
10:00 AM	–	11:00 AM	9	8	5	3	1	0	4	1	0	2	3	4	1	1	24	20
11:00 AM	–	12:00 PM	4	8	2	1	1	0	3	4	0	0	2	3	2	0	15	16
12:00 PM	–	1:00 PM	5	8	2	5	0	0	8	4	0	0	3	2	2	1	20	21
1:00 PM	–	2:00 PM	3	2	7	3	1	2	5	4	1	0	1	2	2	3	20	17
2:00 PM	–	3:00 PM	10	6	3	2	4	1	7	3	1	0	4	2	5	0	35	14
3:00 PM	–	4:00 PM	6	7	3	7	1	1	1	6	0	2	5	3	2	7	17	34
4:00 PM	–	5:00 PM	3	7	0	3	1	4	0	7	0	0	3	3	2	1	10	25
5:00 PM	–	6:00 PM	1	2	2	0	0	1	0	0	0	0	6	2	0	2	9	7
6:00 PM	–	7:00 PM	2	3	1	2	0	0	1	0	2	0	1	6	1	2	9	13
7:00 PM	–	8:00 PM	0	1	0	1	0	0	0	1	0	1	0	6	0	1	0	11
8:00 PM	–	9:00 PM	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4
9:00 PM	–	10:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:00 PM	–	11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			55	55	31	31	13	13	32	32	6	6	38	38	20	20	194	194

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 3B
Staff Person Trip Accumulation (Cardiology Offices)

TIME PERIOD			STAFF AUTO - PARKED GENERATED TRIPS		STAFF AUTO - DISCHARGED GENERATED TRIPS		STAFF TAXI / BLACK CAR GENERATED TRIPS		STAFF AMBULETTE GENERATED TRIPS		STAFF SUBWAY GENERATED TRIPS		STAFF BUS GENERATED TRIPS		STAFF WALK GENERATED TRIPS		STAFF TOTAL GENERATED TRIPS	
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00 AM	–	9:00 AM	11	0	0	0	0	0	0	0	7	0	2	0	3	0	23	0
9:00 AM	–	10:00 AM	6	0	1	0	0	0	0	0	3	0	3	0	0	0	13	0
10:00 AM	–	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	–	12:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
12:00 PM	–	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	–	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	–	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	–	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	–	5:00 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	6
5:00 PM	–	6:00 PM	0	11	0	1	0	0	0	0	0	8	0	5	0	1	0	26
6:00 PM	–	7:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7:00 PM	–	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	–	9:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
9:00 PM	–	10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	–	11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			19	19	2	2	0	0	0	0	10	10	5	5	3	3	39	39

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 3C
Total (Patient & Staff) Person Trip Accumulation (Cardiology Offices)

TIME PERIOD			PATIENT AND STAFF AUTO - PARKED GENERATED TRIPS		PATIENT AND STAFF AUTO - DISCHARGED GENERATED TRIPS		PATIENT AND STAFF TAXI / BLACK CAR GENERATED TRIPS		PATIENT AND STAFF AMBULETTE GENERATED TRIPS		PATIENT AND STAFF SUBWAY GENERATED TRIPS		PATIENT AND STAFF BUS GENERATED TRIPS		PATIENT AND STAFF WALK GENERATED TRIPS		PATIENT AND STAFF TOTAL GENERATED TRIPS		24-HR PERSON TRIP ACCUMULATION (ALL TRIPS)	
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Hourly Entries	Accumulation
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:00 AM	–	9:00 AM	11	0	1	0	3	0	1	0	9	0	6	0	4	0	36	0	36	37
9:00 AM	–	10:00 AM	17	0	4	1	0	3	2	1	3	0	8	3	1	1	35	10	25	62
10:00 AM	–	11:00 AM	9	8	5	3	1	0	4	1	0	2	3	4	1	1	24	20	4	66
11:00 AM	–	12:00 PM	5	8	3	1	1	0	3	4	0	0	2	3	2	0	17	16	1	67
12:00 PM	–	1:00 PM	5	8	2	5	0	0	8	4	0	0	3	2	2	1	20	21	-1	66
1:00 PM	–	2:00 PM	3	2	7	3	1	2	5	4	1	0	1	2	2	3	20	17	3	69
2:00 PM	–	3:00 PM	10	6	3	2	4	1	7	3	1	0	4	2	5	0	35	14	20	90
3:00 PM	–	4:00 PM	6	7	3	7	1	1	1	6	0	2	5	3	2	7	17	34	-16	74
4:00 PM	–	5:00 PM	3	9	0	3	1	4	0	7	0	2	3	3	2	3	10	31	-21	53
5:00 PM	–	6:00 PM	1	13	2	1	0	1	0	0	0	8	6	7	0	3	9	33	-24	28
6:00 PM	–	7:00 PM	2	8	1	2	0	0	1	0	2	0	1	6	1	2	9	18	-9	19
7:00 PM	–	8:00 PM	0	1	0	1	0	0	0	1	0	1	0	6	0	1	0	11	-11	8
8:00 PM	–	9:00 PM	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	6	-6	1
9:00 PM	–	10:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	-1	0
10:00 PM	–	11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			74	74	33	33	13	13	32	32	16	16	43	43	23	23	233	233		

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 3D
Patient Person Trip Accumulation (OB/GYN Office)

TIME PERIOD			PATIENT AUTO - PARKED GENERATED TRIPS		PATIENT AUTO - DISCHARGED GENERATED TRIPS		PATIENT TAXI / BLACK CAR GENERATED TRIPS		PATIENT AMBULETTE GENERATED TRIPS		PATIENT SUBWAY GENERATED TRIPS		PATIENT BUS GENERATED TRIPS		PATIENT WALK GENERATED TRIPS		PATIENT TOTAL GENERATED TRIPS	
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	–	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	–	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	–	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	–	12:00 PM	4	0	8	0	2	0	2	0	0	0	4	0	6	0	27	0
12:00 PM	–	1:00 PM	23	2	6	6	6	2	0	2	2	0	0	4	6	2	44	19
1:00 PM	–	2:00 PM	6	15	2	8	0	6	0	0	0	2	2	0	4	8	15	40
2:00 PM	–	3:00 PM	0	17	0	2	0	0	0	0	0	0	0	0	0	6	0	25
3:00 PM	–	4:00 PM	13	0	4	0	0	0	0	0	0	0	0	2	11	0	27	2
4:00 PM	–	5:00 PM	11	8	6	4	2	0	0	0	2	0	2	0	2	2	25	15
5:00 PM	–	6:00 PM	19	11	15	4	4	2	0	0	4	2	0	2	6	11	48	32
6:00 PM	–	7:00 PM	8	13	2	11	0	4	0	0	0	2	0	0	0	4	11	34
7:00 PM	–	8:00 PM	0	17	0	6	0	0	0	0	0	2	0	0	0	2	0	27
8:00 PM	–	9:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	4
9:00 PM	–	10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	–	11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			84	84	44	44	15	15	2	2	8	8	8	8	36	36	198	198

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 3E
Staff Person Trip Accumulation (OB/GYN Office)

TIME PERIOD			STAFF AUTO - PARKED GENERATED TRIPS		STAFF AUTO - DISCHARGED GENERATED TRIPS		STAFF TAXI / BLACK CAR GENERATED TRIPS		STAFF AMBULETTE GENERATED TRIPS		STAFF SUBWAY GENERATED TRIPS		STAFF BUS GENERATED TRIPS		STAFF WALK GENERATED TRIPS		STAFF TOTAL GENERATED TRIPS	
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00 AM	–	9:00 AM	7	0	4	0	0	0	0	0	0	0	0	0	0	0	11	0
9:00 AM	–	10:00 AM	9	0	3	0	1	0	0	0	3	0	7	0	7	0	29	0
10:00 AM	–	11:00 AM	3	0	1	0	0	0	0	0	1	0	1	0	0	0	7	0
11:00 AM	–	12:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:00 PM	–	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	–	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	–	3:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1
3:00 PM	–	4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	–	5:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	–	6:00 PM	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	4
6:00 PM	–	7:00 PM	0	7	0	0	0	0	0	0	0	0	0	4	0	1	0	12
7:00 PM	–	8:00 PM	0	9	0	3	0	1	0	0	0	4	0	4	0	4	0	25
8:00 PM	–	9:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	3
9:00 PM	–	10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:00 PM	–	11:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			21	21	8	8	3	3	0	0	4	4	8	8	7	7	50	50

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 3F
Total (Patient & Staff) Person Trip Accumulation (OB/GYN Office)

TIME PERIOD			PATIENT AND STAFF AUTO - PARKED GENERATED TRIPS		PATIENT AND STAFF AUTO - DISCHARGED GENERATED TRIPS		PATIENT AND STAFF TAXI / BLACK CAR GENERATED TRIPS		PATIENT AND STAFF AMBULETTE GENERATED TRIPS		PATIENT AND STAFF SUBWAY GENERATED TRIPS		PATIENT AND STAFF BUS GENERATED TRIPS		PATIENT AND STAFF WALK GENERATED TRIPS		PATIENT AND STAFF TOTAL GENERATED TRIPS		24-HR PERSON TRIP ACCUMULATION (ALL TRIPS)	
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Hourly Entries	Accumulation
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:00 AM	–	9:00 AM	7	0	4	0	0	0	0	0	0	0	0	0	0	0	11	0	11	12
9:00 AM	–	10:00 AM	9	0	3	0	1	0	0	0	3	0	7	0	7	0	29	0	29	41
10:00 AM	–	11:00 AM	3	0	1	0	0	0	0	0	1	0	1	0	0	0	7	0	7	47
11:00 AM	–	12:00 PM	6	0	8	0	2	0	2	0	0	0	4	0	6	0	29	0	29	76
12:00 PM	–	1:00 PM	23	2	6	6	6	2	0	2	2	0	0	4	6	2	44	19	25	101
1:00 PM	–	2:00 PM	6	15	2	8	0	6	0	0	0	2	2	0	4	8	15	40	-25	76
2:00 PM	–	3:00 PM	0	18	0	2	1	0	0	0	0	0	0	0	0	6	1	27	-25	51
3:00 PM	–	4:00 PM	13	1	4	0	0	0	0	0	0	0	0	2	11	0	27	3	24	75
4:00 PM	–	5:00 PM	11	8	6	6	2	0	0	0	2	0	2	0	2	2	25	16	9	84
5:00 PM	–	6:00 PM	19	12	15	7	4	2	0	0	4	2	0	2	6	11	48	36	13	97
6:00 PM	–	7:00 PM	8	19	2	11	0	4	0	0	0	2	0	4	0	6	11	46	-35	62
7:00 PM	–	8:00 PM	0	26	0	9	0	1	0	0	0	6	0	4	0	6	0	52	-52	9
8:00 PM	–	9:00 PM	0	2	0	3	0	0	0	0	0	0	0	0	0	1	0	7	-7	3
9:00 PM	–	10:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-1	1
10:00 PM	–	11:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	-1	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			105	105	52	52	17	17	2	2	12	12	16	16	42	42	248	248		

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Tables 4A and 4B present a summary of the person trips made by patients and staff by mode during the AM (9-10 AM), Midday (12-1 PM), and PM (5-6 PM) peak hours and for the 24-hour period:

- During the 9-10 AM Peak hour, a total of 74 trips were made at the surveyed facilities (over 85 percent of these trips were entering the facilities). Approximately 55 percent of these trips were made by staff arriving at work.
- During the 12-1 PM midday peak hour, a total of 104 person trips were made, all by patients.
- During the 5-6 PM evening peak hour, 126 trips were made, approximately 75 percent by patients.
- Through the course of a 24-hour period, 962 trips were made, with approximately 82 percent made by patients.

Table 4A
April 21, 2010 Survey, Cardiology Office Person Trips

Existing	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Subway		Bus		Walk		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	11	0	3	1	0	3	2	1	0	0	5	3	1	1	22	10
Staff	AM	6	0	1	0	0	0	0	0	3	0	3	0	0	0	13	0
Total	AM	17	0	4	1	0	3	2	1	3	0	8	3	1	1	35	10
Patient	MD	5	8	2	5	0	0	8	4	0	0	3	2	2	1	20	21
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	MD	5	8	2	5	0	0	8	4	0	0	3	2	2	1	20	21
Patient	PM	1	2	2	0	0	1	0	0	0	0	6	2	0	2	9	7
Staff	PM	0	11	0	1	0	0	0	0	0	8	0	5	0	1	0	26
Total	PM	1	13	2	1	0	1	0	0	0	8	6	7	0	3	9	33
Patient	24 HOUR	55	55	31	31	13	13	32	32	6	6	38	38	20	20	194	194
Staff	24 HOUR	19	19	2	2	0	0	0	0	10	10	5	5	3	3	39	39
Total	24 HOUR	74	74	33	33	13	13	32	32	16	16	43	43	23	23	233	233

Note: Numbers may not directly add up due to rounding.

Table 4B
April 21, 2010 Survey, OB/GYN Office Person Trips

Existing	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Subway		Bus		Walk		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	AM	9	0	3	0	1	0	0	0	3	0	7	0	7	0	29	0
Total	AM	9	0	3	0	1	0	0	0	3	0	7	0	7	0	29	0
Patient	MD	23	2	6	6	6	2	0	2	2	0	0	4	6	2	44	19
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	MD	23	2	6	6	6	2	0	2	2	0	0	4	6	2	44	19
Patient	PM	19	11	15	4	4	2	0	0	4	2	0	2	6	11	48	32
Staff	PM	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	4
Total	PM	19	12	15	7	4	2	0	0	4	2	0	2	6	11	48	36
Patient	24 HOUR	84	84	44	44	15	15	2	2	8	8	8	8	36	36	198	198
Staff	24 HOUR	21	21	8	8	3	3	0	0	4	4	8	8	7	7	50	50
Total	24 HOUR	105	105	52	52	17	17	2	2	12	12	16	16	42	42	248	248

Note: Numbers may not directly add up due to rounding.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Tables 5A and 5B show the number of person trips generated per 1,000 square feet (ksf) by the medical facilities surveyed (27,400 square feet in all) for all modes and for auto based modes.

Table 5A
April 21, 2010 Survey, Cardiology Office Trips and Trip Generation Rate

Period	Total Person Trips	Trips per ksf	Auto Trips	Trips per ksf
AM	44	2.4	29	1.6
MD	41	2.2	32	1.7
PM	42	2.3	19	1.0
24 HOUR	466	25.5	303	16.5
STAFF AND PATIENT TRIP GENERATION RATES				
Period	Total Person Trips	Trips per ksf	Auto Trips	Trips per ksf
PATIENT	388	21.2	261	14.2
STAFF	78	4.3	42	2.3

Table 5B
April 21, 2010 Survey, OB/GYN Office Trips and Trip Generation Rate

Period	Total Person Trips	Trips per ksf	Auto Trips	Trips per ksf
AM	29	3.2	13	1.4
MD	63	6.9	48	5.3
PM	84	9.2	59	6.5
24 HOUR	496	54.5	354	38.9
STAFF AND PATIENT TRIP GENERATION RATES				
Period	Total Person Trips	Trips per ksf	Auto Trips	Trips per ksf
PATIENT	396	43.5	291	31.9
STAFF	100	11.0	63	6.9

Mode Split

The mode split distribution for patients and staff is presented in Tables 6A and 6B. For all surveyed offices, approximately 55 percent of patients arrived by auto and either parked their cars or were dropped-off in front of the facility. Approximately 15 percent used taxis, black cars, or ambulette services, for a total of approximately 70 percent arriving by some form of auto transport. Walk, bus, and subway trips accounted for the remaining percentage of patient trips.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 6A
April 21, 2010 Survey, Patient Mode Split (Cardiology Offices)

Patients (Raw #'s)	AM		MD		PM		24 HOUR TOTAL	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Auto	14	1	7	13	3	2	85	85
Parked	*11*	*0*	*5*	*8*	*1*	*2*	*55*	*55*
Discharged	*3*	*1*	*2*	*5*	*2*	*0*	*31*	*31*
Taxi/ Black Car	0	3	0	0	0	1	13	13
Ambulette	2	1	8	4	0	0	32	32
Subway	0	0	0	0	0	0	6	6
Bus	5	3	3	2	6	2	38	38
Walk	1	1	2	1	0	2	20	20
Total	22	10	20	21	9	7	194	194

% Distribution	AM		MD		PM		24 HOUR TOTAL	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Auto	65%	-	34%	63%	37%	31%	44%	44%
Parked	*77%*	-	*67%*	*59%*	*33%*	*100%*	*64%*	*64%*
Discharged	*23%*	-	*33%*	*41%*	*67%*	*0%*	*36%*	*36%*
Taxi/ Black Car	0%	-	0%	0%	0%	16%	6%	6%
Ambulette	10%	-	39%	21%	0%	0%	17%	17%
Subway	0%	-	0%	0%	0%	0%	3%	3%
Bus	21%	-	17%	11%	63%	31%	19%	19%
Walk	5%	-	11%	5%	0%	22%	10%	10%

Note: Numbers may not directly add up due to rounding.

Table 6B
April 21, 2010 Survey, Patient Mode Split (OB/GYN Office)

Patients (Raw #'s)	AM		MD		PM		24 HOUR TOTAL	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Auto	0	0	29	8	34	15	128	128
Parked	*0*	*0*	*23*	*2*	*19*	*11*	*84*	*84*
Discharged	*0*	*0*	*6*	*6*	*15*	*4*	*44*	*44*
Taxi/ Black Car	0	0	6	2	4	2	15	15
Ambulette	0	0	0	2	0	0	2	2
Subway	0	0	2	0	4	2	8	8
Bus	0	0	0	4	0	2	8	8
Walk	0	0	6	2	6	11	36	36
Total	0	0	44	19	48	32	198	198

% Distribution	AM		MD		PM		24 HOUR TOTAL	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Auto	-	-	67%	44%	70%	47%	65%	65%
Parked	-	-	*79%*	*25%*	*56%*	*71%*	*66%*	*66%*
Discharged	-	-	*21%*	*75%*	*44%*	*29%*	*34%*	*34%*
Taxi/ Black Car	-	-	14%	11%	9%	7%	7%	7%
Ambulette	-	-	0%	11%	0%	0%	1%	1%
Subway	-	-	5%	0%	9%	7%	4%	4%
Bus	-	-	0%	22%	0%	7%	4%	4%
Walk	-	-	14%	11%	13%	33%	18%	18%

Note: Numbers may not directly add up due to rounding.

The mode split distribution for staff is presented in Tables 7A and 7B. For all surveyed offices, over 50 percent of staff trips were made by auto with staff either parking their vehicles or being dropped-off at the medical facility. Mass transit (bus or subway) accounts for over 25 percent of staff trips at all medical facilities.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 7A
April 21, 2010 Survey, Staff Mode Split (Cardiology Offices)

Staff (Raw #'s)	AM		MD		PM		24 HOUR TOTAL	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Auto	7	0	0	0	0	12	21	21
Parked	*6*	*0*	*0*	*0*	*0*	*11*	*19*	*19*
Discharged	*1*	*0*	*0*	*0*	*0*	*1*	*2*	*2*
Taxi/ Black Car	0	0	0	0	0	0	0	0
Ambulette	0	0	0	0	0	0	0	0
Subway	3	0	0	0	0	8	10	10
Bus	3	0	0	0	0	5	5	5
Walk	0	0	0	0	0	1	3	3
Total	13	0	0	0	0	26	39	39

% Distribution	AM		MD		PM		24 HOUR TOTAL	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Auto	54%	-	-	-	-	46%	54%	54%
Parked	*46%*	-	-	-	-	*42%*	*49%*	*49%*
Discharged	*8%*	-	-	-	-	*4%*	*5%*	*5%*
Taxi/ Black Car	0%	-	-	-	-	0%	0%	0%
Ambulette	0%	-	-	-	-	0%	0%	0%
Subway	23%	-	-	-	-	31%	26%	26%
Bus	23%	-	-	-	-	19%	13%	13%
Walk	0%	-	-	-	-	4%	8%	8%

Note: Numbers may not directly add up due to rounding.

Table 7B
April 21, 2010 Survey, Staff Mode Split (OB/GYN Office)

Staff (Raw #'s)	AM		MD		PM		24 HOUR TOTAL	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Auto	12	0	0	0	0	4	29	29
Parked	*9*	*0*	*0*	*0*	*0*	*1*	*21*	*21*
Discharged	*3*	*0*	*0*	*0*	*0*	*3*	*8*	*8*
Taxi/ Black Car	1	0	0	0	0	0	3	3
Ambulette	0	0	0	0	0	0	0	0
Subway	3	0	0	0	0	0	4	4
Bus	7	0	0	0	0	0	8	8
Walk	7	0	0	0	0	0	7	7
Total	29	0	0	0	0	4	50	50

% Distribution	AM		MD		PM		24 HOUR TOTAL	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Auto	41%	-	-	-	-	100%	58%	58%
Discharged	*32%*	-	-	-	-	*33%*	*42%*	*42%*
Parked	*9%*	-	-	-	-	*67%*	*16%*	*16%*
Taxi/ Black Car	5%	-	-	-	-	0%	5%	5%
Ambulette	0%	-	-	-	-	0%	0%	0%
Subway	9%	-	-	-	-	0%	8%	8%
Bus	23%	-	-	-	-	0%	16%	16%
Walk	23%	-	-	-	-	0%	13%	13%

Note: Numbers may not directly add up due to rounding.

Temporal Distribution

Tables 8A and 8B present temporal distribution data for the cardiology and OB/GYN facilities. For all facilities, staff entries are concentrated during the AM peak hour, and exits during the PM peak hour. No staff entries or exits were recorded during the midday peak hour. Few patient entries were recorded during the AM peak hour and approximately 10 percent of patient exits occur during the MD and PM peak hours.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 8A
April 21, 2010 Survey, Temporal Distribution (Cardiology Offices)

Existing	Peak Hour	Total		% of Day	
		In	Out	In	Out
Patient	AM	22	10	11%	5%
Staff	AM	13	0	33%	0%
Total	AM	35	10	15%	4%
Patient	MD	20	21	10%	11%
Staff	MD	0	0	0%	0%
Total	MD	20	21	9%	9%
Patient	PM	9	7	5%	4%
Staff	PM	0	26	0%	67%
Total	PM	9	33	4%	14%
Patient	24 HOUR	194	194	100%	100%
Staff	24 HOUR	39	39	100%	100%
Total	24 HOUR	233	233	100%	100%

Table 8B
April 21, 2010 Survey, Temporal Distribution (OB/GYN Office)

Existing	Peak Hour	Total		% of Day	
		In	Out	In	Out
Patient	AM	0	0	0%	0%
Staff	AM	29	0	58%	0%
Total	AM	29	0	12%	0%
Patient	MD	44	19	22%	10%
Staff	MD	0	0	0%	0%
Total	MD	44	19	18%	8%
Patient	PM	48	32	24%	16%
Staff	PM	0	4	0%	8%
Total	PM	48	36	20%	14%
Patient	24 HOUR	198	198	100%	100%
Staff	24 HOUR	50	50	100%	100%
Total	24 HOUR	248	248	100%	100%

Distribution of Auto Based Trips

Auto based trips are summarized in Tables 9A and 9B. These data found that, for all surveyed facilities, approximately half of daily auto based patient trips self-park. Drop-off trips account for approximately 25 percent of trips. The remaining 25 percent of daily patient trips are made via taxi and ambulette. The majority of staff auto trips are self-parked, with a small percentage of staff trips are drop-off trips.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 9A
April 21, 2010 Survey, Cardiology Office Auto Trips

Trips	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Total Auto	
		In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	11	0	3	1	0	3	2	1	16	5
	MD	5	8	2	5	0	0	8	4	14	17
	PM	1	2	2	0	0	1	0	0	3	3
	24 HOUR	55	55	31	31	13	13	32	32	130	130
Staff	AM	6	0	1	0	0	0	0	0	7	0
	MD	0	0	0	0	0	0	0	0	0	0
	PM	0	11	0	1	0	0	0	0	0	12
	24 HOUR	19	19	2	2	0	0	0	0	21	21

% Distribution	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Total Auto	
		In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	66%	-	20%	-	0%	-	14%	-	100%	-
	MD	31%	45%	15%	31%	0%	0%	54%	25%	100%	100%
	PM	33%	66%	67%	0%	0%	34%	0%	0%	100%	100%
	24 HOUR	42%	42%	24%	24%	10%	10%	25%	25%	100%	100%
Staff	AM	86%	-	14%	-	0%	-	0%	-	100%	-
	MD	-	-	-	-	-	-	-	-	-	-
	PM	-	92%	-	8%	-	0%	-	0%	-	100%
	24 HOUR	90%	90%	10%	10%	0%	0%	0%	0%	100%	100%

Note: Numbers may not directly add up due to rounding.

Table 9B
April 21, 2010 Survey, OB/GYN Office Auto Trips

Trips	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Total Auto	
		In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	0	0	0	0	0	0	0	0	0	0
	MD	23	2	6	6	6	2	0	2	36	13
	PM	19	11	15	4	4	2	0	0	38	17
	24 HOUR	84	84	44	44	15	15	2	2	145	145
Staff	AM	9	0	3	0	1	0	0	0	13	0
	MD	0	0	0	0	0	0	0	0	0	0
	PM	0	1	0	3	0	0	0	0	0	4
	24 HOUR	21	21	8	8	3	3	0	0	32	32

% Distribution	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Total Auto	
		In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	-	-	-	-	-	-	-	-	-	-
	MD	65%	17%	18%	50%	18%	17%	0%	17%	100%	100%
	PM	50%	63%	39%	25%	11%	13%	0%	0%	100%	100%
	24 HOUR	58%	58%	30%	30%	10%	10%	1%	1%	100%	100%
Staff	AM	70%	-	20%	-	10%	-	0%	-	100%	-
	MD	-	-	-	-	-	-	-	-	-	-
	PM	-	33%	-	67%	-	0%	-	0%	-	100%
	24 HOUR	67%	67%	25%	25%	8%	8%	0%	0%	100%	100%

Note: Numbers may not directly add up due to rounding.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Trip Origins

To identify likely trip distribution and assignment patterns, the interview surveys recorded data on patient and staff origins at each of the cardiology offices. For trips made by auto modes (self-park, drop-off, taxi/black car, and ambulette), 231 records on patient and staff origins (address, neighborhood, zip code) were collected, 172 from patients and 59 from staff. These data reflect a sufficient sample for auto trip origin and destination purposes. Tables 10A and 10B summarize the origins of patient and staff trips that traveled by an automobile mode to any of the surveyed medical facilities. Generally, both patient and staff data found that the heaviest concentrations of origins are from southern Brooklyn, Staten Island, Queens and Manhattan.

Table 10A
Trip Origins, Patients Traveling by Auto

Patient	Number of Trips	% of Trips
Outside NYC, Manhattan, Bronx, Queens	17	10%
Northeast (Grand Army Plaza, Kensington, Park Slope, East New York)	22	13%
West (via Belt Parkway and Brooklyn-Queens Expressway)	22	13%
South (Dyker Heights)	6	3%
Southwest (Ft Hamilton, North Bay Ridge)	35	20%
Staten Island and South Bay Ridge	9	5%
East (Borough Park, New Utrecht, Midwood, Flatlands)	37	22%
Southeast (Coney Island, Sheepshead Bay, Gravesend, Bensonhurst)	24	14%
Total	172	100%

Table 10B
Trip Origins, Staff Traveling by Auto

Staff	Number of Trips	% of Trips
Outside NYC, Manhattan, Bronx, Queens	5	8%
Northeast (Grand Army Plaza, Kensington, Park Slope, East New York)	4	7%
West (via Belt Parkway and Brooklyn-Queens Expressway)	8	14%
South (Dyker Heights)	4	7%
Southwest (Ft Hamilton, North Bay Ridge)	6	10%
Staten Island and South Bay Ridge	17	29%
East (Borough Park, New Utrecht, Midwood, Flatlands)	5	8%
Southeast (Coney Island, Sheepshead Bay, Gravesend, Bensonhurst)	10	17%
Total	59	100%

Mode Split and Vehicle Occupancy Data

Mode split choices for both future conditions are assumed to be the same as the modes surveyed in April 2010 and presented earlier in this memo. Vehicle occupancy data, illustrated in Table 11, is based on medical office rates for staff and visitor auto and taxi rates presented in the *Jamaica Plan FEIS, June 2007*. Vehicle occupancy for patient drop-off and ambulette trips are assumed equal to that of patient taxi trips. While staff taxi trips would have a vehicle occupancy factor of 1.40, staff drop-off trips are more conservatively assumed to have the same 1.20 factor as patient drop-off trips.

Table 11
No Action and Action Auto Vehicle Occupancy, Medical Facility

Patient

Period	Self Park	Dropoff	Taxi	Ambulette
AM	1.65	1.20	1.20	1.20
MD	1.65	1.20	1.20	1.20
PM	1.65	1.20	1.20	1.20
24-Hour	1.65	1.20	1.20	1.20

Staff

Period	Self Park	Dropoff	Taxi	Ambulette
AM	1.00	1.20	1.40	-
MD	1.00	1.20	1.40	-
PM	1.00	1.20	1.40	-
24-Hour	1.00	1.20	1.40	-

FUTURE WITHOUT AND WITH THE PROPOSED PROJECT – TRAVEL CHARACTERISTICS

As previously mentioned in Table 2, the future without the proposed project would result in the construction of an as-of-right building consisting of 27,165 GSF of community facility space and 5,614 GSF of local retail. The future with the proposed project involves the construction of a rezoned building consisting of 57,890 GSF of community facility space and 5,614 GSF of local retail. Both buildings would include a below grade off-street parking facility with capacities of 82 vehicles and 150 vehicles in the No Action and Action conditions, respectively. It should be noted that there is no incremental change to the proposed local retail space between both No Action and Action conditions. For analysis purposes, the future year No Action and Action analyses is assumed to be 2016.

Table 12 presents a summary of the transportation planning assumptions to be used for the analysis of the proposed project under both the No Action and Action conditions. The No Action and Action medical facility transportation planning assumptions are based on all of the survey data collected and summarized earlier in this memo. Assumptions for the No Action local retail component of the project are consistent with assumptions stated in previously approved Final Environmental Impact Statement (FEIS) documents and were also supplemented by data from the 2007-2011 American Community Survey and the 2000 U.S. Census. The local retail development assumptions, which are outlined later in this memo, were approved by NYCDCP in August 2013 as part of the review of No Action Development Travel Demand Factors.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 12
Transportation Planning Assumptions

Land Use	Medical Facility Cardiology Office				Medical Facility OB/GYN Office				Local Retail per 1000 SF	
Future Land Use										
	TRIPS per 1000 GSF (1)				**TRIPS per 1000 GSF** (1)				(4)	
Trip Generation	**STAFF**		**PATIENTS**		**STAFF**		**PATIENTS**		**Weekday**	
Daily Person Trips	4.3		21.2		11.0		43.5		205	
Net Daily Person Trips	4.3		21.2		11.0		43.5		205	
	(1)		(1)		(1)		(1)		(4)	
Temporal Distribution	**STAFF**		**PATIENTS**		**STAFF**		**PATIENTS**		**ALL**	
AM (9 AM - 10 AM)	16.7%		8.1%		28.9%		0.0%		3.0%	
MD (12 PM - 1 PM)	0.0%		10.5%		0.0%		16.0%		19.0%	
PM (5 PM - 6 PM)	33.3%		4.1%		3.9%		20.2%		10.0%	
	(1)		(1)		(1)		(1)		(5)	
In / Out Directional Split	**STAFF**		**PATIENTS**		**STAFF**		**PATIENTS**		**ALL**	
	In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
AM (9 AM - 10 AM)	100%	0%	77%	23%	100%	0%	-	-	50%	50%
MD (12 PM - 1 PM)	-	-	44%	56%	-	-	73%	27%	50%	50%
PM (5 PM - 6 PM)	0%	100%	57%	43%	0%	100%	64%	36%	50%	50%
	(1)				(1)				(5)	
Modal Split	**STAFF**				**STAFF**				**ALL**	
Mode	**AM**	**MD**	**PM**	**ALL**	**AM**	**MD**	**PM**	**ALL**		
Auto (All)	-	-	-	-	-	-	-	-	2.0%	
Auto Self Park	46%	-	42%	49%	32%	-	33%	42%	-	
Auto Drop Off	8%	-	4%	5%	9%	-	67%	16%	-	
Taxi / Black Car	0%	-	0%	0%	5%	-	0%	5%	3.0%	
Ambulette	0%	-	0%	0%	0%	-	0%	0%	-	
Subway	23%	-	31%	26%	9%	-	0%	8%	6.0%	
Bus	23%	-	19%	13%	23%	-	0%	16%	5.0%	
Walk	0%	-	4%	8%	23%	-	0%	13%	84.0%	
	100%	-	100%	100%	100%	-	100%	100%	100%	
	(1)				(1)					
Mode	**PATIENTS**				**PATIENTS**					
	AM	**MD**	**PM**	**ALL**	**AM**	**MD**	**PM**	**ALL**		
Auto Self Park	35%	30%	21%	28%	-	40%	37%	43%		
Auto Drop Off	14%	19%	14%	16%	-	20%	24%	22%		
Taxi / Black Car	10%	0%	7%	6%	-	13%	8%	7%		
Ambulette	10%	30%	0%	17%	-	3%	0%	1%		
Subway	0%	0%	0%	3%	-	3%	8%	4%		
Bus	24%	14%	48%	19%	-	7%	3%	4%		
Walk	7%	8%	10%	10%	-	13%	21%	18%		
	100%	100%	100%	100%	0%	100%	100%	100%		
	(2)				(2)				(5)	
Vehicle Occupancy	**STAFF**		**PATIENTS**		**STAFF**		**PATIENTS**		**ALL**	
Auto (All)	-		-		-		-		2.00	
Auto Self-Park	1.00		1.65		1.00		1.65		-	
Auto Drop-off	1.20		1.20		1.20		1.20		-	
Taxi and Ambulette	1.40		1.20		1.40		1.20		2.00	
Truck Trip Generation										
	(1) (3)				(1) (3)				(4)	
	Weekday				**Weekday**				**Weekday**	
Daily Vehicle Trips	0.0				0.0				0.35	
Temporal Distribution	(1)				(1)				(4)	
AM (9 AM - 10 AM)	-				-				8.0%	
MD (12 PM - 1 PM)	-				-				11.0%	
PM (5 PM - 6 PM)	-				-				2.0%	
	(1)		(1)		(1)		(1)		(4)	
In / Out Directional Split	In		Out		In		Out		**In**	**Out**
	-		-		-		-		50%	50%

Sources:
(1) Stantec survey of medical facilities in vicinity of Study Area, April 2010.
(2) Medical office vehicle occupancy based on medical office vehicle occupancies, The Jamaica Plan FEIS, June 2007.
(3) No trucks were observed serving the surveyed medical facilities.
(4) New York City Environmental Quality Review (CEQR) Technical Manual, Table 16-2, 2014.
(5) Local Retail directional splits based on directional splits for local retail in the Rheingold Development Rezoning FEIS, 2013.
Local Retail modal split and vehicle occupancy based on local retail land use in the Rheingold Development Rezoning FEIS, 2013.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Trip Generation

Local Retail – No Action

The future without the Proposed Project (No Action) includes 5,614 GSF of local retail. The forecasts of weekday travel demand (person trip rate) and temporal distribution for a project's local retail component were obtained from the *2014 CEQR Technical Manual*. *W*eekday directional distributions, modal split, and vehicle occupancy were obtained from the *Rheingold Development Rezoning FEIS.* Local retail truck trip generation rates, temporal distributions and directional distributions were obtained from the *2014 CEQR Technical Manual*.

Medical Facility Trip Generation – No Action

Based upon discussions with the client, it is assumed that, for trip generation purposes, the proposed 27,165 GSF No Action medical facility will function as a cardiology facility, with the equivalent amount of square footage allocated for both patients and staff. Future No Action trips were developed by utilizing the previously calculated cardiology office transportation planning assumptions (summarized in Table 12) and the proposed 27,165 GSF allocated for No Action medical facility use.

Incremental No Action medical facility and local retail person trips are illustrated in Table 13. Incremental No Action medical facility and local retail vehicle trips are presented in Table 14. For the No Action program, the future No Action person trips are equivalent to the incremental No Action person trips since it is assumed that the existing site is vacant and unoccupied and would not be considered a traffic generator.

Table 13
Incremental No Action (as-of-right) Person Trips
27,165 GSF No Action Medical Facility with 5,614 GSF of Local Retail

No Action	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Subway		Bus		Walk		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	16	0	5	2	0	5	3	1	0	0	7	5	1	2	32	14
Staff	AM	9	0	1	0	0	0	0	0	4	0	4	0	0	0	19	0
Local Retail	AM	0	0			1	1	0	0	1	1	1	1	15	15	17	17
Total	AM	25	0	6	2	1	5	3	1	5	1	12	5	16	16	69	31
Patient	MD	7	12	3	8	0	0	12	6	0	0	5	3	3	2	30	31
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Retail	MD	2	2			3	3	0	0	7	7	5	5	92	92	109	109
Total	MD	9	14	3	8	3	3	12	6	7	7	10	9	95	93	139	140
Patient	PM	2	3	3	0	0	2	0	0	0	0	8	3	0	2	13	11
Staff	PM	0	16	0	1	0	0	0	0	0	12	0	7	0	1	0	39
Local Retail	PM	1	1			2	2	0	0	3	3	3	3	48	48	58	58
Total	PM	3	21	3	1	2	3	0	0	3	15	11	14	48	52	71	107
Patient	24 HOUR	81	81	45	45	19	19	48	48	10	10	56	56	29	29	288	288
Staff	24 HOUR	28	28	3	3	0	0	0	0	15	15	7	7	4	4	58	58
Local Retail	24 HOUR	23	23			35	35	0	0	69	69	58	58	967	967	1,151	1,151
Total	24 HOUR	132	132	48	48	53	53	48	48	93	93	121	121	1,000	1,000	1,497	1,497

Note: Numbers may not directly add up due to rounding.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 14
Incremental No Action (as-of-right) Vehicle Trips
27,165 GSF No Action Medical Facility with 5,614 GSF of Local Retail

No Action	Peak Hour	Auto Self park		Auto Dropoff		Balanced Auto Dropoff		Taxi/ Black Car & Ambulete		Balanced Taxi/ Black Car & Ambulete		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	10	0	4	1	4	4	3	5	5	5	19	9
Staff	AM	9	0	1	0	1	1	0	0	0	0	10	1
Local Retail	AM	0	0					0	0	0	0	0	0
Total	AM	19	0	5	1	5	5	3	5	5	5	29	11
Patient	MD	4	7	3	7	7	7	10	5	10	10	20	23
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0
Local Retail	MD	1	1					2	2	2	2	3	3
Total	MD	5	8	3	7	7	7	11	7	11	11	23	26
Patient	PM	1	2	3	0	3	3	0	1	1	1	5	6
Staff	PM	0	16	0	1	1	1	0	0	0	0	1	18
Local Retail	PM	1	1					1	1	1	1	2	2
Total	PM	2	19	3	1	4	4	1	2	2	2	8	26

Note: Numbers may not directly add up due to rounding. All local retail auto trips are assumed to use the off-street parking facility

Medical Facility Trip Generation – Action

Based upon the agreed building program (presented in Table 2 and provided to Stantec by the client), the proposed 57,890 GSF Action medical facility will be allocated to patients and staff as follows – a 42,280 GSF medical facility (both staff and patient use) and a 15,610 GSF Medical Laboratory (staff usage only); this results in a total of 42,280 GSF allocated towards patient use and 57,890 GSF allocated towards staff use. Trips were equally split between cardiology and OB/GYN trip rates for both patients and staff in order to reflect a hybrid medical facility (which reflects the multiple types of medical services that are expected to be provided at the proposed birthing center). Using the previously calculated cardiology and OB/GYN trip rates from Table 12 and the proposed medical facility GSF (21,140 GSF and 28,945 GSF for patient and staff cardiology trip use and 21,140 GSF and 28,945 GSF for patient and staff OB/GYN trip use, assuming the equal split between cardiology and OB/GYN trip uses), future Action trips were developed. Incremental Action medical facility person trips are illustrated in Table 15. Incremental Action medical facility vehicle trips are presented in Table 16.

Trip patterns for the cardiology and OB/GYN uses vary with OB/GYN patient arrivals occurring later in the day (no arrivals were surveyed during the AM peak hour) whereas cardiology patients arrive throughout the day (35 percent of patients arrived during the AM peak hour). The Action building program contains an equal mix of cardiology and OB/GYN whereas the No Action program contains only cardiology. This results in less overall square footage for cardiology for the Action program compared to the No Action program which in turn leads to a reduction in patient trips between the Action and No Action programs for certain time periods (as highlighted in Table 15 below). To be conservative, these trips were increased to zero in order to reflect no change in total trips with respect to the No Action condition.

It should also be noted that the combination of using cardiology trip generation rates in the No Action condition and an equal split between cardiology and OB/GYN trip generation rates in the Action condition is expected to provide a conservative estimate of the incremental traffic expected to be generated within the traffic study area, as the Proposed Project is, at most, expected to contain 50 percent OB/GYN medical uses, a use which generates more trips than cardiology.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 15
Incremental Action Person Trips
42,280 GSF Patient / 57,890 GSF Staff Action Medical Facility w/5,614 GSF of Local Retail

Action	Peak Hour	Auto Self park		Auto Dropoff		Taxi/ Black Car		Ambulette		Subway		Bus		Walk		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Staff	AM	30	0	8	0	4	0	0	0	9	0	21	0	21	0	93	0
Total	AM	30	0	8	0	4	0	0	0	9	0	21	0	21	0	93	0
Patient	MD	52	2	14	13	15	5	0	3	5	0	0	9	14	5	100	37
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	MD	52	2	14	13	15	5	0	3	5	0	0	9	14	5	100	37
Patient	PM	44	24	34	10	10	5	0	0	10	5	0	4	15	24	112	71
Staff	PM	0	5	0	8	0	0	0	0	0	1	0	0	0	0	0	15
Total	PM	44	29	34	18	10	5	0	0	10	6	0	5	15	24	112	86
Patient	24 HOUR	178	178	93	93	30	30	0	0	17	17	7	7	77	77	402	402
Staff	24 HOUR	69	69	25	25	8	8	0	0	14	14	26	26	21	21	163	163
Total	24 HOUR	247	247	118	118	38	38	0	0	31	31	33	33	98	98	565	565

Indicates negative trips which were increased to 0 in order to be conservative.

Note: Numbers may not directly add up due to rounding.

Table 16
Incremental Action Vehicle Trips
42,280 GSF Patient / 57,890 GSF Staff Action Medical Facility w/5,614 GSF of Local Retail

Action Vehicle Trips	Peak Hour	Auto Self park		Auto Dropoff		Balanced Auto Dropoff		Taxi/ Black Car & Ambulete		Balanced Taxi/ Black Car & Ambulete		Total	
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Patient	AM	0	0	0	0	0	0	0	0	0	0	0	0
Staff	AM	30	0	7	0	7	7	3	0	3	3	40	10
Total	AM	30	0	7	0	7	7	3	0	3	3	40	10
Patient	MD	32	1	12	11	12	12	13	7	13	13	56	26
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0
Total	MD	32	1	12	11	12	12	13	7	13	13	56	26
Patient	PM	26	14	28	8	28	28	8	4	8	8	63	50
Staff	PM	0	5	0	7	7	7	0	0	0	0	7	12
Total	PM	26	20	28	15	35	35	8	4	8	8	70	63

Note: Numbers may not directly add up due to rounding.

There were no truck trips at any of the existing medical facilities. No truck trips are projected for the proposed medical facility under both No Action and Action conditions.

Additionally, no truck trips are projected for the local retail component of the no action building.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Trip Distribution

Medical Facility – No Action and Action

As presented previously in Figure 2 and Tables 10A and 10B, origins of existing patients and staff surveyed at each of the medical facilities were used to determine the origins and destinations of future trips. The use of medical facility data resulted in a representative set of origins and destinations for the proposed project.

Trips are assumed to originate from these origins and are destined for the medical facility, and upon exit make the reverse trip back to their place of origin. Also, please note that taxi, ambulette, and auto drop-off trips will continue either into or out of the study area before or after a pickup or drop-off is made at the project site.

Trip Assignment

For both No Action and Action conditions, likely routes entering and leaving the proposed project were developed based on trip origins and destinations. The suggested routings were based on mapping software (e.g., Google Maps, MS Streets and Trips). Table 17 presents likely routes for vehicle trips entering the site based on their origin. Major approach routes as well as local streets directly serving the site are presented. To exit the site, trips are routed back to their origins using the same primary route.

Table 17
Vehicle Trip Assignment, Routes by Origin

Origin	Major Approach	Local Streets Direct to Site (Entry Self Park)
Outside NYC, Manhattan, Bronx, Queens	Brooklyn-Queens Expressway	54th Street west of site
Northeast (Crown Heights, East New York, Flatbush, Park Slope)	Eastern Parkway and 4th Avenue	4th Avenue, left turn at 54th Street
Northeast (Flatbush, Kensington)	Fort Hamilton Parkway	Fort Hamilton Parkway, right turn at 53rd Street, left turn at 9th Avenue, left turn at 54th Street
West (Bay Ridge)	4th and 5th Avenues	Left or right turn onto 54th Street
South (Dyker Heights)	11th Avenue	11th Avenue, left turn at 55th Street, Right turn at 9th Avenue, Right turn at 54th Street
Southwest (Ft Hamilton, Bay Ridge)	Fort Hamilton Parkway	Fort Hamilton Parkway, left turn at 55th Street, Right turn at 9th Avenue, Right turn at 54th Street
Staten Island	Verrazano Narrows Bridge	Fort Hamilton Parkway, left turn at 55th Street, Right turn at 9th Avenue, Right turn at 54th Street
East (Borough Park, Parkville, Midwood, Flatlands)	53rd Street	53rd Street, left turn at 9th Avenue, left turn at 54th Street
Southeast (New Utrecht, Bensonhurst, Gravesend)	60th and 65th Street, and 11th Avenue and Fort Hamilton Parkway	Approach via 60th or 65th Street, 50 percent turn right onto 11th Avenue, 50 percent turn right onto Fort Hamilton Parkway, left turn at 55th Street, right turn at 9th Avenue, Right turn at 54th Street
Southeast (Coney Island, Sheepshead Bay, Bergen Beach)	Shore / Belt Parkway	Exit at 65th Street, left turn at 4th Avenue, Right turn onto 60th Street, left turn at 9th Avenue, right turn on 54th Street

The primary east-west routes near the study area that are expected to be used by site generated vehicle trips are 52nd street (one way eastbound), 53rd Street (one way westbound), 60th Street (eastbound and westbound), 65th Street (eastbound and westbound), and 54th Street (serves the proposed site's parking garage).

The principal north-south routes near the study area that would serve site generated traffic are Fort Hamilton Parkway, 11th Avenue to the east, and 9th Avenue to the west, all two-way streets.

The Shore/Belt Parkway, Verrazano Narrows Bridge, Brooklyn-Queens Expressway, and Eastern Parkway are expected to be used by longer distance vehicle trips. These trips would primarily use the local east-west and north-south routes listed above to access the facility.

Patient trips would be heavily served by the east-west 52nd and 53rd, 60th, and 65th Streets to the east, reflecting the concentration of patient residences to the east and southeast of the site.

The principal difference between patient and staff trips is the heavy concentration of staff trips coming from and returning to Staten Island via the Verrazano Narrows Bridge, and therefore accessing the site via Fort Hamilton Parkway to the south. No staff trips are expected to use Fort Hamilton Parkway north of the site or 52nd and 53rd Street east of the site.

Self-parked auto trips are expected to use the sub-cellar parking garage and would all need to enter and exit via 54th Street eastbound. Drop-off trips, including taxi, black car, and ambulette trips would drop patients and staff directly in front of the facility on Fort Hamilton Parkway's west sidewalk. These drop-off vehicles would exit the network via the same primary routes they entered the study area network without making any additional pick-ups. To serve outbound trips, pick-up trips would enter the study area network from the same locations and routes to pick-up patients or staff, and exit to the same locations via the same routes. That is, pick-up and drop-off trips would enter and leave the study area via the same primary routes.

No Action and Action site generated vehicle trips for the AM, Midday, and PM peak hours follow this technical memo. It should be noted that the numbers illustrated in the incremental trip diagrams may be slightly different from the values presented in Tables 14 and 16 due to rounding. The screening analysis found that the site-generated incremental trip threshold of 50 vehicles would be exceeded by one intersection during the weekday midday peak hour and five intersections during the weekday PM peak hour. None of the five intersections would exceed the 50 vehicle trip threshold during the weekday AM peak hour; however, it is proposed that these intersections would be analyzed during the AM peak hour.

Parking

It is expected that patients and staff of the proposed medical facility that arrive to the site by automobile and normally park their cars will park in the off-street automated sub-cellar parking garage. A review of the first floor site plan for the Proposed Project shows that a total of 2,900 SF is allocated for parking use. Discussions with the client confirmed that a general area of 100 feet of space by 20 feet wide will be allocated as reservoir space for inbound motorists waiting to park their vehicles using the single elevator automated parking facility (it should be noted that the space is wide enough to accommodate vehicles simultaneously entering and leaving the automated parking facility). Using the 2014 CEQR Technical Manual recommended length of 20 feet for a parking space[2], it is projected that up to five vehicles will be able to queue inside of the building without blocking either pedestrian or vehicular traffic on 54th Street. Although an operator has yet to be selected, automated parking systems generally vary on both the design and the clients specifications (for instance, similar systems being explored at another, unrelated site can process vehicles every 90 seconds). It is anticipated that the system will be designed to accommodate the necessary demand generated by the Proposed Project without causing an impact to traffic on 54th Street.

[2] Section 382.1 of the 2014 CEQR Technical Manual.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Future parking demand was developed using the data obtained from the April 2010 survey data of self-parked vehicle entries and exits at each of the surveyed sites and the No Action and Action trip generation methodology previously described in this memo. Tables 18A, 18B and 18C respectively illustrate the No Action, Incremental Action and Action Condition parking demand at the proposed off-street automated parking facility[3]. It is projected that parking accumulation under both the No Action (as-of-right) Project and the Proposed Project will be below the allotted capacity throughout a typical weekday.

It is proposed that a portion of existing on-street parking regulations (approximately 50 feet in length and as close as possible to the entrance to the Proposed Project) on the west side of Fort Hamilton Parkway from 54th Street to 55th Street be revised from the existing "No Parking 8:30- 10 AM Monday" to "No Standing 7AM-7PM Monday to Friday except Authorized Vehicles, Ambulettes". This change is projected to result in the loss of two on-street parking spaces but will ensure that ambulettes will not impede traffic flow along Fort Hamilton Parkway. Additionally, it is proposed that "No Standing Anytime" signage be posted approximately 20 feet west and east of the access to the proposed below grade automated off-street parking facility (on 54th Street, west of Fort Hamilton Parkway). This modification is projected to result in the loss of two (2) on-street parking spaces but will ensure acceptable ingress and egress to the off-street parking facility. In total, existing on-street parking resources are projected to be reduced by a maximum of four vehicles during any peak hour (there is available capacity within the off-street parking facility to handle projected peak hour local retail vehicle trips).

Although on-street parking within the study area is mostly comprised of alternate side parking regulations and June 2011 field observations indicated a sufficient amount on-street parking supply within the study area during the each of the peak periods, a parking survey was performed in July 2014 to verify that on-street parking conditions have not changed. Both the June 2011 field observations and July 2014 parking survey indicate that there is sufficient on-street parking inventory to accommodate the loss of two on-street parking spaces and, therefore, no further analysis of on-street parking is proposed. Tables summarizing the July 2014 parking survey follow this technical memo.

[3] As previously mentioned, trip patterns for the cardiology and OB/GYN uses vary with OB/GYN patient arrivals occurring later in the day (no arrivals were surveyed during the AM peak hour) whereas cardiology patients arrive throughout the day (35 percent of patients arrived during the AM peak hour). The Action building program contains an equal mix of cardiology and OB/GYN whereas the No Action program contains only cardiology. This results in less overall square footage for cardiology for the Action program compared to the No Action program which in turn leads to a reduction in patient trips between the Action and No Action programs for certain time periods (as highlighted in Table 18B).

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 18A
No Action (as-of-right) Parking Accumulation Table
27,165 GSF No Action Medical Facility with 5,614 GSF of Local Retail

TIME PERIOD			STAFF AUTO-PARKED VEHICLE TRIPS				PATIENT AUTO-PARKED VEHICLE TRIPS				5,614 GSF LOCAL RETAIL AUTO-PARKED VEHICLE TRIPS[1]										TOTAL VEHICLE TRIPS		PARKING ACCUMULATION
			CARDIO		OBGYN		CARDIO		OBGYN		DAILY PERSON TRIPS	TEMP. DIST.	MODAL SPLIT (AUTO)	AUTO PERSON TRIPS	VEHICLE OCC.	AUTO VEHICLE TRIPS	% IN	%OUT	IN VEHICLE TRIPS	OUT VEHICLE TRIPS			
			In	Out	In	Out	In	Out	In	Out											In	Out	
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
7:00 AM	–	8:00 AM	1	0	0	0	0	0	0	0		0.0%		0		0			0	0	1	0	1
8:00 AM	–	9:00 AM	16	0	0	0	0	0	0	0		3.1%		1		0			0	0	17	0	18
9:00 AM	–	10:00 AM	9	0	0	0	10	0	0	0		3.0%		1		0			0	0	19	0	36
10:00 AM	–	11:00 AM	0	0	0	0	8	7	0	0		4.1%		1		0			0	0	8	7	38
11:00 AM	–	12:00 PM	1	0	0	0	4	7	0	0		7.2%		2		1			0	0	6	7	36
12:00 PM	–	1:00 PM	0	0	0	0	4	7	0	0	205	19.0%	2.0%	4	2.000	2	50.0%	50.0%	1	1	5	8	33
1:00 PM	–	2:00 PM	0	0	0	0	3	2	0	0		18.8%		4		2			1	1	4	3	34
2:00 PM	–	3:00 PM	0	0	0	0	9	5	0	0		10.7%		2		1			1	1	10	6	39
3:00 PM	–	4:00 PM	0	0	0	0	5	6	0	0		6.8%		2		1			0	0	5	7	37
4:00 PM	–	5:00 PM	0	3	0	0	3	6	0	0		6.7%		2		1			0	0	3	9	31
5:00 PM	–	6:00 PM	0	16	0	0	1	2	0	0		10.0%		2		1			1	1	2	19	14
6:00 PM	–	7:00 PM	0	7	0	0	2	3	0	0		6.9%		2		1			0	0	2	11	6
7:00 PM	–	8:00 PM	0	0	0	0	0	1	0	0		3.0%		1		0			0	0	0	1	5
8:00 PM	–	9:00 PM	0	1	0	0	0	3	0	0		1.1%		0		0			0	0	0	5	0
9:00 PM	–	10:00 PM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
10:00 PM	–	11:00 PM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0		0.0%		0		0			0	0	0	0	0
			28	28	0	0	49	49	0	0									6	6	83	83	

Note: Numbers may not directly add up due to rounding.

[1] Temporal distribution for local retail taken from 24 hour temporal distribution data used in the 15 Penn Plaza FEIS, 2010. AM, MD and PM peak hour temporal distributions comply with Table 16-2 of the 2014 CEQR Technical Manual. Hourly local retail trips were developed by applying the hourly temporal distributions to daily vehicle trips, assuming that the assumed local retail modal split, in / out directional split and vehicle occupancy were held consistent throughout each hour of the day. See the Transportation Planning Assumptions table for more information.

Table 18B
Incremental Action Parking Accumulation Table
42,280 GSF Patient / 57,890 GSF Staff Action Medical Facility w/5,614 GSF of Local Retail

TIME PERIOD			STAFF AUTO-PARKED VEHICLE TRIPS				PATIENT AUTO-PARKED VEHICLE TRIPS				TOTAL VEHICLE TRIPS		PARKING ACCUMULATION
			CARDIO		OBGYN		CARDIO		OBGYN				
			In	Out	In	Out	In	Out	In	Out	In	Out	
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	0	0	4	0	0	0	0	0	4	0	4
8:00 AM	–	9:00 AM	1	0	21	0	0	0	0	0	22	0	26
9:00 AM	–	10:00 AM	1	0	29	0	0	0	0	0	30	0	56
10:00 AM	–	11:00 AM	0	0	8	0	0	0	0	0	9	0	64
11:00 AM	–	12:00 PM	0	0	4	0	0	0	6	0	10	0	74
12:00 PM	–	1:00 PM	0	0	0	0	0	0	33	3	33	3	103
1:00 PM	–	2:00 PM	0	0	0	0	0	0	9	21	9	20	92
2:00 PM	–	3:00 PM	0	0	0	4	0	0	0	24	0	28	64
3:00 PM	–	4:00 PM	0	0	0	4	0	0	18	0	18	4	78
4:00 PM	–	5:00 PM	0	0	0	0	0	0	15	12	15	12	82
5:00 PM	–	6:00 PM	0	1	0	4	0	0	27	15	26	20	88
6:00 PM	–	7:00 PM	0	0	0	21	0	0	12	18	11	40	60
7:00 PM	–	8:00 PM	0	0	0	29	0	0	0	24	0	53	8
8:00 PM	–	9:00 PM	0	0	0	0	0	0	0	3	0	3	4
9:00 PM	–	10:00 PM	0	0	0	4	0	0	0	0	0	4	0
10:00 PM	–	11:00 PM	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0
			2	2	67	67	0	0	119	119	188	188	

Indicates negative trips which were increased to 0 in order to be conservative.

Note: Numbers may not directly add up due to rounding.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Table 18C
Action Parking Accumulation Table
42,280 GSF Patient / 57,890 GSF Staff Action Medical Facility w/5,614 GSF of Local Retail

TIME PERIOD			STAFF AUTO-PARKED VEHICLE TRIPS				PATIENT AUTO-PARKED VEHICLE TRIPS				LOCAL RETAIL AUTO-PARKED VEHICLE TRIPS		TOTAL VEHICLE TRIPS		PARKING ACCUMULATION
			CARDIO		OBGYN		CARDIO		OBGYN						
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
12:00 AM	–	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	–	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	–	3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	–	4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	–	5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	–	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	–	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	–	8:00 AM	2	0	4	0	0	0	0	0	0	0	6	0	6
8:00 AM	–	9:00 AM	17	0	21	0	0	0	0	0	0	0	39	0	44
9:00 AM	–	10:00 AM	9	0	29	0	10	0	0	0	0	0	49	0	92
10:00 AM	–	11:00 AM	0	0	8	0	8	7	0	0	0	0	17	8	102
11:00 AM	–	12:00 PM	2	0	4	0	4	7	6	0	0	0	16	8	110
12:00 PM	–	1:00 PM	0	0	0	0	4	7	33	3	1	1	38	12	137
1:00 PM	–	2:00 PM	0	0	0	0	3	2	9	21	1	1	13	23	126
2:00 PM	–	3:00 PM	0	0	0	4	9	5	0	24	1	1	10	33	103
3:00 PM	–	4:00 PM	0	0	0	4	5	6	18	0	0	0	23	10	116
4:00 PM	–	5:00 PM	0	3	0	0	3	6	15	12	0	0	19	21	113
5:00 PM	–	6:00 PM	0	17	0	4	1	2	27	15	1	1	28	39	102
6:00 PM	–	7:00 PM	0	8	0	21	2	3	12	18	0	0	14	50	66
7:00 PM	–	8:00 PM	0	0	0	29	0	1	0	24	0	0	0	54	12
8:00 PM	–	9:00 PM	0	2	0	0	0	3	0	3	0	0	0	8	4
9:00 PM	–	10:00 PM	0	0	0	4	0	0	0	0	0	0	0	4	0
10:00 PM	–	11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	–	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
			30	30	67	67	49	49	119	119	6	6	271	271	

Note: Numbers may not directly add up due to rounding.

Transit

The project site is well served by public transportation. Three nearby subway stations provide access to the BMT N and the IND D subway lines. Four local bus routes (B9, B11, B16, and B70) provide access to and from the project site.

The IND D subway line runs northbound and southbound along New Utrecht Avenue to the northeast of the project site. The D line's 50th and 55th Street stations are located within walking distance of the proposed project. The BMT N line runs eastbound and westbound to the south of the project site along 61st and 62nd Street and runs northbound and southbound to the west along 4th Avenue and has a station on Fort Hamilton Parkway between 61st and 62nd Street. The D and N lines' stations are all within similar walking distances to the project site.

The B16, B70, B9, and B11 bus lines provide local service to the site. The B16 bus runs northbound and southbound along Fort Hamilton Parkway south of 57th Street, eastbound and westbound along 56th and 57th Street to the east of Fort Hamilton Parkway, and then northbound and southbound along 13th and 14th Avenue. Bus stops are located south of the project site along Fort Hamilton Parkway at 57th Street and on 57th Street between 11th Avenue and Fort Hamilton Parkway. The B70 bus runs northbound and southbound along 8th Avenue and has a bus stop at 55th Street, two blocks west of the site. The B9 bus runs eastbound and westbound along 60th Street and has stops on 60th Street immediately east and west of Fort Hamilton Parkway. Finally the B11 bus also runs eastbound and westbound but to the north of the site along 49th and 50th Streets. Bus stops are located on 49th and 50th Street immediately east and west of Fort Hamilton Parkway.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

Site generated subway and bus trips are presented in Table 19. Subway trips are assumed to be distributed evenly between the D and N lines as they both run similar routes and their stations are located within similar distances from the site. D line trips were equally distributed between the 50th Street and 55th Street stations. All N line trips would access the site via the Fort Hamilton Parkway station.

Table 19
Incremental No Action and Action Subway and Bus Trips

Subway and Bus Trips	Peak Hour	No Action Subway Trips			Action Subway Trips			No Action Bus Trips			Action Bus Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Patient	AM	0	0	0	0	0	0	7	5	11	0	0	0
Staff	AM	4	0	4	9	0	9	4	0	4	21	0	21
Local Retail	AM	1	1	2				1	1	2			
Total	AM	5	1	7	9	0	9	12	5	17	21	0	21
Patient	MD	0	0	0	5	0	5	5	3	8	0	9	9
Staff	MD	0	0	0	0	0	0	0	0	0	0	0	0
Local Retail	MD	7	7	13				5	5	11			
Total	MD	7	7	13	5	0	5	10	9	19	0	9	9
Patient	PM	0	0	0	10	5	15	8	3	12	0	4	4
Staff	PM	0	12	12	0	1	1	0	7	7	0	0	0
Local Retail	PM	3	3	7				3	3	6			
Total	PM	3	15	19	10	6	15	11	14	25	0	5	5

Note: Totals may not directly add up due to rounding.

The proposed project is projected to generate fewer than 200 subway or bus trips per hour at any of the nearby subway stations or bus stops. Therefore, no further transit analysis is required.

Pedestrians

The pedestrian study area includes the corners and crosswalks at the intersections of Fort Hamilton Parkway and 54th Street, Fort Hamilton Parkway and 55th Street, 9th Avenue and 54th Street, 9th Avenue and 55th Street, as well as the east and west sidewalks of Fort Hamilton Parkway between 54th and 55th Street.

Tables 20 and 21 contain the pedestrian trips generated by the proposed project. Site generation pedestrian activity is expected to be generated from a combination of auto, transit, and walk trips:

- Patients and staff that park in the sub-cellar garage and walk along 54th Street and Fort Hamilton Parkway to access the project site.
- Subway trips using the "D" line 50th and 55th Street stations, and the "N" line Fort Hamilton Parkway station walk to/from the stations via Fort Hamilton Parkway, 54th Street, and 55th Street.
- Bus trips using the B70, B9, B16, and B11 buses access the facility via Fort Hamilton Parkway, 54th Street, and 55th Street.
- Walk trips access the site via Fort Hamilton Parkway, 54th Street, and 55th Street.

Reference: 5402 Fort Hamilton Parkway EAS – Transportation Screening Analyses & Proposed Travel Demand Factors

- Patient and staff trips that arrive and depart via auto drop-off, taxi/ black car, or ambulette use the sidewalk at the proposed site entrance on the west side of Fort Hamilton Parkway between 54th and 55th Street.

Table 20
Incremental No Action Pedestrian Trips

No Action Ped Trips	Medical Facility						Local Retail					Total
	Self Park	Subway	Bus	Walk	Dropoff	Taxi / Ambulette	Self Park	Subway	Bus	Walk	Taxi / Ambulette	
AM	25	4	16	3	8	5	1	2	2	29	1	96
MD	18	0	8	5	11	0	4	13	11	184	7	261
PM	21	12	19	4	5	2	2	7	6	97	3	178

Note: Totals may not directly add up due to rounding.

Table 21
Incremental Action Pedestrian Trips

Action Ped Trips	Medical Facility						Total
	Self Park	Subway	Bus	Walk	Dropoff	Taxi / Ambulette	
AM	30	9	21	21	9	4	93
MD	55	5	9	19	27	20	133
PM	73	15	5	39	52	14	198

Note: Totals may not directly add up due to rounding.

Pedestrian flow diagrams, presenting the pedestrian volumes in the vicinity of the site, follow this technical memo. Crosswalks, corners, and other sidewalks approaching the site are projected to have fewer than 200 additional site-generated trips and, therefore, would not require further analysis.

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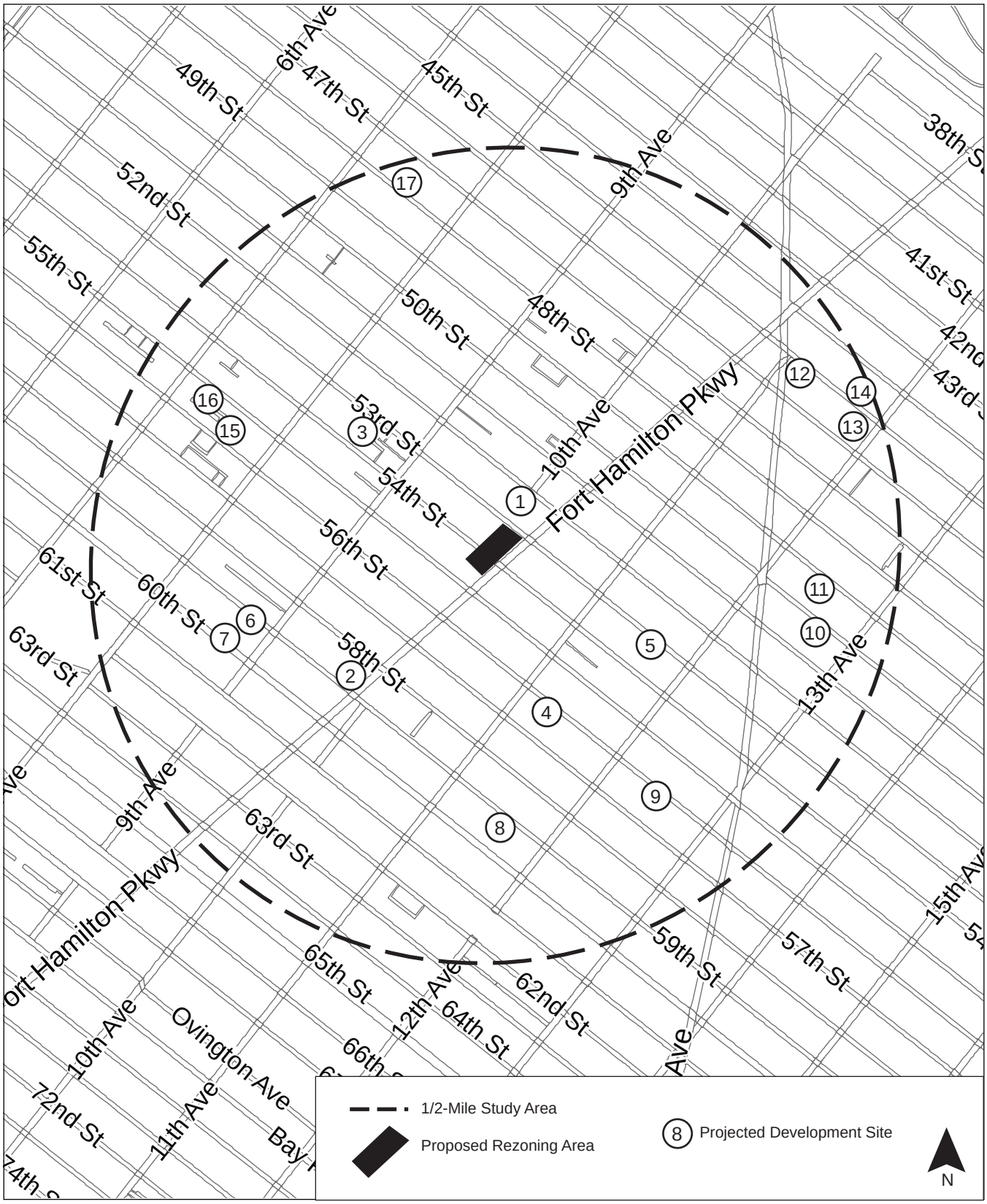
Note: A no action project map/listing, incremental no action and action vehicular and pedestrian trip assignments and parking survey tables follow this technical memo.

No Action
Project List



5402 FORT HAMILTON PARKWAY REZONING

Brooklyn, New York

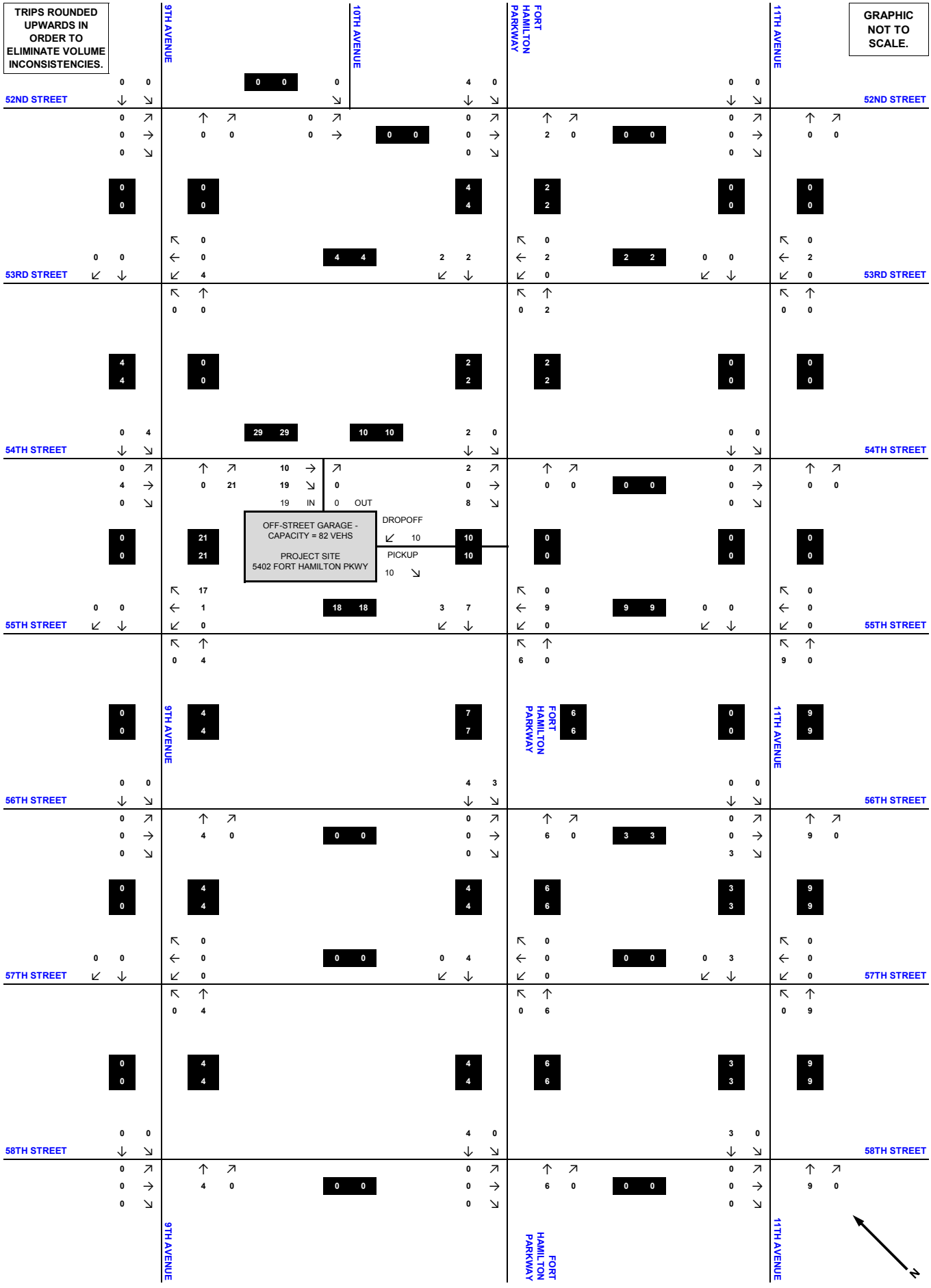
Map No.	Address	Block	Lot(s)	Bldg Height	Gross Floor Area	Zoning Floor Area	Comm-ercial	Comm-unity Facility	Resi-dential	Dwelling Units	Notes	400 ft study area	1/2 mile study area
1	984 52nd St.	5659	42	4 story, penthouse, cellar	5,601	4,366	0	0	4,366	6	no parking	x	x
2	5814-5820 Ft. Hamilton Pkwy.	5701	40	49 ft - 3 story plus cellar, sub-cellar, mezzanine	38,859	22,296	10,602	11,694	0	0	subcellar - parking cellar, 1 fl, mezz - commercial 2-3 fl - comm fac		x
3	843-845 54th St.	5665	60, 61	45 feet + setback to 54 ft - 6 story, cellar, basement	13,595	10,304	0	1,505	8,799	10	community facility in basement		x
4	1128 56th St.	5689	19	3 story	5,602	5,595	0	0	5,595	2			x
5	864 59th St.	5707	33	48 ft - 4 story, cellar	7,399	4,975	0	3,639	3,426	5	daycare center on 1st fl & cellar		x
6	857 60th St.	5707	57	64 ft - 6 story, w/cellar	9,728	7,533	2,335	0	5,966	9	768 sf of commercial FA is in cellar		x
7	1154 59th St.	5710	23	35 ft - 3 story w/cellar	4,914	3,490	0	0	3,490	3			x
8	1152-1154 59th St.	5710	22	35 ft - 3 story w/cellar	5,040	3,597	0	0	3,597	3			x
9	1248 56th St.	5690	24	35 ft - 3 story w/cellar	unknown	6,496	0	0	6,496	1	single family home		x
10	1262 50th St.	5648	32	34 ft - 3 story w/cellar	10,154	7,588	0	0	7,588	6			x
11	1246 49th St.	5641	126	45 ft - 4 story w/cellar	6,276	4,407	0	0	4,407	3			x
12	1118 45th St.	5615	18	46 ft - 4 story w/cellar	12,435	9,948	0	0	9,948	6			x
13	4506 12th Ave.	5615	41	57 ft - 5 story w/cellar	21,966	17,698	0	0	17,698	10			x
14	1190 44th St.	5609	44	45 ft - 4 story w/cellar	unknown	5,500	0	0	5,500	4			x
15	757 58th St.	850	55	49 ft - 4 story w/cellar	5,344	4,000	0	2,594	2,706	3	ambulatory diagnostic treatment health care facility in cellar & 1st fl.		x
16	716 57th St.	850	14	40 ft - 4 story w/cellar	6,009	4,005	0	994	3,011	5			x
17	749 49th St.	777	59, 60	50 ft - 4 story w/cellar	9,929	7,539			7,539	8			x
	Totals				**162,851**	**129,337**	**12,937**	**20,426**	**100,132**	**84**			

	5105 Ft. Hamilton Pkwy - PS 160 Annex			this new school addition opened in September 2012 with 410 seats								x	x
	942 62nd St - PS 310			this new school opened in September 2012 with 267 seats									x

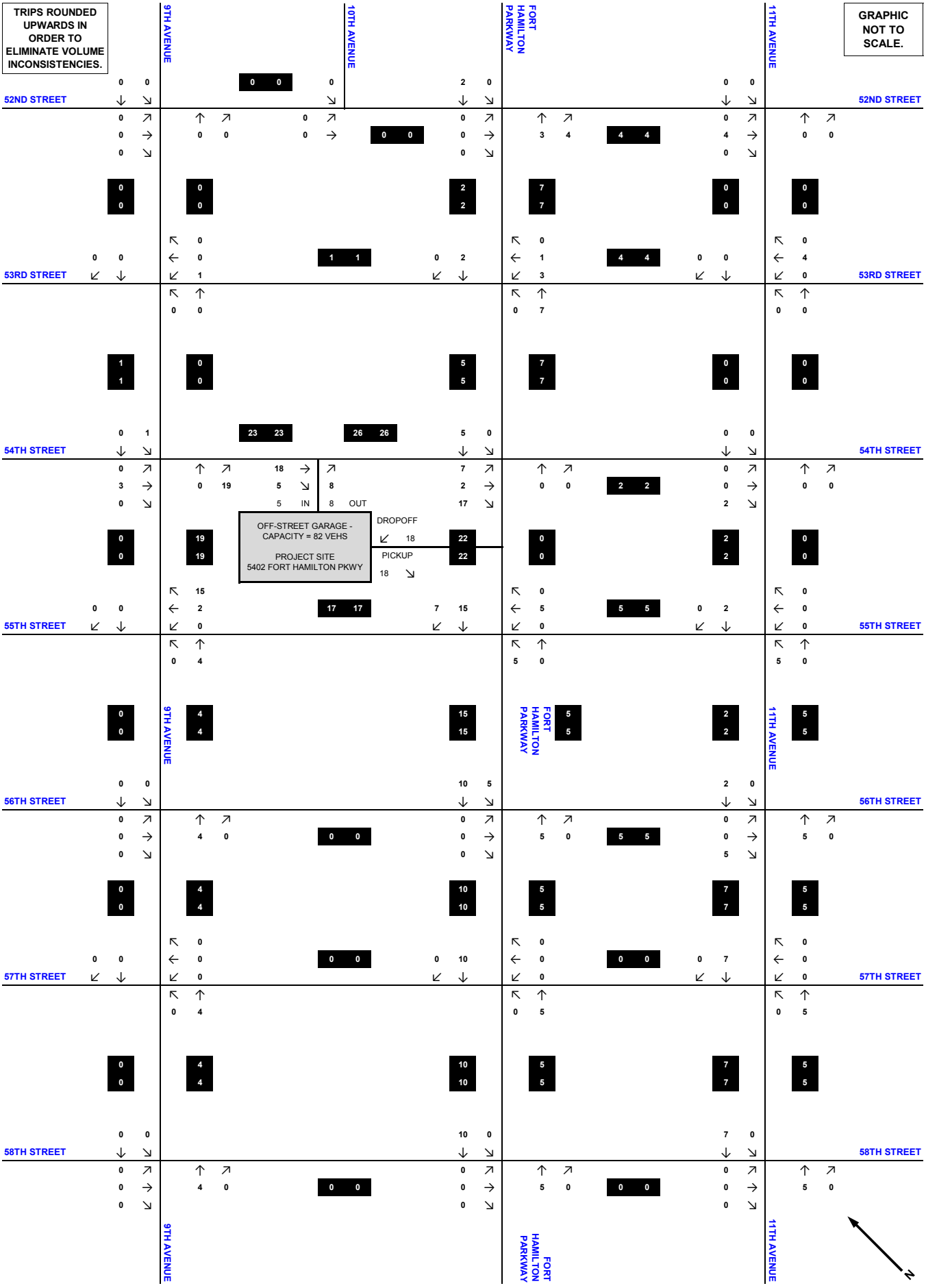
Sources: NYC Department of Buildings, NYC School Construction Authority.
Sources checked that did not provide any relevent info: NYC Department of City Planning, NYC Department of Housing Preservation and Development.
All projects listed are as-of-right. No current/recent CEQR applications found for the study area.

Incremental No Action
Trip Assignments

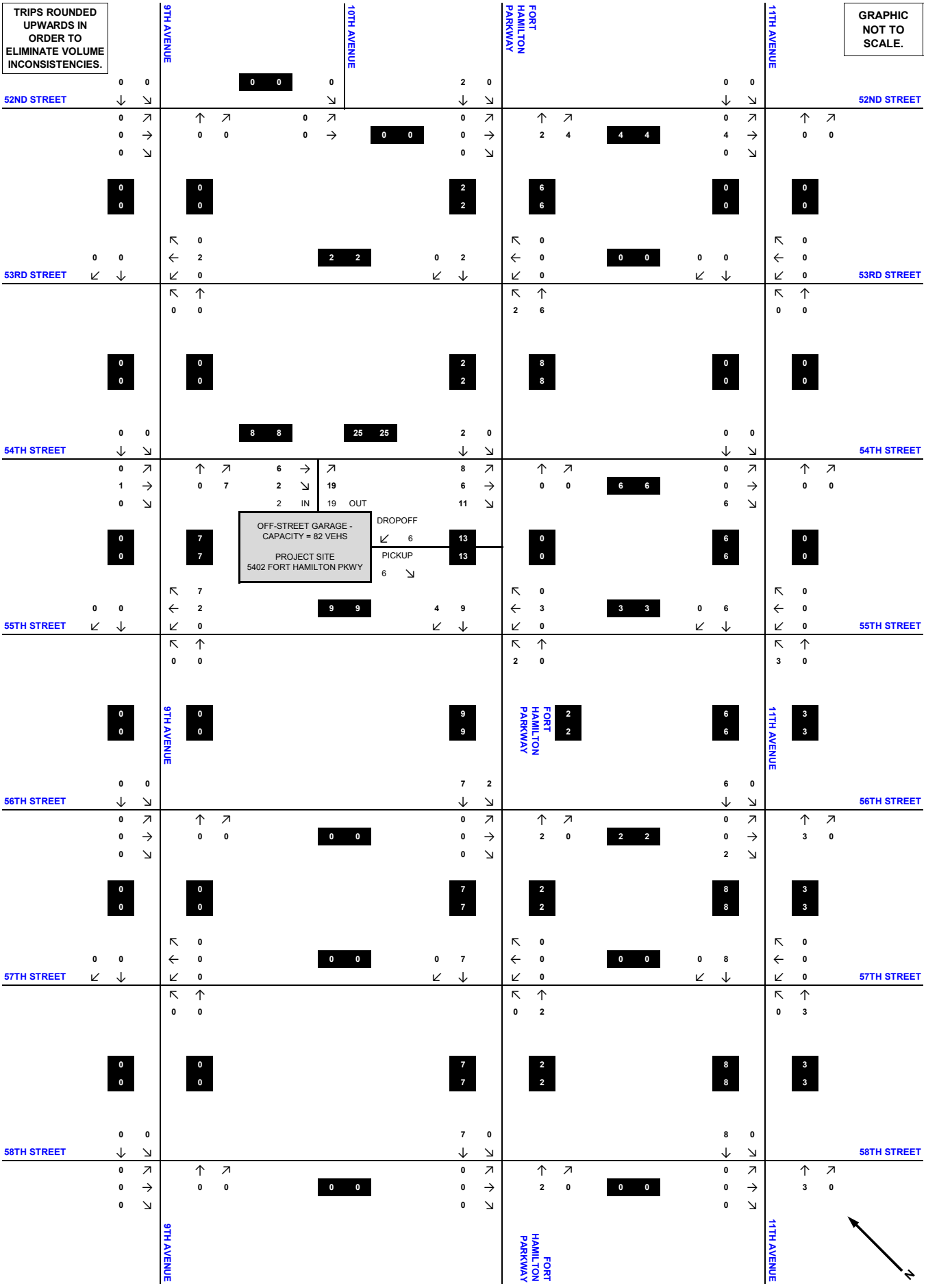
2016 AM No Action (As-of-Right) Condition Incremental Traffic Volumes



2016 MD No Action (As-of-Right) Condition Incremental Traffic Volumes

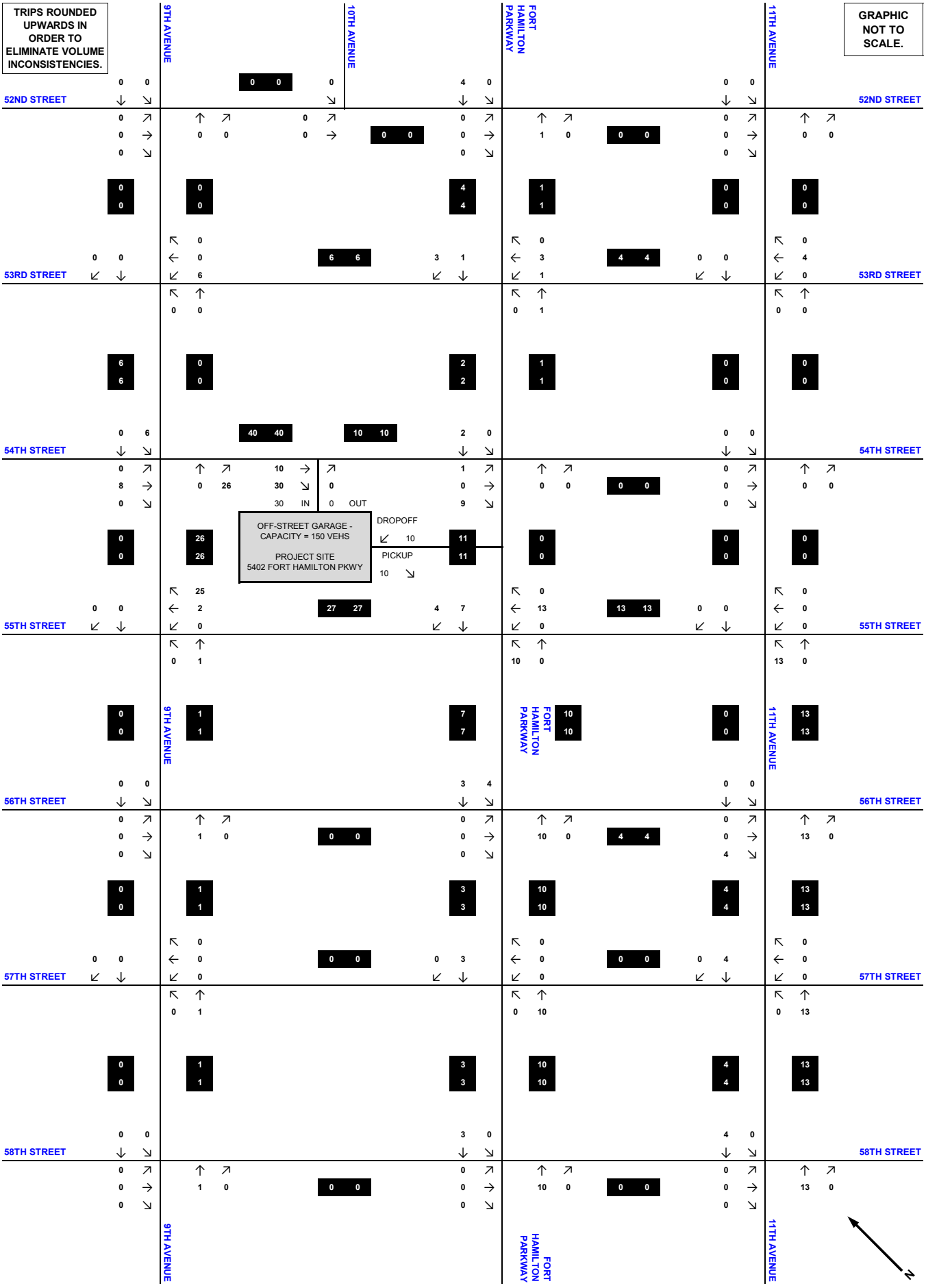


2016 PM No Action (As-of-Right) Condition Incremental Traffic Volumes

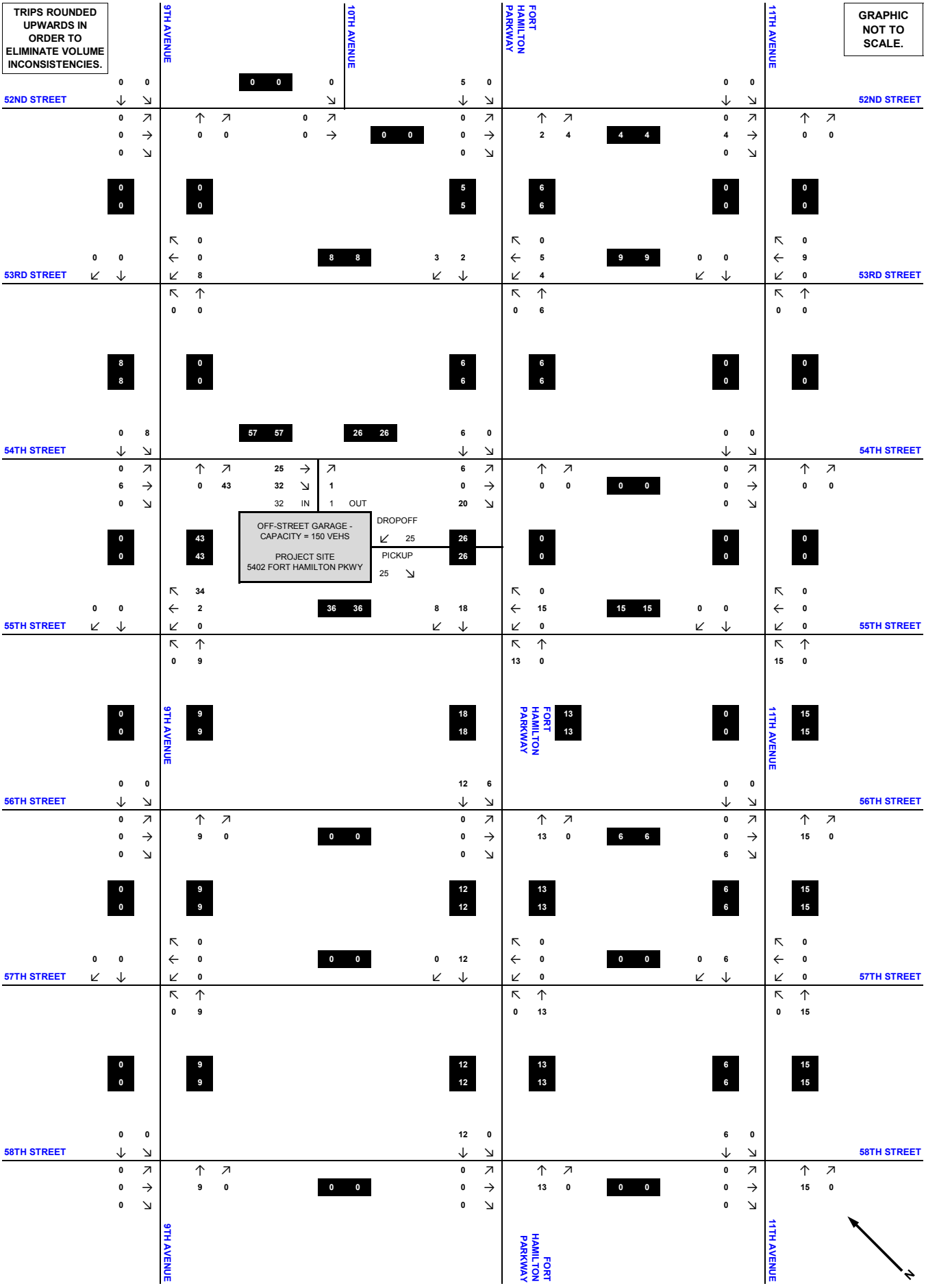


Incremental Action
Trip Assignments

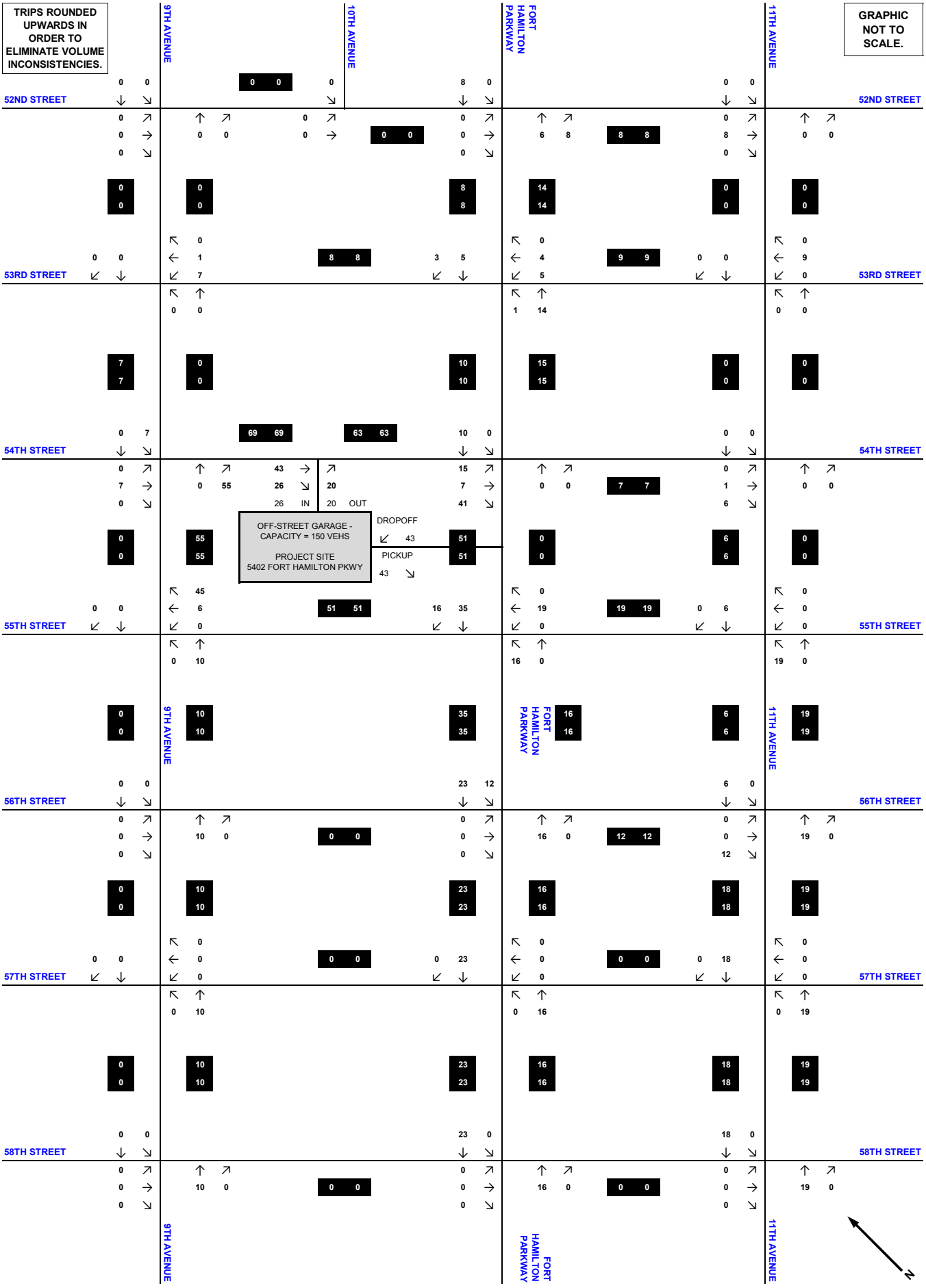
2016 AM Action Condition Incremental Traffic Volumes



2016 MD Action Condition Incremental Traffic Volumes

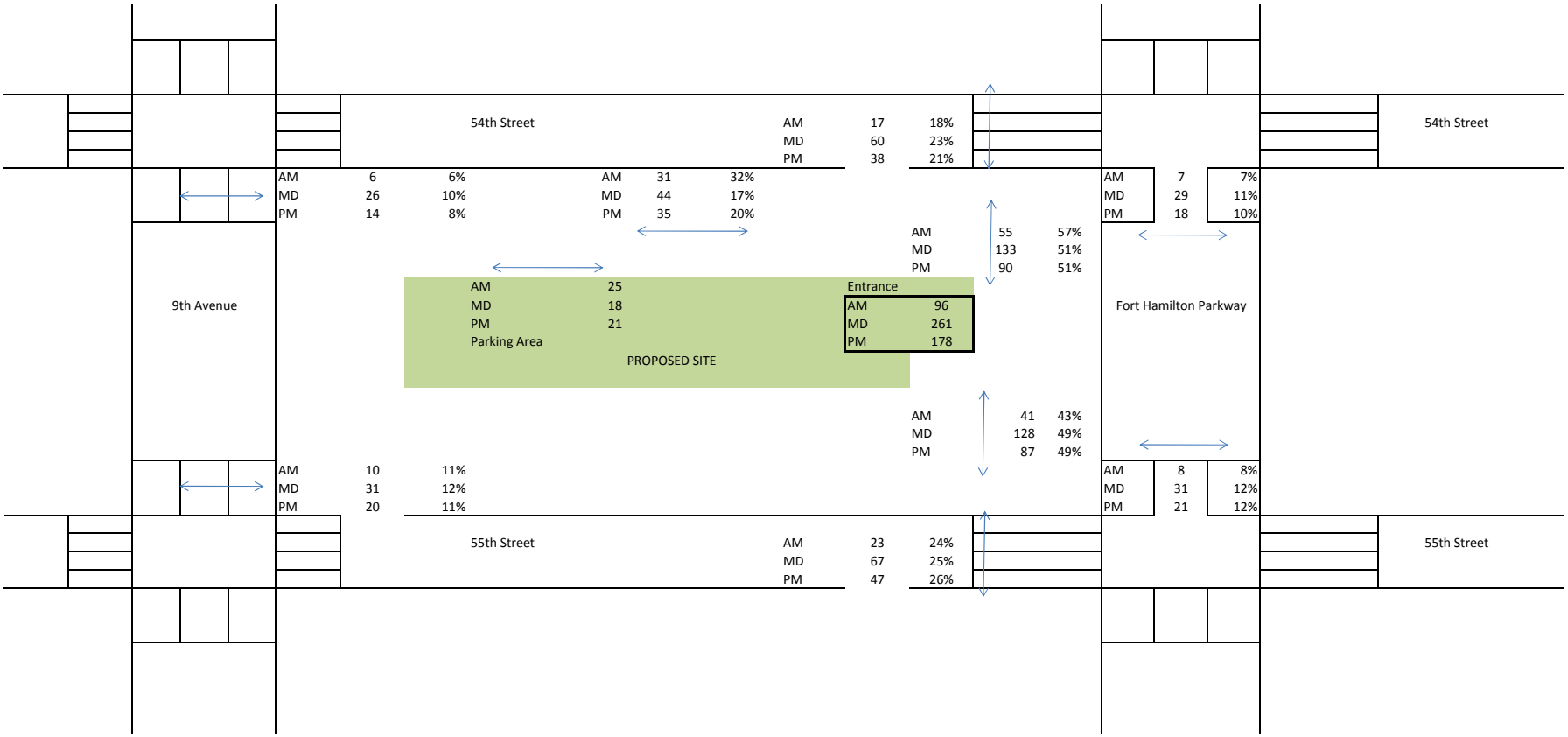


2016 PM Action Condition Incremental Traffic Volumes



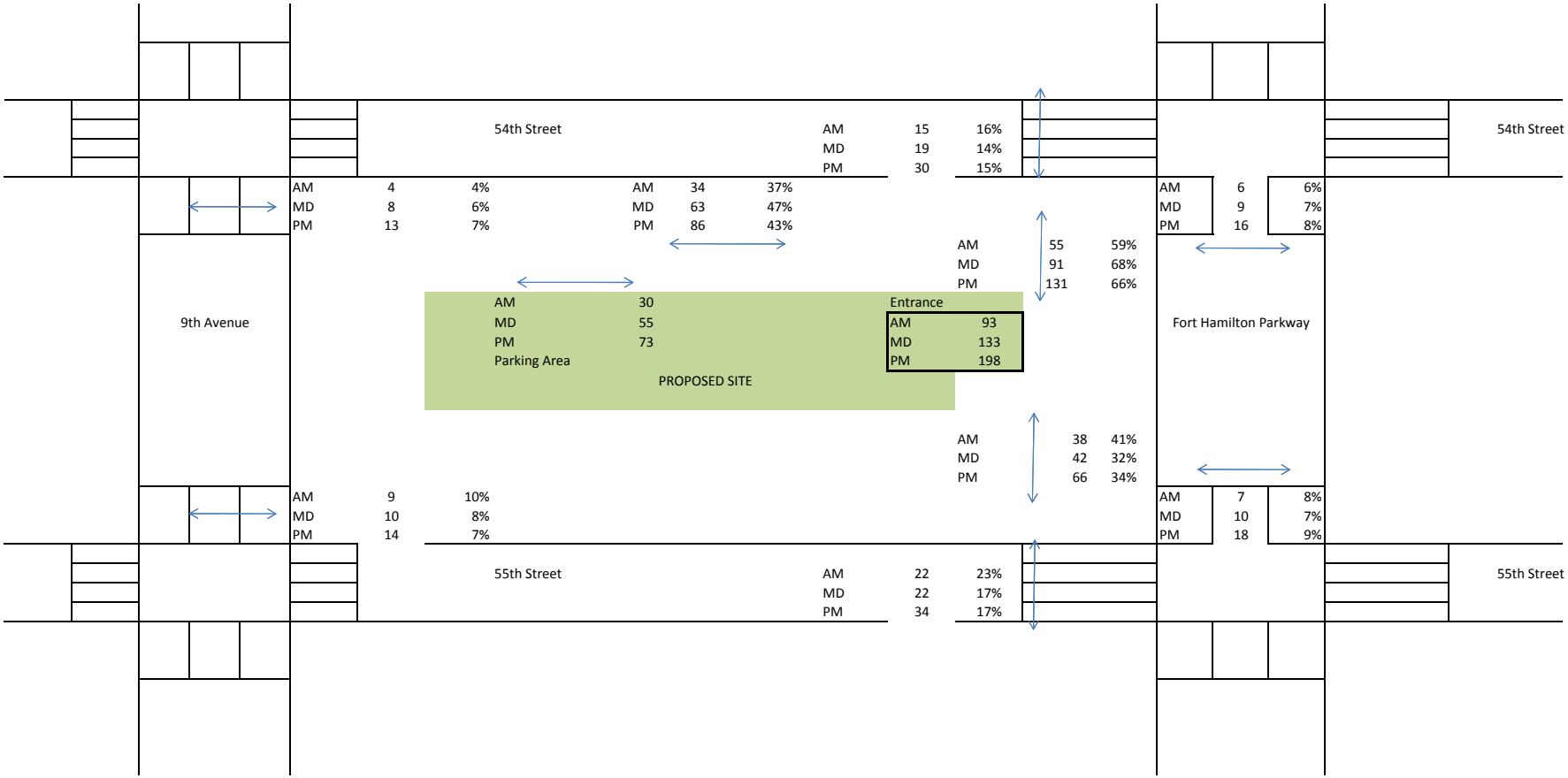
Incremental No Action Pedestrian Assignments

Total Pedestrian Impact

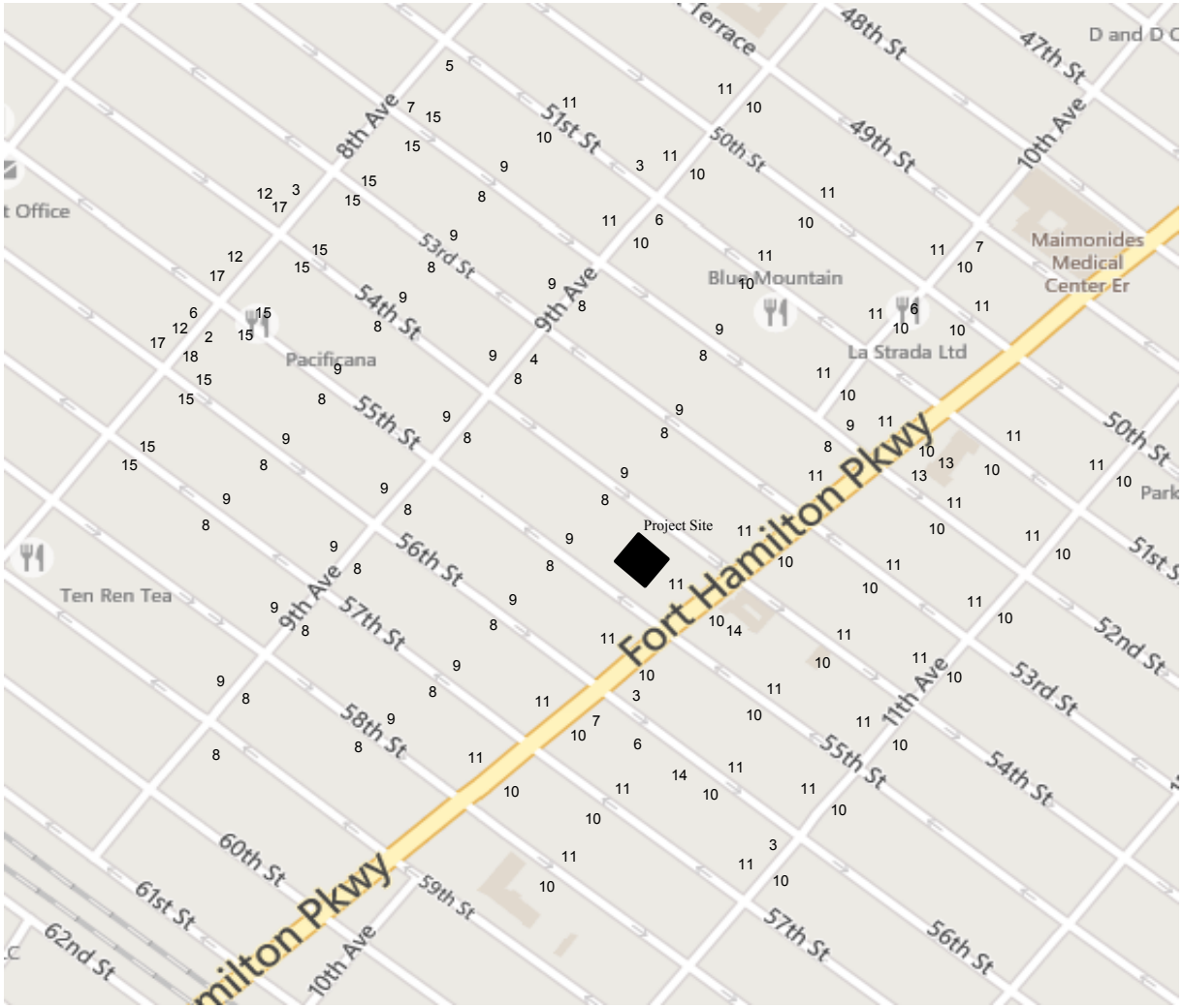


Incremental Action
Pedestrian Assignments

Total Pedestrian Impact



Parking Analysis Tables



FORT HAMILTON PARKWAY EAS
PARKING INVENTORY MAP

LEGEND

Map No.	Parking Regulation
1	1 Hr Metered Parking from 8am - 7pm except Sun
2	No Parking from 8am - 8:30am except Sun
3	No Parking Anytime
4	No Standing except Authorized Vehicles
5	No Standing
6	No Standing, Bus Stop
7	No Standing Anytime
8	No Parking 9:30 -11:00am, Thursday
9	No Parking 9:30 - 11:00am, Monday
10	No Parking 8:30 - 10:00am, Thursday
11	No Parking 8:30 - 10:00am, Monday
12	No Parking 7:30 - 8:00am
13	No Standing 7:00am - 4:00pm, School Days
14	No Standing 7:00am - 7:00pm, School Days
15	2 Hr Metered Parking from 9:00am - 7:00pm, except Sunday
16	No Parking 8:00am - 7:00pm
17	2 Hr Metered Parking from 8:00am - 7:00pm, except Sunday
18	No Parking 8:00 - 8:30am

FORT HAMILTON PARKWAY EAS
PARKING UTILIZATION SURVEY - 1/4 MILE RADIUS OF PROJECT SITE
Tuesday, July 08, 2014

EASTBOUND, WESTBOUND STREETS			**AM PEAK**				**MIDDAY PEAK**				**PM PEAK**			
Street	from	to	**North / West**		**South / East**		**North / West**		**South / East**		**North / West**		**South / East**	
			Occupied	Unoccupied	Occupied	Unoccupied	Occupied	Unoccupied	Occupied	Unoccupied	Occupied	Unoccupied	Occupied	Unoccupied
50th St	11th Ave	Fort Hamilton Parkway					17	0	12	0	16	0	11	0
50th St	Fort Hamilton Parkway	10th Ave					12	0	8	0	10	0	8	0
50th St	10th Ave	9th Ave					27	2	26	0	27	0	27	0
51st St	11th Ave	Fort Hamilton Parkway					15	0	17	2	16	0	17	0
51st St	Fort Hamilton Parkway	10th Ave					11	0	10	0	11	0	9	0
51st St	10th Ave	9th Ave					21	1	28	0	26	0	30	0
51st St	9th Ave	8th Ave					23	4	27	0	27	0	31	0
52nd St	11th Ave	Fort Hamilton Parkway					16	1	19	1	17	2	22	0
52nd St	Fort Hamilton Parkway	10th Ave					7	0	10	0	6	0	10	0
52nd St	10th Ave	9th Ave					34	2	34	0	33	0	37	0
52nd St	9th Ave	8th Ave					22	2	31	0	21	3	33	1
53rd St	11th Ave	Fort Hamilton Parkway	18	3	17	2	21	2	19	0	18	0	23	0
53rd St	Fort Hamilton Parkway	9th Ave	29	1	40	2	31	2	39	0	32	0	39	0
53rd St	9th Ave	8th Ave	22	1	30	1	25	0	31	0	23	0	30	0
54th St	11th Ave	Fort Hamilton Parkway	21	1	31	1	22	4	16	9	20	4	15	2
54th St	Fort Hamilton Parkway	9th Ave	32	2	38	2	32	0	38	6	32	0	39	0
54th St	9th Ave	8th Ave	27	0	15	0	24	2	31	0	26	0	29	0
55th St	11th Ave	Fort Hamilton Parkway	20	2	22	3	13	4	18	6	11	6	17	6
55th St	Fort Hamilton Parkway	9th Ave	26	2	30	4	27	3	29	2	22	2	31	3
55th St	9th Ave	8th Ave	27	4	32	0	28	1	31	0	25	0	25	0
56th St	11th Ave	Fort Hamilton Parkway	20	5	23	5	14	5	15	4	16	5	15	6
56th St	Fort Hamilton Parkway	9th Ave	25	0	25	0	28	0	28	0	29	0	30	0
56th St	9th Ave	8th Ave	22	2	21	3	29	0	25	1	25	3	30	3
57th St	11th Ave	Fort Hamilton Parkway	22	5	28	4	18	1	24	2	13	6	16	7
57th St	Fort Hamilton Parkway	9th Ave	25	0	28	1	26	0	29	0	25	0	31	0
57th St	9th Ave	8th Ave	22	0	25	3	28	0	28	0	26	3	29	3
58th St	11th Ave	Fort Hamilton Parkway	28	0	35	0	28	3	38	0	25	0	36	0
58th St	Fort Hamilton Parkway	9th Ave	24	3	29	3	25	0	29	2	26	0	26	2
59th St	10th Ave	9th Ave	18	1	27	0								
8th Ave	53rd St	54th St					5	0	10	0	4	1	6	4
8th Ave	54th St	55th St					8	0	5	0	8	0	5	0
8th Ave	55th St	56th St					4	1	8	0	5	0	8	0
9th Ave	50th St	51st St					7	0	9	0	6	1	7	0
9th Ave	51st St	52nd St					7	0	7	0	6	1	7	0
9th Ave	52nd St	53rd St					6	0	7	0	6	0	8	0
9th Ave	53rd St	54th St					7	0	9	0	7	0	9	0
9th Ave	54th St	55th St					6	0	8	0	6	0	8	0
9th Ave	55th St	56th St					7	0	9	0	7	0	9	0
9th Ave	56th St	57th St					7	1	9	0	7	1	8	1
9th Ave	57th St	58th St					6	1	8	0	6	0	9	0
9th Ave	58th St	59th St					7	0	8	0	7	0	7	1
10th Ave	49th St	50th St					7	0	7	1	6	1	7	1
10th Ave	50th St	51st St					9	0	8	0	8	1	8	0
11th Ave	51st St	52nd St					7	1	8	0	6	1	7	1
11th Ave	52nd St	53rd St					5	2	8	0	6	1	6	2
11th Ave	53rd St	54th St					6	1	7	2	7	0	7	2
11th Ave	54th St	55th St					6	1	5	3	7	0	7	1
11th Ave	55th St	56th St					7	1	7	1	5	3	6	2
11th Ave	56th St	57th St					6	1	8	1	4	3	4	5
Fort Hamilton Parkway	50th St	51st St					9	1	10	1	8	0	8	0
Fort Hamilton Parkway	51st St	52nd St					10	0	5	1	10	0	8	0
Fort Hamilton Parkway	52nd St	53rd St					9	0	10	0	10	0	9	0
Fort Hamilton Parkway	53rd St	54th St					9	0	7	0	9	0	7	0
Fort Hamilton Parkway	54th St	55th St					8	1	3	1	9	0	3	1
Fort Hamilton Parkway	55th St	56th St					10	0	8	0	10	0	6	1
Fort Hamilton Parkway	56th St	57th St					9	1	9	0	9	0	6	2
Fort Hamilton Parkway	57th St	58th St					7	0	6	1	6	1	7	1
Fort Hamilton Parkway	58th St	59th St					4	1	5	0	5	0	5	0
STUDY AREA TOTALS			**428**	**32**	**496**	**34**	**829**	**53**	**908**	**47**	**804**	**49**	**898**	**58**
TOTAL AVAILABLE SPACES			**66**				**100**				**107**			

Indicates segments where data could not be collected within the appropriate peak period.

FORT HAMILTON PARKWAY EAS
PARKING ANALYSIS

Existing Parking Summary

	Morning				Midday				Evening			
Parking	**Demand**	**Available**	**Capacity**	**Utilization**	**Demand**	**Available**	**Capacity**	**Utilization**	**Demand**	**Available**	**Capacity**	**Utilization**
On Street	924	66	990	93.3%	1737	100	1837	94.6%	1702	107	1809	94.1%
Off Street[a]												
Total	924	66	990	93.3%	1737	100	1837	94.6%	1702	107	1809	94.1%

[a] No off-street parking facilities within a 1/4 mile of the project site.

Increase in Parking Demand due to Background Growth

	Morning				Midday				Evening			
Parking	**Demand**	**Available**	**Capacity**	**Utilization**	**Demand**	**Available**	**Capacity**	**Utilization**	**Demand**	**Available**	**Capacity**	**Utilization**
On Street	947	43	990	95.7%	1781	56	1837	97.0%	1745	64	1809	96.5%
Off Street												
Total	947	43	990	95.7%	1781	56	1837	97.0%	1745	64	1809	96.5%

Additional No Action Demand

	Morning	Midday	Evening
Location	**Demand**	**Demand**	**Demand**
On Street	0	0	0
Off Street[b]	36	35	16
Total	36	35	16

[b] Represents demand to Proposed No Action Private Off-Street Parking Facility.

No Action Parking Summary

	Morning				Midday				Evening			
Parking	**Demand**	**Available**	**Capacity**	**Utilization**	**Demand**	**Available**	**Capacity**	**Utilization**	**Demand**	**Available**	**Capacity**	**Utilization**
On Street	947	43	990	95.7%	1781	56	1837	97.0%	1745	64	1809	96.5%
Off Street[c]	36	46	82	43.9%	35	47	82	42.7%	16	66	82	19.5%
Total	983	89	1072	91.7%	1816	103	1919	94.6%	1761	130	1891	93.1%

[c] No Action Parking Demand Generated by the Proposed Project will be fully accommodated in the Proposed Private Off-Street Parking Facility.

Additional Action Demand

	Morning	Midday	Evening
Location	**Demand**	**Demand**	**Demand**
On Street[d]	4	4	4
Off Street[e]	56	103	88
Total	60	107	92

[b] Includes an increase in demand of four (4) vehicles due to proposed modifications to on-street parking regulations on Fort Hamilton Pkwy (fronting the proposed facility) and 54th Street (adjacent to the entrance to the proposed off-street parking facility).

[e] Represents demand to Proposed No Action Private Off-Street Parking Facility.

Action Parking Summary

	Morning				Midday				Evening			
Parking	**Demand**	**Available**	**Capacity**	**Utilization**	**Demand**	**Available**	**Capacity**	**Utilization**	**Demand**	**Available**	**Capacity**	**Utilization**
On Street	951	39	990	96.1%	1785	52	1837	97.2%	1749	60	1809	96.7%
Off Street[f,g]	92	58	150	61.3%	138	12	150	92.0%	104	46	150	69.3%
Total	1043	97	1140	91.5%	1923	64	1987	96.8%	1853	106	1959	94.6%

[f] Action Parking Demand Generated by the Proposed Project to the Private Off-Street Parking Facility will not accommodate parking demand during the midday peak period.

[g] The capacity of the Action Private Off-Street Parking Facility will increase by 68 spaces to 150 parking spaces.

Conclusion - No Parking Shortfall generated by the Proposed Project.

APPENDIX 5:
NO ACTION DEVELOPMENT TRAVEL DEMAND FACTOR MEMO

Memo

Stantec

To:	Ingrid Young New York City Department of City Planning	From:	Christopher Mojica, P.E. Steve Abendschein, P.E.
File:	193410287	Date:	August 14, 2013

Reference: **5402 Fort Hamilton Parkway EAS – No Action Development Project Travel Demand Factors & Appropriateness of Considering No Action Development Projects as Part of the General Background Growth within the Study Area**

This memorandum summarizes the transportation planning assumptions (travel demand factors) to be used for No Action (soft site) developments planned for completion on or before 2016, which is the year that the Proposed Project is expected to be completed. Additionally, this technical memorandum will outline the appropriateness of considering the planned No Action development projects as part of the general background growth within the traffic study area (that is, not superimposing the No Action developments onto the general projected background growth in traffic). This memorandum is a supplement to the July 2, 2013 *Transportation Screening Analyses & Proposed Travel Demand Factors* memorandum, which was approved by the New York City Department of City Planning's Environmental Assessment Review Division on July 8, 2013. Wherever possible, assumptions regarding trip generation, trip assignment, mode split and trip distribution are consistent with what is set forth in the *2012 City Environmental Quality Review* (*CEQR*) *Technical Manual*.

PLANNED NO ACTION DEVELOPMENTS WITHIN THE TRAFFIC STUDY AREA

In addition to the projected background growth and proposed as-of-right site development, development projects within a ½-mile from a project site that are expected to be complete by the 2016 analysis year were considered as part of the development of 2016 No-Action conditions[1]. The no-action list is summarized in Table 1 on the following page.

[1] See July 2, 2013 *Transportation Screening Analyses & Proposed Travel Demand Factors* memorandum for more information regarding assumptions pertaining to projected background growth and the proposed as-of-right development.

Reference: 5402 Fort Hamilton Parkway EAS – No Action Development Project Travel Demand Factors & Appropriateness of Considering No Action Development Projects as Part of the General Background Growth

Table 1
Projects Under Construction or Expected to Be Complete by 2016
(½-Mile Study Area)

Project Number	Site Description	Building Program / Comments
1	984 52nd Street (Block 5659, Lot 42)	6 Residential Units
2	5814-5820 Fort Hamilton Parkway (Block 5701, Lot 40)	10,602 GSF Commercial Retail 11,694 GSF Community Facility
3	843-845 54th Street (Block 5665, Lots 60 & 61)	10 Residential Units 1,505 GSF Community Facility
4	1128 56th Street (Block 5689, Lot 19)	2 Residential Units
5	864 59th Street (Block 5707, Lot 33)	5 Residential Units 3,639 GSF Community Facility (Daycare)
6	857 60th Street (Block 5707, Lot 57)	9 Residential Units 2,335 GSF Commercial Retail
7	1154 59th Street (Block 5710, Lot 23)	3 Residential Units
8	1152-1154 59th Street (Block 5710, Lot 22)	3 Residential Units
9	1248 56th Street (Block 5690, Lot 24)	Single Family Home
10	1262 50th Street (Block 5648, Lot 32)	6 Residential Units
11	1246 49th Street (Block 5641, Lot 126)	3 Residential Units
12	1118 45th Street (Block 5615, Lot 41)	6 Residential Units
13	4506 12th Avenue (Block 5609, Lot 44)	10 Residential Units
14	1190 44th Street (Block 5609, Lot 44)	4 Residential Units
15	757 58th Street (Block 850, Lot 55)	3 Residential Units 2,594 GSF Community Facility (Health Care)
16	716 57th Street (Block 850, Lot 14)	5 Residential Units 994 GSF Community Facility
17	749 49th Street (Block 777, Lots 59 &60)	8 Residential Units
18	5105 Ft. Hamilton Pkwy (PS 160 Annex - Block 5653, Lot 21)	This new school addition opened in September 2012 with 410 seats. 55,000 GSF for entire school complex.
19	942 62nd St (PS 310 - Block 5729, Lot 24)	This new school opened in September 2012 with 267 seats (24,136 GSF)
20	986 52nd Street (Block 5659, Lot 43)	6 Residential Units
21	928 55th Avenue (Block 5680, Lot 18)	10 Residential Units 3,122 GSF Community Facility
Sources: NYC Department of Buildings, NYC School Construction Authority, NYC Department of City Planning, & NYC Department of Education.		
Note 1: All projects listed are as-of-right.		
Note 2: No current/recent CEQR applications found for the study area.		

Reference: 5402 Fort Hamilton Parkway EAS – No Action Development Project Travel Demand Factors & Appropriateness of Considering No Action Development Projects as Part of the General Background Growth

NO ACTION TRANSPORTATION PLANNING ASSUMPTIONS

Transportation planning assumptions used to forecast travel demand from each No Action project's land use component are discussed below and summarized in Table 2. All of the listed No Action projects have some variation of residential, retail, school or community facility components. Wherever possible, transportation planning assumptions, including mode split, trip generation and trip assignment, are consistent with assumptions stated in previously approved Final Environmental Impact Statement (FEIS) documents. These sources were supplemented by data from the 2007-2011 American Community Survey and the 2000 U.S. Census.

RESIDENTIAL

The future without the Proposed Project (No Action) includes several soft site developments with marginal residential components.

Daily Person Trip Rates and Temporal Distributions – The forecasts of weekday travel demand (person trip rate) and temporal distribution for each No Action project's residential components were obtained from the *2012 CEQR Technical Manual*.

Directional Distributions – Directional distributions for residential uses were obtained from the *Rheingold Development Rezoning FEIS*.

Vehicle Occupancy – Automobile and taxi vehicle occupancy rates were obtained from 2007-2011 American Community Survey and the *Rheingold Development Rezoning FEIS*, respectively.

Modal Split – The mode split distributions for residential uses were calculated by Stantec, using some of the methodology set forth in Appendix 7.1 of the *Crotona Park East / West Farms Rezoning FEIS*. Stantec made the following assumptions pertaining to mode split distributions:

- 2007-2011 American Community Survey Journey-to-Work (JTW) data sets (more recent than the 2000 Census data; 2010 Census data not available yet) used as the exclusive data source
- Mode split distributions for No-Action projects will be based upon the five digit zip code (11219) corresponding to the location of the proposed project
- The method for aggregating the more ambiguous modes (motorcycle, ferryboat, bicycle and other means) as well as rarely used or linked modes (e.g., railroad) is as follows:
    - Auto = Auto + Motorcycle
    - Taxi = Taxi + Other Means
    - Bus = Bus or Trolley Bus
    - Subway = Street Car or Trolley Car + Subway or Elevated + Railroad + Ferryboat
      All railroad trips will utilize the subway to reach project site.
    - Walk = Walk + Bicycle
    - To be conservative, the work at home mode will be excluded from the aggregation of mode splits, thereby slightly increasing (proportionately) the modal split for each mode of travel.

Trucking Characteristics – Residential truck trip generation rates, temporal distributions and directional distributions were obtained from Table 16-2 of the *2012 CEQR Technical Manual*.

Reference: 5402 Fort Hamilton Parkway EAS – No Action Development Project Travel Demand Factors & Appropriateness of Considering No Action Development Projects as Part of the General Background Growth

Table 2
Transportation Planning Assumptions
No Action Project (Soft Site) Land Uses

Land Use	Residential	Local Retail	Daycare	Community Facilities	School (Student)	School (Staff)
	per DU	per 1000 SF	per 1000 SF	per 1000 SF	per Student	per Staff (Person Trips) per 1,000 SF (Truck Trips)
Person Trip Generation Rate	(1)	(1)	(2)	(2)	(3)	(3)
	Weekday	**Weekday**	**Weekday**	**Weekday**	**Weekday**	**Weekday**
Daily Person Trips	8.075	205	138	48	2	2
Temporal Distribution	(1)	(1)	(2)	(2)	(3)	(3)
AM (8 AM - 9 AM)	10.0%	3.0%	16.0%	7.1%	50.0%	5.0%
MD (12 PM - 1 PM)	5.0%	19.0%	5.0%	10.0%	0.0%	0.0%
PM (5 PM - 6 PM)	11.0%	10.0%	19.0%	7.2%	2.5%	2.5%
In / Out Directional Split	(4)	(4)	(2)	(2)	(3)	(3)
	In / Out	**In / Out**	**In / Out**	**In / Out**	**In / Out**	**In / Out**
AM (8 AM - 9 AM)	15% / 85%	50% / 85%	53% / 47%	61% / 39%	100% / 0%	100% / 0%
MD (12 PM - 1 PM)	50% / 50%	50% / 50%	50% / 50%	55% / 45%	0% / 0%	0% / 0%
PM (5 PM - 6 PM)	70% / 30%	50% / 50%	47% / 53%	29% / 71%	0% / 100%	0% / 100%
Modal Split	(5)	(4)	(2)	(2)	(3)	(6)
Mode	**ALL**	**ALL**	**ALL**	**ALL**	**ALL**	**ALL**
Auto	29.7%	2.0%	15.0%	5.0%	6.2%	38.0%
Taxi	1.7%	3.0%	5.0%	1.0%	1.7%	2.3%
Bus	7.7%	5.0%	10.0%	3.0%	0.0%	13.3%
Subway	38.7%	6.0%	20.0%	6.0%	0.0%	26.6%
Walk	22.2%	84.0%	50.0%	85.0%	88.2%	19.8%
School Bus	0.0%	0.0%	0.0%	0.0%	3.9%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy	(4), (5)	(4)	(2)	(2)	(3)	(3)
Auto	1.12	2.00	1.65	1.65	1.70	1.19
Taxi	1.40	2.00	1.40	1.40	1.22	1.40
School Bus					19.00	
Truck Trip Generation Rate	(1)	(1)	(2)	(2)		(3)
	Weekday	**Weekday**	**Weekday**	**Weekday**	**No Truck Trip Generation for School Students**	**Weekday**
Daily Vehicle Trips	0.06	0.35	0.07	0.29		0.07
Temporal Distribution	(1)	(1)	(2)	(2)		(3)
AM (8 AM - 9 AM)	12.0%	8.0%	9.6%	9.6%		9.6%
MD (12 PM - 1 PM)	9.0%	11.0%	11.0%	11.0%		11.0%
PM (5 PM - 6 PM)	2.0%	2.0%	1.0%	1.0%		1.0%
	(1)	(1)	(2)	(2)		(3)
In / Out Directional Split	**In / Out**	**In / Out**	**In / Out**	**In / Out**		**In / Out**
	50% / 50%	50% / 50%	50% / 50%	50% / 50%		50% / 50%

Sources:
(1) New York City Environmental Quality Review (CEQR) Technical Manual, Table 16-2, 2012 (Revised June 5, 2013).
(2) Trip Generation for Community Facility and Daycare based on Community Facility and Daycare land uses in Appendix 7.1 of the Crotona Park East/West Farms Rezoning FEIS, 2011.
(3) Trip Generation for School (Student and Staff) based on School Student and School Staff uses in the Hudson Square Rezoning FEIS, 2013.
(4) Residential/Local Retail directional splits based on directional splits for residential & local retail in the Rheingold Development Rezoning FEIS, 2013.
Residential taxi vehicle occupancy based on vehicle occupancy for residential land use in the Rheingold Development Rezoning FEIS, 2013.
Local Retail modal split and vehicle occupancy based on local retail land use in the Rheingold Development Rezoning FEIS, 2013.
(5) Residential modal split & auto vehicle occupancy based on 2007-2011 American Community Survey (ACS) Means of Transportation to Work Data for Zip Code 11219. Excludes work at home mode.
(6) School Staff modal split based on 2000 U.S. Census Reverse Journey-to-Work Data for Kings County Tracts 116, 118, and 216. Excludes work at home mode.

Reference: 5402 Fort Hamilton Parkway EAS – No Action Development Project Travel Demand Factors & Appropriateness of Considering No Action Development Projects as Part of the General Background Growth

LOCAL RETAIL

The future without the Proposed Project (No Action) includes two soft site developments with local retail components.

Daily Person Trip Rates and Temporal Distributions – The forecasts of weekday travel demand (person trip rate) and temporal distribution for a project's local retail component were obtained from the *2012 CEQR Technical Manual*.

Directional Distributions, Modal Split and Vehicle Occupancy – For local retail, the weekday directional distributions, modal split, and vehicle occupancy were obtained from the *Rheingold Development Rezoning FEIS.*

Trucking Characteristics – Local retail truck trip generation rates, temporal distributions and directional distributions were obtained from the *2012 CEQR Technical Manual*.

DAYCARE

Stantec's research of previous EIS's determined that daycare trip generation rates were generally higher than trip generation rates for undefined community facilities. The future without the Proposed Project (No Action) includes one daycare facility (also listed as a community facility). Therefore, it was assumed to calculate trip generation for the sole daycare facility separate from the undefined community facilities presented within the No Action development list (see Table 1) in order to conservatively estimate soft site daycare development. All weekday travel demand assumptions – *Daily Person Trip Rates, Temporal and Directional Distributions, Modal Split, Vehicle Occupancy, and Trucking Characteristics* – for the sole daycare facility was obtained from the *Crotona Park East / West Farms Rezoning FEIS*.

COMMUNITY FACILITY

The future without the Proposed Project (No Action) includes five soft site developments with community facility components. Since the community facility land use is broad (four of the five proposed soft site developments are undefined and information on the sole defined community facility, a health care facility, does not include a breakdown of staff and patients), Stantec researched various EIS's to determine a conservative estimation of soft site community facility development. All weekday travel demand assumptions – *Daily Person Trip Rates, Temporal and Directional Distributions, Modal Split, Vehicle Occupancy, and Trucking Characteristics* – were obtained from the *Crotona Park East / West Farms Rezoning FEIS*.

SCHOOL (STUDENT)

The future without the Proposed Project (No Action) includes two schools (P.S. 160 Annex and P.S 310). It should be noted that the P.S. 160 Annex building is an expansion of the existing P.S. 160 building, which is being constructed in order to alleviate existing student overcrowding. Based upon conversations with the New York City Department of City Planning, the incremental number of student seats to be analyzed for the P.S. 160 Annex was reduced from 410 seats to 100 seats in order to reflect the reduced incremental trips associated with the new P.S. 160 Annex. Due to the lack of available information on P.S. 310 (another building which is expected to alleviate student overcrowding at existing public schools within the vicinity), it was agreed with

the New York City Department of City Planning to analyze the full amount of student seats in the development of No Action peak hour trips.

All weekday travel demand assumptions – *Daily Person Trip Rates, Temporal and Directional Distributions, Modal Split, and Vehicle Occupancy* – for school students were obtained from the *Hudson Square Rezoning FEIS*. It should be noted that there are no *Trucking Characteristics* associated with school student trip generation.

SCHOOL (STAFF)

The future without the Proposed Project (No Action) includes two schools (P.S. 160 Annex and P.S 310). Although staffing levels were not originally provided, Stantec researched previous EIS's for a correlation between the amount of school students and school faculty/staff. Using the ratio of students and faculty/staff within the *Hudson Square Rezoning FEIS*[2], Stantec estimated the amount school staff as a proportion of the amount of students (seats) provided within the No Action development list.

Daily Person Trip Rates, *Temporal Distributions, Directional Distributions, and Vehicle Occupancy* – The forecasts of weekday travel demand (person trip rate), temporal distribution, directional distribution and vehicle occupancy were obtained from the *Hudson Square Rezoning FEIS.*

Modal Split – The mode split distributions for school staff use were determined using the 1000 U.S. Census Reverse Journey-to-Work data for Kings County Census Tracts 116, 118, and 216. To be conservative, the work at home mode will be excluded from the aggregation of mode splits, thereby slightly increasing (proportionately) the modal split for each mode of travel.

Trucking Characteristics – It is assumed that truck deliveries will be made at both school facilities. Attachment A of this technical memorandum contains Annual Facility Surveys by the New York City Department of Education, which outline square footages by room within the school. Stantec utilized the total square footages from the Annual Facility Surveys as the basis for developing truck trips. School truck trip generation rates, temporal distributions and directional distributions were obtained from the *Hudson Square Rezoning FEIS*.

Attachment B contains all of the No Action peak hour trip tables, separated by each land use. It should be noted that no peak hour truck trips were generated under any of the analyzed land uses.

[2] From Table 13-4 of the *Hudson Square Rezoning FEIS*, 444 students / 40 staff/faculty = 11.1 students per staff/faculty.

Reference: 5402 Fort Hamilton Parkway EAS – No Action Development Project Travel Demand Factors & Appropriateness of Considering No Action Development Projects as Part of the General Background Growth

APPROPRIATENESS OF CONSIDERING NO ACTION DEVELOPMENT PROJECTS AS PART OF THE GENERAL BACKGROUND GROWTH

Subsection 343.2 – No Action Development Project Making in the *2012 CEQR Technical Manual* includes a procedure to determine whether or not the proposed No Action development projects would be appropriately considered as part of the background. The procedure calls for calculating the total amount of peak hour trip making expected from all of the No Action development projects and then to calculate the percentage increase in traffic this constitutes within the study area. If the calculated percentage is less than the recommended growth rates, enumerated in Table 16-4 of the 2012 manual, it may be generally assumed that each of the developments fall within the background growth rate and do not need to be superimposed on it.

To determine the total vehicular trip making within traffic study area, Stantec placed a cordon-line around the periphery of the traffic study area and calculated the vehicular trips into and out of the study area, based upon balanced 2011 peak hour traffic networks. To be conservative, turning movements which enter and immediately leave the defined cordon-line were not included in the estimation of cordon-line traffic as these movements are not projected to be impacted by the Proposed Project. The result was that there were 2,965, 2,690, and 3,260 vehicular trips along the cordon-line during the AM, MD, and PM peak hours, respectively. Attachment C contains the 2011 Existing Condition peak hour traffic networks, illustrating the turning movements summarized in Stantec's cordon-line calculation.

Utilizing the total No Action development peak hour vehicle trips, existing conditions traffic networks, and the cumulative background rates (from Table 16-4 of the *2012 CEQR Technical Manual*), Stantec compared the background growth rate to the projected growth rate attributed to the No Action development projects. This is presented in Table 3 below.

Table 3
Study Area (Cordon-Line) Growth Rate Comparison
No Action Development Project Growth Rate vs. Background Growth Rate

Peak Hour	2011 Existing Conditions Total Cordon-Line Volume	No Action Developments		*CEQR* Cumulative Percent Background Growth (a)
		Projected Peak Hour Trips	Percent Growth	
AM	2,965	63	2.12%	2.53%
MD	2,690	40	1.49%	
PM	3,260	43	1.32%	

Notes:
(a) Represents Background Growth for 5 Years (2011-2016) at 0.50%

As presented in Table 3, the projected peak hour trips are estimated to increase cordon-line study area traffic at a rate below the cumulative CEQR background growth rate. To be conservative, the projected peak hour trips presented in Table 3 also account for balanced taxi and school bus trips (that is, trips which are assumed to enter and exit the study area within the same peak analysis hour). Therefore, it may be generally assumed under CEQR guidelines that each of the 21 No Action developments fall within the background growth rate and do not need to be superimposed on it.

Reference: 5402 Fort Hamilton Parkway EAS – No Action Development Project Travel Demand Factors & Appropriateness of Considering No Action Development Projects as Part of the General Background Growth

APPROVAL OF TECHNICAL MEMORANDUM

This technical memorandum was approved by the New York City Department of City Planning via email on August 13, 2013 with the stipulation that Stantec utilizes the cumulative CEQR background growth rate (2.53 percent) in the development of future year No Action traffic networks.

NEXT STEPS

With approval of this technical memorandum, Stantec will proceed forward with the 2016 No Action traffic analysis. The next submission will consist of the 2016 No Action traffic networks and the 2016 No Action HCS analysis.

STANTEC CONSULTING SERVICES INC.

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Attachments: A – Annual NYC Department of Education Facility Surveys

B – No Action Peak Hour Trip Tables, by land use

C – 2011 Existing Conditions Peak Hour Traffic Networks (with Cordon-Line)

Attachment A
New York City Department of Education
Annual Facility Surveys

Bldg ID: **K160** P.S. 160 - BROOKLYN **Geo District:** 20

Bldg Address: 5105 FORT HAMILTON PARKWAY **Survey Principal:** MARGARET RUSSO

Added Room **Room Number Changed** **Deleted Room**

Room No	2012-2013 Org Name	Room SQFT	AC	2011-2012 Room Function	2012-2013 Room Function	Primary Function Used %	Sharing Y/N
101	P.S. 160 - BROOKLYN	840	N	FIRST GRADE	KINDERGARTEN	50 - 100	N
102	P.S. 160 - BROOKLYN	975	N	KINDERGARTEN	KINDERGARTEN	50 - 100	N
102B	P.S. 160 - BROOKLYN	234	Y	AP'S OFFICE	CONFERENCE ROOM	50 - 100	N
103	P.S. 160 - BROOKLYN	4,896	Y	AUDITORIUM	AUDITORIUM	50 - 100	N
104A	P.S. 160 - BROOKLYN	119	N	PARENT'S ROOM	COMMUNITY BASED ORGANIZATION	50 - 100	N
104B	P.S. 160 - BROOKLYN	153	N	DUPLICATING/COPY ROOM	DUPLICATING/COPY ROOM	50 - 100	N
104C	P.S. 160 - BROOKLYN	119	N	SBST	PARENT'S ROOM	50 - 100	N
106A	P.S. 160 - BROOKLYN	288	Y	TEACHER'S CAFETERIA	TEACHER'S CAFETERIA	50 - 100	N
108	P.S. 160 - BROOKLYN	744	Y	GENERAL/MAIN OFFICE	ATTENDANCE OFFICE	50 - 100	N
108B	P.S. 160 - BROOKLYN	288	Y	PRINCIPAL'S OFFICE	AP'S OFFICE	50 - 100	N
109	P.S. 160 - BROOKLYN	638	N	NON-D75 SPED CLASSROOM	SCIENCE CLASSROOM FOR PS	50 - 100	N
110	P.S. 160 - BROOKLYN	667	N	FIRST GRADE	THEATRE ARTS/DRAMA	50 - 100	N
201	P.S. 160 - BROOKLYN	620	N	KINDERGARTEN	SCIENCE CLASSROOM FOR PS	50 - 100	N
202	P.S. 160 - BROOKLYN	672	N	KINDERGARTEN	SCIENCE CLASSROOM FOR PS	50 - 100	N
203	P.S. 160 - BROOKLYN	696	Y	SECOND GRADE	KINDERGARTEN	50 - 100	N
204	P.S. 160 - BROOKLYN	221	N	SETSS	GENERAL BUILDING SUPPORT	50 - 100	N
205	P.S. 160 - BROOKLYN	660	Y	SECOND GRADE	KINDERGARTEN	50 - 100	N
206	P.S. 160 - BROOKLYN	660	Y	THIRD GRADE	KINDERGARTEN	50 - 100	N
207	P.S. 160 - BROOKLYN	704	N	THIRD GRADE	KINDERGARTEN	50 - 100	N
208	P.S. 160 - BROOKLYN	660	Y	KINDERGARTEN	KINDERGARTEN	50 - 100	N
209	P.S. 160 - BROOKLYN	572	Y	KINDERGARTEN	KINDERGARTEN	50 - 100	N
210	P.S. 160 - BROOKLYN	667	Y	SECOND GRADE	KINDERGARTEN	50 - 100	N
211	P.S. 160 - BROOKLYN	357	Y	NON-D75 SPED CLASSROOM	SPEECH	50 - 100	N

Bldg ID: **K160** P.S. 160 - BROOKLYN **Geo District:** 20

Bldg Address: 5105 FORT HAMILTON PARKWAY **Survey Principal:** MARGARET RUSSO

Added Room **Room Number Changed** **Deleted Room**

Room No	2012-2013 Org Name	Room SQFT	AC	2011-2012 Room Function	2012-2013 Room Function	Primary Function Used %	Sharing Y/N
214	P.S. 160 - BROOKLYN	192	Y	NURSE/MEDICAL SUITE	STORAGE ROOM	50 - 100	N
301	P.S. 160 - BROOKLYN	620	N	FIRST GRADE	FIRST GRADE	50 - 100	N
302	P.S. 160 - BROOKLYN	725	Y	THIRD GRADE	FIRST GRADE	50 - 100	N
303	P.S. 160 - BROOKLYN	660	Y	THIRD GRADE	FIRST GRADE	50 - 100	N
304	P.S. 160 - BROOKLYN	696	N	THIRD GRADE	FIRST GRADE	50 - 100	N
305	P.S. 160 - BROOKLYN	484	Y	FIRST GRADE	ACADEMIC INTERVENTION SERVICES	50 - 100	N
306	P.S. 160 - BROOKLYN	638	Y	SECOND GRADE	FIRST GRADE	50 - 100	N
307	P.S. 160 - BROOKLYN	576	Y	SECOND GRADE	FUNDED - ESL	50 - 100	N
308	P.S. 160 - BROOKLYN	660	Y	NON-D75 SPED CLASSROOM	NON-D75 SPED CLASSROOM	50 - 100	N
309	P.S. 160 - BROOKLYN	1,053	Y	MEDIA CENTER	MEDIA CENTER	50 - 100	N
309B	P.S. 160 - BROOKLYN	224	Y	COACH'S OFFICE	COACH'S OFFICE	50 - 100	N
309C	P.S. 160 - BROOKLYN	98	N	FUNDED - READING	FUNDED - READING	50 - 100	N
310	P.S. 160 - BROOKLYN	667	Y	FIRST GRADE	FIRST GRADE	50 - 100	N
314	P.S. 160 - BROOKLYN	192	N	STORAGE ROOM	STORAGE ROOM	50 - 100	N
401	P.S. 160 - BROOKLYN	600	Y	FOURTH GRADE	VACANT	50 - 100	N
402	P.S. 160 - BROOKLYN	667	N	FIFTH GRADE	DANCE ROOM	50 - 100	N
403	P.S. 160 - BROOKLYN	660	N	FOURTH GRADE	SECOND GRADE	50 - 100	N
404	P.S. 160 - BROOKLYN	572	Y	FIFTH GRADE	SECOND GRADE	50 - 100	N
405	P.S. 160 - BROOKLYN	660	N	FIFTH GRADE	ACADEMIC INTERVENTION SERVICES	50 - 100	N
406	P.S. 160 - BROOKLYN	660	N	FOURTH GRADE	SECOND GRADE	50 - 100	N
407	P.S. 160 - BROOKLYN	672	Y	FOURTH GRADE	SECOND GRADE	50 - 100	N
408	P.S. 160 - BROOKLYN	660	N	FIFTH GRADE	SECOND GRADE	50 - 100	N
409	P.S. 160 - BROOKLYN	504	N	ART ROOM	STORAGE ROOM	50 - 100	N

Bldg ID: **K160** P.S. 160 - BROOKLYN **Geo District:** 20

Bldg Address: 5105 FORT HAMILTON PARKWAY **Survey Principal:** MARGARET RUSSO

Added Room **Room Number Changed** **Deleted Room**

Room No	2012-2013 Org Name	Room SQFT	AC	2011-2012 Room Function	2012-2013 Room Function	Primary Function Used %	Sharing Y/N
410	P.S. 160 - BROOKLYN	638	Y	FOURTH GRADE	SECOND GRADE	50 - 100	N
CAF	P.S. 160 - BROOKLYN	3,510	Y	STUDENT CAFETERIA	STUDENT CAFETERIA	50 - 100	N
CUSTODI	P.S. 160 - BROOKLYN	360	Y	GENERAL BUILDING SUPPORT	GENERAL BUILDING SUPPORT	50 - 100	N
KITCHEN	P.S. 160 - BROOKLYN	468	Y	KITCHEN	KITCHEN	50 - 100	N
101X	P.S. 160 - BROOKLYN	306	N		SBST	50 - 100	N
103X	P.S. 160 - BROOKLYN	1,008	N		OTHER OFFICE	50 - 100	N
105X	P.S. 160 - BROOKLYN	480	N		OT/PT	50 - 100	N
106AX	P.S. 160 - BROOKLYN	342	N		PRINCIPAL'S OFFICE	50 - 100	N
106BX	P.S. 160 - BROOKLYN	182	N		RECORD ROOM	50 - 100	N
106CX	P.S. 160 - BROOKLYN	60	N		GENERAL/MAIN OFFICE	50 - 100	N
106X	P.S. 160 - BROOKLYN	612	N		GENERAL/MAIN OFFICE	50 - 100	N
109X	P.S. 160 - BROOKLYN	725	N		NON-D75 SPED CLASSROOM	50 - 100	N
114X	P.S. 160 - BROOKLYN	558	N		VACANT	50 - 100	N
119AX	P.S. 160 - BROOKLYN	112	N		GYMNASIUM	50 - 100	N
119X	P.S. 160 - BROOKLYN	3,111	N		GYMNASIUM	50 - 100	N
122X	P.S. 160 - BROOKLYN	589	N		VACANT	50 - 100	N
201X	P.S. 160 - BROOKLYN	1,044	N		THIRD GRADE	50 - 100	N
205X	P.S. 160 - BROOKLYN	990	N		THIRD GRADE	50 - 100	N
206X	P.S. 160 - BROOKLYN	1,015	N		THIRD GRADE	50 - 100	N
209X	P.S. 160 - BROOKLYN	341	N		AP'S OFFICE	50 - 100	N
214X	P.S. 160 - BROOKLYN	899	N		THIRD GRADE	50 - 100	N
216AX	P.S. 160 - BROOKLYN	264	N		GUIDANCE OFFICE	50 - 100	N
216BX	P.S. 160 - BROOKLYN	169	N		GUIDANCE OFFICE	50 - 100	N

Bldg ID: **K160** P.S. 160 - BROOKLYN **Geo District:** 20

Bldg Address: 5105 FORT HAMILTON PARKWAY **Survey Principal:** MARGARET RUSSO

Added Room **Room Number Changed** **Deleted Room**

Room No	2012-2013 Org Name	Room SQFT	AC	2011-2012 Room Function	2012-2013 Room Function	Primary Function Used %	Sharing Y/N
301X	P.S. 160 - BROOKLYN	672	N		FOURTH GRADE	50 - 100	N
305X	P.S. 160 - BROOKLYN	725	N		FOURTH GRADE	50 - 100	N
306X	P.S. 160 - BROOKLYN	475	N		STAFF DEVELOPMENT	50 - 100	N
308X	P.S. 160 - BROOKLYN	375	N		RESOURCE ROOM	50 - 100	N
309X	P.S. 160 - BROOKLYN	696	N		FOURTH GRADE	50 - 100	N
313AX	P.S. 160 - BROOKLYN	88	N		NURSE/MEDICAL SUITE	50 - 100	N
313BX	P.S. 160 - BROOKLYN	80	N		NURSE/MEDICAL SUITE	50 - 100	N
313CX	P.S. 160 - BROOKLYN	54	N		NURSE/MEDICAL SUITE	50 - 100	N
313DX	P.S. 160 - BROOKLYN	55	N		NURSE/MEDICAL SUITE	50 - 100	N
313EX	P.S. 160 - BROOKLYN	297	N		NURSE/MEDICAL SUITE	50 - 100	N
314X	P.S. 160 - BROOKLYN	713	N		THIRD GRADE	50 - 100	N
316X	P.S. 160 - BROOKLYN	896	N		CTT	50 - 100	N
322X	P.S. 160 - BROOKLYN	300	N		SETSS	50 - 100	N
324AX	P.S. 160 - BROOKLYN	198	N		COACH'S OFFICE	50 - 100	N
324X	P.S. 160 - BROOKLYN	2,175	N		LIBRARY	50 - 100	N
401X	P.S. 160 - BROOKLYN	891	N		FIFTH GRADE	50 - 100	N
405X	P.S. 160 - BROOKLYN	725	N		FIFTH GRADE	50 - 100	N
406X	P.S. 160 - BROOKLYN	840	N		FOURTH GRADE	50 - 100	N
409X	P.S. 160 - BROOKLYN	750	N		ACADEMIC INTERVENTION SERVICES	50 - 100	N
413X	P.S. 160 - BROOKLYN	272	N		STORAGE ROOM	50 - 100	N
414X	P.S. 160 - BROOKLYN	750	N		FOURTH GRADE	50 - 100	N
415X	P.S. 160 - BROOKLYN	1,134	N		ART ROOM	50 - 100	N
416X	P.S. 160 - BROOKLYN	806	N		SCIENCE CLASSROOM FOR PS	50 - 100	N

Bldg ID: **K160** P.S. 160 - BROOKLYN **Geo District:** 20

Bldg Address: 5105 FORT HAMILTON PARKWAY **Survey Principal:** MARGARET RUSSO

Added Room **Room Number Changed** **Deleted Room**

Room No	2012-2013 Org Name	Room SQFT	AC	2011-2012 Room Function	2012-2013 Room Function	Primary Function Used %	Sharing Y/N
419AX	P.S. 160 - BROOKLYN	182	N		COACH'S OFFICE	50 - 100	N
419BX	P.S. 160 - BROOKLYN	104	N		COACH'S OFFICE	50 - 100	N
422X	P.S. 160 - BROOKLYN	279	N		SCIENCE PREP ROOM	50 - 100	N
424X	P.S. 160 - BROOKLYN	1,044	N		MUSIC ROOM	50 - 100	N
501X	P.S. 160 - BROOKLYN	660	N		FIFTH GRADE	50 - 100	N
505X	P.S. 160 - BROOKLYN	810	N		FIFTH GRADE	50 - 100	N
506X	P.S. 160 - BROOKLYN	782	N		FIFTH GRADE	50 - 100	N
509X	P.S. 160 - BROOKLYN	480	N		NON-D75 SPED CLASSROOM	50 - 100	N
511X	P.S. 160 - BROOKLYN	270	N		AP'S OFFICE	50 - 100	N
514X	P.S. 160 - BROOKLYN	703	N		GENERAL BUILDING SUPPORT	50 - 100	N
516X	P.S. 160 - BROOKLYN	234	N		GENERAL BUILDING SUPPORT	50 - 100	N
518X	P.S. 160 - BROOKLYN	266	N		STORAGE ROOM	50 - 100	N
519X	P.S. 160 - BROOKLYN	136	N		STORAGE ROOM	50 - 100	N
C02	P.S. 160 - BROOKLYN	221	N		GENERAL BUILDING SUPPORT	50 - 100	N
C15	P.S. 160 - BROOKLYN	638	N		TEACHER'S CAFETERIA	50 - 100	N
C19	P.S. 160 - BROOKLYN	2,013	N		KITCHEN	50 - 100	N
CAFE	P.S. 160 - BROOKLYN	1,860	N		STUDENT CAFETERIA	50 - 100	N

How many student bathrooms are there in your building ?	22
Are any of the student bathrooms being shared by multiple schools ?	N
Are all the student bathrooms open throughout the day ?	Y
Please identify the number of non-instructional spaces, not reported above, being used for instructional purposes, academic intervention services, or therapeutic or counseling services	0
Are any of those non-instructional space being shared?	N

Bldg ID: **K310** PS 310 THE SCHOOL FOR FUTURE LEADERS - BROC **Geo District:** 20

Bldg Address: 942 62 ST **Survey Principal:** YUQING HONG

Added Room **Room Number Changed** **Deleted Room**

Room No	2012-2013 Org Name	Room SQFT	AC	2011-2012 Room Function	2012-2013 Room Function	Primary Function Used %	Sharing Y/N
101	P.S. 310 - BROOKLYN	120	N		PARENT'S ROOM	50 - 100	N
102	P.S. 310 - BROOKLYN	900	N		PRE-K FULL DAY	50 - 100	N
104	P.S. 310 - BROOKLYN	1,080	N		KINDERGARTEN	50 - 100	N
110	P.S. 310 - BROOKLYN	2,726	N		GYMNASIUM	50 - 100	N
113A	P.S. 310 - BROOKLYN	408	N		PRINCIPAL'S OFFICE	50 - 100	N
113C	P.S. 310 - BROOKLYN	540	N		GENERAL/MAIN OFFICE	50 - 100	N
117	P.S. 310 - BROOKLYN	300	N		OTHER OFFICE	50 - 100	N
201	P.S. 310 - BROOKLYN	475	N		SPECIAL ED SUPPORT	50 - 100	N
202	P.S. 310 - BROOKLYN	960	N		KINDERGARTEN	50 - 100	N
204	P.S. 310 - BROOKLYN	1,050	N		KINDERGARTEN	50 - 100	N
207	P.S. 310 - BROOKLYN	120	N		GUIDANCE OFFICE	50 - 100	N
207A	P.S. 310 - BROOKLYN	130	N		OCCUPATIONAL THERAPY	50 - 100	N
211	P.S. 310 - BROOKLYN	480	N		RESOURCE ROOM	50 - 100	N
301	P.S. 310 - BROOKLYN	690	N		ART ROOM	50 - 100	N
302	P.S. 310 - BROOKLYN	396	N		STORAGE ROOM	50 - 100	N
305	P.S. 310 - BROOKLYN	648	N		KINDERGARTEN	50 - 100	N
307	P.S. 310 - BROOKLYN	870	N		FIRST GRADE	50 - 100	N
308	P.S. 310 - BROOKLYN	190	N		AP'S OFFICE	50 - 100	N
310	P.S. 310 - BROOKLYN	90	N		STORAGE ROOM	50 - 100	N
401	P.S. 310 - BROOKLYN	1,050	N		LIBRARY	50 - 100	N
402	P.S. 310 - BROOKLYN	870	N		SECOND GRADE	50 - 100	N
405	P.S. 310 - BROOKLYN	630	N		SECOND GRADE	50 - 100	N
407	P.S. 310 - BROOKLYN	870	N		FIRST GRADE	50 - 100	N

Bldg ID: K310 PS 310 THE SCHOOL FOR FUTURE LEADERS - BROC **Geo District:** 20

Bldg Address: 942 62 ST **Survey Principal:** YUQING HONG

Added Room **Room Number Changed** **Deleted Room**

Room No	2012-2013 Org Name	Room SQFT	AC	2011-2012 Room Function	2012-2013 Room Function	Primary Function Used %	Sharing Y/N
410	P.S. 310 - BROOKLYN	806	N		CTT	50 - 100	N
412	P.S. 310 - BROOKLYN	837	N		CTT	50 - 100	N
501A	P.S. 310 - BROOKLYN	216	N		SCIENCE PREP ROOM	50 - 100	N
502	P.S. 310 - BROOKLYN	837	N		THIRD GRADE	50 - 100	N
504	P.S. 310 - BROOKLYN	253	N		TEACHER'S ROOM	50 - 100	N
505	P.S. 310 - BROOKLYN	612	N		OTHER DOE ORGANIZATION	50 - 100	N
509	P.S. 310 - BROOKLYN	840	N		OCCUPATIONAL THERAPY	50 - 100	N
510	P.S. 310 - BROOKLYN	952	N		SCIENCE CLASSROOM FOR PS	50 - 100	N
512	P.S. 310 - BROOKLYN	930	N		FUNDED - ESL	50 - 100	N
C02	P.S. 310 - BROOKLYN	1,600	N		STUDENT CAFETERIA	50 - 100	N
C06	P.S. 310 - BROOKLYN	552	N		TEACHER'S CAFETERIA	50 - 100	N
C08	P.S. 310 - BROOKLYN	108	N		OTHER OFFICE	50 - 100	N

How many student bathrooms are there in your building ?	12
Are any of the student bathrooms being shared by multiple schools ?	N
Are all the student bathrooms open throughout the day ?	Y
Please identify the number of non-instructional spaces, not reported above, being used for instructional purposes, academic intervention services, or therapeutic or counseling services	0
Are any of those non-instructional space being shared?	N

Attachment B
Peak Hour Trip Tables,
by No Action Development and Land Use

All No Action Project Trips

Map #	Site Location	Autos			Taxis			Trucks			School Buses		
		AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	1	1	1	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy.	2	6	3	1	6	3	0	0	0	0	0	0
3	843-845 54th St.	2	1	2	0	0	0	0	0	0	0	0	0
4	1128 56th St.	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	8	3	10	3	1	3	0	0	0	0	0	0
6	857 60th St.	2	2	2	0	1	1	0	0	0	0	0	0
7	1154 59th St.	1	0	1	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	1	0	1	0	0	0	0	0	0	0	0	0
9	1248 56th St.	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	1	1	1	0	0	0	0	0	0	0	0	0
11	1246 49th St.	1	0	1	0	0	0	0	0	0	0	0	0
12	1118 45th St.	1	1	1	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	2	1	2	0	0	0	0	0	0	0	0	0
14	1190 44th St.	1	0	1	0	0	0	0	0	0	0	0	0
15	757 58th St.	1	0	1	0	0	0	0	0	0	0	0	0
16	716 57th St.	1	1	1	0	0	0	0	0	0	0	0	0
17	749 49th St.	2	1	2	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex)	4	0	0	1	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	11	0	0	4	0	0	0	0	0	1	0	0
20	986 52nd St.	1	1	1	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	2	1	2	0	0	0	0	0	0	0	0	0
	Total (No Action Projects)	**45**	**20**	**33**	**9**	**8**	**7**	**0**	**0**	**0**	**1**	**0**	**0**

Map #	Site Location	Total Person Trips			Auto Person Trips			Taxi Person Trips			Bus Person Trips			Subway Person Trips			Work at Home Person Trips			School Bus Person Trips		
		AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	5	2	5	1	1	2	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy.	105	469	258	3	11	6	2	13	7	4	23	12	6	28	15	0	0	0	0	0	0
3	843-845 54th St.	13	11	14	2	1	3	0	0	0	1	0	1	3	2	3	0	0	0	0	0	0
4	1128 56th St.	2	1	2	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
5	864 59th St.	84	27	100	13	5	15	4	1	5	8	3	10	18	6	21	0	0	0	0	0	0
6	857 60th St.	22	95	56	2	3	3	0	3	1	2	5	3	4	6	6	0	0	0	0	0	0
7	1154 59th St.	2	1	3	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
8	1152-1154 59th St.	2	1	3	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
9	1248 56th St.	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	5	2	5	1	1	2	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0
11	1246 49th St.	2	1	3	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
12	1118 45th St.	5	2	5	1	1	2	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0
13	4506 12th Ave.	8	4	9	2	1	3	0	0	0	1	0	1	3	2	3	0	0	0	0	0	0
14	1190 44th St.	3	2	4	1	0	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
15	757 58th St.	11	14	12	1	1	1	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0
16	716 57th St.	7	7	8	1	1	1	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0
17	749 49th St.	6	3	7	2	1	2	0	0	0	1	0	1	2	1	3	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex)	101	0	5	6	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0
19	942 62nd Street (PS 310)	269	0	15	18	0	1	5	0	0	0	0	0	1	0	0	0	0	0	10	0	1
20	986 52nd St.	5	2	5	1	1	2	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0
21	928 55th Ave.	19	19	20	3	2	4	0	0	0	1	0	1	4	3	4	0	0	0	0	0	0
	Total (No Action Projects)	**679**	**665**	**538**	**61**	**30**	**52**	**13**	**17**	**13**	**18**	**31**	**29**	**58**	**55**	**72**	**0**	**0**	**0**	**14**	**0**	**1**

Residential Trips

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday Residential Trips	Autos			Taxis			Trucks			School Buses		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	48	1	1	1	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	81	2	1	2	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	0	3,639	0	0	40	1	1	1	0	0	0	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	73	2	1	2	0	0	0	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	24	1	0	1	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	24	1	0	1	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	48	1	1	1	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	24	1	0	1	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	48	1	1	1	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	81	2	1	2	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	32	1	0	1	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	24	1	0	1	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	40	1	1	1	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	65	2	1	2	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	0	0	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	48	1	1	1	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	3,122	0	0	0	81	2	1	2	0	0	0	0	0	0	0	0	0
					0	0	0													
	Total (No Action Projects)	**100**	**12,937**	**19,909**	**3,639**	**367**	**33**	**808**	**21**	**11**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday Residential Trips	Temporal Distributior			Total Person Trips			Auto Person Trips			Taxi Person Trips			Bus Person Trips			Subway Person Trips			Walk Person Trips			School Bus Person Trips		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	48	10.0%	5.0%	11.0%	5	2	5	1	1	2	0	0	0	0	0	0	2	1	2	1	1	1	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	0	10.0%	5.0%	11.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	81	10.0%	5.0%	11.0%	8	4	9	2	1	3	0	0	0	1	0	1	3	2	3	2	1	2	0	0	0
4	1128 56th St.	2	0	0	0	0	0	16	10.0%	5.0%	11.0%	2	1	2	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
5	864 59th St.	5	0	3,639	3,639	0	0	40	10.0%	5.0%	11.0%	4	2	4	1	1	1	0	0	0	0	0	0	2	1	2	1	0	1	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	73	10.0%	5.0%	11.0%	7	4	8	2	1	2	0	0	0	1	0	1	3	1	3	2	1	2	0	0	0
7	1154 59th St.	3	0	0	0	0	0	24	10.0%	5.0%	11.0%	2	1	3	1	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	24	10.0%	5.0%	11.0%	2	1	3	1	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0
9	1248 56th St.	1	0	0	0	0	0	8	10.0%	5.0%	11.0%	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	48	10.0%	5.0%	11.0%	5	2	5	1	1	2	0	0	0	0	0	0	2	1	2	1	1	1	0	0	0
11	1246 49th St.	3	0	0	0	0	0	24	10.0%	5.0%	11.0%	2	1	3	1	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0
12	1118 45th St.	6	0	0	0	0	0	48	10.0%	5.0%	11.0%	5	2	5	1	1	2	0	0	0	0	0	0	2	1	2	1	1	1	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	81	10.0%	5.0%	11.0%	8	4	9	2	1	3	0	0	0	1	0	1	3	2	3	2	1	2	0	0	0
14	1190 44th St.	4	0	0	0	0	0	32	10.0%	5.0%	11.0%	3	2	4	1	0	1	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	24	10.0%	5.0%	11.0%	2	1	3	1	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0
16	716 57th St.	5	0	994	0	0	0	40	10.0%	5.0%	11.0%	4	2	4	1	1	1	0	0	0	0	0	0	2	1	2	1	0	1	0	0	0
17	749 49th St.	8	0	0	0	0	0	65	10.0%	5.0%	11.0%	6	3	7	2	1	2	0	0	0	1	0	1	2	1	3	1	1	2	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	0	10.0%	5.0%	11.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	0	10.0%	5.0%	11.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	48	10.0%	5.0%	11.0%	5	2	5	1	1	2	0	0	0	0	0	0	2	1	2	1	1	1	0	0	0
21	928 55th Ave.	10	0	0	0	0	0	81	10.0%	5.0%	11.0%	8	4	9	2	1	3	0	0	0	1	0	1	3	2	3	2	1	2	0	0	0
					0	0	0																									
	Total (No Action Projects)	**100**	**12,937**	**20,426**	**3,639**	**367**	**33**	**808**				**81**	**40**	**89**	**21**	**11**	**29**	**0**	**0**	**0**	**5**	**0**	**5**	**32**	**15**	**33**	**20**	**9**	**21**	**0**	**0**	**0**

(1) Assumes a student to staff/faculty ratio, based upon the ratio presented for a proposed school within Table 13-4 of the 2013 Hudson Square Rezoning FEIS.
444 students / 40 staff/faculty = 11.1 students per staff/faculty

Local Retail Trips

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday Local Retail Trips	Autos			Taxis			Trucks			School Buses		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	2173	1	4	2	1	6	3	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	0	3,639	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	479	0	1	0	0	1	1	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	0	0	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	3,122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0													
	Total (No Action Projects)	**100**	**12,937**	**19,909**	**3,639**	**367**	**33**	**2,652**	**1**	**5**	**2**	**1**	**7**	**4**	**0**	**0**	**0**	**0**	**0**	**0**

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday Local Retail Trips	Temporal Distributior			Total Person Trips			Auto Person Trips			Taxi Person Trips			Bus Person Trips			Subway Person Trips			Walk Person Trips			School Bus Person Trips		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	2173	3.0%	19.0%	10.0%	65	413	217	1	8	4	2	12	7	3	21	11	4	25	13	55	347	183	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	3,639	3,639	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	479	3.0%	19.0%	10.0%	14	91	48	0	2	1	0	3	1	1	5	2	1	5	3	12	76	40	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	0	0	0	0	0	3.0%	19.0%	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0																									
	Total (No Action Projects)	**100**	**12,937**	**20,426**	**3,639**	**367**	**33**	**2,652**				**80**	**504**	**265**	**1**	**10**	**5**	**2**	**15**	**8**	**4**	**26**	**13**	**5**	**30**	**16**	**67**	**423**	**223**	**0**	**0**	**0**

(1) Assumes a student to staff/faculty ratio, based upon the ratio presented for a proposed school within Table 13-4 of the 2013 Hudson Square Rezoning FEIS.
444 students / 40 staff/faculty = 11.1 students per staff/faculty

Daycare Trips

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday Daycare Trips	Autos			Taxis			Trucks			School Buses		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	0	3,639	0	0	502	7	2	9	3	1	3	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	0	0	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	3,122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0													
	Total (No Action Projects)	**100**	**12,937**	**19,909**	**3,639**	**367**	**33**	**502**	**7**	**2**	**9**	**3**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday Daycare Trips	Temporal Distributior			Total Person Trips			Auto Person Trips			Taxi Person Trips			Bus Person Trips			Subway Person Trips			Walk Person Trips			School Bus Person Trips		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	3,639	3,639	0	0	502	16.0%	5.0%	19.0%	80	25	95	12	4	14	4	1	5	8	3	10	16	5	19	40	13	48	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	0	0	0	0	0	16.0%	5.0%	19.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0																									
	Total (No Action Projects)	**100**	**12,937**	**20,426**	**3,639**	**367**	**33**	**502**				**80**	**25**	**95**	**12**	**4**	**14**	**4**	**1**	**5**	**8**	**3**	**10**	**16**	**5**	**19**	**40**	**13**	**48**	**0**	**0**	**0**

(1) Assumes a student to staff/faculty ratio, based upon the ratio presented for a proposed school within Table 13-4 of the 2013 Hudson Square Rezoning FEIS.
444 students / 40 staff/faculty = 11.1 students per staff/faculty

Community Facility Trips

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday Community Facility Trips	Autos			Taxis			Trucks			School Buses		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	561	1	2	1	0	0	0	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	72	0	0	0	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	0	3,639	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	125	0	0	0	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	0	0	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	3,122	0	0	0	150	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0													
	Total (No Action Projects)	**100**	**12,937**	**19,909**	**3,639**	**367**	**33**	**956**	**1**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday Community Facility Trips	Temporal Distributior			Total Person Trips			Auto Person Trips			Taxi Person Trips			Bus Person Trips			Subway Person Trips			Walk Person Trips			School Bus Person Trips		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	561	7.1%	10.0%	7.2%	40	56	40	2	3	2	0	1	0	1	2	1	2	3	2	34	48	34	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	72	7.1%	10.0%	7.2%	5	7	5	0	0	0	0	0	0	0	0	0	0	0	0	4	6	4	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	3,639	3,639	0	0	175	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	125	7.1%	10.0%	7.2%	9	12	9	0	1	0	0	0	0	0	0	0	1	1	1	8	11	8	0	0	0
16	716 57th St.	5	0	994	0	0	0	48	7.1%	10.0%	7.2%	3	5	3	0	0	0	0	0	0	0	0	0	0	0	0	3	4	3	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	0	7.1%	10.0%	7.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	0	0	0	0	0	7.1%	10.0%	7.2%	11	15	11	1	1	1	0	0	0	0	0	0	1	1	1	9	13	9	0	0	0
					0	0	0																									
	Total (No Action Projects)	**100**	**12,937**	**20,426**	**3,639**	**367**	**33**	**980**				**68**	**96**	**69**	**3**	**5**	**3**	**0**	**1**	**0**	**1**	**2**	**1**	**4**	**5**	**4**	**58**	**82**	**58**	**0**	**0**	**0**

(1) Assumes a student to staff/faculty ratio, based upon the ratio presented for a proposed school within Table 13-4 of the 2013 Hudson Square Rezoning FEIS.
444 students / 40 staff/faculty = 11.1 students per staff/faculty

School Student Trips

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday School Student Trips	Autos			Taxis			NO TRUCKS			School Buses		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	0	0	0	0	0	0	0				0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	0	0	0	0	0	0	0				0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
5	864 59th St.	5	0	0	3,639	0	0	0	0	0	0	0	0	0				0	0	0
6	857 60th St.	9	2,335	0	0	0	0	0	0	0	0	0	0	0				0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
15	757 58th St.	3	0	2,594	0	0	0	0	0	0	0	0	0	0				0	0	0
16	716 57th St.	5	0	994	0	0	0	0	0	0	0	0	0	0				0	0	0
17	749 49th St.	8	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	200	4	0	0	1	0	0				0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	534	10	0	0	4	0	0				1	0	0
20	986 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0
21	928 55th Ave.	10	0	3,122	0	0	0	0	0	0	0	0	0	0				0	0	0
					0	0	0													
	Total (No Action Projects)	**100**	**12,937**	**19,909**	**3,639**	**367**	**33**	**734**	**14**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday School Student Trips	Temporal Distributior			Total Person Trips			Auto Person Trips			Taxi Person Trips			Bus Person Trips			Subway Person Trips			Walk Person Trips			School Bus Person Trips		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	3,639	3,639	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	200	50.0%	0.0%	2.5%	100	0	5	6	0	0	2	0	0	0	0	0	0	0	0	88	0	4	4	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	534	50.0%	0.0%	2.5%	267	0	13	17	0	1	5	0	0	0	0	0	0	0	0	235	0	12	10	0	1
20	986 52nd St.	6	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	0	0	0	0	0	50.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0																									
	Total (No Action Projects)	**100**	**12,937**	**20,426**	**3,639**	**367**	**33**	**734**				**367**	**0**	**18**	**23**	**0**	**1**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**323**	**0**	**16**	**14**	**0**	**1**

(1) Assumes a student to staff/faculty ratio, based upon the ratio presented for a proposed school within Table 13-4 of the 2013 Hudson Square Rezoning FEIS.
444 students / 40 staff/faculty = 11.1 students per staff/faculty

School Staff Trips

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday School Staff Trips	Autos			Taxis			Trucks			School Buses		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	0	3,639	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	18	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	48	1	0	0	0	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	3,122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0													
	Total (No Action Projects)	**100**	**12,937**	**19,909**	**3,639**	**367**	**33**	**66**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

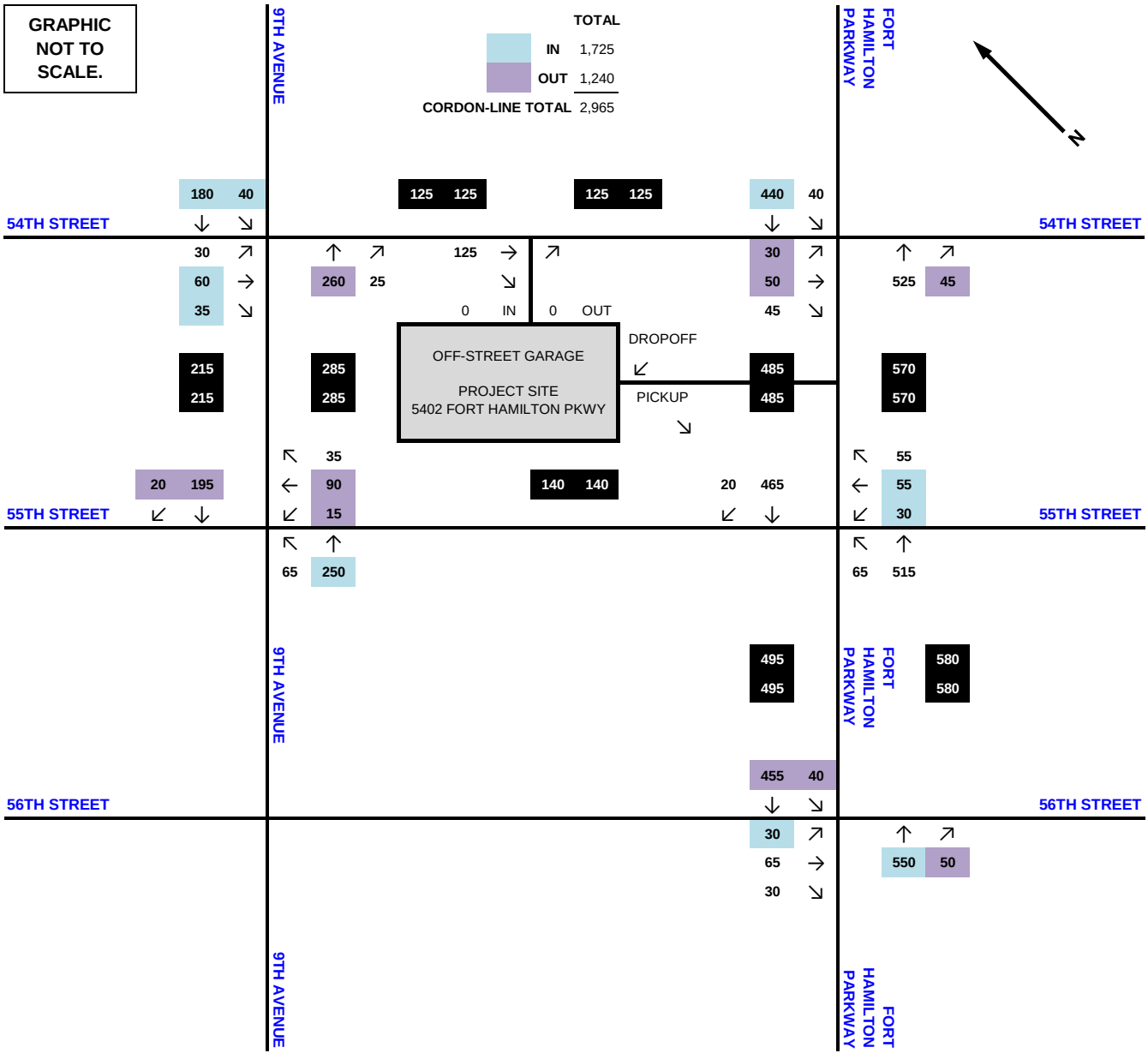
Map #	School SF (/1000)	
18	55.000	obtained from annual facility surveys (NYC DOE
19	24.136	obtained from annual facility surveys (NYC DOE

Map #	Site Location	Residential Dwelling Units (DU)	Retail (Local) Floor Area (GSF)	Community Facility Floor Area (GSF)	Daycare Floor Area (GSF)	School Students (Seats)	School Staff (1)	Weekday School Staff Trips	Temporal Distributior			Total Person Trips			Auto Person Trips			Taxi Person Trips			Bus Person Trips			Subway Person Trips			Walk Person Trips			School Bus Person Trips		
									AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
1	984 52nd St.	6	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	5814-5820 Ft. Hamilton Pkwy	0	10,602	11,694	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	843-845 54th St.	10	0	1,505	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	1128 56th St.	2	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	864 59th St.	5	0	3,639	3,639	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	857 60th St.	9	2,335	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1154 59th St.	3	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1152-1154 59th St.	3	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1248 56th St.	1	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1262 50th St.	6	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	1246 49th St.	3	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	1118 45th St.	6	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	4506 12th Ave.	10	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1190 44th St.	4	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	757 58th St.	3	0	2,594	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	716 57th St.	5	0	994	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	749 49th St.	8	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	5105 Fort Hamilton Pkwy (PS 160 Annex	0	0	0	0	100	9	18	5.0%	0.0%	2.5%	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	942 62nd Street (PS 310)	0	0	0	0	267	24	48	5.0%	0.0%	2.5%	2	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
20	986 52nd St.	6	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	928 55th Ave.	10	0	0	0	0	0	0	5.0%	0.0%	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0																									
	Total (No Action Projects)	**100**	**12,937**	**20,426**	**3,639**	**367**	**33**	**66**				**3**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

(1) Assumes a student to staff/faculty ratio, based upon the ratio presented for a proposed school within Table 13-4 of the 2013 Hudson Square Rezoning FEIS.
444 students / 40 staff/faculty = 11.1 students per staff/faculty

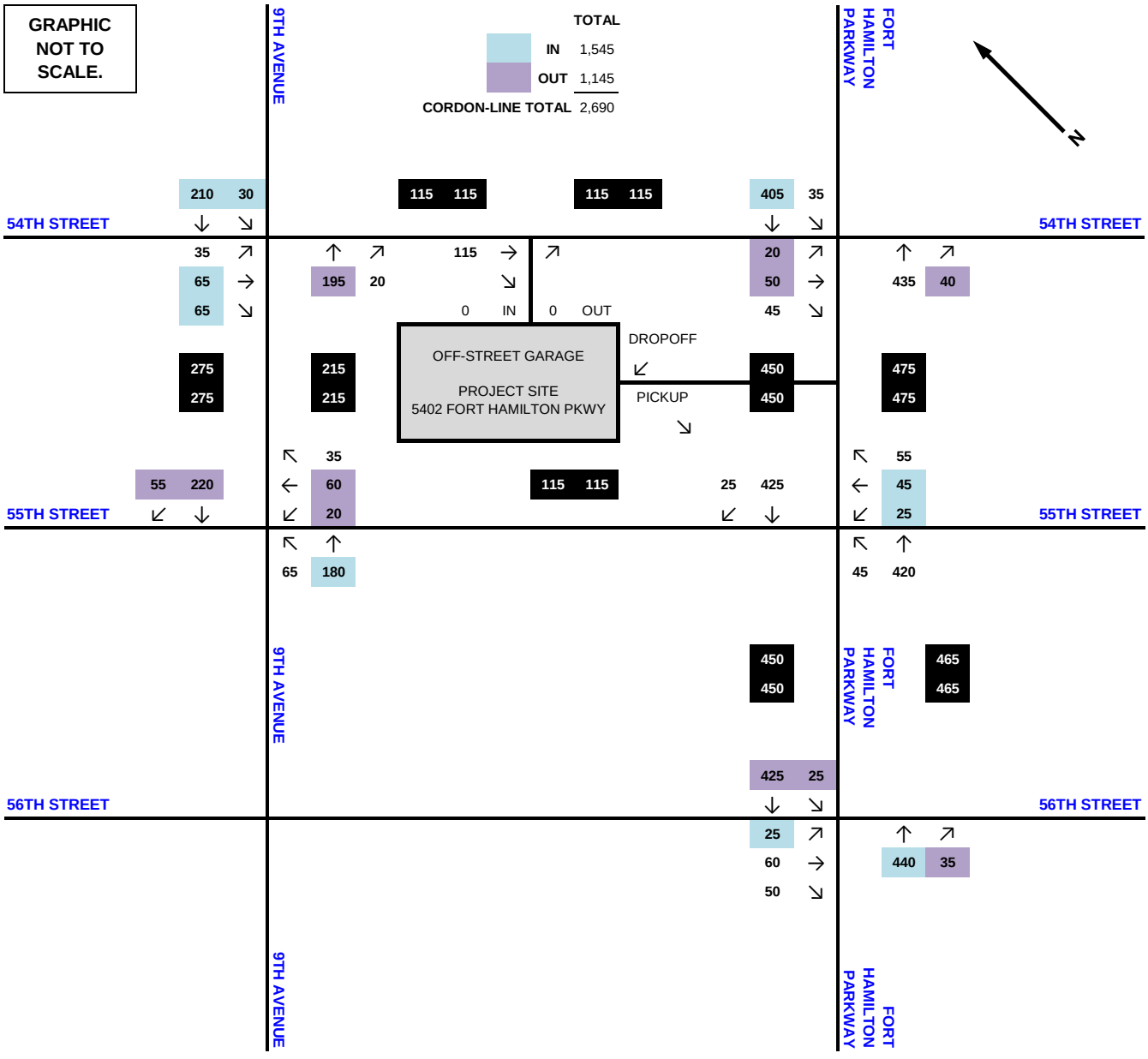
Attachment C
2011 AM/MD/PM Peak Hour Traffic Networks (with Cordon-Line)

2011 AM Existing Condition Traffic Volumes (Cordon-Line)



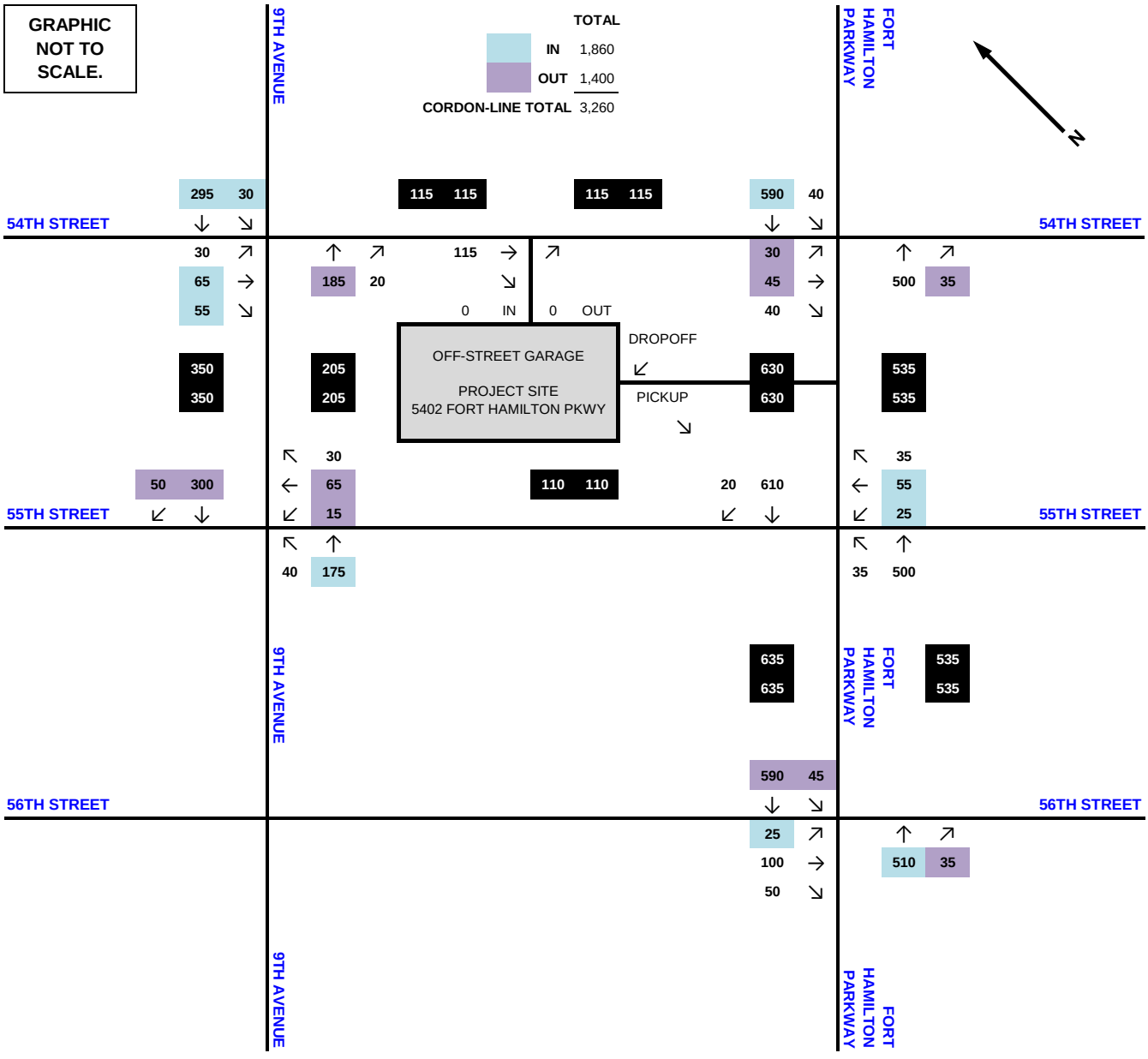
NOTE: TO BE CONSERVATIVE, SOME TURNING MOVEMENTS ALONG THE CORDON-LINE WERE NOT INCLUDED (e.g., EB THRU/RIGHT TURN AT FORT HAMILTON PKWY.

2011 MD Existing Condition Traffic Volumes (Cordon-Line)



NOTE: TO BE CONSERVATIVE, SOME TURNING MOVEMENTS ALONG THE CORDON-LINE WERE NOT INCLUDED (e.g., EB THRU/RIGHT TURN AT FORT HAMILTON PKWY.

2011 PM Existing Condition Traffic Volumes (Cordon-Line)



NOTE: TO BE CONSERVATIVE, SOME TURNING MOVEMENTS ALONG THE CORDON-LINE WERE NOT INCLUDED (e.g., EB THRU/RIGHT TURN AT FORT HAMILTON PKWY.