Stevenson Commons

Final Scope of Work for a Draft Environmental Impact Statement

CEQR No. 21DCP044X

Lead Agency:
New York City Planning Commission

Prepared by:
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June 7, 2021

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~~DRAFT~~FINAL
SCOPE OF WORK FOR A DRAFT ENVIRONMENTAL IMPACT STATEMENT

CEQR NO. 21DCP044X

~~September 4th~~June 7th, 202~~10~~

This document is the Final Scope of Work (Final Scope) for the Stevenson Commons Draft Environmental Impact Statement (DEIS). This Final Scope has been prepared to describe the Proposed Actions, present the proposed framework for the EIS analysis, and discuss the procedures to be followed in the preparation of the DEIS. This Final Scope incorporates changes that were made subsequent to publication of the Draft Scope of Work (Draft Scope). Revisions of the Draft Scope have been incorporated into this Final Scope and are indicated by double-underlining new text and ~~striking~~ deleted text.

A. INTRODUCTION

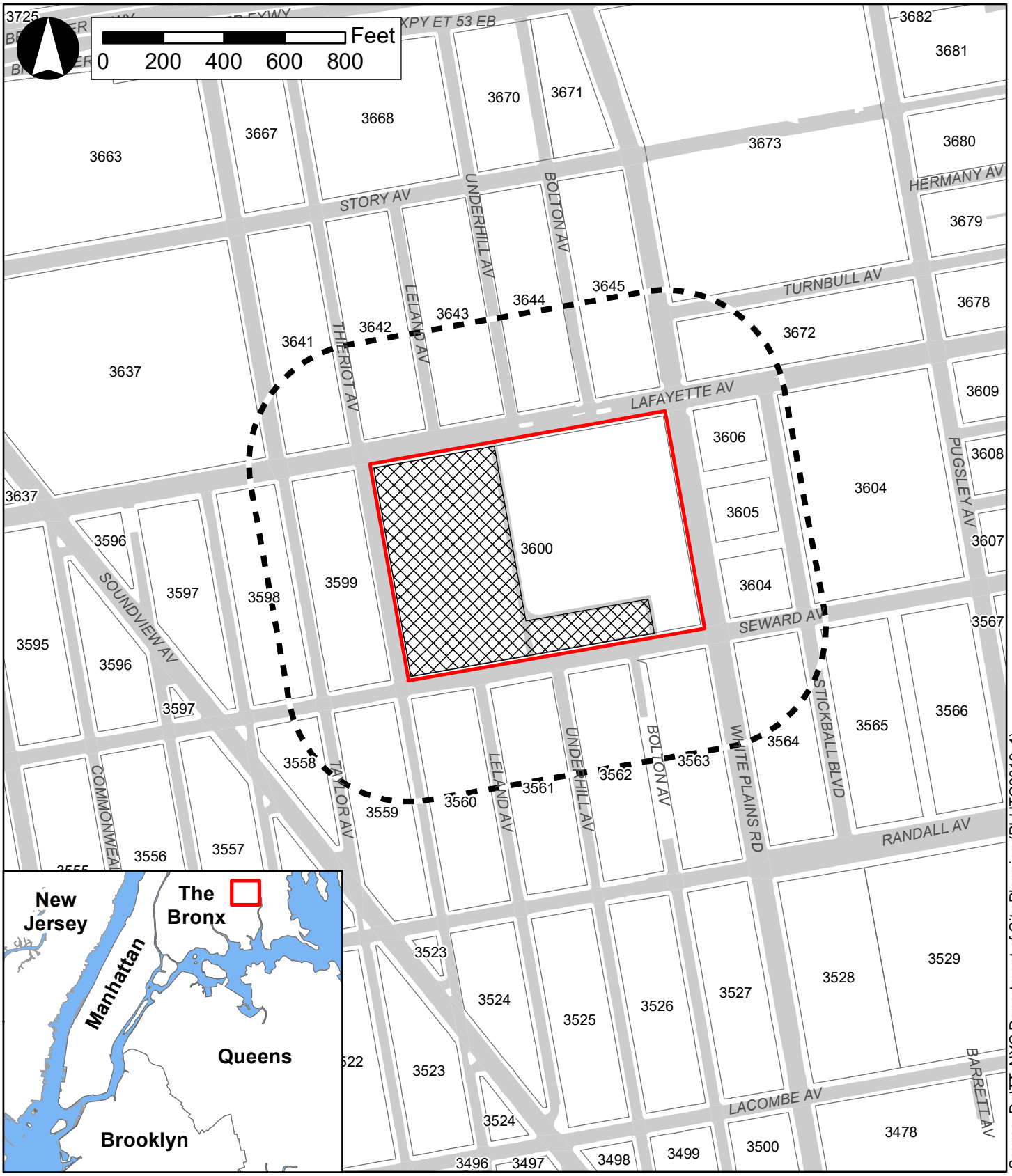
This ~~Draft~~ Final Scope of Work (~~Draft~~ Final Scope) outlines the technical areas to be analyzed in the preparation of a Draft Environmental Impact Statement (DEIS) for the Stevenson Commons project. The New York City Department of City Planning (DCP), acting on behalf of the New York City Planning Commission (CPC), as lead agency for City Environmental Quality Review (CEQR), has determined that the project will require the preparation of an EIS.

Camber Property Group, LLC (the "Applicant"), as property owner of 755 White Plains Road and 1850 Lafayette Avenue (Block 3600, Lot 4), is requesting discretionary actions to facilitate new residential and community facility development at Stevenson Commons in the Soundview neighborhood of Bronx Community District 9. The Stevenson Commons site (a.k.a. the "Project Area") at 1850 Lafayette Avenue (Block 3600, Lot 4) comprises the 679,000 square foot (sf) superblock bounded by Lafayette Avenue, White Plains Road, Seward Avenue, and Thieriot Avenue (see **Figure 1**). The eastern portion of the site is currently developed with a mix of residential, retail, community facility, and/or accessory parking uses.

The Proposed Actions would facilitate new construction on the Stevenson Commons site that would result in an incremental (net) increase compared to No-Action conditions of approximately 735 affordable dwelling units (DUs), including 621 income-restricted housing units and 114 affordable ~~units~~ independent residences for seniors (AIRS), 33,995 gsf of community facility uses, approximately 1.94 acres of publicly accessible open space, and a net decrease of approximately 104 parking spaces (the "Proposed Project"). New development would be spread across six new buildings on the Stevenson Commons site. Construction of the Proposed Project is expected to begin in the second quarter of 2021 with all components complete and operational by early 2028.

This document provides a description of the Proposed Actions and associated Proposed Project, and includes task categories for all technical areas to be analyzed in the DEIS.

Figure 1
Project Location



Source: DoITT, NYC Department of City Planning (PLUTO2019v1)

Legend

Project Area | 400-Foot Radius | Development Site | 3600 Tax Blocks

B. REQUIRED APPROVALS AND REVIEW PROCEDURES

Required Approvals

The Proposed Actions would encompass discretionary actions that are subject to review under the City Environmental Quality Review (CEQR) process. The anticipated discretionary actions include:

- Modification to the previously approved Stevenson Commons large scale residential development (LSRD) (CP-22380) to update the previously approved plans and zoning calculations to reflect a proposed mixed use development on Block 3600, Lot 4; and
- ~~Modification~~ Amendment to the previously approved Stevenson Commons City-aided limited-profit housing project on Block 3600, Lot 4 pursuant to Article 2 of the New York State Private Housing Finance Law (CP-22381) to reflect the Proposed Project.

City Environmental Quality Review (CEQR) and Scoping

The Proposed Actions are classified as a Type 1 Action, as defined under NYC Executive Order 91 of 1977 §6-15 (2) and are subject to environmental review in accordance with CEQR guidance. An Environmental Assessment Statement (EAS) and Positive Declaration were issued on August 31, 2020 by DCP, as lead agency. DCP has determined that the Proposed Actions may result in significant adverse environmental impacts and directed that a DEIS be prepared.

The~~is~~ Draft Scope of Work (Draft Scope) for the preparation of a DEIS contains a description of the Proposed Actions and the tasks that would be undertaken to analyze the potential environmental impacts of the Proposed Actions and associated Proposed Project. The issuance of the Draft Scope marks the beginning of the public comment period. The scoping process allows the public a voice in framing the scope of the DEIS. The scoping document sets forth the analyses and methodologies that will be utilized to prepare the DEIS. During the public comment period, those interested in reviewing the Draft Scope may do so and give their comments to the lead agency. In accordance with City and State environmental review regulations and methodologies, the Draft Scope of Work to prepare the EIS was issued on September 4, 2020. The public, interested agencies, and elected officials, ~~are~~ were invited to comment on the Draft Scope, either in writing or orally, at ~~the~~ a public scoping meeting.

In accordance with SEQRA and CEQR, the~~is~~ Draft Scope of Work ~~has been~~was distributed for public review. A public scoping meeting ~~has been scheduled for~~was held on October 8th 2020 at 2:00 PM, and the period for submitting written comments ~~will~~ remained open until Monday, October 19th 2020. In support of the City's efforts to contain the spread of COVID-19, DCP ~~will hold~~held the public scoping meeting remotely. ~~Instructions on how to view and participate, as well as materials relating to the meeting, will be available at the DCP Scoping Documents webpage (https://www1.nyc.gov/site/planning/applicants/scopingdocuments.page) and NYC Engage website (https://www1.nyc.gov/site/nycengage/index.page) in advance of the meeting.~~

Comments received during the Scoping Meeting and written comments received up to ten days after the meeting ~~will be~~were considered and incorporated, as appropriate, into this~~e~~ ~~Final Scope of Work (~~Final Scope~~)~~. The Final Scope ~~will~~ incorporates all relevant comments made on the Draft Scope and revises the extent or methodologies of the studies, as appropriate, in response to comments made during the CEQR scoping process, and to include any other necessary changes to the scope of work for

the EIS. **Appendix 5** includes responses to comments made on the Draft Scope. The DEIS will be prepared in accordance with thise ~~resulting~~ Final Scope.

Once the DEIS is complete, the document will be made available for public review and comment. A public hearing will be held on the DEIS in conjunction with the CPC hearing on the land use applications to afford all interested parties the opportunity to submit oral and written comments. At the close of the public review period, a Final EIS (FEIS) will be prepared. Comments made on the DEIS will be responded to and incorporated into the FEIS, as appropriate. The FEIS will then be used by the relevant City agencies to evaluate CEQR findings, which address project impacts and proposed mitigation measures, and to decide whether to approve the requested discretionary actions, with or without modifications. The rationale for this decision is then set forth in a document called a Statement of Findings.

C. PROJECT DESCRIPTION

Project Area

The Stevenson Commons site comprises the 679,000-sf superblock bounded by Lafayette Avenue to the north, White Plains Road to the east, Seward Avenue to the south, and Thieriot Avenue to the west. The site is occupied by a nine-building Mitchell-Lama housing development and contains a total of 990,050 gross square feet (gsf), including approximately 914,634 gsf of residential uses (948 affordable rental DUs), 10,648 gsf of local retail uses, 36,214 gsf of community facility uses (health center), and 570 at-grade accessory parking spaces. It should be noted however that only 462 of the 570 spaces are currently functional, as a portion of the parking square footage is used for onsite maintenance and storage. As shown in **Figure 2**, the nine buildings are all located on the eastern portion of the block and are oriented around a central private open space. The western portion of the block is occupied by surface accessory parking spaces and private open spaces encompassing private tennis and handball courts. These private open spaces, which also include passive grassy areas, total approximately 3.1 acres, and are used exclusively by current residents, although the grass field is currently not operational for the tenants due to safety concerns. In addition to parking, there is a large open area on the western portion of the Project Area that was historically used for outdoor recreation as football and softball fields and tennis, basketball and handball courts. The tennis courts remain in use and have been operated by the New York Junior Tennis League since approximately 1994. However, prior to the Applicant's acquisition of the site, the fields and courts became unusable due to poor conditions and public safety concerns. As a result, access to the fields was restricted and these areas were secured with fencing.

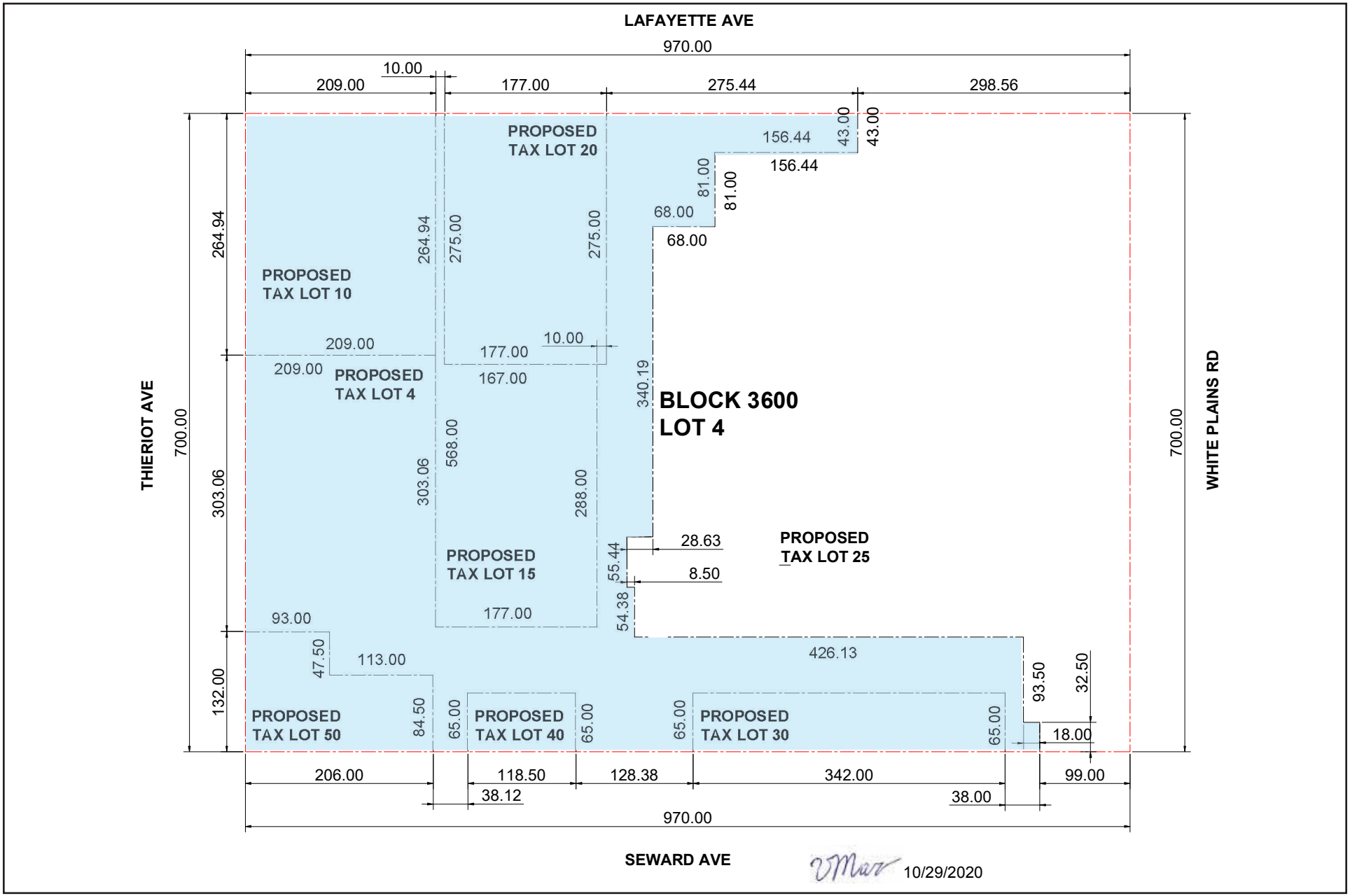
Although the Project Area currently exists as Tax Block 3600, Lot 4, it is undergoing a proposed subdivision and will be apportioned into eight new tax lots to facilitate future residential development. As depicted in the Tentative Tax Lot Sketch shown in **Figure 3**, the Proposed Project would occupy the western and southwestern segments of the overall Project Area (tentative future Tax Lots 4, 10, 15, 20, 30, 40, and 50, the "Development Site"), with the existing Stevenson Commons development comprising the northeastern and eastern portion of the Project Area (tentative future Tax Lot 25).

The development of Stevenson Commons was facilitated by ~~two~~ several CPC approvals in 1971 and 1973~~, including approval of a plan for a City-aided limited-profit housing project (Stevenson Commons) on Block 3600, Lot 4 pursuant to Article 2 of the New York State Private Housing Finance Law (CP-22381, approved September 24, 1973), and approval of a NYC Housing and Development Administration's application for a LSRD authorization pursuant to Article VII, Chapter 8 of the Zoning Resolution and~~

Source: ESRI

Legend

Project Area | 400-Foot Radius | Development Site



Stevenson Commons

This Figure is new to the FSOW

Figure 3

Tentative Tax Lot Subdivision Sketch

~~Special Permit authorizations (CP-22380, approved September 24, 1973)~~. Stevenson Commons was developed pursuant to a LSRD plan (CP-22380, approved September 24, 1973) and a City-aided limited-profit housing project and plan pursuant to Article 2 of the New York State Private Housing Finance Law (CP-22381, approved September 24, 1973). Before the 1973 Stevenson Commons approvals, the Project Area was subject to several land use approvals to facilitate the development of the Lavenburg Community, a precursor to Stevenson Commons, a LSRD with four 21- and 30-story towers and five 4-story buildings with 905 units. The City Planning Commission approved a limited profit rental housing plan pursuant to Article 2 of the New York State Private Housing Finance Law (CP-21484, approved March 22, 1971), a LSRD (CP-21517, approved March 22, 1971), and the demapping of portions of Leland Avenue, Underhill Avenue, and Bolton Avenue between Lafayette Avenue and Seward Avenue (CP-21539, approved March 22, 1971).

Beyond the project and plan approval, ~~T~~the approved Stevenson Commons LSRD included two special permits and an authorization pursuant to the following sections of the Zoning Resolution:

- ZR § 78-22 - to authorize accessory commercial uses listed in Use Group 6A or 6F which in the aggregate occupy not more than two percent of the total floor area in the development, and of which no single establishment occupies more than 15,000 square feet of floor area;
- ZR § 78-42 - to permit a waiver of the requirements for off-street parking spaces accessory to commercial uses within the development; and
- ZR § 74-53 - to permit group parking facilities with more than 150 spaces, accessory to uses in the large scale residential development.

Stevenson Commons was completed in the mid-1970s pursuant to the LSRD and housing project approvals. On the approved site plan, the Stevenson Commons buildings were situated on the eastern half of the site and the western half of the site consisted of surface parking lots and a large, unimproved open area that was eventually used for outdoor recreation. However, a significant amount of the parking went unused (it was never more than a quarter occupied) and the open area fell into disrepair. As a result, ~~I~~in 2003, an application was filed (ULURP No. M 040047 ZSX and M 030150 HOX) to modify the previously approved ~~Mitchell-Lama Project Plan~~project and plan for Stevenson Commons and to modify the previously approved LSRD authorization to permit inclusion of the Bronx International Youth Tennis Center on the western portion of the Project Area. This minor modification application was approved, but the tennis center was never constructed~~.~~, ~~The site plan remains as configured in the 1973 approval~~ and over the nearly two decades since, this open area has fallen into further disrepair.

The Stevenson Commons site is currently located within an R6 zoning district that was established with the 1961 enactment of the ZR. R6 zoning districts are widely mapped in built-up, medium-density areas of Brooklyn and the Bronx. The character of R6 districts can range from neighborhoods with a diverse mix of building types and heights to large-scale “tower in the park” developments. Developers in R6 districts can choose between two sets of bulk regulations: standard “height factor” regulations, which produce small multi-family buildings on small zoning lots and tall buildings set back from the street on larger lots; or optional “Quality Housing” regulations, which produce high lot coverage buildings within height limits that often reflect the scale of older, pre-1961 apartment buildings in the neighborhood. The existing buildings on the Stevenson Commons site were developed pursuant to Height Factor regulations. Under Height Factor zoning regulations, the residential floor area ratio (FAR) in R6 districts ranges from 0.78 (for a single-story building) to 2.43 at a typical height of 13 stories; the open space ratio (OSR) ranges from 27.5 to 37.5. While commercial uses are not typically permitted in R6 districts (absent the mapping of a commercial overlay), a limited amount of commercial use is allowed on the Stevenson Commons site pursuant to the LSRD Special Permit approved by the CPC in 1973. In R6

districts, off-street parking is generally required for 70 percent of DUs, although the required parking for income-restricted housing units (IRHU) is for 25 percent of DUs. For buildings developed pursuant to Quality Housing regulations, parking is required for 25 percent of IRHU and for 50 percent of DUs that are not classified as IRHU.

The Stevenson Commons site has an existing built FAR of 1.42, including a residential FAR of 1.35, a community facility FAR of 0.05, and a commercial FAR of 0.02. With a built FAR of 1.42, the Stevenson Commons site is underbuilt pursuant to existing zoning regulations; however, no new development can occur on the site, as its development is limited to the plan approved in the 1973 LSRD Special Permit.

Neighborhood Context

The Clason Point peninsula in the South Bronx is separated from surrounding areas by various natural and manmade barriers, including the Cross-Bronx Expressway (I-95) and Bruckner Expressway (I-278) to the north, the Bronx River to the west, Pugsley Creek and Westchester Creek to the east, and the East River to the south. The peninsula is comprised of a number of predominantly residential neighborhoods including Soundview, Clason Point, Castle Hill, and Harding Park.

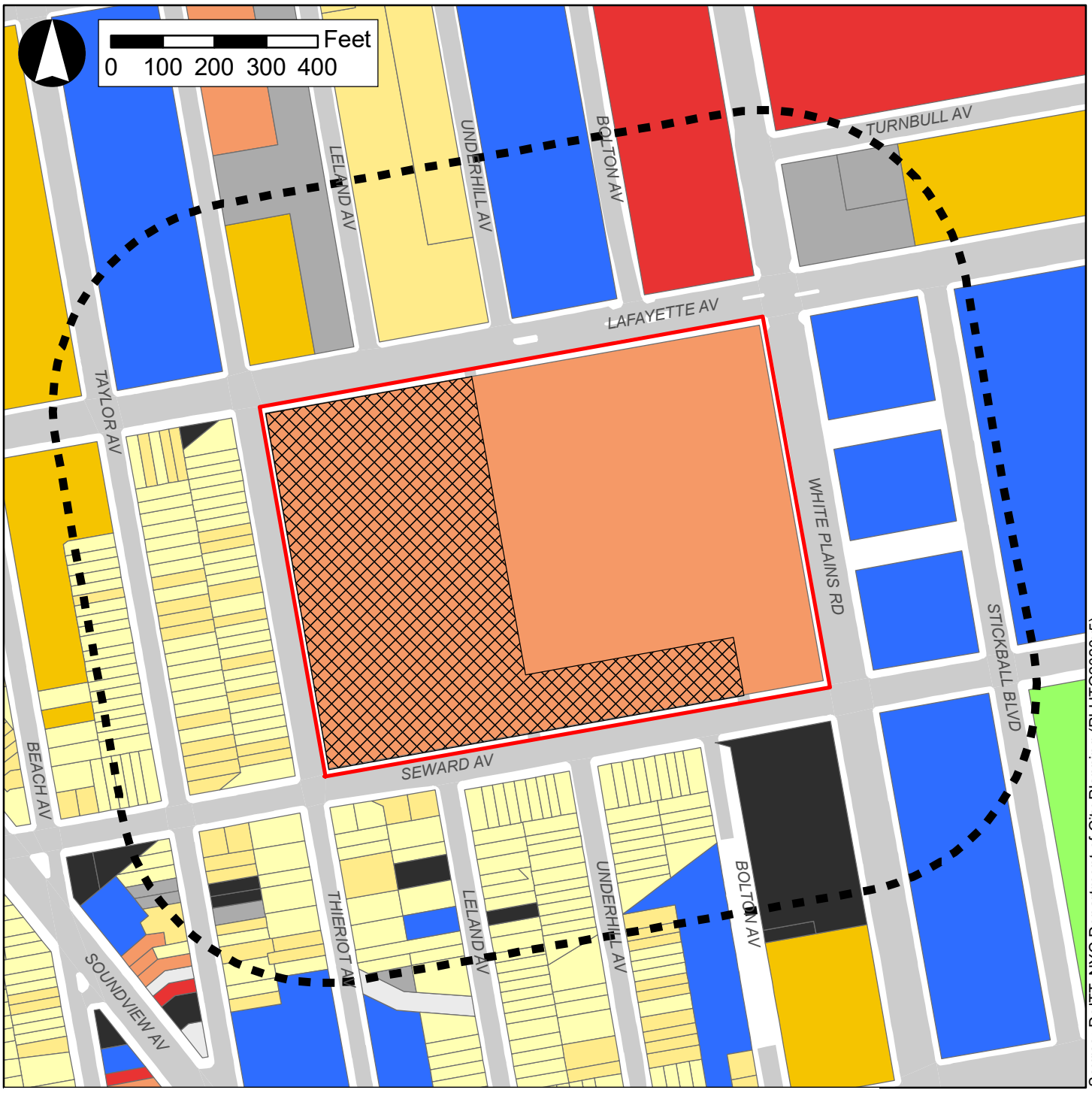
Soundview was predominantly undeveloped farmland through the 1910s. In 1920, the Lexington Avenue subway was completed along Westchester Avenue and one- and two-family houses were built. In the 1960s, construction of the Bruckner Expressway (I-278) spurred development of high-rise multi-family buildings for low- and middle-income households, including the Soundview Houses.[1] The area has undergone little new development since the 1960s and is still defined by many of these features.

As shown in **Figure ~~4~~3**, residential uses are spread throughout the surrounding area and range from one-story single-family homes to 21-story multi-family apartment buildings. Other defining and notable features in the surrounding area include open space, public facilities and institutional uses, and commercial uses. Several local and regional open spaces are located in the area including Story Playground (2.1 acres), Castle Hill Park (8.8 acres), Pugsley Creek Park (83.6 acres), and Soundview Park (205.3 acres). Public facilities and institutional uses are concentrated along White Plains Road, Lafayette Avenue, and Soundview Avenue and include a U.S. Post Office, several schools, houses of worship, a nursing/rehabilitation center, and the New York Public Library (NYPL) Soundview branch. Commercial uses are generally located on large lots to the northeast of the Project Area and are primarily single-story chain retailers. Public transportation in the surrounding area includes ferry service at the Soundview Ferry Terminal in Clason Point Park, several New York City Transit (NYCT) local bus routes along the major thoroughfares of White Plains Road, Lafayette Avenue, and Soundview Avenue (Bx5, Bx27, Bx36, Bx39), and NYCT subway service (No. 6 train) along Westchester Avenue.

As shown in **Figure 54**, in addition to the R5 and R6 districts discussed above, a variety of zoning districts are located within the surrounding area including R4, R5/C1-2, R8, R8/C2-4, and C4-1. R4 is a non-contextual, low-density district that allows single- or two-family homes along with multi-family buildings in a variety of housing types with a maximum residential FAR of 0.75. R8 is a non-contextual, medium-density district that allows construction pursuant to either height factor or Quality Housing regulations. Depending on the regulations applied, R8 zoning allows a maximum residential FAR of 6.02 (height factor) or 7.2 FAR (on a wide street and/or with MIH under Quality Housing). C1-2 commercial overlays are mapped along portions of White Plains Road and Soundview Avenue within R5 districts and permit a

[1] Jackson, Kenneth T. (Ed.). (2010). *The Encyclopedia of New York City.* New Haven, CT: Yale University Press.

Figure 4
Land Use Study Area



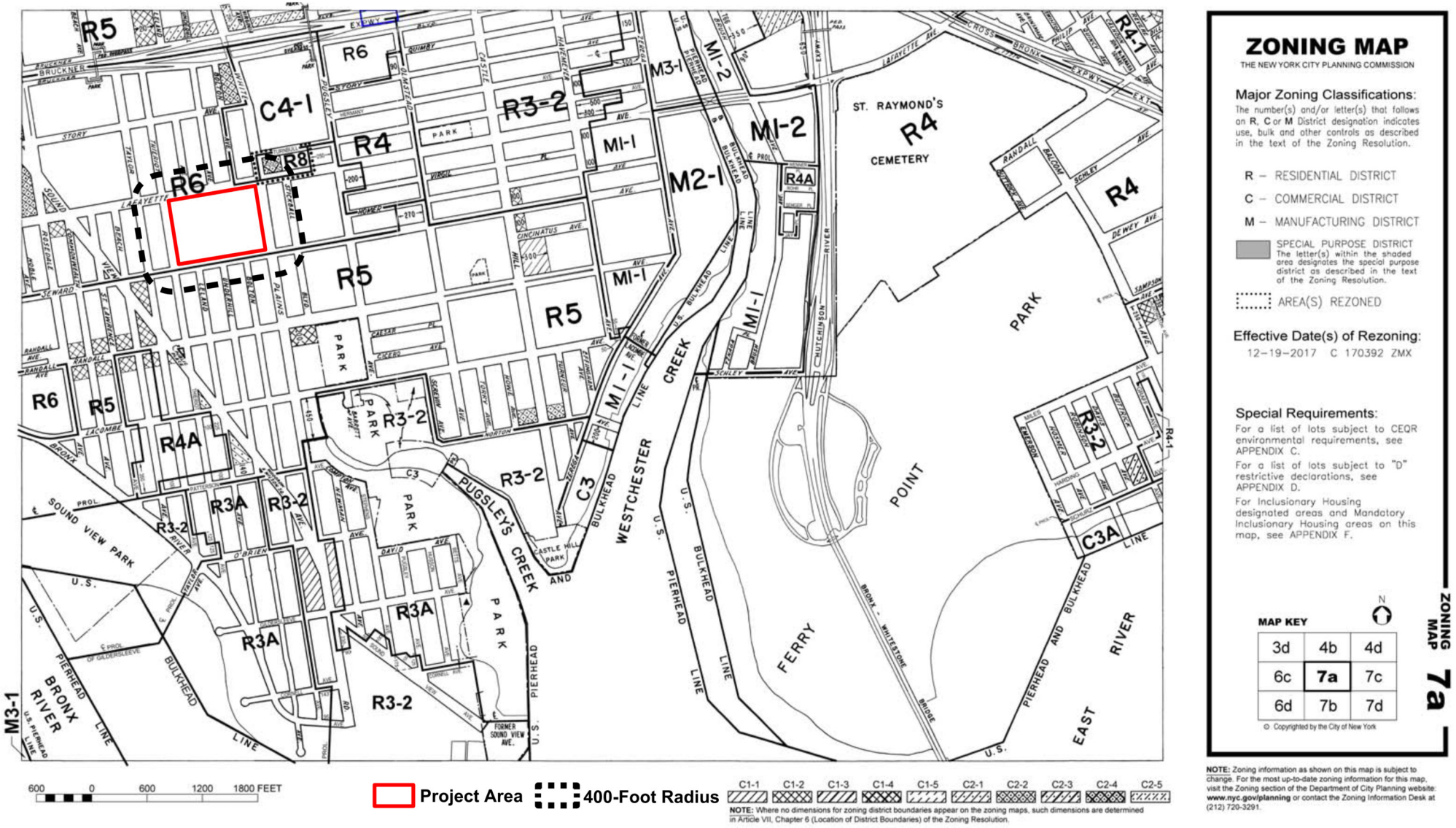
Source: DoITT, NYC Department of City Planning (PLUTO2020v5)

Legend

- Project Area
- 400-Foot Radius
- Development Site

Land Use

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


ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
AREA(S) REZONED
Effective Date(s) of Rezoning:
12–19–2017 C 170392 ZMX
Special Requirements:
For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
For Inclusionary Housing designated areas and Mandatory Inclusionary Housing areas on this map, see APPENDIX F.
MAP KEY
3d 4b 4d
6c 7a 7c
6d 7b 7d
© Copyrighted by the City of New York
ZONING MAP 7a
NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3291.
600 0 600 1200 1800 FEET
Project Area
400-Foot Radius
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.
R5
R6
C4-1
R8
R4
R3-2
M3-1
M1-2
M1-1
M2-1
R4A
R4-1
ST. RAYMOND'S CEMETERY
R4
PARK
POINT
FERRY
EAST RIVER
BRONX RIVER
SOUND VIEW PARK
R3A
C3
C3A
WESTCHESTER CREEK
PUGSLEY'S CREEK AND CASTLE HILL PARK
PIERHEAD AND BULKHEAD LINE
U.S. PIERHEAD LINE
BULKHEAD LINE
FORMER SOUND VIEW AVE.
BRONX - WHITESTONE BRIDGE

commercial FAR of 1.0. A C2-4 overlay is mapped along White Plains Road and Lafayette Avenue within an R8 district and permits a commercial FAR of 2.0. Both overlay districts allow a variety of retail shops and other businesses intended to serve the neighborhood's commercial needs, such as bodegas, restaurants, and hardware stores.

Description of the Proposed Actions

The Proposed Actions comprise minor modification to a large-scale residential development (LSRD) plan, and ~~a modification~~amendment to the previously approved Stevenson Commons City-aided limited-profit housing project pursuant to Article 2 of the New York State Private Housing Finance Law (CP-22381), as detailed below.

Large-Scale Residential Development (LSRD) Special Permit & City-Aided Limited-Profit Housing Project - ~~Minor Modifications~~Requested Actions

As discussed previously, the development of Stevenson Commons was facilitated by a 1973 CPC-approval of a NYC Housing and Development Administration's application for a LSRD authorization pursuant to Article VII, Chapter 8 of the Zoning Resolution and Special Permit authorizations.

The applicant is requesting the following ~~minor modifications~~land use actions:

1. modification to the previously approved Stevenson Commons large scale residential development (CP-22380) to update the previously approved plans and zoning calculations to reflect ~~a~~ the proposed ~~mixed use~~predominantly residential development; and

2. ~~modification~~ amendment to the previously approved Stevenson Commons City-aided limited-profit housing project and plan pursuant to Article 2 of the New York State Private Housing Finance Law (CP-22381) to reflect the land actually occupied by the existing Mitchell-Lama development.

The ~~p~~Proposed ~~minor modifications~~Actions are necessary to allow for the production of new housing at Stevenson Commons, which is not currently permitted without the requested ~~modifications~~ approvals~~to the existing LSRD and housing project~~. Absent the ~~approved special permit~~prior approvals, the proposed development of six new residential and mixed residential and community facility buildings with approximately 735 total new income-restricted housing units could be developed as-of-right under R6 zoning.

Public Financing

In addition, construction financing for one or more buildings of the Proposed Project from City sources will be sought. Funding may be requested from the New York City Department of Housing Preservation and Development (HPD) and/or New York City Housing Development Corporation (HDC) under the Senior Affordable Rental Apartments (SARA) Program, the Open Door Program, the Extremely Low and Low-income Affordability (ELLA) financing program, and/or Mixed Income Program: Mix & Match. Additionally, funding may be requested from the State for competitive tax credits.

Purpose and Need for the Proposed Actions

The Proposed Actions are requested in order to allow the development of a significant number of affordable housing units in the Soundview neighborhood of the Bronx. Under the ~~current LSRD Special Permit~~existing approvals restrictions, no new housing can be constructed on the Stevenson Commons site, despite the site being underbuilt pursuant to its underlying R6 zoning. The requested ~~minor modifications~~actions would facilitate the development of an additional 735 affordable income-restricted DUs, including 621 income-restricted housing units and 114 ~~senior housing~~AIRS units, and 33,995 gsf of community facility uses. The ~~p~~Proposed ~~minor modifications~~Project would be consistent with the existing Stevenson Commons ~~LSRD~~ development, and would be compliant with the underlying R6 zoning district. Additionally, the location and bulk of the existing Stevenson Commons buildings would not change, and no new modifications of zoning provisions are required for either the Proposed Project or the existing Stevenson Commons buildings. The Proposed Project would enhance and not decrease amenities to the residents of Stevenson Commons by increasing access to open space. The Proposed Project facilitated by the Proposed Actions would also be consistent with existing developments to the north of the Project Area, including the 16-story Carol Gardens apartments to the north, the eight- to 15-story NYCHA Monroe Houses to the northwest, and the 21-story Park Lane Apartments to the northeast. It would allow new residential development on an underutilized property and would therefore support the City's goals of promoting affordable housing development by maximizing the use of vacant and underutilized land.

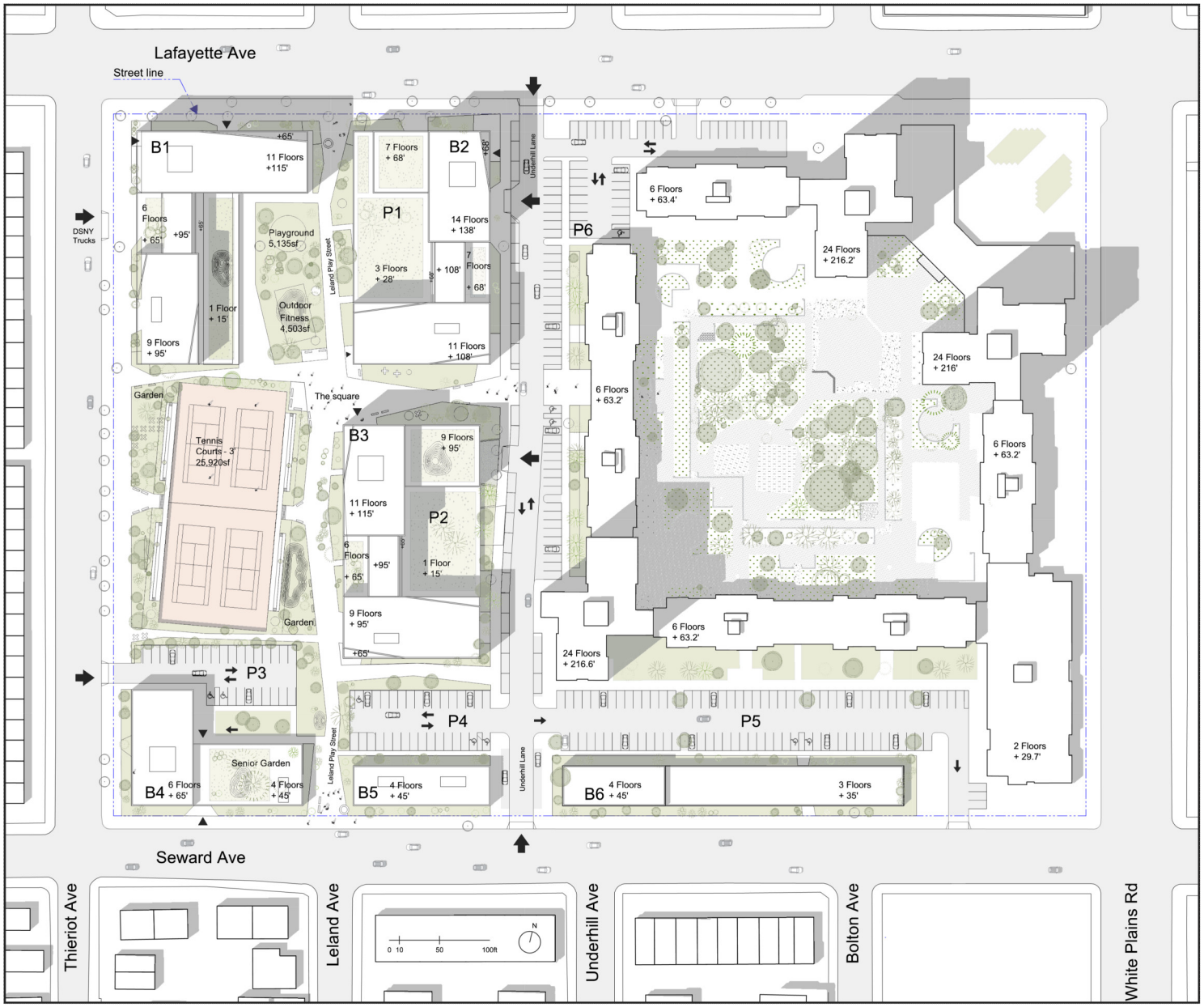
The Proposed Actions would be consistent with the policy goals of the City's *Housing New York: A Five-Borough, Ten-Year Plan*. The proposed residential development would help provide much-needed affordable residential units in an area in which population is increasing and there is increased demand for residential uses. According to the Department of City Planning's 2013 report *New York City Population Projections by Age/Sex & Borough*, the Bronx is anticipated to have the highest rate of growth in the City over the next several decades, estimated at 14 percent from 2010 to 2040.[2] As population in the Bronx is expected to experience substantial and steady growth, additional housing is necessary to ensure adequate supply.

The Proposed Actions would facilitate the creation of approximately 735 new affordable housing units in the Project Area within Bronx Community District 9, where, according to the U.S. Census Bureau, 48.7 percent of households are rent burdened (spending 35 percent or more of their income on rent).

Description of the Proposed Project

The Proposed Actions would facilitate the construction of a new approximately 826,209 gsf mixed-use development. As shown in **Figure ~~6~~5**, new development would be spread across six buildings on the Stevenson Commons site (referred to as Buildings B1, B2, B3, B4, B5, B6) and would result in an incremental (net) increase of approximately 735 affordable DUs, including 621 income-restricted housing units and 114 ~~affordable~~ AIRS units ~~for seniors~~, approximately 33,995 gsf of community facility uses (including an approximately 19,879 gsf child care center and approximately 14,116 gsf of indoor

[2] According to the report, "[t]he Bronx is projected to grow from 1,385,000 in 2010 to 1,579,000 in 2040, an increase of 14 percent—the highest level of growth among the city's boroughs. After experiencing growth of 4.5 percent in the 2010-2020 period, growth in the borough is projected to increase to 5 percent in the subsequent decade and then decline to 4 percent between 2030 and 2040." New York City Population Projections by Age/Sex & Borough, 2010–2040, NYC Department of City Planning, December 2013 at 3.



FOR ILLUSTRATIVE PURPOSES ONLY

Source: WXY

Stevenson Commons

Figure 6
Proposed Site Plan - Stevenson Commons

recreational space (e.g., classrooms, locker rooms, etc.) for community recreational needs and in support of the adjacent tennis courts), and approximately 1.94 acres of publicly accessible open space and an additional 0.68 acres of private open space. The Proposed Project would also provide approximately 466 parking spaces in the Project Area (a net decrease of 104 spaces).

The proposed 735 additional DUs of affordable housing are anticipated to be marketed to households earning between 30 percent and 130 percent of Area Median Income (AMI). Accessory parking would be required for 25 percent of all DUs below 80 percent of AMI, including senior units, and 50 percent of all DUs above 80 percent of AMI, including all homeownership units.

The proposed approximately 1.94 acres of publicly-accessible open space would be located on the western edge of the Stevenson Commons site along the Thieriot Avenue frontage between Buildings B1 and B4. The open space would be accessible to the public from Thieriot Avenue, Lafayette Avenue, Seward Avenue, and the private driveway. It is expected that the open space would include a variety of amenities and programming, including tennis courts, pathways, gardens, landscaping, and seating. Access to the open space would be available to the general public, but the playground and tennis court facilities would be locked during the evening hours to ensure security. In addition to the proposed 1.94 acres of open space that would be publicly accessible, the Proposed Project would also include approximately 0.68 acres of private open space that would be available exclusively to the residents of the Proposed Project. This private open space would consist mostly of rooftop terraces and grassy areas.

A total of approximately 466 parking spaces would be provided at the Stevenson Commons site, including 206 spaces within below-grade garages and 260 surface parking spaces. As shown in **Figure 6~~5~~**, these spaces would be distributed between two below-grade parking garages (referred to as P1 and P2) and four surface-level lots (referred to as P3, P4, P5, P6). The below-grade parking garages would be located beneath Buildings B2 and B3, respectively, with vehicle access provided from Seward Avenue or Lafayette Avenue via the private driveway. Vehicle access to surface lots P4 and P5 would also be provided from the private driveway, as well as a curbcut on Seward Avenue located approximately 112 feet west of White Plains Road. Surface lot P3 would service Building B4 and vehicle access would only be provided from Thieriot Avenue. Surface lot P4 would be located west of the private driveway in between Buildings B3 and B5, and Surface lot P5 would be located east of the private driveway to the north of Building B6. Surface lot P6 would be located in the north portion of the site to the east of the private driveway, and vehicle access would only be provided from Lafayette Avenue. Additional parking would be provided along the private driveway.

Building-by-Building Description

Proposed Buildings B1, B2, B3, B4, B5, and B6 would be located on western and southern portions of the Project Area (see **Figures 6~~5~~ and 7~~6~~**). An illustrative site plan and massing diagram of the Stevenson Commons site are provided in **Figures 6~~5~~ and 7~~6~~**, respectively. **Table 1** provides a summary of the proposed development program.

Building B1 would be situated at the northwestern edge of the Development Site, with~~have~~ frontage along Lafayette and Thieriot Avenues (see **Figure 5**). The building would rise to a maximum height of 11 stories (approximately 115 feet, with a maximum building height envelope of 125 feet) and would be comprised of approximately 187,352 gsf of affordable residential space (187 DUs) and 19,879 gsf of community facility space. Although specific tenants have not been identified, the community facility space within the building is anticipated to be occupied by a daycare use. Building B1 would be accessible from both Lafayette and Thieriot Avenues and each use would have its own entrance.

FOR ILLUSTRATIVE PURPOSES ONLY

Source: WXY

Figure 7
Proposed Massing - Stevenson Commons

TABLE 1
Proposed Development Program[1]

Building	Total GSF[2]	Residential GSF[3]	Community Facility GSF	Accessory Parking Spaces[4]	Max. Building Height Envelope[5] (ft)
B1	207,231	187,352	19,879	466	125
B2	254,432	181,257	8,013		150~~38~~
B3	224,581	195,489	6,103		130~~15~~
B4	74,327	74,327	0		~~65~~70
B5	20,828	20,828	0		~~45~~50
B6	44,810	44,810	0		~~45~~50
Total	**826,209**	**704,063**	**33,995**	**466**	

[1] Table 1 does not include existing development on the Stevenson Commons site.
[2] Includes building amenity, lobby, and parking floor area.
[3] Includes ~~senior~~ AIRS and cooperative housing units.
[4] Existing buildings on the site have been accounted for in the calculation of accessory parking spaces.
[5] Although the proposed building heights would be slightly shorter (ranging from 42 to 138 feet), the requested approvals would permit the maximum building height envelopes shown in this table. As such, this maximum permitted building height envelope will be used for CEQR analysis purposes throughout this document, unless otherwise noted.

Building B2 would be located at the northern edge of the Development Site fronting Lafayette Avenue between Building B1 to the west and the existing Stevenson Commons buildings to the east. The building would rise to a maximum height of 14 stories (approximately 138 feet, with a maximum building height envelope of 150 feet) and would be the tallest of the proposed buildings. The building would have frontage along Lafayette Avenue and the private driveway and would be comprised of approximately 181,257 gsf of affordable residential space (181 DUs), 8,013 gsf of community facility space, and 65,162 gsf of parking (140 spaces) (see **Figure 6~~5~~**). Although specific tenants have not been identified, the building is anticipated to be programmed with approximately 8,013 gsf of indoor recreational space (e.g. classrooms, locker rooms, etc.) for community recreational needs and in support of the adjacent tennis courts. Residential entrances would be located on the private driveway, while community facility uses would be accessed from the courtyard. As described above, parking would be provided beneath Building B2 and a portion of the ground-floor would be used for parking.

Building B3 would be located just south of Building B2, with~~have~~ frontage along the private driveway. The building ~~and~~ would rise to a maximum height of 11 stories (approximately 115 feet, with a maximum building height envelope of 130 feet) (see **Figure 6~~5~~**). The building would be comprised of approximately 195,489 gsf of affordable residential space (195 DUs), 6,103 gsf of community facility space, and 22,989 gsf of parking (66 spaces). Although specific tenants have not been identified, the building is anticipated to be programmed with approximately 6,103 gsf of indoor recreational space (e.g. classrooms, locker rooms, etc.) for community recreational needs and in support of the adjacent tennis courts. Residential entrances would be located on the private driveway, while community facility uses would be accessed from the courtyard. As described above, parking would be provided beneath Building B3 and a portion of the ground-floor would be used for parking.

Building B4 would be located at the southwestern edge of the Development Site with~~have~~ frontage along Seward and Thieriot Avenues. The building ~~and~~ would rise to a maximum height of six stories (approximately 6~~5~~2 feet, with a maximum building height envelope of 70 feet) (see **Figure 6~~5~~**). The building would be comprised of approximately 74,327 gsf of affordable residential space (114 ~~affordable rental DUs~~AIRS units) for seniors. Building entrances would be located on Thieriot Avenue.

Buildings B5 and B6 would be located at the southern edge of the Development Site and have frontage along Seward Avenue and the private driveway (see **Figure 6~~5~~**). The buildings would each rise to a

maximum height of four stories (approximately 4~~5~~2 feet, with a maximum building height envelope of 50 feet). Buildings B5 and B6 would contain approximately 20,828 gsf and 44,810 gsf of affordable residential space (total of 58 affordable cooperative housing units), respectively. At both buildings, entrances would be located along Seward Avenue.

D. ANALYSIS FRAMEWORK FOR ENVIRONMENTAL REVIEW

The Proposed Actions would change the regulatory controls governing land use and development in the Project Area. The 2014 *CEQR Technical Manual* will serve as the general guide on the methodologies and impact criteria for evaluating the Proposed Actions' potential effects on various environmental areas of analysis.

Reasonable Worst-Case Development Scenario (RWCDS)

In order to assess the possible effects of the Proposed Actions, a RWCDS was developed for both Future No-Action and Future With-Action conditions. The incremental difference between the Future No-Action and Future With-Action conditions will serve as the basis for the impact analyses of the DEIS.

Analysis Year

~~The Proposed Actions are expected to be approved in early 2021, with c~~Construction of the first buildings on the Stevenson Commons site is expected to begin~~ning~~ in the second quarter of 2021, following approval of the Proposed Actions. All of the proposed buildings are expected to be completed and occupied by early 2028. As such, the environmental review will use a 2028 analysis year.

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

In the 2028 future without the Proposed Actions, it is expected that no new development would occur within the Project Area. As such, the Project Area would continue to be occupied by 948 DUs, 10,648 gsf of local retail uses, and 36,214 gsf of community facility uses (health center).

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

In the 2028 future with the Proposed Actions, six new buildings would be constructed within the Project Area. In the future with the Proposed Actions, the Project Area would be occupied by a total of approximately 1,683 affordable DUs (including existing units), including 621 income-restricted housing units and 114 ~~affordable~~ AIRS units ~~for seniors~~, approximately 70,209 gsf of community facility uses (including an approximately 19,879 gsf child care center and approximately 14,116 gsf of indoor recreational space for community recreational needs and in support of the adjacent tennis courts), approximately 10,648 gsf of commercial uses, approximately 1.94 acres of publicly accessible open space, and approximately 466 parking spaces. The Proposed Project, as described above, represents the RWCDS for analysis purposes.

Possible Effects of the Proposed Actions

Table 2 provides a comparison of the No-Action and With-Action scenarios identified for analysis purposes of the Proposed Actions. As shown, the Proposed Actions would result in an incremental (net) increase of 735 DUs, including 621 income-restricted housing units and 114 ~~affordable~~ AIRS units ~~for seniors~~, 33,995 gsf of community facility space, approximately 1.94 acres of publicly accessible open

space, and a net decrease of approximately 104 parking spaces. **Table 2** also provides an estimate of the number of residents and workers generated by the Proposed Actions.

TABLE 2
Comparison of No-Action and With-Action Conditions

Use		No-Action Scenario	With-Action Scenario	Increment
Residential	~~Affordable Senior Housing~~AIRS Units		114 DUs	**+114 DUs**
	Affordable Housing (Rental)	948 DUs	1,511 DUs	**+563 DUs**
	Affordable Housing (Co-op)	--	58 DUs	**+58 DUs**
	Total Residential Units	*948 DUs*	*1,683 DUs*	***+735 DUs***
Community Facility[1]		36,214 gsf	70,209 gsf	**+33,995 gsf**
Local Retail		10,648 gsf	10,648 gsf	**No change**
Parking Spaces		570 spaces	466 spaces	**-104 spaces**
Publicly Accessible Open Space[2]		--	1.94 acres (84,548 sf)	**+1.94 acres (84,548 sf)**
Population/Employment[3]		**No-Action Scenario**	**With-Action Scenario**	**Increment**
Residents		2,635 residents	4,533 residents	**+1,898 residents**
Workers		179 workers	307 workers	**+128 workers**

Notes:

[1] Community facility space includes an approximately 19,879 gsf child care center and approximately 14,116 gsf of indoor recreational space (e.g. classrooms, locker rooms, etc.) for community recreational needs and in support of the adjacent tennis courts

[2] Although Stevenson Commons currently includes approximately 3.1 acres sf of open space, in the form of tennis/handball courts and grassy areas, those spaces are private, currently fenced off and inaccessible to the general public and are therefore not included in the table. With-Action acreage shown also does not include an additional 0.68 acres of private open space.

[3] Based on 2.78 persons per DU for all family units (2010 Census average household size for Bronx Community District 9) and average of 1.5 persons per unit for the senior housing units. Estimate of workers based on standard rates used in prior EIS documents. Employee rates used are as follows: three employees per 1,000 sf of retail, one employee per 25 DU, thee employees per 1000 sf of community facility uses.

Construction Phasing

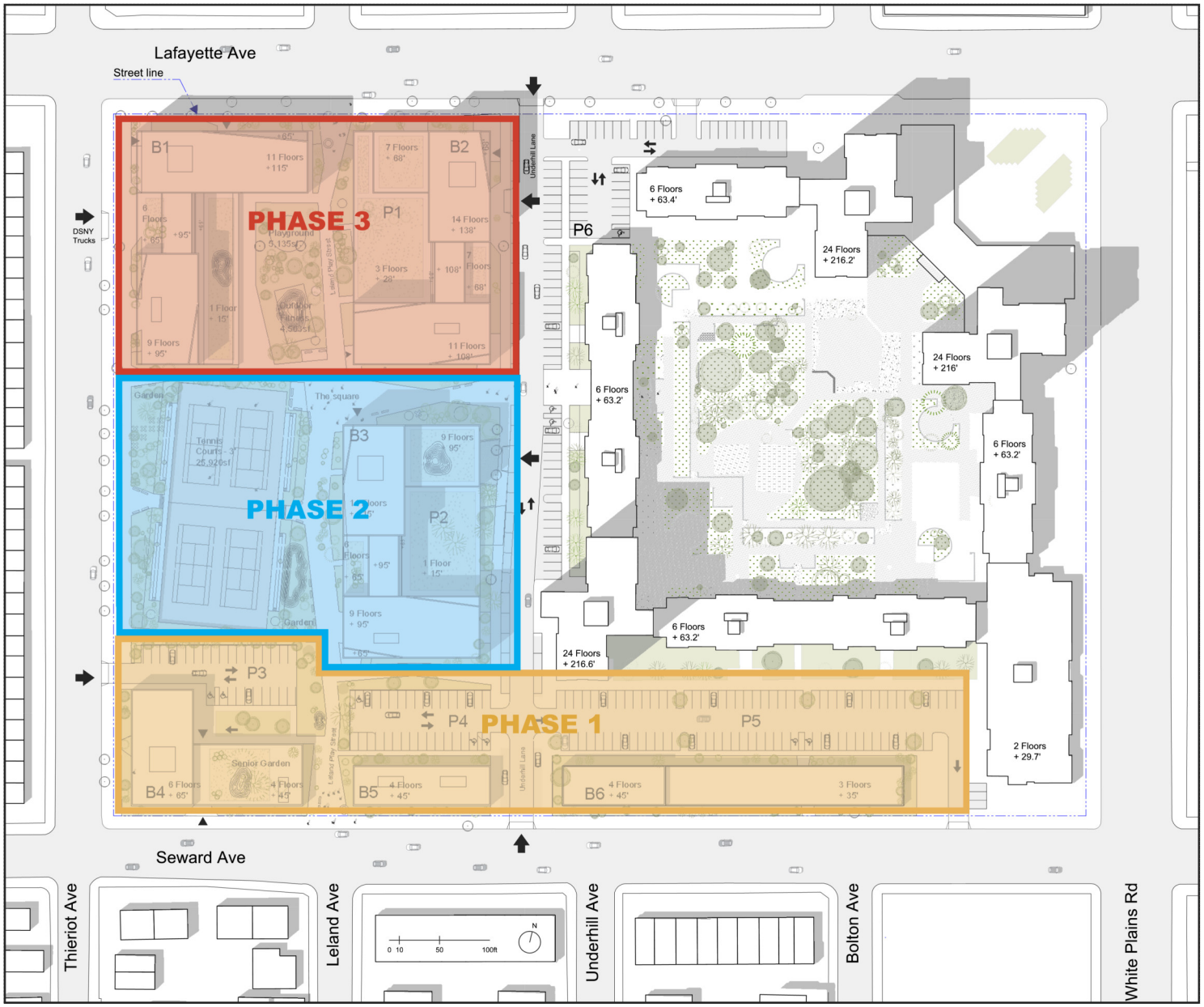
Development of the Proposed Project would occur in three phases and commence as soon as all necessary public approvals are granted ~~in early 2021~~. Phase 1 would include construction of Buildings B4, B5 and B6, starting in the second quarter of 2021 and ending by the end of 2022. Phase 2 would include Building B3, starting in early 2023 and ending in early 2025. Phase 3 would include Buildings B1 and B2, starting in mid-2025 and ending in early 2028. (see **Figure 8~~7~~**). All components of the Proposed Project are expected to be complete and fully operational by 2028.

E. PROPOSED SCOPE OF WORK FOR THE DEIS

Because the Proposed Actions would affect various areas of environmental concern and were found to have the potential for significant adverse impacts in a number of impact categories, pursuant to the EAS and Positive Declaration, a DEIS will be prepared for the Proposed Actions that will analyze all technical areas of concern.

The DEIS will be prepared in conformance with all applicable laws and regulations, including SEQRA (Article 8 of the New York State Environmental Conservation Law) and its implementing regulations found at 6 NYCRR Part 617, New York City Executive Order No. 91 of 1977, as amended, and the Rules of Procedure for CEQR, found at Title 62, Chapter 5 of the Rules of the City of New York.

The DEIS, following the guidance of the 2014 *CEQR Technical Manual*, will include:



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Source: WXY

- A description of the Proposed Actions and their environmental setting;
- A statement of the environmental impacts of the Proposed Actions, including short- and long-term effects and typical associated environmental effects;
- An identification of any adverse environmental effects that cannot be avoided if the Proposed Actions are implemented;
- A discussion of reasonable alternatives to the Proposed Actions;
- An identification of irreversible and irretrievable commitments of resources that would be involved in the Proposed Actions, should it be implemented; and
- A description of mitigation proposed to eliminate or minimize any significant adverse environmental impacts.

Based on the preliminary screening assessments as outlined in the *CEQR Technical Manual* and detailed in the EAS for the Proposed Actions, all of the CEQR technical areas warrant assessment and would therefore be included in the DEIS, with the following exceptions: historic archaeological resources, natural resources, solid waste and sanitation services, and energy. The specific technical areas to be included in the DEIS, as well as their respective tasks and methodologies, are described below.

TASK 1. PROJECT DESCRIPTION

The first chapter of the DEIS introduces the reader to the Proposed Actions and sets the context in which to assess impacts. This chapter contains a description of the Proposed Actions: site location; the background and/or history of the project; a statement of the purpose and need; key planning considerations that have shaped the current proposal; a detailed description of the Proposed Actions; and discussion of the approvals required, procedures to be followed, and the environmental review process.

In addition, the Project Description chapter will present the planning background and rationale for the actions being proposed and summarize the Proposed Project for analysis in the DEIS.

TASK 2. LAND USE, ZONING, AND PUBLIC POLICY

A land use analysis characterizes the uses and development trends in the area that may be affected by a proposed action, and determines whether a proposed action is either compatible with those conditions or whether it may affect them. Similarly, the analysis considers the action's compliance with, and effect on, the area's zoning and other applicable public policies. This chapter will analyze the potential impacts of the Proposed Actions on land use, zoning, and public policy, pursuant to the methodologies presented in the *CEQR Technical Manual*. The primary land use study area will consist of the Project Area, where the potential effects of the Proposed Actions would be directly experienced. The secondary land use study area would include the neighboring areas within a 400-foot radius from the Project Area, as shown in **Figure 4~~3~~**, which could experience indirect impacts. The analysis will include the following subtasks:

- Provide a brief development history of the primary (i.e., Project Area) and secondary study areas.
- Provide a description and map of land use patterns and trends in the study areas, including recent development activity.

- Describe and map existing zoning and recent zoning actions in the study areas.
- Describe public policies that apply to the study areas, including specific development projects and plans for public improvement, as well as Housing New York, and the City's sustainability goals in PlaNYC/OneNYC. In addition, as the Project Area falls within the boundaries of the City's Coastal Zone, an assessment of the Proposed Actions' consistency with the City's Waterfront Revitalization Program (WRP) will be prepared
- Based on field surveys and prior studies, identify, describe, and graphically portray predominant land use patterns within the study areas. Describe recent land use trends in the study areas and identify major factors influencing land use trends.
- Prepare a list of future development projects in the study areas that are expected to be constructed by the 2028 analysis year and may influence future land use trends. Also, identify pending zoning actions or other public policy actions that could affect land use patterns and trends in the study areas. Based on these planned projects and initiatives, assess future land use and zoning conditions without the Proposed Actions (No-Action condition).
- Describe the Proposed Actions and provide an assessment of the impacts of the resultant Proposed Development on land use and land use trends, zoning, and public policy. Consider the effects of the Proposed Actions related to issues of compatibility with surrounding land use, consistency with public policy initiatives, and the effect on development trends and conditions in the area.

TASK 3. SOCIOECONOMIC CONDITIONS

The socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements. Although socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. This chapter will assess the Proposed Actions' potential effects on the socioeconomic character of the study area.

The five principal issues of concern with respect to socioeconomic conditions are whether a proposed action would result in significant adverse impacts due to: (1) direct residential displacement; (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business and institutional displacement; and (5) adverse effects on specific industries. As detailed below, the Proposed Actions warrant an assessment of socioeconomic conditions with respect to indirect residential displacement, only. Direct displacement of fewer than 500 residents or of fewer than 100 employees would not typically be expected to alter the socioeconomic characteristics of a neighborhood, according to the *CEQR Technical Manual*. The Proposed Project would not exceed the *CEQR Technical Manual* analysis thresholds of 500 displaced residents or 100 displaced employees, and therefore, are not expected to result in significant adverse impacts due to direct residential or business/institutional displacement. In addition, as the Proposed Actions would not affect conditions within a specific industry, an analysis of adverse effects on specific industries is not warranted, and no significant adverse impacts would result. Lastly, as the Proposed Actions would introduce less than 200,000 sf of non-residential uses, an assessment of indirect business displacement is not warranted, and no significant adverse impacts would result.

The assessment of indirect residential displacement will begin with a preliminary assessment to determine whether a detailed analysis is necessary. Detailed analyses will be conducted if the

preliminary assessment cannot definitively rule out the potential for significant adverse impacts. The detailed assessment will be framed in the context of existing conditions and evaluations of the Future No-Action and With-Action conditions in 2028, including any population changes anticipated to take place by the analysis year of the Proposed Actions.

Indirect Residential Displacement

Indirect residential displacement is the involuntary displacement of residents that results from a change in socioeconomic conditions created by a proposed action. Indirect residential displacement could occur if a proposed project either introduces a trend or accelerates a trend of changing socioeconomic conditions that may potentially displace a vulnerable population to the extent that the socioeconomic character of the neighborhood would change, according to the *CEQR Technical Manual*. To assess this potential impact, the *CEQR Technical Manual* seeks to answer a series of threshold questions in terms of whether the project substantially alters the demographic character of an area through population change or introduction of more expensive housing.

The indirect residential displacement analysis will use the most recent available U.S. Census data, New York City Department of Finance's Real Property Assessment Data (RPAD) database, as well as current real estate market data, to present demographic and residential market trends and conditions for the study area. The presentation of study area characteristics will include population estimates, housing tenure and vacancy status, median value and rent, estimates of the number of housing units not subject to rent protection, and median household income. The preliminary assessment will carry out the following step-by-step evaluation, pursuant to *CEQR Technical Manual* guidance:

- Step 1: Determine if the Proposed Actions would add substantial new population with different income as compared with the income of the study area population. If the expected average incomes of the new population would be similar to the average incomes of the study area populations, no further analysis is necessary. If the expected average incomes of the new population would exceed the average incomes of the study area populations, then Step 2 of the analysis will be conducted.
- Step 2: Determine if the Proposed Actions' population is large enough to affect real estate market conditions in the study area. If the population increase may potentially affect real estate market conditions, then Step 3 will be conducted.
- Step 3: Determine whether the study area has already experienced a readily observable trend toward increasing rents and the likely effect of the action on such trends and whether the study area potentially contains a population at risk of indirect displacement resulting from rent increases due to changes in the real estate market caused by the new population.

A detailed analysis, if warranted, would utilize more in-depth demographic analysis and field surveys to characterize existing conditions of residents and housing, identify populations at risk of displacement, assess current and future socioeconomic trends that may affect these populations, and examine the effects of the Proposed Actions on prevailing socioeconomic trends and, thus, impacts on the identified populations at risk.

TASK 4. COMMUNITY FACILITIES

The Proposed Actions would not displace any existing community facilities or services, nor would they affect the physical operations of or access to and from any police or fire stations. As such, the Proposed Actions would not result in any direct effects on community facilities.

As the indirect community facilities impact analysis is a density-related analysis, the analysis will focus on development anticipated within the Project Area. As noted above, the Proposed Project would add 735 new affordable residential units to the area, of which 114 would be dedicated to senior housing. According to Table 6-1 of the *CEQR Technical Manual,* this level of development in the Bronx would trigger a detailed analysis of elementary and intermediate schools, and child care centers. While the Proposed Project would not trigger detailed analyses of potential impacts on police/fire stations and health care services, for informational purposes, a description of existing police, fire, and health care facilities serving the Project Area will be provided in the EIS.

Public Schools

- The primary study area for the analysis of elementary and intermediate schools should be the school districts' "sub-district" in which the project is located, pursuant to CEQR guidance. As the Project Area is located wholly within New York City Community School District (CSD) 8, Sub-district 2, the elementary and intermediate school analyses will be conducted for schools in that sub-district.
- Public elementary and intermediate schools serving CSD 8, Sub-district 2 will be identified and located. Existing capacity, enrollment, and utilization data for all public elementary and intermediate schools within the affected sub-district will be provided for the current (or most recent) school year, noting any specific shortages of school capacity. Similar data will be provided for Bronx high schools in accordance with *CEQR Technical Manual* guidance.
- Conditions that would exist in the No-Action condition for the sub-district (for elementary and intermediate school analyses) will be identified, taking into consideration projected changes in future enrollments, including those associated with other developments in the affected sub-district, using the SCA's *Projected New Housing Starts* as per *CEQR Technical Manual* guidance. Plans to alter school capacity either through administrative actions on the part of the New York City Department of Education (DOE), or as a result of the construction of new school space prior to the 2028 analysis year, will also be identified or incorporated into the analyses. Planned new capacity projects from the DOE's *2020-2024 Five Year Capital Plan* will not be included in the quantitative analysis unless the projects have commenced site preparation and/or construction. They may, however, be included in a qualitative discussion.
- Future conditions with the Proposed Actions will be analyzed, adding students likely to be generated by the Proposed Project to the projections for the future No-Action condition. Impacts will be assessed based on the difference between the future With-Action projections and the future No-Action projections (at the sub-district level) for enrollment, capacity, and utilization in 2028.
- A determination of whether the Proposed Actions would result in significant adverse impacts to elementary and/or intermediate schools will be made. A significant adverse impact may result, warranting consideration of mitigation, if the Proposed Actions would result in: (1) a collective utilization rate of the elementary and/or intermediate schools in the sub-district study area that is equal to or greater than 100 percent in the With-Action condition; and (2) an increase of five

percent or more in the collective utilization rate between the No-Action and With-Action conditions, pursuant to CEQR.

Libraries

- Local public library branches within the borough of the Bronx that serve the area within approximately ¾-mile of the Project Area, which is the distance that one might be expected to travel for such services, will be identified and presented on a map.
- Existing libraries within the study area and their respective information services and user populations will be described. Information regarding services provided by branches within the study area will include holdings and other relevant existing conditions. Details on library operations will be based on publicly available information and/or consultation with New York Public Library officials. If applicable, holdings per resident may be estimated to provide a quantitative gauge of available resources in the applicable branch libraries in order to form a baseline for the analysis.
- For No-Action conditions, projections of population change in the area and information on any planned changes in library services or facilities will be described, and the effects of these changes on library services will be assessed. Using the information gathered for existing conditions, holdings per resident in the No-Action condition will be estimated.
- The effects of the addition of the population resulting from the Proposed Actions on the library's ability to provide information services to its users will be assessed. Holdings per resident in the With-Action condition will be estimated and compared to the No-Action holdings estimate.
- If the Proposed Actions would increase a branch library's ¾-mile study area population by five percent or more over No-Action levels, and it is determined, in consultation with the New York Public Library, that this increase would impair the delivery of library services in the study area, a significant adverse impact may occur, warranting consideration of mitigation, in accordance with the *CEQR Technical Manual*.

Child Care Centers

- Existing publicly funded child care centers within approximately two miles of the Project Area will be identified. Each facility will be described in terms of its location, number of slots (capacity), enrollment, and utilization in consultation with the Administration for Children's Services (ACS).
- For No-Action conditions, information will be obtained for any changes planned for child care programs or facilities in the area, including the closing or expansion of existing facilities and the establishment of new facilities. Any expected increase in the population of children under age six within the eligibility income limitations, using the No-Action RWCDS (see "Analysis Framework for Environmental Review"), will be discussed as potential additional demand, and the potential effect of any population increases on demand for child care services in the study area will be assessed. The available capacity or resulting deficiency in slots and the utilization rate for the study area will be calculated for the No-Action condition.
- The potential effects of the additional eligible children resulting from the Proposed Actions, as well as the new child care center expected as part of the Proposed Project, will be assessed by comparing the estimated net demand over capacity to a net demand over capacity in the No-Action analysis.

- A determination of whether the Proposed Actions would result in significant adverse impacts to child care centers will be made. A significant adverse impact may result, warranting consideration of mitigation, if the Proposed Actions would result in both of the following: (1) a collective utilization rate of the group child care centers in the study area that is greater than 100 percent in the With-Action condition; and (2) an increase of five percent or more in the collective utilization rate of child care centers in the study area between the No-Action and With-Action conditions, in accordance with the *CEQR Technical Manual*.

TASK 5. OPEN SPACE

If a project may add population to an area, demand for existing open space facilities would typically increase. Indirect effects may occur when the population generated by the Proposed Actions would be sufficiently large to noticeably diminish the ability of an area's open space to serve the future population. For the majority of projects, an assessment is conducted if the Proposed Actions would generate more than 200 residents or 500 employees, or a similar number of other uses. However, the need for an open space assessment may vary in certain areas of the City that are considered either underserved or well-served by open space; if a project is located in an underserved area, an open space assessment should be conducted if that project would generate more than 50 residents or 125 workers. The Project Area is not identified as underserved nor well-served in the *CEQR Technical Manual,* and the Proposed Project exceeds the residential analysis threshold of 200 residents. Therefore, an assessment of nonresidential open space is warranted and will be provided in the DEIS.

The open space analysis will consider open space resources within a residential (half-mile radius) study area. The study area will generally comprise those census tracts that have 50 percent or more of their area located within the half-mile radius of the Project Area, as recommended in the *CEQR Technical Manual*. The resultant open space study area is shown in **Figure 9~~8~~**.

The detailed open space analysis in the DEIS will include the following subtasks:

- Characteristics of the two open space user groups (residents and workers/daytime users) will be determined. To determine the number of residents in the study area, 2014-2018~~2013-2017~~ American Community Survey (ACS) 5-year estimates from the U.S. Census will be compiled for census tracts comprising the residential open space study area. As the study area may include a workforce and daytime population that may also use open spaces, the number of employees and daytime workers in the study area will also be calculated, based on reverse journey-to-work census data.
- Existing open spaces within the half-mile open space study area will be inventoried and mapped. The condition and usage of existing facilities will be described based on the inventory and field visits. Acreages of these facilities will be determined, and the total study area acreages will be calculated. The percentage of passive and active open space will also be calculated.
- Based on the inventory of facilities and study area populations, total, passive, and active open space ratios will be calculated for the residential population and compared to City guidance to assess adequacy. Open space ratios are expressed as the amount of passive open space acreage per 1,000 residential population.
- Expected changes in future levels of open space supply and demand in the 2028 analysis year will be assessed, based on other planned development projects within the open space study area. Any new open space or recreational facilities that are anticipated to be operational by the analysis year will also be accounted for. The open space ratios will be calculated for future No-

Figure 9
Open Space Study Area

Action conditions and compared with the exiting ratios to determine the change in future levels of adequacy.

- Effects on open space supply and demand resulting from the increased residential population associated with the Proposed Project will be assessed. Any new publicly accessible or accessory open space facilities included in the Proposed Project would also be taken into account. The assessment of the Proposed Actions' impacts will be based on a comparison of the open space ratios for the future No-Action versus future With-Action conditions. In addition to the quantitative analysis, a qualitative analysis will be performed to determine if the changes resulting from the Proposed Actions constitute a substantial change (positive or negative) or an adverse effect to open space conditions. The qualitative analysis will assess whether or not the study area is sufficiently served by open space, given the capacity, condition, and distribution of open space. The potential for direct effects to open space will also be assessed based on other technical assessments (e.g., noise, air pollutant emissions, odors, or shadows).
- If any significant adverse impacts are identified, potential mitigation strategies will be identified in consultation with the lead and expert agencies.

TASK 6. SHADOWS

A shadows analysis assesses whether new structures resulting from a proposed action would cast shadows on sunlight sensitive publicly accessible resources or other resources of concern, such as natural resources, and to assess the significance of their impact. This chapter will examine the Proposed Project's potential for significant and adverse shadow impacts pursuant to *CEQR Technical Manual* criteria. Generally, the potential for shadow impacts exists if an action would result in new structures or additions to buildings resulting in structures over 50 feet in height that could cast shadows on important natural features, publicly accessible open space, or on historic features that are dependent on sunlight. New construction or building additions resulting in incremental height changes of less than 50 feet can also potentially result in shadow impacts if they are located adjacent to, or across the street from, a sunlight-sensitive resource.

Based on the anticipated height and bulk of the Proposed Project envelope, the Proposed Actions would result in the construction of new buildings that would be greater than 50 feet in height. The DEIS will assess the Proposed Project for potential shadowing effects on sunlight-sensitive uses and disclose the range of shadow impacts, if any, which are likely to result from the Proposed Actions. The shadows analysis in the DEIS will include the following subtasks:

- A preliminary shadows screening assessment will be prepared to ascertain whether shadows from the Proposed Project may potentially reach any sunlight-sensitive resources at any time of year:
    - A Tier 1 Screening Assessment will be conducted to determine the longest shadow study area, which is defined as 4.3 times the height of a structure (the longest shadow that would occur on December 21, the winter solstice), pursuant to the *CEQR Technical Manual*. A base map that illustrates the locations of the projected and potential developments in relation to the sunlight-sensitive resources will be developed.
    - A Tier 2 Screening Assessment will be conducted if any portion of a sunlight-sensitive resource lies within the longest shadow study area. The Tier 2 assessment will determine the triangular area that cannot be shaded by the developments, which in New York City is the area that lies between -108 and +108 degrees from true north.

- If any portion of a sunlight-sensitive resource is within the area that could be potentially shaded by the developments, a Tier 3 Screening Assessment will be conducted. The Tier 3 Screening Assessment will determine if shadows resulting from the Proposed Project can reach a sunlight-sensitive resource through the use of three-dimensional computer modeling software with the capacity to accurately calculate shadow patterns. The model will include a three-dimensional representation of the sunlight-sensitive resource(s), a three-dimensional representation of the Proposed Project, and a three-dimensional representation of the topographical information within the area to determine the extent and duration of new shadows that would be cast on sunlight-sensitive resources as a result of the Proposed Actions.

- If the screening analysis does not rule out the possibility that action-generated shadows would reach any sunlight-sensitive resources, a detailed analysis of potential shadow impacts on publicly-accessible open spaces or sunlight-sensitive historic resources resulting from development will be provided in the DEIS. The detailed shadow analysis will establish a baseline condition (No-Action), which will be compared to the future condition resulting from the Proposed Actions (With-Action) to illustrate the shadows cast by existing or future buildings and distinguish the additional (incremental) shadow cast by the Proposed Project. The detailed analysis will include the following tasks:
  - The analysis will be documented with graphics comparing shadows resulting from the No-Action condition with shadows resulting from the Proposed Project, with incremental shadow highlighted in a contrasting color.
  - A summary table listing the entry and exit times and total duration of incremental shadow on each applicable representative day for each affected resource will be provided.
  - The significance of any shadow impacts on sunlight-sensitive resources will be assessed, taking into consideration the amount of remaining sunlight on those sensitive resources, as well as the types of vegetation and or recreational activities involved.
  - If potential significant adverse impacts are identified, potential mitigation strategies will be discussed.

TASK 7. HISTORIC AND CULTURAL RESOURCES

According to the *CEQR Technical Manual*, a historic and cultural resources assessment is required if a project would have the potential to affect either archaeological or architectural resources. As determined in the EAS for the Proposed Actions, the Proposed Actions do not warrant an assessment of archaeological resources.

Although, as stated in the EAS, the Project Area does not encompass any designated historic architectural resources, it is located within 400 feet of the Isaac Clason School – P.S. 100, an eligible State and National Register (S/NR) resource. Therefore, an assessment of historic architectural resources will be included in the EIS. Impacts on architectural resources are considered on the affected site and in the area surrounding it. The architectural resources study area is therefore defined as the Project Area, plus a 400-foot radius, as per the guidance provided in the *CEQR Technical Manual*. In consultation with LPC and consistent with the guidance of the *CEQR Technical Manual*, designated and/or eligible architectural resources in the study area will be identified and mapped. The EIS will assess the potential impacts of the Proposed Actions on any identified architectural resources, including visual and contextual changes as well as any direct physical impacts. Potential impacts will be evaluated through a

comparison of the future No-Action condition and future With-Action condition, and a determination made as to whether any change would alter or eliminate the significant characteristics of the resource that make it important.

TASK 8. URBAN DESIGN AND VISUAL RESOURCES

Urban design is the totality of components that may affect a pedestrian's experience of public space. An assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. When an action would potentially obstruct view corridors, compete with icons in the skyline, or would result in substantial alterations to the streetscape of the neighborhood by noticeably changing the scale of buildings, a more detailed analysis of urban design and visual resources would be appropriate.

As the Proposed Actions would result in new development not permitted pursuant to the applicable existing LSRD special permit restrictions, a preliminary assessment of urban design and visual resources will be provided in the DEIS.

The urban design study area will be the same as that used for the land use analysis (delineated by a 400-foot radius from the Project Area boundary). For visual resources, the view corridors within the study area from which such resources are publicly viewable will be identified. The preliminary assessment will consist of the following:

- Based on field visits, the urban design and visual resources of the directly affected area and adjacent study area will be described using text, photographs, and other graphic material, as necessary, to identify critical features, use, bulk, form, and scale.
- In coordination with Task 2, the changes expected in the urban design and visual character of the study area due to known development projects in the future No-Action condition will be described.
- Potential changes that could occur in the urban design character of the study area as a result of the Proposed Actions will be described. For the Project Area, the analysis will focus on the general massing assumed for the Proposed Project, as well as elements such as streetwall height, setback, and building envelope. Photographs and/or other graphic material will be utilized, where applicable, to assess the potential effects on urban design and visual resources, including views of/to resources of visual or historic significance and a three-dimensional representation of the future With-Action condition streetscape.

A detailed analysis will be prepared if warranted based on the preliminary assessment. Examples of projects that may require a detailed analysis are those that would make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings, potentially obstructing view corridors, or competing with icons in the skyline, as described in the *CEQR Technical Manual*. The detailed analysis would describe the Project Area and the urban design and visual resources of the surrounding area. The analysis would describe the potential changes that could occur to urban design and visual resources in the future with the Proposed Actions condition, in comparison to the future without the Proposed Actions condition, focusing on the changes that could negatively affect a pedestrian's experience of the area. If necessary, mitigation measures to avoid or reduce potential significant adverse impacts will be identified.

TASK 9. HAZARDOUS MATERIALS

The objective of the hazardous materials assessment is to determine whether the Project Area may have been adversely affected by current or historical uses at or adjacent to the site. As development facilitated by the Proposed Actions would require excavation and in-ground disturbance in the Project Area, this chapter of the DEIS will examine the potential for impacts related to subsurface contamination, including an evaluation of the existing soil and groundwater conditions in areas that would be affected by the Proposed Actions.

As part of the hazardous materials task, a Phase I Environmental Site Assessment (ESA) will be prepared for the Development Site. The Phase I ESA will consist of a thorough review of any previous reports, historical maps, City directories, and environmental database materials to identify any potential environmental impacts that would lead to a concern for hazardous materials impacts. A visual inspection of the Development Site will also be conducted to assess any potential for hazardous materials impacts. The Hazardous Materials chapter will summarize the findings of the completed Phase I ESA conducted for the Development Site and will include any necessary recommendations for additional testing or other activities that would be required either prior to or during construction and/or operation of the project. The appropriate remediation measures specific to the future uses of the site, including any New York City Department of Environmental Protection (DEP) recommendations, will be ~~provided~~ discussed in the DEIS. If necessary, measures to avoid or reduce potential significant adverse impacts will be identified and discussed in the DEIS. ~~However, due to the existing active uses on the Development Site and the phased nature of the Proposed Project, it is not feasible to conduct a Phase II Investigation, if deemed to be required, at the present time. Accordingly, it is anticipated that any requirements will be memorialized by a hazardous materials (E) designation, in accordance with the *CEQR Technical Manual*, which would be placed on the applicable block(s) and lot(s) pursuant to Section 11-15 of the New York City Zoning Resolution and the (E) Rules. The DEIS would include (E) designation language describing the requirements that would apply.~~

TASK 10. WATER AND SEWER INFRASTRUCTURE

The water and sewer infrastructure assessment determines whether a proposed action may adversely affect the City's water distribution or sewer system and, if so, assess the effects of such actions to determine whether their impact is significant. The *CEQR Technical Manual* outlines thresholds for analysis of an action's water demand and its generation of wastewater and stormwater. As presented in the EAS for the Proposed Actions, the Proposed Project would not trigger the CEQR threshold for a detailed water supply assessment. However, water demand estimates will be provided in the EIS to inform the wastewater and stormwater conveyance and treatment analysis. The threshold of preliminary wastewater and stormwater infrastructure analysis for projects outside of Manhattan with combined sewers is 400 DUs or 150,000 sf of commercial development, or involve development on a site that is 5 acres or larger where the amount of impervious surface would increase. As the Proposed Project would include more than 400 DUs and involve development on a site that is larger than 5 acres, an assessment of wastewater and stormwater conveyance systems is required. The water and sewer infrastructure analysis will consider the potential for significant adverse impacts resulting from the Proposed Project. DEP will be consulted in preparation of this assessment.

Wastewater and Stormwater Infrastructure

- The appropriate study area for the assessment will be established in accordance with *CEQR Technical Manual* guidance and in consultation with DEP. The Project Area is located within the service area of the Hunts Point Wastewater Treatment Plant (WWTP).
- The existing Project Area stormwater drainage system and surfaces (pervious or impervious) will be described, and the amount of stormwater generated on the Project Area will be estimated using DEP's volume calculation worksheet.
- The existing sewer system serving the Project Area will be described based on records obtained from DEP. The existing flows to the Hunts Point WWTP, which serves the Project Area, will be obtained for the latest twelve-month period, and the average dry weather monthly flow will be presented.
- Any changes to the stormwater drainage plan, sewer system, and surface area expected in the future without the Proposed Actions will be described, as warranted.
- Future stormwater generation from the Project Area will be assessed to determine the Proposed Actions' potential to result in impacts. Changes to the Project Area's surface area will be described, runoff coefficients and runoff for each surface type/area will be presented, and volume and peak discharge rates from the Project Area will be determined based on the DEP volume calculation worksheet.
- Sanitary sewage generation for the Project Area will also be estimated. The effects of the incremental demand on the system will be assessed to determine if there will be any impact on operations of the Hunts Point WWTP.

A more detailed assessment may be required if increased sanitary or stormwater discharges from the Proposed Project are predicted to affect the capacity of portions of the existing sewer system, exacerbate combined sewer overflow (CSO) volumes/frequencies, or contribute greater pollutant loadings in stormwater discharged to receiving water bodies. The scope of a more detailed analysis, if necessary, will be developed based on conclusions from the preliminary infrastructure assessment and coordinated with DEP.

TASK 11. TRANSPORTATION

The objective of a transportation analysis is to determine whether a proposed action may have a potential significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, the safety of all roadway users (pedestrians, bicyclists and motorists), on-and off-street parking, or goods movement. The Proposed Actions are expected to induce new predominantly residential development, which would generate additional vehicular travel and demand for parking, as well as additional subway and bus riders and pedestrian traffic. These new trips have the potential to affect the area's transportation systems.

Travel Demand and Screening Assessment

Detailed travel demand forecasts were prepared for the Proposed Project using standard sources, including the *CEQR Technical Manual*, U.S. census data, previously-approved studies, and other references to determine the worse-case scenario to be analyzed in the DEIS transportation analysis. The travel demand forecast (a Level 1 screening assessment) is summarized by peak hour, mode of travel, as

well as person and vehicle trips. The travel demand forecasts also identify the number of peak hour person trips made by transit and the numbers of pedestrian trips traversing the area's sidewalks, corner areas, and crosswalks. The results of these forecasts have been summarized in a Transportation Planning Factors and Travel Demand Forecast (TPF/TDF) technical memorandum (refer to **Appendix 1**). Detailed vehicle, pedestrian and transit trip assignments (a Level 2 screening assessment) were prepared based on the results of the Proposed Actions' travel demand forecast to identify the intersections and pedestrian/transit elements selected for quantified analysis.

Traffic

The DEIS will provide a detailed traffic analysis focusing on those peak hours and street network intersections where the highest concentrations of action-generated demand would occur. The peak hours for analysis will be selected, and the specific intersections to be included in the traffic study area will be determined based upon the assignment of project-generated traffic and the *CEQR Technical Manual* analysis threshold of 50 additional vehicle trips per hour, or at known congested locations.

The Proposed Project would exceed the minimum development density screening thresholds for a transportation analysis specified in Table 16-1 of the *CEQR Technical Manual*. Therefore, a travel demand forecast is required to determine if the Proposed Actions would generate 50 or more vehicle trips in any peak hour. Based on a preliminary forecast, the Proposed Actions are expected to generate more than 50 additional vehicular trips in one or more peak hours. Based on a preliminary vehicle trip assignment, it is anticipated that a detailed traffic analysis will be warranted at the following intersections:

- White Plains Road at Bruckner Boulevard Westbound (signalized);
- White Plains Road at Bruckner Boulevard Eastbound (signalized);
- White Plains Road at Story Avenue (signalized);
- White Plains Road at Bruckner Plaza (signalized);
- White Plains Road at Turnbull Avenue (signalized);
- White Plains Road at Lafayette Avenue (signalized);
- Bolton Avenue at Story Avenue (signalized);
- Bolton Avenue at Lafayette Avenue (signalized);
- Underhill Avenue at Story Avenue (signalized);
- Underhill Avenue at Lafayette Avenue (unsignalized);
- Leland Avenue at Story Avenue (unsignalized);
- Leland Avenue at Lafayette Avenue (unsignalized);
- Thieriot Avenue at Lafayette Avenue (unsignalized).

The following outlines the anticipated scope of work for conducting a traffic impact analysis for the Proposed Actions:

- Conduct a count program for traffic analysis locations that includes a mix of automatic traffic recorder (ATR) machine counts and intersection turning movement counts, along with vehicle classification counts and travel time studies (speed runs) as support data for air quality and noise analyses. Turning movement count data will be collected at each analyzed intersection during the weekday AM, midday, and PM and Saturday midday peak hours, as needed, and will be supplemented by nine days of continuous ATR counts. Vehicle classification count data will be collected during each peak hour at several representative intersections along each of the principal corridors in the study area. The turning movement counts, vehicle classification counts,

and travel time studies will be conducted concurrently with the ATR counts. Where applicable, available information from recent studies in the vicinity of the study area will be compiled, including data from such agencies as the New York City Department of Transportation (DOT) and DCP.

- Inventory physical data at each of the analysis intersections, including street widths, number of traffic lanes and lane widths, pavement markings, turn prohibitions, bicycle routes, curbside parking regulations, and vehicle queue lengths. Signal phasing and timing data for each signalized intersection included in the analysis will be obtained from DOT.
- Determine existing traffic operating characteristics at each analysis intersection including capacities, volume-to-capacity (v/c) ratios, average vehicle delays, and levels of service (LOS) per lane group, per intersection approach, and per overall intersection. This analysis will be conducted using the 2000 Highway Capacity Manual (HCM) methodology with the latest approved Highway Capacity Software (HCS).
- Based on available sources, Census data and standard references including the *CEQR Technical Manual*, estimate the demand from other major developments planned in the vicinity of the Project Area by the 2028 analysis year. This will include total daily and peak hour person and vehicular trips, and the distribution of trips by auto, taxi, and other modes. A truck trip generation forecast will also be prepared based on data from the *CEQR Technical Manual* and previous relevant studies. Mitigation measures accepted for all No-Action projects as well as other DOT initiatives will be included in the future No-Action network, as applicable.
- Compute the future 2028 No-Action traffic volumes based on approved background traffic growth rates for the study area (0.25 percent per year for years one through five, 0.125 percent per year for ~~year six~~each additional year) and demand from major development projects expected to be completed in the future without the Proposed Actions. Incorporate any planned changes to the roadway system anticipated by 2028, and determine the No-Action v/c ratios, delays, and LOS at analyzed intersections.
- Based on available sources, Census data, and standard references including the *CEQR Technical Manual*, develop a travel demand forecast for the Project Area based on the net change in uses compared to the No-Action condition. Determine the net change in vehicle trips expected to be generated by the Proposed Project as described in the TPF/TDF technical memorandum. Assign the net action-generated trips in each analysis period to likely approach and departure routes, and prepare traffic volume networks for the 2028 future with the Proposed Actions condition for each analyzed peak hour.
- Determine the v/c ratios, delays, and LOS at analyzed intersections for the With-Action condition and identify significant adverse traffic impacts in accordance with *CEQR Technical Manual* criteria.
- Identify and evaluate potential traffic mitigation measures, as appropriate, for all significantly impacted locations in the study area in consultation with the lead agency and DOT. Potential traffic mitigation could include both operational and physical measures, such as changes to lane striping, curbside parking regulations and traffic signal timing and phasing, roadway widening, and the installation of new traffic signals. Where impacts cannot be fully or partially mitigated, they will be described as unavoidable adverse impacts.

Transit

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

Subway

The Proposed Actions are expected to generate a net increase of more than 200 additional subway trips in the weekday AM and PM peak hours at the Parkchester subway station, and would therefore require detailed subway analysis. Transit analyses typically focus on the weekday AM and PM commuter peak hours when overall demand on the subway and bus systems is usually highest. The detailed subway analysis will include the following subtasks:

- Identify for analysis those subway stations expected to be utilized by 200 or more action-generated trips in one or more peak hours. At each of these stations, analyze those stairways and fare entrance control elements expected to be used by significant concentrations of action-generated demand in the weekday AM and PM peak hours.
- Conduct counts of existing weekday AM and PM peak hour demand at analyzed subway station elements and determine existing v/c ratios and levels of service based on *CEQR Technical Manual* criteria.
- Determine volumes and conditions at analyzed subway station elements in the future without the Proposed Actions using approved background growth rates and accounting for any trips expected to be generated by No-Action development within the project area, as well as major No-Action projects in the vicinity of the project area.
- Add action-generated demand to the No-Action volumes at analyzed subway station elements and determine AM and PM peak hour volumes and conditions in the future with the Proposed Actions.
- Identify potential significant adverse impacts at subway station stairways and fare control elements based on *CEQR Technical Manual* impact criteria.
- If development facilitated by the Proposed Actions generates 200 or more new subway trips in one direction on one of the subway routes serving the Project Area, subway line haul conditions will also be assessed in the DEIS.
- Mitigation needs and potential subway station improvements will be identified, as appropriate, in conjunction with the lead agency and NYCT. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

Bus

The Project Area and its surroundings are served by a total of four NYCT-operated local bus routes. These bus routes connect the area with other areas of the Bronx. A detailed analysis of bus conditions is generally not required if a proposed action is projected to result in fewer than 50 peak hour trips being assigned to a single bus route (in one direction) based on the general thresholds used by the MTA and specified in the *CEQR Technical Manual*. As the incremental person-trips by bus generated by the Proposed Actions would exceed 50 peak hour trips in one direction on the Bx36 and Bx39 bus routes

serving the Project Area, the EIS will include a quantitative analysis of local bus conditions during the weekday AM and PM commuter peak hours when overall demand on the bus system is usually highest. For that analysis, trips will be assigned to each route based on proximity to the Project Area and current ridership patterns. The analysis will include documenting existing peak hour bus service levels and maximum load point ridership, determining conditions in the future No-Action condition, and assessing the effects of new action-generated peak hour trips. Bus transit mitigation, if warranted, will be identified in consultation with the lead agency and the MTA.

Pedestrians

Projected pedestrian volumes of less than 200 persons per hour at any pedestrian element (sidewalks, corner areas, and crosswalks) would not typically be considered a significant impact, since the level of increase would not generally be noticeable and therefore would not require further analysis under *CEQR Technical Manual* criteria. Based on the level of new pedestrian demand generated by the Proposed Project and the preliminary pedestrian assignment, it is anticipated that action-generated pedestrian trips would exceed the 200-trip analysis threshold at five pedestrian elements (one sidewalk, three corner areas, and one crosswalk) in one or more peak hour. A detailed pedestrian analysis will therefore be prepared for the DEIS focusing on selected sidewalks, corner areas, and crosswalks along corridors that would experience more than 200 additional peak hour pedestrian trips. Pedestrian counts will be conducted at each analysis location and used to determine existing LOS. No-Action and With-Action pedestrian volumes and LOS will be determined based on approved background growth rates, and trips expected to be generated by No-Action development in the vicinity of the Project Area, and action-generated demand. The specific pedestrian facilities to be analyzed will be determined in consultation with the lead agency once the assignment of action-generated pedestrian trips has been finalized. The analysis will evaluate the potential for incremental demand from the Proposed Actions to result in significant adverse impacts based on current *CEQR Technical Manual* criteria. Potential measures to mitigate any significant adverse pedestrian impacts will be identified and evaluated, as warranted, in consultation with the lead agency and DOT.

Vehicular and Pedestrian Safety

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside a motor vehicle. In an effort to drive these fatalities down, DOT and New York City Police Department (NYPD) developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. As discussed in the *Vision Zero Bronx Pedestrian Safety Action Plan*, the Project Area is located along a Priority Corridor (White Plains Road), which is prioritized for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement, and education measures that intend to alter the physical and behavioral conditions on City streets that lead to pedestrian fatality and injury.

Data on traffic crashes involving pedestrians and/or cyclists at study area intersections will be obtained from DOT for the most recent three-year period available. These data will be analyzed to determine if any of the studied locations may be classified as high crash locations and whether vehicle and/or pedestrian trips and any street network changes resulting from the Proposed Actions would adversely affect vehicular and pedestrian safety in the area. If any high crash locations are identified, feasible improvement measures will be explored to alleviate potential safety issues.

Parking

If project-generated parking demand cannot be fully accommodated within the Project Area, a detailed analysis of on-street and off-street parking conditions will be provided in the DEIS. A detailed inventory of existing on-street and off-street parking would be conducted for the weekday midday period (when parking in a business area is frequently at peak occupancy) and weekday overnight period (when residential parking demand typically peaks) to document existing supply and demand for each period. Parking utilization within ¼-mile of the project site will be analyzed. If the initial on- and off-street parking assessment shows conditions at or near capacity, then a parking assessment would be conducted up to a ½-mile radius to determine if capacity is available to accommodate the projected demand. The parking analyses would document changes in the parking utilization in proximity to the Project Area under the No-Action and With-Action conditions based on accepted background growth rates and projected demand from No-Action and With-Action development on the project site and other major projects in the vicinity of the study area.

Parking demand generated by the residential component of the Proposed Project will be forecasted based on auto ownership data for the Project Area and the surrounding area. Parking demand from all other uses will be derived from the forecasts of daily auto trips generated by these uses.

TASK 12. AIR QUALITY

CEQR Technical Manual criteria require an air quality assessment for actions that can result in significant air quality impacts. There are mobile source impacts that could arise when an action increases or causes a redistribution of traffic, creates any other mobile sources of pollutants, or adds new uses near existing mobile sources. There are mobile source impacts that could be produced by parking facilities, parking lots, or garages. Stationary source impacts could occur with actions that create new stationary sources or pollutants such as emission stacks from industrial plants, hospitals, or other large institutional uses, or a building's boilers, that can affect surrounding uses; or when actions add uses near existing or planned future emission stacks, and the new uses might be affected by the emissions from the stacks.

Mobile Source Analysis

The increased traffic associated with the Proposed Project would have the potential to affect local air quality. Emissions generated by the increased traffic at intersections have the potential to impact air quality significantly at nearby sensitive land uses. The mobile source analysis will evaluate the Proposed Project for potential impacts from carbon monoxide (CO) and fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) due to vehicular traffic anticipated to be generated under the Proposed Project. If the level of incremental traffic generated by the Proposed Project exceeds the applicable mobile source analysis thresholds outlined in the *CEQR Technical Manual*, a detailed analysis would be prepared using the latest versions of the EPA-approved mobile source emissions model (MOVES) and the EPA-approved AERMOD dispersion model for CO and/or $PM_{2.5}$. Up to two intersections would be selected for analysis, depending on the mobile source screening results. Mitigation measures would be identified and evaluated, as appropriate, if potential significant adverse air quality impacts are identified.

Parking ~~Garage~~ Facility Analysis

Based on parking ~~garage~~ facility locations and size, an analysis of CO and PM emissions will be prepared. The analysis will use the procedures outlined in the *CEQR Technical Manual* for assessing potential impacts of the proposed parking facilities~~y~~. Cumulative impacts from on-street sources and emissions from parking ~~garages~~ facilities will be calculated, where appropriate, as well as potential impacts to sensitive receptors on the Proposed Project.

Stationary Source Analysis

Heating and Hot Water System Analysis

Each of the six new buildings will have its own natural gas-fired heating and/or hot water systems. While screening studies can be usefully employed for single sites, the number, size, and location of the potential areas for development are such that refined modeling will likely be necessary to demonstrate the project's compliance with National Ambient Air Quality Standards (NAAQS) and other relevant impact criteria. Therefore, a refined modeling analysis will be performed using the latest version of the EPA AERMOD model and five years of representative meteorological data. Emission rates will be developed based on the size of the development and assumptions developed to represent boiler stack location(s). Concentrations of nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter less than 2.5 microns in diameter (~~PM_{10} and~~ $PM_{2.5}$) will be determined at surrounding publicly-accessible locations. Receptors will be placed at elevated locations on all facades and at multiple elevations on nearby buildings to identify maximum pollutant concentrations and concentration increments per the guidance provided in the *CEQR Technical Manual*.

The analysis of the heating and hot water systems of the Proposed Project will consider impacts on existing developments, as well as the potential for "project-on-project" impacts. This analysis will be performed to determine impacts from clusters of developments on the project site. A cumulative analysis of emissions from heating and hot water systems from the Proposed Project and the Stevenson Commons existing steam plant on off-site receptors will also be conducted.

Predicted values will be compared to NAAQS for NO_2, SO_2, and PM_{10}, and the CEQR *de minimis* criteria for $PM_{2.5}$. If required, an air quality (E) designation will be proposed to mandate fuel, system, operational and/or heating and hot water system exhaust stack restrictions that would be required to avoid a significant adverse air quality impact. The DEIS would include (E) designation language describing the requirements that would apply.

Large/Major Source Analysis

The *CEQR Technical Manual* requires an analysis of projects that may result in significant adverse impact due to certain types of new uses located near a "large" or "major" stationary emissions source. Major sources are defined as those located at facilities that have a Title V or Prevention of Significant Deterioration air permit, while large sources are defined as those located at facilities that require a State Facility Permit. To assess the potential effects of these existing sources on the Project Area, a review of existing permitted facilities will be conducted using EPA, NYSDEC, and DEP databases. If any large or major stationary emissions sources are identified, a detailed analysis would be prepared. Cumulative impacts will be determined, if applicable. Impacts would be assessed in relation to the NAAQS and CEQR $PM_{2.5}$ de minimis criteria.

Industrial Source Analysis

The project area is primarily zoned residential, with a portion of the 400-foot study area around the Development Site located within a C4-1 zoning district. A review of air permit information will be performed to determine whether there are any permitted industrial sources of emissions within the commercial zoned portion of the study area. If any permitted industrial sources are identified, an analysis will be performed. If required, EPA's AERMOD refined dispersion model would be used to estimate the short-term and annual concentrations of critical pollutants at sensitive receptor locations. Predicted values will be compared with the short-term guideline concentrations (SGC) and annual guideline concentrations (AGC) reported in DEC's DAR-1 AGC/SGC Tables guidance document to determine the potential for significant impacts. Potential cumulative effects of air toxic compounds will be evaluated, if required.

TASK 13. GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Greenhouse Gas Emissions

Increased greenhouse (GHG) emissions are changing the global climate, which is predicted to lead to wide-ranging effects on the environment, including rising sea levels, increases in temperature, and changes in precipitation levels. Although this is occurring on a global scale, the environmental effects of climate change are also likely to be felt at the local level. As the Proposed Development exceeds the 350,000 sf development threshold, a GHG emissions assessment will be provided in the EIS.

In accordance with the *CEQR Technical Manual*, GHG emissions generated by the Proposed Development will be quantified, and an assessment of consistency with the City's established GHG reduction goal will be prepared. Emissions will be estimated for the analysis year and reported as carbon dioxide equivalent (CO2e) metric tons per year. GHG emissions other than carbon dioxide (CO2) will be included if they would account for a substantial portion of overall emissions, adjusted to account for the global warming potential. Relevant measures to reduce energy consumption and GHG emissions that could be incorporated into the Proposed Development will be discussed, and the potential for those measures to reduce GHG emissions from the Proposed Development will be assessed to the extent practicable.

- *Building Operational Emissions*: GHG emissions from the Proposed Development will be estimated based on carbon intensity factors specified in the *CEQR Technical Manual*.
- *Mobile Source Emissions*: GHG emissions from vehicle trips to and from the Development Site will be quantified using trip distances and vehicle emission factors provided in the *CEQR Technical Manual*.
- *Potential Measures to Reduce GHG Emissions*: Design features and operational measures to reduce the Proposed Development's energy use and GHG emissions will be discussed to the extent that information is available.
- *Consistency with the City's GHG Reduction Goal*: Consistency of the Proposed Development and the Proposed Actions overall will be assessed. While the City's overall goal is to reduce GHG emissions by 30 percent below 2005 level by 2025, individual project consistency is evaluated based on building energy efficiency, proximity to transit, on-site renewable power and distributed generation, efforts to reduce on-road vehicle trips and/or to reduce the carbon fuel intensity or improve vehicle efficiency for project-generated vehicle trips, and other efforts to reduce the project's carbon footprint.

Climate Change

While the Project Area is not located within the federally mapped 100- and 500-year floodplains, portions of the Project Area are expected to be located within the New York City Panel on Climate Change's (NPCC's) 100- and 500-year floodplains by 2080s and the 2020s, respectively. As such, a climate change assessment is warranted pursuant to *CEQR Technical Manual* guidance. This chapter of the DEIS will include a qualitative discussion of potential effects of climate change and potential design measures that could be incorporated into new development projected to occur in the Project Area.

TASK 14. NOISE

For the Proposed Actions, there are two major areas of concern regarding noise: (1) the effect the Proposed Actions would have on noise levels in the surrounding community; and (2) the level of building attenuation necessary to achieve interior noise levels that satisfy CEQR requirements.

The Proposed Actions would generate vehicle trips, but given the background conditions and the anticipated project-generated traffic, it is not expected that project-generated traffic would be likely to result in significant adverse noise impacts. However, a screening assessment will be performed to determine whether there are any locations where there is the potential for the Proposed Action to result in significant noise impacts (i.e., doubling of Noise Passenger Car Equivalents [PCEs]) due to project-generated traffic. A detailed analysis of potential noise impacts due to outdoor mechanical equipment is not required as the outdoor mechanical equipment for any future development facilitated by the Proposed Actions would be required to meet applicable regulations. The noise analysis will also examine the level of building attenuation necessary to meet CEQR interior noise level requirements.

The following tasks will be performed in compliance with *CEQR Technical Manual* guidance:

- Based on the traffic studies conducted for Task 11, "Transportation", a screening analysis will be conducted to determine whether there are any locations where there is the potential for the Proposed Actions to result in significant noise impacts (i.e., doubling Noise PCEs) due to action-generated traffic. If it is determined that Noise PCEs would double at any sensitive receptor, a detailed analysis would be conducted in accordance with *CEQR Technical Manual* guidance.
- Appropriate noise descriptors for building window/wall attenuation and alternate means of ventilation purposes would be selected. Based on CEQR criteria, the noise analysis will examine the L_{10} and the one-hour equivalent ($L_{eq(1)}$) noise levels.
- Given the constraints in performing noise and traffic data collection due to the COVID-19 pandemic, existing noise levels will be estimated utilizing noise data from approved noise studies conducted for other nearby projects in consultation with DCP, and existing traffic conditions will be estimated using existing transportation ATR and Turning Movement Count (TMC) data. In conformance with *CEQR Technical Manual* procedures, existing noise level estimates will be based on noise data measured in units of "A" weighted decibel scale (dBA) as well as one-third octave bands performed during typical weekday AM, midday, and PM peak periods (coinciding with the traffic peak periods).[3] The estimated noise level descriptors will include equivalent noise level (L_{eq}), maximum level (L_{max}), minimum level (L_{min}), and statistical

[3] ~~Depending on the traffic conditions presented in the Transportation analysis, the noise analysis may be required to include noise level calculations during the Saturday peak period as well, if applicable.~~

percentile levels such as L_1, L_{10}, L_{50}, and L_{90}. A summary table of existing noise level estimates will be provided as part of the DEIS.

- Following procedures outlined in the *CEQR Technical Manual* for assessing mobile source noise impacts, future No-Action and With-Action noise levels will be estimated at the noise receptor locations using the PCE-based proportionality equation per *CEQR Technical Manual* guidance for all locations where local traffic is the dominant noise source. All projections will be made with L_{eq} noise descriptor.
- Future noise levels with the Proposed Project will be predicted using the PCE-based proportionality equation per *CEQR Technical Manual* guidance based on the Proposed Project's vehicle trip assignment developed as part of Task 11, "Transportation."
- As an existing playground (Space Time Playground) is located directly northeast of the development site, and as the Proposed Project intends to include both a play area facility and replace and relocate an existing tennis court within the development site, a play area noise analysis will be conducted to determine the level of impact from the proposed play area and tennis court on existing, nearby sensitive receptors, and the need for attenuation requirements for project-generated building facades facing the existing and/or proposed play areas and tennis court.
- The effect the Proposed Project would have on noise levels at existing and future sensitive land uses will be identified, in consideration of CEQR noise level guidance.
- The level of building attenuation necessary to satisfy CEQR requirements (a function of the exterior noise levels) will be determined based on the highest L_{10} noise level estimated at each monitoring site. If required, building attenuation requirements will be memorialized by (E) designations placed on the block and lot requiring specific levels of attenuation pursuant to Section 11-15 of the New York City Zoning Resolution and the (E) Rules, as referenced above in the Hazardous Materials and Air Quality sections. The DEIS will include (E) designation language describing the requirements that would apply.

TASK 15. PUBLIC HEALTH

Public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability, and premature death; and reducing inequalities in health status, as defined in the *CEQR Technical Manual*. The goal of CEQR with respect to public health is to determine whether adverse impacts on public health may occur as a result of a proposed action, and, if so, to identify measures to mitigate such effects.

A public health assessment may be warranted if an unmitigated significant adverse impact is identified in other CEQR analysis areas, such as air quality, hazardous materials, or noise, according to the *CEQR Technical Manual*. If unmitigated significant adverse impacts are identified for the Proposed Actions in any of these technical areas and a public health assessment is warranted, an analysis will be provided for the specific technical area or areas.

TASK 16. NEIGHBORHOOD CHARACTER

Neighborhood character is established by numerous factors, including land use patterns, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other

physical features that include traffic and pedestrian patterns, noise, etc. The Proposed Actions have the potential to alter certain elements contributing to the affected area's neighborhood character. Therefore, a neighborhood character analysis will be provided in the DEIS.

A preliminary assessment of neighborhood character will be provided in the DEIS to determine whether changes expected in other technical analysis areas—land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; transportation; and noise—may affect a defining feature of neighborhood character. The preliminary assessment will:

- Identify the defining features of the existing neighborhood character.
- Summarize changes in the character of the neighborhood that can be expected in the future With-Action condition and compare to the future No-Action condition.
- Evaluate whether the Proposed Actions have the potential to affect these defining features, either through the potential for a significant adverse impact or a combination of moderate effects in the relevant technical areas.

If the preliminary assessment determines that the Proposed Actions could affect the defining features of neighborhood character, a detailed analysis will be conducted in accordance with the *CEQR Technical Manual* guidance.

TASK 17. CONSTRUCTION

Construction impacts, though temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through the area. Construction impacts are usually important when construction activity has the potential to affect transportation conditions, archaeological resources and the integrity of historic resources, community noise levels, air quality conditions, and mitigation of hazardous materials. Multi-sited projects with overall construction periods lasting longer than two years and that are near to sensitive receptors should undergo a preliminary impact assessment according to the *CEQR Technical Manual*. Construction of the Proposed Project is expected to take place over a period greater than two years, and is therefore considered long-term. In addition, as the Proposed Project would include multiple buildings within the Project Area, there is the potential for on-site receptors on buildings to be completed before the final build-out. This chapter of the DEIS will provide a preliminary impact assessment following *CEQR Technical Manual* guidance. The preliminary assessment will evaluate the duration and severity of the disruption or inconvenience to nearby sensitive receptors. Given the multiple buildings that are anticipated in the Project Area and the anticipated construction period, it is anticipated that a detailed construction impact analysis will be prepared for one or more technical areas and reported in the DEIS in accordance with *CEQR Technical Manual* guidance. Technical areas to be assessed include the following:

- *Transportation:* The assessment will consider losses in lanes, sidewalks, and other transportation services on the adjacent streets during the various phases of construction and identify the increase in vehicle trips from construction workers and equipment. A travel demand forecast for the worst-case construction period will be prepared if warranted under CEQR guidance, including the preparation of a trip generation table identifying the number of construction worker vehicles and construction-related trucks for the construction AM and PM peak hours for each quarter and an assessment of parking conditions during the peak construction traffic periods. Based on the trip projections of activities associated with peak

construction for the Proposed Development, an assessment of potential transportation impacts during construction and how they are compared to the trip projections under the operational condition will be provided. If this effort identifies the need for a separate detailed analysis, such analysis will be prepared.

- *Air Quality:* The construction air quality impact section will contain a detailed quantitative analysis of emissions from construction equipment, worker vehicles and trucks, as well as fugitive dust. The pollutants for analysis will be CO, $PM_{2.5}$, PM_{10} and NO_2. The preliminary construction schedule developed for the Proposed Project would be used to estimate the peak period of activity for air quality purposes. The analysis will review the projected activity and equipment in the context of intensity, duration, and location of emissions relative to nearby sensitive locations including project buildings that would have been completed and occupied during the later phases of construction, and identify any project-specific control measures required to further reduce the effects of construction and to ensure that significant adverse impacts on air quality do not occur.
- *Noise:* The construction noise impact section will contain a discussion of noise from the Proposed Project's construction activity. This will include estimates of construction noise levels at nearby receptors during the various phases of construction at each Project building. The construction noise analysis will rely on the conceptual construction schedule developed for the Proposed Project to identify peak periods of construction activity. Assumptions would be developed regarding equipment usage factors and typical equipment noise levels. The magnitude and duration of construction noise experienced at nearby noise receptors will be determined and evaluated. Appropriate recommendations will be made to comply with New York City Department of Environmental Protection (DEP) Rules for Citywide Construction Noise Mitigation and the New York City Noise Control Code.
- *Other Technical Areas:* As appropriate, the construction assessment will discuss other areas of environmental concern, including Land Use and Neighborhood Character, Socioeconomic Conditions, Community Facilities, Open Space, Historic and Cultural Resources, and Hazardous Materials, for potential construction-related impacts.

TASK 18. MITIGATION

Where significant adverse impacts have been identified in Tasks 2 through 17, measures to mitigate those impacts will be described. The chapter will also consider when mitigation measures will need to be implemented. These measures will be developed and coordinated with the responsible City/State agencies, as necessary. Where impacts cannot be fully mitigated, they will be disclosed as unavoidable adverse impacts.

TASK 19. ALTERNATIVES

The purpose of an alternative section in an EIS is to examine development options that would tend to reduce action-related impacts. The alternatives will be better defined once the full extent of the Proposed Actions' impacts have been identified. The DEIS will include at a minimum a No-Action alternative and a No Impact/No Unmitigated Impact alternative. The alternatives analysis will be qualitative, except in those technical areas where significant adverse impacts for the Proposed Actions have been identified. The level of analysis provided will depend on an assessment of project impacts determined by the analysis connected with the appropriate tasks.

TASK 20. SUMMARY EIS CHAPTERS

The DEIS will include the following three summary chapters, in accordance with CEQR guidance:

- *Unavoidable Adverse Impacts*: summarizes any significant adverse impacts that are unavoidable if the Proposed Actions are implemented regardless of the mitigation employed (or if mitigation is not feasible).
- *Growth-Inducing Aspects of the Proposed Actions*: which generally refer to "secondary" impacts of the Proposed Actions that trigger further development.
- *Irreversible and Irretrievable Commitments of Resources*: which summarizes the Proposed Actions and their impact in terms of the loss of environmental resources (loss of vegetation, use of fossil fuels and materials for construction, etc.), both in the immediate future and in the long term.

TASK 21. EXECUTIVE SUMMARY

The executive summary will utilize relevant material from the body of the DEIS to describe the Proposed Actions, the environmental impacts, measures to mitigate those impacts, and alternatives to the Proposed Actions. The executive summary will be written in enough detail to facilitate drafting of a notice of completion by the lead agency.

Appendix 1

Transportation Planning Factors and Travel Demand Forecast Memorandum

Philip Habib & Associates
Engineers and Planners • 102 Madison Avenue • New York, NY 10016 • 212 929 5656 • 212 929 5605 (fax)

TECHNICAL MEMORANDUM

TO: **New York City Department of City Planning**

FROM: **Philip Habib & Associates**

DATE: **March 2, 2021**

PROJECT: **Stevenson Commons (PHA No. 1870)**

RE: **Transportation Planning Factors and Travel Demand Forecast**

This memorandum summarizes the transportation planning factors to be used for the analyses of traffic, parking, transit, and pedestrian conditions for the *Stevenson Commons EIS*. Camber Property Group, LLC (the "Applicant") is requesting discretionary actions to facilitate new residential and community facility development at Stevenson Commons in the Soundview neighborhood of Bronx Community District 9. The Stevenson Commons site (a.k.a. the "Project Area") at 1850 Lafayette Avenue (Block 3600, Lot 4) comprises the 679,000 square foot (sf) superblock bounded by Lafayette Avenue to the north, White Plains Road to the east, Seward Avenue to the south, and Thieriot Avenue to the west (see **Figure 1**). The eastern portion of the site is currently developed with a mix of residential, retail, community facility, and/or accessory parking uses. Estimates of the peak travel demand for the Proposed Actions' With-Action conditions are provided, along with a discussion of trip assignment methodologies and study area definitions.

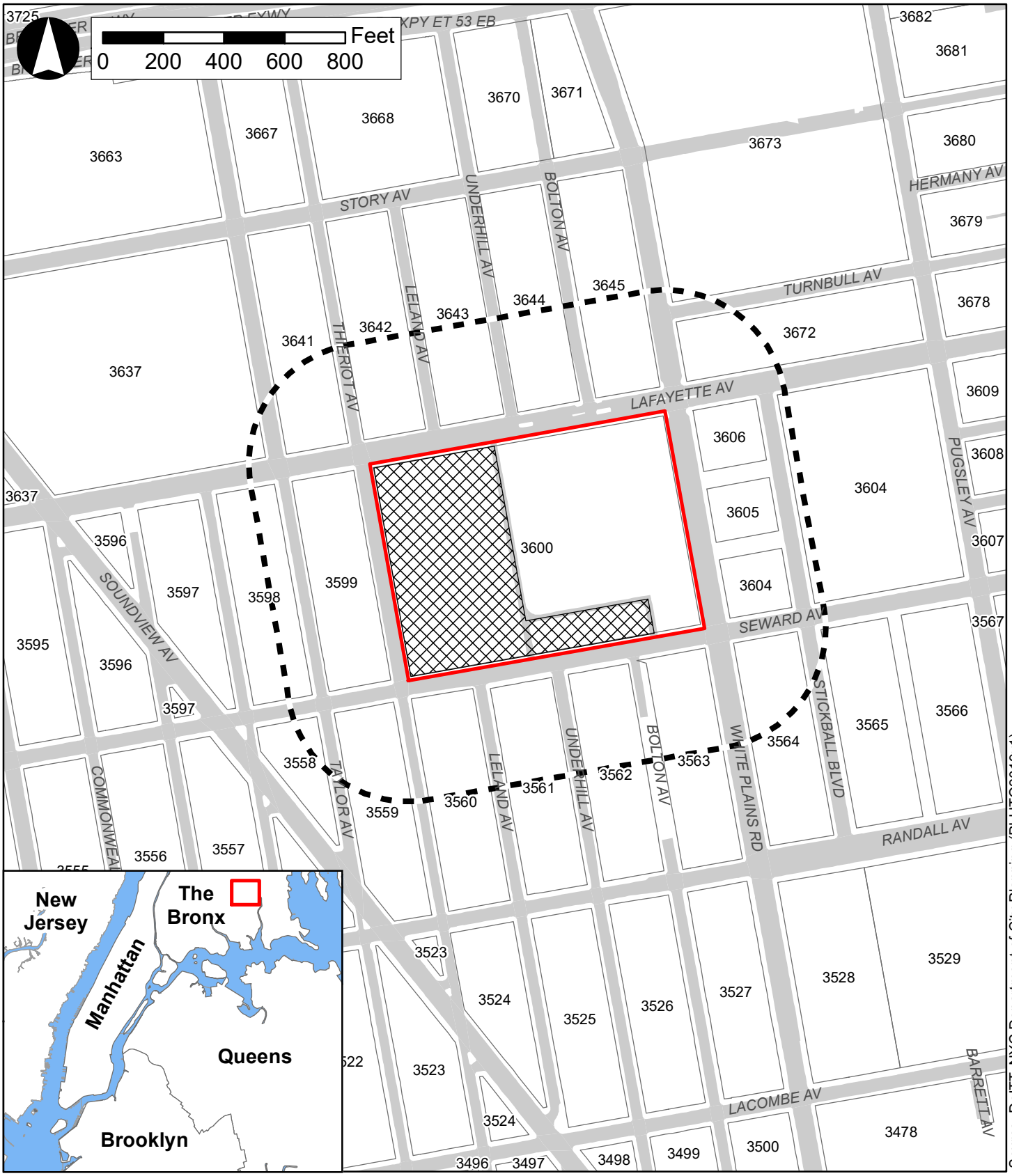
THE PROPOSED ACTIONS

The Proposed Actions would encompass several discretionary approvals, including:

- Modification to the previously approved Stevenson Commons large scale residential development (LSRD) (CP-22380) to update the previously approved plans and zoning calculations to reflect a proposed as-of-right mixed use development on Block 3600, Lot 4; and
- Modification to the previously approved Stevenson Commons City-aided limited-profit housing project on Block 3600, Lot 4 pursuant to Article 2 of the New York State Private Housing Finance Law (CP-22381).

The Proposed Actions would facilitate new construction on the Stevenson Commons site that would result in an incremental (net) increase compared to No-Action conditions of approximately 735 affordable dwelling units (DUs), including 114 affordable units for seniors, 33,995 gsf of community facility uses, approximately 1.94 acres of publicly accessible open space, and a net decrease of 104 accessory parking spaces (the "Proposed Project"). New development would be spread across six new buildings on the Stevenson

Figure 1
Project Location



Source: DoITT, NYC Department of City Planning (PLUTO2019v1)

Legend

Project Area | 400-Foot Radius | Development Site | 3600 Tax Blocks

Commons site. Construction of the Proposed Project is expected to begin in the second quarter of 2021 with all components complete and operational by early-2028.

REASONABLE WORST-CASE DEVELOPMENT SCENARIO (RWCDS)

In order to assess the potential effects of the Proposed Actions, a reasonable worst-case development scenario (RWCDS) for both the future without the Proposed Actions (the "No-Action" condition) and the future with the Proposed Actions (the "With-Action" condition) will be forecasted for an analysis year, or Build year, of 2028. The effects of the Proposed Actions, therefore, represent the incremental effects on conditions that would result from the net change in development between the No-Action and With-Action conditions (i.e., the "project increment"). **Table 1** below shows a summary of the No-Action conditions, With-Action conditions, and the project increment for the Project Area in 2028 under the RWCDS.

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

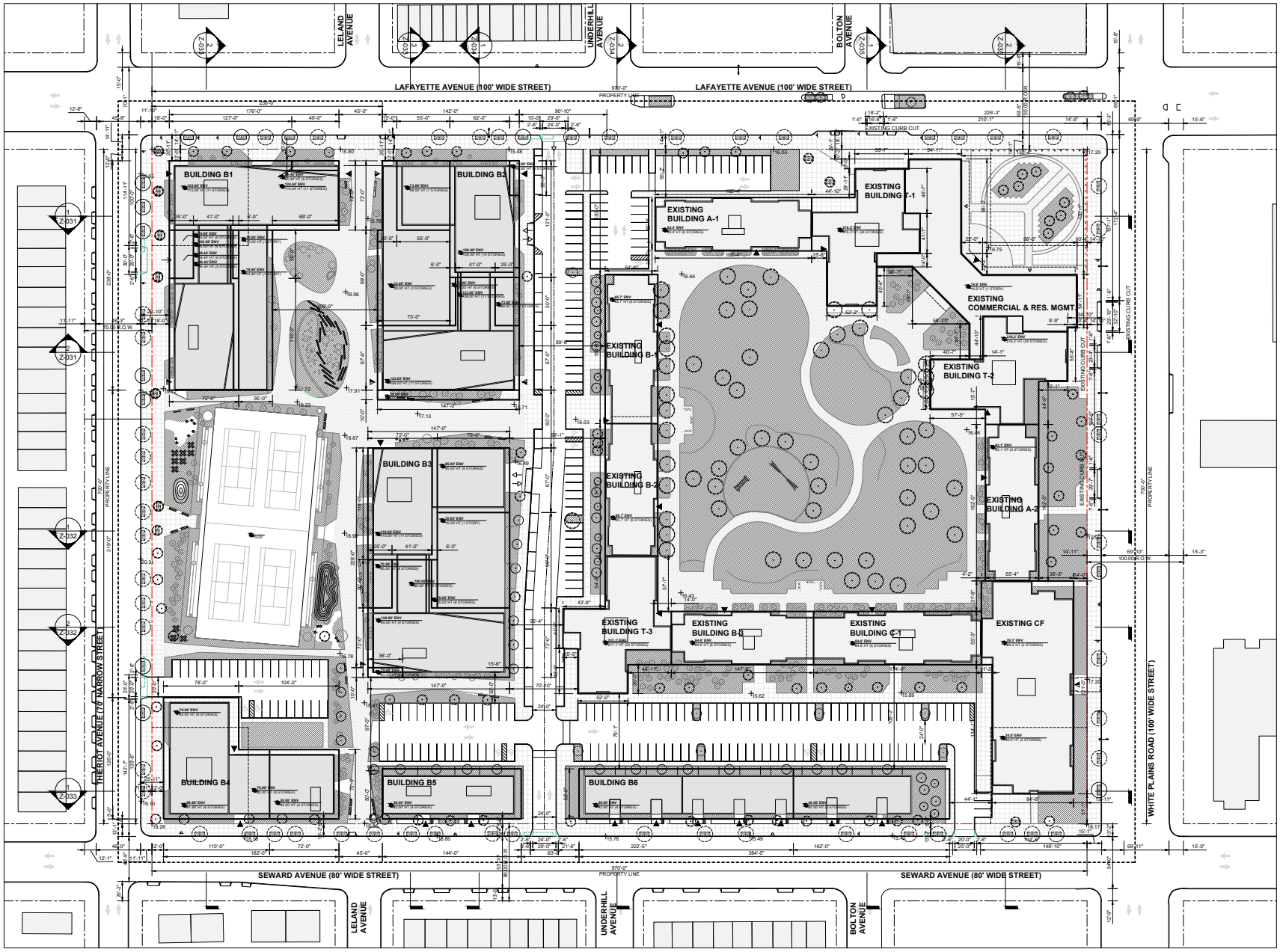
The No-Action scenario assumes that no new as-of-right development could occur on the Stevenson Commons site without modification of the existing LSRD special. As such, the Project Area would continue to be occupied by 948 DUs, 10,648 gsf of local retail uses, and 36,214 gsf of community facility uses (health center).

In the future without the Proposed Actions, as under existing conditions, The Stevenson Commons site (Block 3600) would be occupied by nine Mitchell-Lama buildings ranging in height from 6 to 24 stories. In total, the nine buildings comprise 990,050 gross square feet (gsf), including 943,188 gsf of residential floor area (948 affordable rental DUs), 10,648 gsf of local retail, and 36,214 gsf of community facility floor area currently occupied by the Stevenson Family Health Center. The nine buildings are all located on the eastern portion of the block and are oriented around a central private open space. The western portion of the block is occupied by 570 surface accessory parking spaces and tennis and handball courts.

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

By 2028 under the With-Action condition, the Stevenson Commons site would consist of six new predominantly residential buildings on Block 3600 (buildings B1 through B6 in **Figure 2**, which comprise the "Development Site"). Building B1 would have a maximum height of 125 feet (11 stories) and would comprise a total of 207,231 gsf, including 187,352 gsf of affordable residential floor area and 19,879 gsf of community facility floor area (daycare center). Building B2 would have a maximum building height of 138 feet (14 stories) and would comprise a total of 254,432 gsf, including 181,257 gsf of affordable residential floor area, 8,013 gsf of community facility floor area (recreation center), and 65,162 gsf of at-grade and above-grade parking. Building B3 would have a maximum building height of 115 feet (11 stories) and would comprise a total of 224,581 gsf, including 195,489 gsf of affordable residential floor area, 6,103 gsf of community facility floor area (recreation center), and 22,989 gsf of at-grade parking. Building B4 would rise to a maximum height of six-stories (approximately 65 feet). The building would be comprised of approximately 114 affordable rental DUs for seniors (approximately 74,327 gsf). Buildings B5 and B6 would each rise to a maximum height of four stories (approximately 45 feet) and would comprise a total of 20,828 gsf and 44,810 gsf, respectively.

In total, the Proposed Actions would introduce a net 735 affordable DUs (including 563 affordable rental units, 58 affordable co-op units, and 114 affordable senior units) and 33,995 gsf of community facility floor



N.T.S

Legend

- Large Scale General Boundary
- Zoning Lot Line
- Proposed Maximum Zoning Envelope
- Development Envelope Height (Illustrative Building Height / # of Stories)
- Illustrative Building Line
- Illustrative Building
- Residential Access Point
- Commercial Access Point
- Community Access Point
- Spot Elevation / Height (relative to NAVD88)
- Parking Access Point
- Loading Access (at loading berths)
- Traffic Direction
- Centerline of Driveway
- Existing Context Building
- Existing Fire Hydrant
- Proposed Curb Cut
- Existing Curb Cut (to be relocated)
- Existing Curb Cut (to mantained)
- Existing Street Light
- Existing Tree & Tree Pit
- Existing Site Tree
- Proposed Tree & Tree Pit
- Proposed Plants
- Street Sign
- Planted Area
- Pavers
- Sidewalk
- Benches

Notes

1. Elevations referenced to North American Vertical Datum of 1988 (NVD88) which is 1,095 feet above National Geodetic Survey Datum at Sandy Hook, New Jersey.
2. Building shown within zoning envelopes are for illustrative purposes only and are subject to change.
3. Location of bulkheads illustrative and subject to change.
4. Graphic scale applicable to all non-dimensioned elements.
5. The landscape design of open space, including rooftop terraces, street network, and parking lots depicted are shown for illustrative purposes only and are subject to change.
6. Entrances to proposed buildings are illustrative.

N

area. A total of 466 accessory parking spaces would be provided (a net decrease of 104 spaces) as well as approximately 1.94 acres of publicly accessible open space.

Table 1: Project Increment Summary

Use	No-Action Scenario	With-Action Scenario	Increment
Affordable Housing (Rental)	948 DUs	1,511 DUs	**+563 DUs**
Affordable Housing (Co-op)	0 DUs	58 DUs	**+58 DUs**
Affordable Senior Housing	0 DUs	114 DUs	**+114 DUs**
Total Residential	***948 DUs***	***1,683 DUs***	***+735 DUs***
Health Center	36,214 gsf	36,214 gsf	**No change**
Daycare	0 gsf	19,879 gsf	**+19,879 gsf**
Recreation Center	0 gsf	14,116 gsf	**+14,116 gsf**
Total Community Facility	***36,214 gsf***	***70,209 gsf***	***+33,995 gsf***
Local Retail	10,648 gsf	10,648 gsf	**No change**
Parking Spaces	570 spaces	466 spaces	**-104 spaces**

PRELIMINARY TRANSPORTATION PLANNING ASSUMPTIONS

The transportation planning factors used to forecast travel demand for the RWCDS land uses are summarized in **Table 2** and discussed below. **Table 2** provides the daily trip generation rates, temporal and directional distributions, mode choice factors, vehicle occupancies, and truck trip factors for the land uses discussed above. Factors are shown for the weekday AM and PM peak hours (typical peak periods for commuter travel demand) and the weekday midday and Saturday peak hours (typical peak periods for retail demand).

Residential – Family Units

The forecast of travel demand for the affordable family residential units used a weekday trip generation rate of 8.075 person trips per DU, a Saturday trip generation rate of 9.6 person trips per DU, and temporal distributions of 10.0 percent, 5.0 percent, 11.0 percent, and 8.0 percent for the weekday AM, midday, and PM, and Saturday midday peak hours, respectively, as per the 2020 *City Environmental Quality Review (CEQR) Technical Manual*. The family units' modal split estimated 40.7 percent, 0.7 percent, 31.3 percent, 19.3 percent, and 8.0 percent for private auto, taxi, bus-to-subway, bus-only, and walk-only modes, respectively, as per the 2014-2018 American Community Survey (ACS) Means of Transportation to Work Table for Bronx Census Tracts 16, 20, 38, 42, 74, and 98 for all family units. The auto occupancy rate of 1.06 persons per auto was also based on this source. Directional splits and the taxi occupancy rate of 1.40 persons per taxi were based on the 2017 *1965 Lafayette Avenue EAS*. Truck trip generation rates were based on the 2020 *CEQR Technical Manual*.

Residential – Senior Units

The forecast of travel demand for the affordable senior residential units also used a weekday trip generation rate of 8.075 person trips per DU, a Saturday trip generation rate of 9.6 person trips per DU, and temporal distributions of 10.0 percent, 5.0 percent, 11.0 percent, and 8.0 percent for the weekday AM, midday, and PM, and Saturday midday peak hours, respectively, as per the 2020 *CEQR Technical Manual*. The modal split assumptions used for the family units were similarly applied to the proposed affordable senior units. Directional splits and the taxi occupancy rate of 1.40 persons per taxi were based on the 2017 *1965 Lafayette Avenue EAS*, which similarly included affordable senior housing units and is located one block north of the Project Area. Truck trip generation rates were based on the 2020 *CEQR Technical Manual*.

Table 2: Transportation Planning Assumptions

Land Use:	Residential - Family	Residential - Senior	Community Facility - Daycare (Students)	Community Facility - Daycare (Parents)	Community Facility - Daycare (Staff)	Community Facility - Recreation Center
Size/Units:	621 DU	114 DU	19,879 gsf	19,879 gsf	19,879 gsf	14,116 gsf
Trip Generation:	(1)	(1)	(6)	(6)	(6)	(5)
Weekday	8.075	8.075	22.0	44.0	6.0	44.7
Saturday	9.6	9.6	0.0	0.0	0.0	26.6
	per DU	per DU	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf	per 1,000 gsf
Temporal Distribution:	(1)	(1)	(6)	(6)	(6)	(5)
AM (8-9 AM)	10.0%	10.0%	25.0%	25.0%	25.0%	5.8%
MD (1-2 PM)	5.0%	5.0%	0.0%	0.0%	2.5%	7.4%
PM (5-6 PM)	11.0%	11.0%	25.0%	25.0%	25.0%	7.6%
SatMD (1-2 PM)	8.0%	8.0%	0.0%	0.0%	0.0%	10.0%
	(2)	(2)	(2)	(2)	(7)	(5)
Modal Splits:	All Periods	All Periods	All Periods	All Periods	All Periods	All Periods
Auto	40.7%	40.7%	40.7%	40.7%	50.5%	4.0%
Taxi	0.7%	0.7%	0.7%	0.7%	0.0%	9.0%
Bus-to-Subway	31.3%	31.3%	31.3%	31.3%	14.5%	12.0%
Bus Only	19.3%	19.3%	19.3%	19.3%	22.3%	5.0%
Walk/Other	8.0%	8.0%	8.0%	8.0%	12.7%	70.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	(3)	(3)	(6)	(6)	(6)	(5)
In/Out Splits:	In Out	In Out	In Out	In Out	In Out	In Out
AM	16.0% 84.0%	36.0% 64.0%	100% 0%	50% 50%	100% 0%	66% 34%
MD	50.0% 50.0%	50.0% 50.0%	0% 0%	0% 0%	50% 50%	58% 42%
PM	67.0% 33.0%	60.0% 40.0%	0% 100%	50% 50%	0% 100%	34% 66%
Sat MD	53.0% 47.0%	53.0% 47.0%	0% 0%	0% 0%	0% 0%	58% 42%
Vehicle Occupancy:	(2,3)	(2,3)	(6)	(6)	(6)	(5)
	All Periods	All Periods	All Periods	All Periods	All Periods	All Periods
Auto	1.06	1.06	1.00	1.00	1.00	1.40
Taxi	1.40	1.40	1.00	1.00	1.00	1.40
Truck Trip Generation:	(1)	(1)	(4)	(4)	(4)	(5)
Weekday	0.06	0.06	0.07	0.07	0.07	0.04
Saturday	0.02	0.02	0.00	0.00	0.00	0.01
	per DU	per DU	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf
	(1)	(1)	(4)	(4)	(4)	(5)
AM	12.0%	12.0%	9.6%	9.6%	9.6%	7.7%
MD	9.0%	9.0%	11.0%	11.0%	11.0%	11.0%
PM	2.0%	2.0%	1.0%	1.0%	1.0%	2.0%
Sat MD	9.0%	9.0%	0.0%	0.0%	0.0%	11.0%
	In Out	In Out	In Out	In Out	In Out	In Out
AM/MD/PM	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%

Notes :

(1) Based on 2014 *City Environmental Quality Review (CEQR) Technical Manual.*
(2) Based on 2014-2018 *American Community Survey (ACS)* Means of Transportation to Work Table for Bronx Census Tracts 16, 20, 38, 42, 74, and 98.
(3) *1965 Lafayette Avenue EAS , 2017 .*
(4) *La Central FEIS, 2016.*
(5) *West Harlem Rezoning* FEIS, 2012.
(6) Based on data proveded by NYCDOT.
(7) Based on 2012-2016 *AASHTO CTTP Reverse Journey to Work data for Bronx* Census Tracts 16, 20, 38, 42, 74, and 98.

Community Facility - Daycare

The forecast of travel demand for the daycare use was primarily based on data provided by the New York City Department of Transportation (NYC DOT). Based on this data, the proposed project's daycare use used a weekday trip generation rate of 22.0 person trips per 1,000 gsf, 44.0 person trips per 1,000 gsf and 6.0 person trips per 1,000 gsf for students, parents, and staff, respectively. The temporal distributions of 25.0 percent in the weekday AM and PM peak hours for students and parents, and the temporal distributions of 25.0 percent, 2.5 percent, and 25.0 percent in the weekday AM, midday, and PM peak hours, respectively, for staff are also based on data provided NYC DOT. The modal split assumptions for the residential uses were applied to students and parents for the proposed daycare use. The modal split assumptions for daycare staff were 50.5 percent by auto, 0.0 percent by taxi, 14.5 percent by bus-to-subway, 22.3 percent by bus only, and

12.7 percent by walk only as per the 2012-2016 American Association of State Highway and Transportation Officials (AASHTO) Census Transportation Planning Products (CTPP) reverse journey to work five-year data for Bronx Census Tracts 16, 20, 38, 42, 74, and 98. Directional distributions and vehicle occupancies were also based on data provided by NYCDOT, and truck trip generation rates were based on data from the 2016 *La Central FEIS.*

Community Facility – Recreation Center

The factors used (trip generation rates, temporal and directional distributions, modal splits, and vehicle occupancies) to forecast the travel demand for the proposed recreation center were based on data from the 2012 *West Harlem Rezoning FEIS*. As shown in **Table 2**, the travel demand forecast for the recreation center used weekday and Saturday trip generation rates of 44.7 and 26.6 trips per 1,000 gsf, respectively. Temporal distributions of 5.8 percent for the weekday AM, 7.4 percent for the weekday midday, 7.6 percent for the weekday PM, and 10.0 percent for the Saturday midday periods were used. The modal split assumptions used for the recreation center were 4.0 percent by auto, 9.0 percent by taxi, 12.0 percent by bus-to-subway, 5.0 percent by bus only, and 70.0 percent by walk only. Additionally, vehicle occupancies of 1.4 persons per vehicle were used for auto and taxi.

TRIP GENERATION

Table 3 provides an overall travel demand forecast for the Project Area for the weekday AM, midday, and PM, and Saturday midday peak hours. As shown in **Table 3**, the Proposed Actions would generate a net increase of approximately 994 person trips (in and out combined) in the weekday AM peak hour, 352 person trips in the weekday midday peak hour, 1,062 person trips in the weekday PM peak hour, and 604 person trips in the Saturday midday peak hour. The Proposed Actions would generate 353, 130, 377, and 229 (in and out combined) incremental vehicle trips (including auto, taxi, and truck trips) in the weekday AM, midday, and PM, and Saturday midday peak hours, respectively; 298, 99, 317, and 183 incremental subway trips (in and out combined) in the weekday AM, midday, PM, and Saturday midday peak hours, respectively; 486, 159, 516, and 294 bus trips (in and out combined, including trips to and from the Parkchester subway station) in the weekday AM, midday, PM, and Saturday midday peak hours, respectively; and 590, 219, 633, and 365 total pedestrian trips (in and out combined, including walk-only and trips to/from public transit) in the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

As shown in **Table 3**, the Proposed Actions would generate 50 or more vehicle trips, 200 or more bus trips, and more than 200 pedestrian trips in all four peak hours, and therefore a Level 2 screening analysis for traffic, bus, and pedestrians would be warranted. The following section further discusses the modal distribution and assignment patterns for the Proposed Actions.

Table 3: Travel Demand Forecast – Person Trips

Land Use:		Residential - Family		Residential - Senior		Community Facility - Daycare (Students)		Community Facility - Daycare (Parents)		Community Facility - Daycare (Staff)		Community Facility - Recreation Center		Total		
Size/Units:		621	DU	114	DU	19,879	gsf	19,879	gsf	19,879	gsf	14,116	gsf			
Peak Hour Person Trips:																
	AM (8-9 AM)	502		94		110		220		30		38		994		
	MD (1-2 PM)	252		48		0		0		4		48		352		
	PM (5-6 PM)	552		102		110		220		30		48		1,062		
	Sat MD (1-2 PM)	478		88		0		0		0		38		604		
Person Trips:																
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM	Auto	33	172	14	23	45	0	45	45	15	0	1	1	153	241	394
	Taxi	1	3	0	0	1	0	1	1	0	0	2	1	5	5	10
	Bus-to-Subway	25	132	11	19	34	0	34	34	4	0	3	2	111	187	298
	Bus Only	16	81	7	12	21	0	21	21	7	0	1	1	73	115	188
	Walk/Other	6	33	3	5	9	0	9	9	4	0	17	9	48	56	104
	Total	81	421	35	59	110	0	110	110	30	0	24	14	390	604	994
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
MD	Auto	51	51	10	10	0	0	0	0	1	1	1	1	63	63	126
	Taxi	1	1	0	0	0	0	0	0	0	0	3	2	4	3	7
	Bus-to-Subway	39	39	7	7	0	0	0	0	1	1	3	2	50	49	99
	Bus Only	24	24	5	5	0	0	0	0	0	0	1	1	30	30	60
	Walk/Other	11	11	2	2	0	0	0	0	0	0	20	14	33	27	60
	Total	126	126	24	24	0	0	0	0	2	2	28	20	180	172	352
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
PM	Auto	150	74	25	17	0	45	45	45	0	15	1	1	221	197	418
	Taxi	3	1	0	0	0	1	1	1	0	0	1	3	5	6	11
	Bus-to-Subway	116	57	19	13	0	34	34	34	0	4	2	4	171	146	317
	Bus Only	71	35	12	8	0	21	21	21	0	7	1	2	105	94	199
	Walk/Other	30	15	5	3	0	9	9	9	0	4	11	22	55	62	117
	Total	370	182	61	41	0	110	110	110	0	30	16	32	557	505	1,062
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
Sat MD	Auto	103	91	19	17	0	0	0	0	0	0	1	1	123	109	232
	Taxi	2	2	0	0	0	0	0	0	0	0	2	1	4	3	7
	Bus-to-Subway	80	70	15	13	0	0	0	0	0	0	3	2	98	85	183
	Bus Only	49	43	9	8	0	0	0	0	0	0	1	1	59	52	111
	Walk/Other	20	18	4	3	0	0	0	0	0	0	15	11	39	32	71
	Total	254	224	47	41	0	0	0	0	0	0	22	16	323	281	604

Table 3: Travel Demand Forecast (cont.) – Vehicle Trips

Land Use:		Residential - Family		Residential - Senior		Community Facility - Daycare (Students)		Community Facility - Daycare (Parents)		Community Facility - Daycare (Staff)		Community Facility - Recreation Center		Total		
Vehicle Trips :																
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM	**Auto (Total)**	31	162	13	22	0	0	45	45	15	0	1	1	105	230	335
	Taxi	1	2	0	0	0	0	1	1	0	0	1	1	3	4	7
	Taxi Balanced	3	3	0	0	0	0	2	2	0	0	2	2	7	7	14
	Truck	2	2	0	0	0	0	0	0	0	0	0	0	2	2	4
	Total	36	167	13	22	0	0	47	47	15	0	3	3	114	239	353
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
MD	**Auto (Total)**	47	47	9	9	0	0	0	0	1	1	1	1	58	58	116
	Taxi	1	1	0	0	0	0	0	0	0	0	2	1	3	2	5
	Taxi Balanced	2	2	0	0	0	0	0	0	0	0	3	3	5	5	10
	Truck	2	2	0	0	0	0	0	0	0	0	0	0	2	2	4
	Total	51	51	9	9	0	0	0	0	1	1	4	4	65	65	130
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
PM	**Auto (Total)**	142	70	24	16	0	0	45	45	0	15	1	1	212	147	359
	Taxi	2	1	0	0	0	0	1	1	0	0	1	2	4	4	8
	Taxi Balanced	3	3	0	0	0	0	2	2	0	0	3	3	8	8	16
	Truck	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
	Total	146	74	24	16	0	0	47	47	0	15	4	4	221	156	377
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
Sat MD	**Auto (Total)**	97	86	18	16	0	0	0	0	0	0	1	1	116	103	219
	Taxi	1	1	0	0	0	0	0	0	0	0	1	1	2	2	4
	Taxi Balanced	2	2	0	0	0	0	0	0	0	0	2	2	4	4	8
	Truck	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2
	Total	100	89	18	16	0	0	0	0	0	0	3	3	121	108	229

	Incremental Vehicle Trips			Incremental Pedestrian Trips (Walk + Bus + Subway)			Incremental Subway Trips			Incremental Bus Trips (Bus + Subway)		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM	114	239	353	232	358	590	111	187	298	184	302	486
MD	65	65	130	113	106	219	50	49	99	80	79	159
PM	221	156	377	331	302	633	171	146	317	276	240	516
Sat MD	121	108	229	196	169	365	98	85	183	157	137	294

LEVEL 1 SCREENING ASSESSMENT

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

Traffic

Based on *CEQR Technical Manual* guidance, a quantified traffic analysis is typically required if a proposed action would result in 50 or more vehicular trip ends in a peak hour at one or more intersections. As shown in **Table 3**, under the Proposed Actions, the net number of incremental vehicle trips – 353 in the weekday AM, 130 in the weekday midday, 377 in the weekday PM, and 229 in the Saturday midday periods – would exceed the 50-trip threshold in each period. As such, a Level 2 screening analysis is warranted to determine which intersections would require a quantified analysis for these periods.

Transit

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) and specified in the *CEQR Technical Manual*, detailed transit analyses are generally not required if a proposed action is projected to result in fewer than 200 peak hour rail or bus transit riders. If a proposed action would result in 50 or more bus passengers being assigned to a single bus route (in one direction), or if it would result in an increase of 200 or more passengers at a single subway station or on a single subway line, a detailed bus and/or subway analysis would be warranted. Transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus systems is usually highest.

As shown in **Table 3**, the Proposed Actions would generate approximately 298, 99, 317, and 183 (in and out combined) incremental subway trips in the weekday AM, midday, and PM and Saturday midday peak hours, respectively. Incremental transit bus trips would total approximately 486, 159, 516, and 294 (in and out combined, including trips to and from the Parkchester subway station) during these same periods, respectively. As these numbers would exceed 200 subway trips/hour and 200 bus trips/hour in one or more peak hour, Level 2 screening analyses are therefore warranted for the weekday AM and PM peak hours to determine which, if any, subway stations, subway lines, and bus routes would require quantified analysis. Although the total number of bus person-trips would exceed 200 in the Saturday midday peak hour, these trips would be off-peak when the transit systems typically have ample capacity. As such, off-peak periods are not analyzed and no subway or bus impacts are anticipated in these periods.

Pedestrians

According to *CEQR Technical Manual* guidance, a quantified analysis of pedestrian conditions is typically required if a proposed action would result in 200 or more peak hour pedestrian trips at any pedestrian element (sidewalk, corner area or crosswalk). As shown in **Table 3**, the Proposed Actions would generate an incremental demand of approximately 590 total pedestrian trips in the weekday AM peak hour, 219 total pedestrian trips in the weekday midday peak hour, 633 total pedestrian trips in the weekday PM peak hour, and 365 total pedestrian trips in the Saturday midday peak hour. These totals include walk-only trips and pedestrians en route to and from nearby subway stations and bus stops. As the numbers of trips in the weekday AM, midday and PM, and Saturday midday peak hours would exceed the 200-trip threshold, a Level 2 screening analysis is warranted to determine which, if any, pedestrian elements would require quantified analysis for these periods.

LEVEL 2 SCREENING ASSESSMENT

As discussed above, when Level 1 screening analysis thresholds are exceeded, detailed trip assignments (a Level 2 assessment) are performed to estimate the incremental trips that could occur at specific transportation elements and to identify potential locations for further analysis. If the trip assignments show that the Proposed Actions would generate 50 or more peak hour vehicle trips at an intersection, 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 quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians and parking.

Traffic

Project Area Street Network

As discussed above, the Project Area comprises the 679,000 square foot (sf) superblock bounded by Lafayette Avenue to the north, White Plains Road to the east, Seward Avenue to the south, and Thieriot Avenue to the west. The Stevenson Commons site has approximately 970 feet of street frontage on Lafayette and Seward Avenues (to the north and south, respectively) and approximately 700 feet of street frontage on White Plains Road and Thieriot Avenue (to the east and west, respectively).

White Plains Road is a major two- to four-lane north-south corridor running from Bronx River Avenue in the Shorehaven area along the East River to the border with Westchester County at East 243rd Street, where it continues as West 1st Street in the city of Mount Vernon. It is a designated local truck route north of the Bruckner Expressway. The Bx39 bus route runs along its entire length north of Soundview Avenue, and the Bx36 runs along White Plains Road north of Lafayette Avenue. The Bx5 bus travels along White Plains Road in the vicinity of the Project Area between Story and Lafayette Avenues. Parking is permitted, with some restrictions, on both sides of White Plains Road adjacent to the Project Area. White Plains Road provides the most direct vehicular connection between the Project Area and the Bruckner Expressway.

Lafayette Avenue is an east-west corridor that runs in four sections. In the Soundview area of the Bronx, it runs from Soundview Park in the west to Zerega Avenue in the east with two lanes and a hatched median. In the vicinity of the Project Area, the Bx5 bus runs along Lafayette Avenue, intersecting with White Plains Road. There is a Class II bicycle lane on Lafayette Avenue between Metcalf and Zerega Avenues, and parking is permitted on both sides of the street adjacent to the Stevenson Commons site.

To the west of the Stevenson Commons site, **Thieriot Avenue** runs in the north-south direction between Bruckner Boulevard and O Brien Avenue. Parking is permitted on both sides of the street in the vicinity of the Project Area.

Bordering the south of the Stevenson Commons site, **Seward Avenue** is an approximately 40-foot-wide arterial running in the east-west direction between Metcalf and Zerega Avenues. Parking is permitted on both sides of the street in the vicinity of the Project Area.

Additional predominant arterials in the vicinity of the Project Area include The **Bruckner Expressway**, a six- to eight-lane east-west limited access highway that carries Interstate 278 between the Triborough Bridge (with connections to Queens, Brooklyn, and Staten Island) and the Bruckner Interchange with the Cross Bronx Expressway and the Hutchison River Parkway; the **Bronx River Parkway**, a four- to six-lane north-south limited access parkway that runs from Story Avenue in the Bronx to NY State Route 22 in Westchester County;

and **Story Avenue**, a two-lane east-west corridor that provides the most direct vehicular connection between the Project Area and the Bronx River Parkway.

Traffic Assignment and Analyzed Intersections

As shown in **Table 3** and discussed above, the Proposed Actions are expected to result in new incremental increases of approximately 353, 130, 377, and 229 vehicle trips in the weekday AM, midday, and PM and Saturday midday peak hours, respectively. As these traffic volumes exceed 50 trips in each peak hour (the *CEQR Technical Manual* Level 1 screening threshold for a detailed analysis), a preliminary assignment of net increment traffic volumes was prepared for each period to help identify individual intersections for analysis (a Level 2 screening assessment).

The assignment of auto and taxi trips to the street network in proximity to the Project Area are based on the anticipated origins and destinations of vehicle trips associated with the different land uses under the Proposed Actions. The origins/destinations of the residential trips used for the assignments are based upon 2014 – 2018 ACS journey-to-work data for Bronx Census Tracts 16, 20, 38, 42, 74, and 98 and the portal assignments used for the *1965 Lafayette Avenue EAS*, while the origins/destinations for the daycare parents and students and recreation facility trips that are mostly local in nature were based on population density in neighborhoods within a one-mile radius of the Project Area. In addition, the origins/destinations of the daycare staff trips used for the assignments are based on reverse-journey-to-work data for the aforementioned Bronx Census Tracts. **Tables 4** and **5** show the direction distributions of auto and taxi trips by land use based on the origin/destination data.

Table 4: Direction Distributions of Auto/Taxi Trips for Residential Uses

Portal	Residential %
Bronx River Pkwy	0.099
Bruckner Expy EB	0.186
Bruckner Expy WB	0.448
Castle Hill Ave	0.019
Cross Bronx Expy	0.143
Hutchinson River Pkwy	0.036
Lafayette Ave EB	0.031
Lafayette Ave WB	0.015
Rosedale Ave	0.001
Story Ave WB	0.005
White Plains Rd NB	0.010
White Plains Rd SB	0.007

Table 5: Direction Distributions of Auto/Taxi Trips for Community Facility Uses

Portal	Daycare Parents, Students and Recreation Center %	Daycare Staff %
Bronx River Pkwy	0	0.329
Bruckner Expy EB	0.125	0.192
Bruckner Expy WB	0.125	0.172
Castle Hill Ave	0.125	0.015
Cross Bronx Expy	0	0.068
Hutchinson River Pkwy	0	0.022
Lafayette Ave EB	0.25	0.115
Lafayette Ave WB	0.125	0.010
Rosedale Ave	0	0.005
Story Ave WB	0	0.015
White Plains Rd NB	0.125	0.053
White Plains Rd SB	0.125	0.004

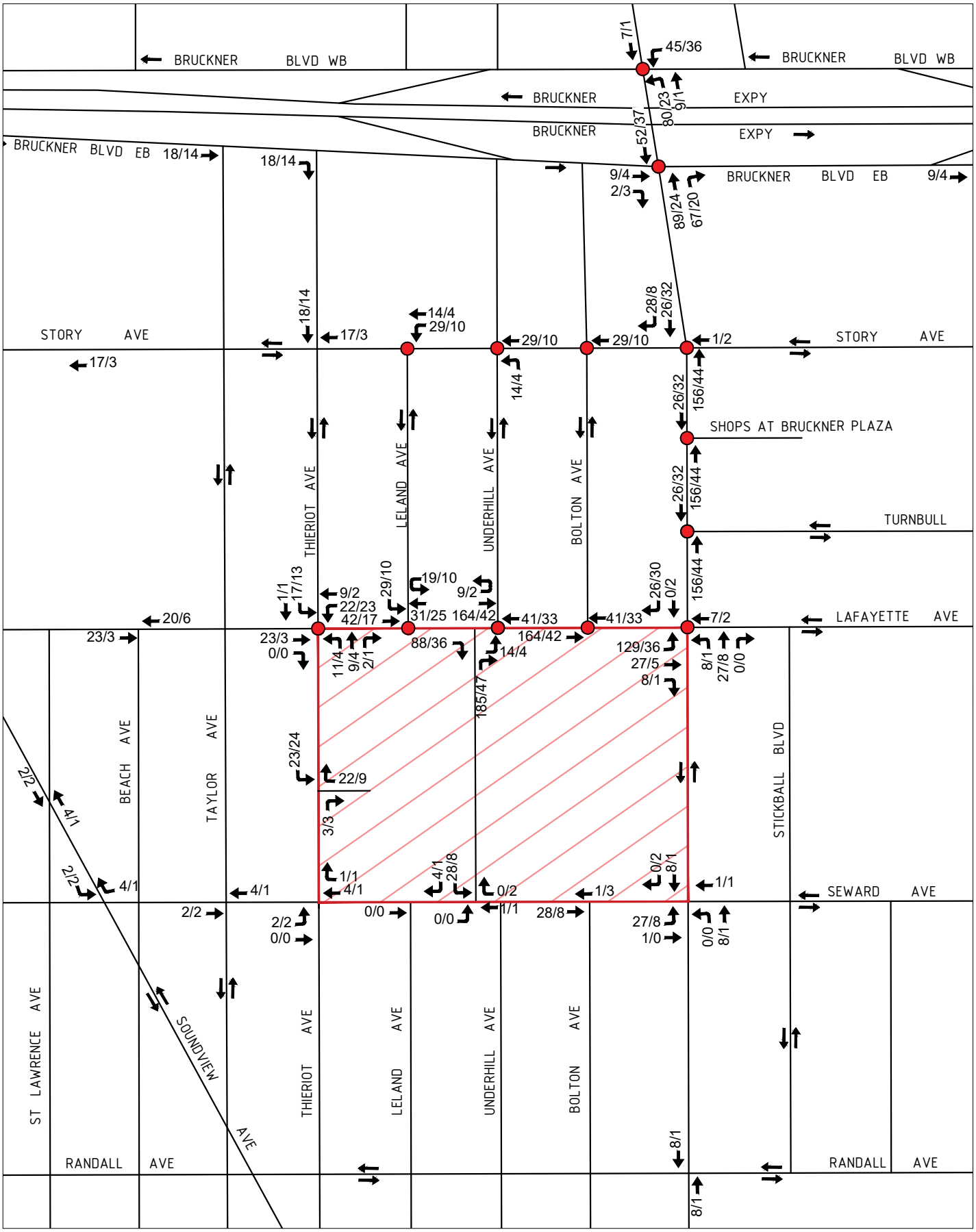
The peak hour vehicle assignment is shown in **Figure 3**. As shown in **Figure 3**, a total of 13 intersections (9 signalized and 4 unsignalized) would exceed the 2020 *CEQR Technical Manual* 50 vehicle trips per hour threshold, and therefore would require a detailed traffic analysis. The intersections selected for analysis are as follows:

- White Plains Road at Bruckner Boulevard Westbound (signalized);
- White Plains Road at Bruckner Boulevard Eastbound (signalized);
- White Plains Road at Story Avenue (signalized);
- White Plains Road at Bruckner Plaza (signalized);
- White Plains Road at Turnbull Avenue (signalized);
- White Plains Road at Lafayette Avenue (signalized);
- Bolton Avenue at Story Avenue (signalized);
- Bolton Avenue at Lafayette Avenue (signalized);
- Underhill Avenue at Story Avenue (signalized);
- Underhill Avenue at Lafayette Avenue (unsignalized);
- Leland Avenue at Story Avenue (unsignalized);
- Leland Avenue at Lafayette Avenue (unsignalized);
- Thieriot Avenue at Lafayette Avenue (unsignalized)

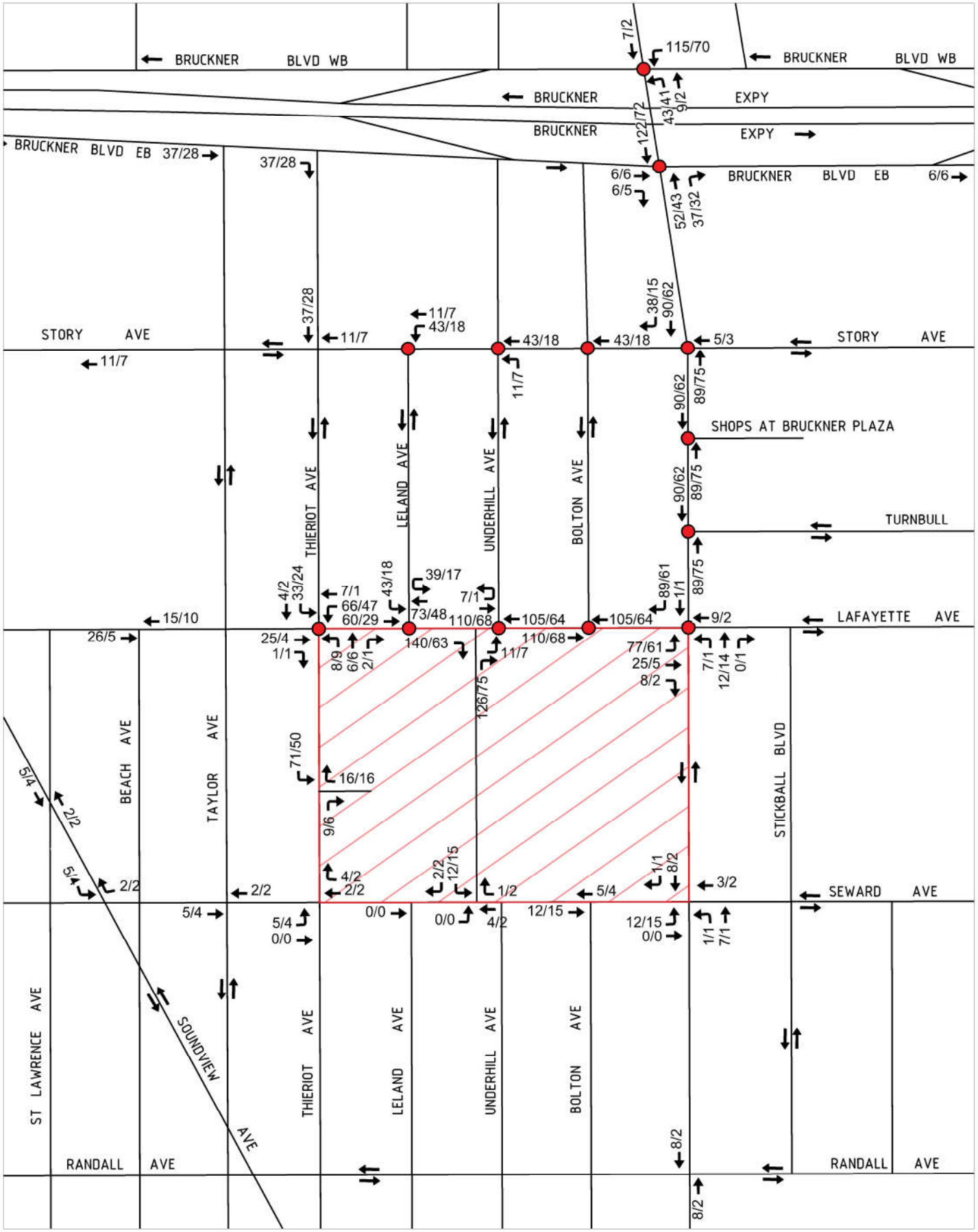
Traffic Analysis Peak Hours

As noted above, incremental demand from the Proposed Actions would exceed the 50-trip *CEQR Technical Manual* analysis threshold at 13 intersections during one or more of the weekday AM, midday, and PM and Saturday midday peak hours. The traffic impact analysis will therefore focus on these four periods. Based on data collected in June 2019, the weekday peak hours selected for analysis are 7:45-8:45 AM, 12:30-1:30 PM, and 4:30-5:30 PM, and the Saturday peak hour is 2:00-3:00 PM.

Incremental Vehicle Volumes - AM & MD



Incremental Vehicle Volumes - PM & SAT



Transit

As discussed previously, according to the general thresholds used by the MTA and specified in the *CEQR Technical Manual*, if a proposed action would result in 50 or more bus passengers being assigned to a single bus route (in one direction), a detailed bus analysis would be warranted.

Subway Service

As shown in **Figure 4**, one New York City Transit (NYCT) subway station located in proximity to the Project Area is expected to be used by project-generated demand. The Parkchester station, served by the No. 6 train operating on the Lexington Avenue Local Line, is located an approximately 0.9-mile walk to the northeast corner of the Project Area at the Hugh J. Grant traffic circle.

As shown in **Table 3**, the Proposed Actions would generate a net increment of approximately 298 subway trips in the weekday AM peak hour and 317 subway trips in the PM. All trips were assigned to the Parkchester subway station, as it is the only station serving the Project Area. As incremental peak hour demand from the Proposed Actions would exceed the 200-trip *CEQR Technical Manual* analysis threshold at this station during the AM and PM peak hours, it has been selected for detailed analysis. The analysis will focus on key circulation elements (e.g., stairs and fare arrays) expected to be used by concentrations of new demand form the Proposed Actions.

Subway Line Haul

As discussed above, the vicinity of the Project Area is served by one NYCT subway route – the No. 6 train. The peak direction of travel along the No. 6 route is typically Manhattan-bound (southbound) in the AM and Bronx-bound (northbound) in the PM. **Table 6** provides the assignment of project-generated subway trips for the weekday AM and PM peak hours, by direction. As shown below in **Table 6**, the Proposed Actions would generate approximately 184 Manhattan-bound trips along the No.6 subway route during the weekday AM peak hour, and approximately 170 Bronx-bound trips during the weekday PM peak hour. As the Proposed Actions would not generate the *CEQR Technical* Manual threshold of 200 or more new peak hour subway trips in any one direction of the analyzed No. 6 train, an analysis of subway line haul conditions is not warranted as impacts are not expected.

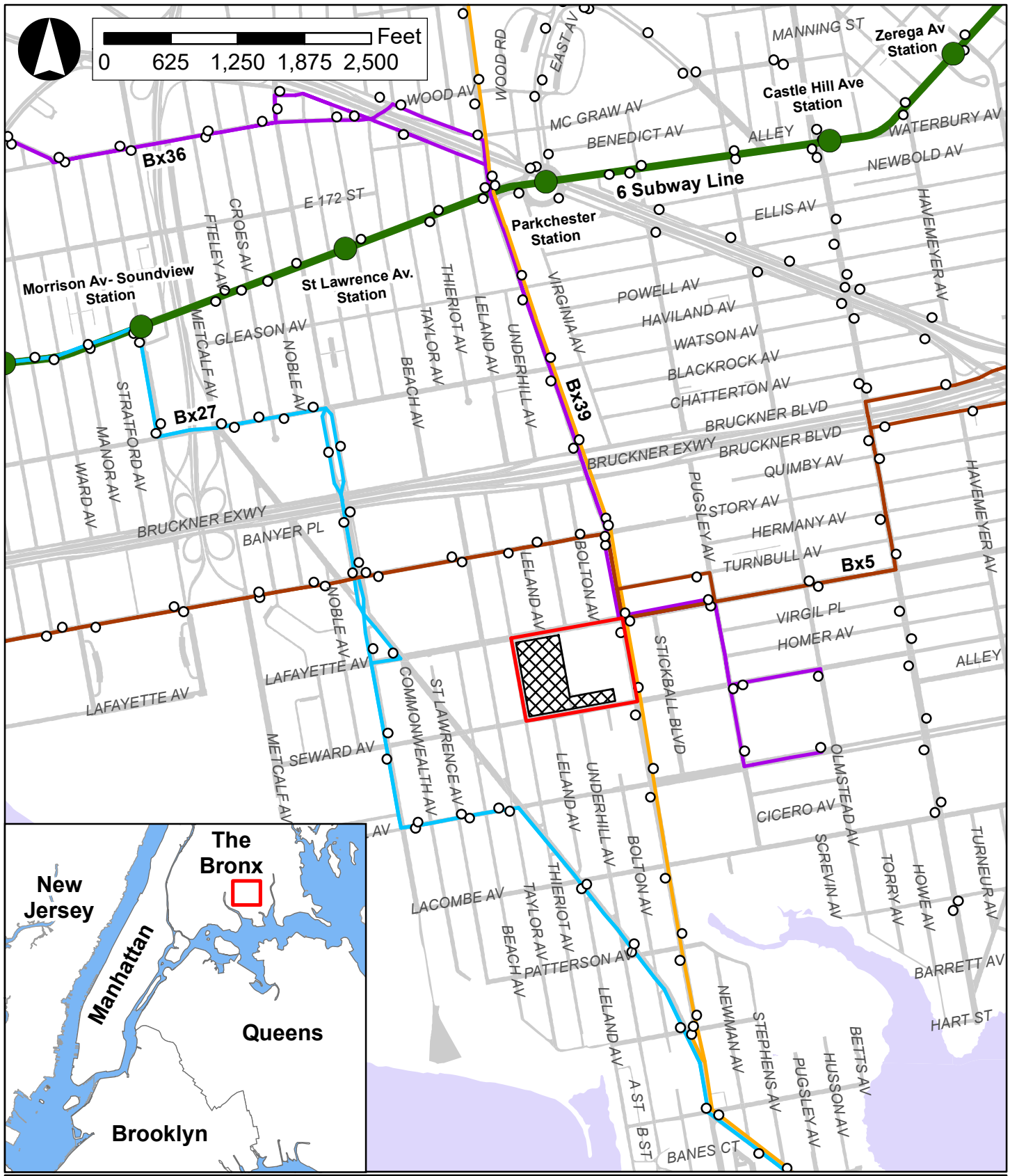
Table 6: Subway Assignments by Direction - No. 6 Train

Direction	AM			PM		
	In	Out	Total	In	Out	Total
Manhattan-Bound	3	181	184	5	142	147
Bronx-Bound	108	6	114	166	4	170
Total	**111**	**187**	**298**	**171**	**146**	**317**

Bus Service

According to the general thresholds used by the MTA and specified in the *CEQR Technical Manual*, a detailed analysis of bus conditions is generally not required if a proposed action is projected to result in fewer than 50 peak hour trips being assigned to a single bus route (in one direction), as this level of new demand is considered unlikely to result in significant adverse impacts. As shown in **Table 3** and discussed above, the approximate hourly public bus trips generated by the Proposed Actions would be 486 and 516 trips in the weekday AM and PM peak hours, respectively. This includes trips that would use the bus to access the

Figure 4
Project Area Transit Map



Legend

- Project Area
- Stevenson Commons Site
- Subway Station
- Bus Stops
- 6 Subway Line

Bus Routes

- BX27
- BX39
- BX36
- BX5

subway, as well as bus-only trips. As such, preliminary assignments of project-generated weekday AM and PM peak hour bus person trips were prepared.

As shown in **Figure 4**, a total of four local bus routes – the Bx5, Bx27, Bx36, and Bx39 routes – operated by NYCT provide service within one quarter-mile of the Project Area. Bus trips were assigned to bus stops based on the anticipated ridership of each bus route. Specifically, project-generated bus trips were distributed as follows:

- Seventeen percent of bus-only trips would be expected to use the Bx5 local bus. Eastbound trips would board or alight on the south side of Lafayette Avenue between White Plains Road and Pugsley Avenue, and westbound trips would board or alight on the east side of White Plains Road between Lafayette and Turnbull Avenues. Given the Project Area's location along the Bx5 route, it was assumed that trips would be split evenly by direction.
- Eleven percent of bus-only trips would be expected to use the Bx27 local bus. Northbound trips would board or alight on the east side of Rosedale Avenue between Lafayette Avenue and Seward Avenue, and southbound trips would board or alight on the west side of Rosedale Avenue between Seward Avenue and Randall Avenue. Given the Project Area's location along the Bx27 route, it was assumed 90 percent of bus-only trips would travel to or from points north.
- Forty-seven percent of bus-only trips and 65 percent of bus-to-subway trips would be expected to use the Bx36 local bus to or from points north. Inbound (southbound) trips would alight on the south side of Lafayette Avenue between White Plains Road and Pugsley Avenue, and outbound (northbound) trips would board on the east side of White Plains Road between Lafayette and Turnbull Avenues.
- Twenty-five percent of bus-only trips and 35 percent of bus-to-subway would be expected to use the Bx39 local bus. Southbound trips would board or alight on the west side of White Plains Road between Lafayette Avenue and Seward Avenue. Northbound trips would board or alight on the east side of White Plains Road between Lafayette and Turnbull Avenues. Given the Project Area's location along the Bx39 route, it was assumed that 90 percent of bus-only trips and all bus-to-subway trips would travel to or from points north.

Table 7 provides the bus route assignment of project-generated bus person-trips for the weekday AM and PM peak hours. As shown in **Table 7**, based on the bus route distribution outlined above, the Bx36 bus would experience an increase of 177 northbound and 105 southbound trips in the weekday AM peak hour and 140 northbound and 161 southbound trips in the weekday PM peak hour. The Bx39 bus would experience an increase of 107 northbound and 44 southbound trips in the weekday AM peak hour and 96 northbound trips and 66 southbound trips in the weekday PM peak hour. Therefore, detailed bus analyses of the Bx36 and Bx39 routes are warranted for both peak hours.

Table 7: Bus Route Assignments

Route	Inbound				Outbound			
	AM	MD	PM	SAT	AM	MD	PM	SAT
	184	80	276	157	302	79	240	137
Bx5 EB (btwn White Plains & Pugsly)	7	3	9	5	10	3	8	5
Bx5 WB (btwn Lafayette & Turnbull)	7	3	9	5	10	3	8	5
Bx27 NB (btwn Lafayette & Seward)	7	3	9	5	10	3	8	5
Bx27 SB (btwn Seward & Randall)	1	0	1	1	1	0	1	1
Bx36 NB (to subway) (btwn Lafayette & Turnbull)	0	0	0	0	177	45	140	78
Bx36 SB (from subway) (btwn White Plains & Pugsly)	105	45	161	92	0	0	0	0
Bx39 NB (to subway) (btwn Lafayette & Turnbull)	16	7	24	13	91	24	72	41
Bx39 SB (from subway) (btwn Lafayette & Seward)	41	19	63	36	3	1	3	2
Total	**184**	**80**	**276**	**157**	**302**	**79**	**240**	**137**

Pedestrians

Based on *CEQR Technical Manual* guidance, detailed pedestrian analyses are generally warranted if a proposed action is projected to result in 200 or more new peak hour pedestrians at any sidewalk, corner area, or crosswalk. As shown in **Table 3**, the Proposed Actions would generate approximately 590, 219, 633, and 365 pedestrian trips (bus only, bus-to-subway, and walk-only; in and out combined) in the weekday AM, midday, and PM and Saturday midday peak hours, respectively. Bus only, bus-to-subway, and walk-only trips would each have a different assignment pattern. Subway and bus trips would be assigned as described above. Walk-only trips were assigned evenly through the local street network, with residential and community facility "walk-only" trips originating/ending at their respective entrance/exit locations based on the proposed site plan (refer to **Figure 2** above). In the weekday AM and PM peak hours, new pedestrian trips would be most concentrated on sidewalks and crosswalks adjacent to the Development Site and along corridors connecting the site to nearby bus stops. In the midday and Saturday periods, pedestrian trips would tend to be more dispersed, as people travel throughout the area for dining, shopping and/or running errands.

A preliminary assignment of weekday AM, midday, and PM and Saturday midday pedestrian trips is shown in **Figure 5**. As shown in **Figure 5**, a total of six pedestrian elements (two sidewalks, three corner areas, and one crosswalk) will exceed the 200-trip *CEQR Technical Manual* analysis threshold in one or more peak hours, thereby warranting detailed analyses. These pedestrian elements, discussed below, are primarily located along White Plains Road and the intersection at Lafayette Avenue.

SIDEWALKS

- East sidewalk along White Plains Road between Lafayette Avenue and Turnbull Avenue
- South sidewalk along Lafayette Avenue between Thieriot Avenue and White Plains Road

CORNER AREAS

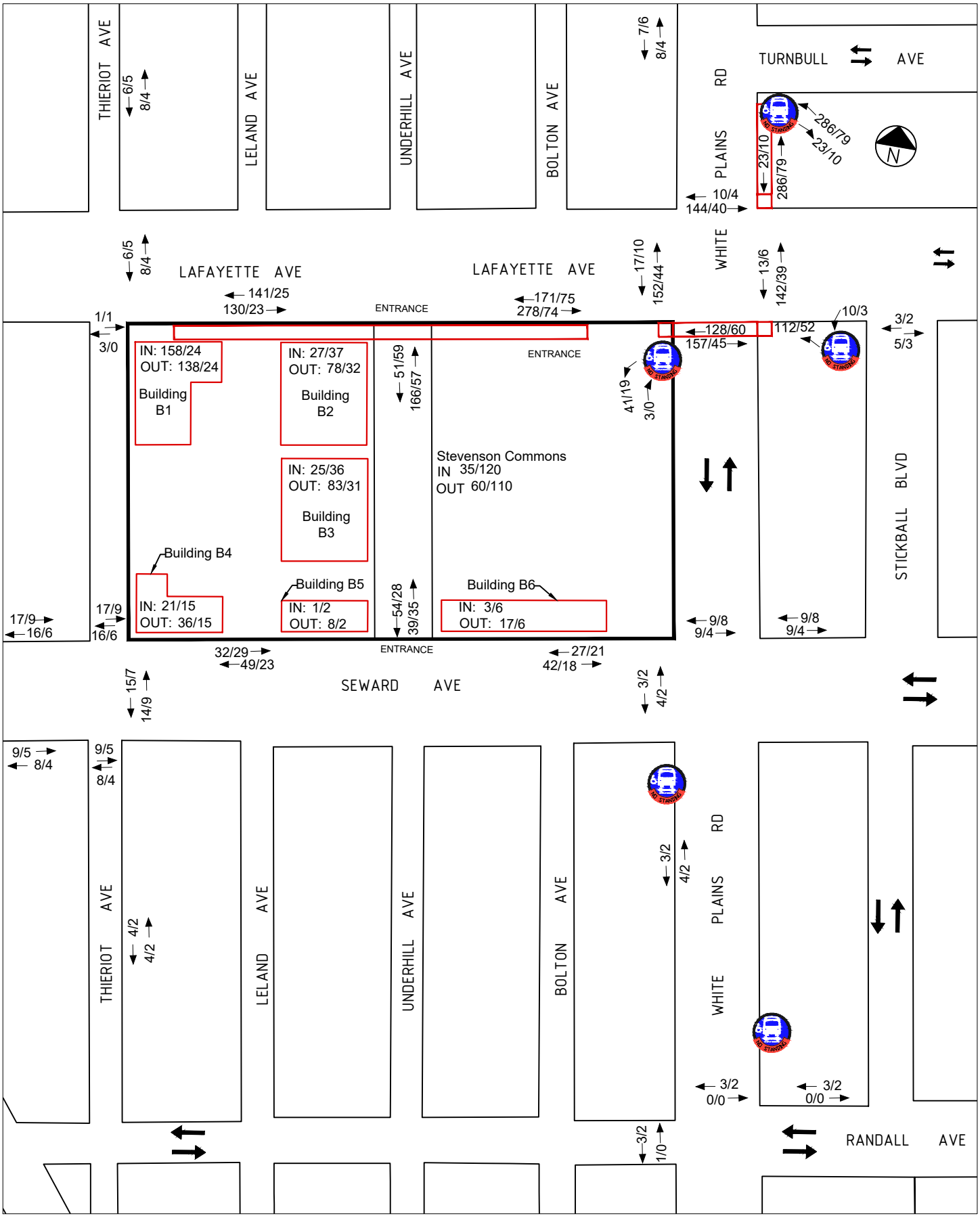
- Northeast corner at the intersection of Lafayette Avenue at White Plains Road
- Southeast corner at the intersection of Lafayette Avenue at White Plains Road
- Southwest corner at the intersection of Lafayette Avenue at White Plains Road

CROSSWALKS

- South crosswalk at the intersection of Lafayette Avenue at White Plains Road

MTA Bus Stop Analysis Location

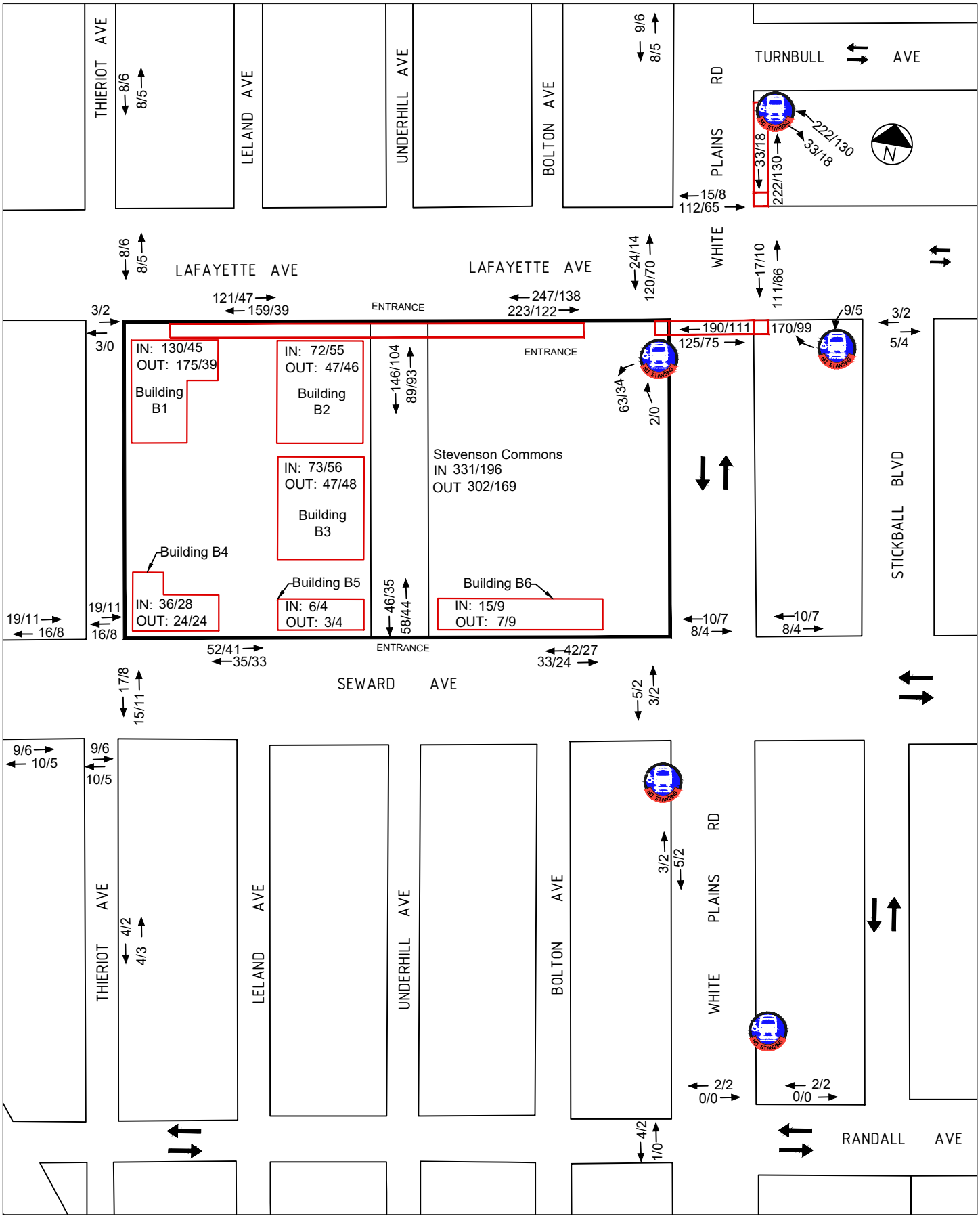
Incremental Pedestrian Volumes - AM & MD



14/4 - Weekday AM/MD Pedestrian Volumes

MTA Bus Stop Analysis Location

Incremental Pedestrian Volumes - PM & SAT



14/4 - Weekday PM/SAT Pedestrian Volumes

Pedestrian Analysis Peak Hours

The pedestrian analysis will focus on the weekday AM, midday, and PM and Saturday midday peak periods which are the periods when the greatest amount of new pedestrian demand would be generated by the Proposed Actions.

Vehicular and Pedestrian Safety

Under *CEQR Technical Manual* guidance, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as locations with 48 or more total reportable and non-reportable crashes or where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, crash trends will be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips.

Parking

As the Proposed Project is predominantly residential, it is anticipated that parking demand would peak in the overnight period. As the existing development is also predominately residential, weekday overnight parking surveys were conducted within the Project Area in August 2020. Per the surveys conducted, the existing 948 affordable rental family units generate an overnight parking demand of 178 occupied spaces.

The 2014-2018 ACS Vehicles Available data for renter-occupied households in Bronx Census Tracts 16, 20, 38, 42, 74, and 98 indicated an auto ownership rate of 0.450 autos per household, which is more than double the auto ownership rate of 0.188 autos per affordable renter-occupied household indicated by the overnight parking surveys conducted within the Project Area. To account for the lower auto-ownership rate exhibited by affordable and senior affordable housing units, auto ownership data from the New York City Department of City Planning's *Zoning for Quality and Affordability FEIS* was utilized. This data indicated that, for units located more than a half-mile from transit, affordable housing units typically have an auto ownership rate equivalent to less than three-quarters of that of all housing units and senior affordable housing units typically have auto ownership rates equivalent to less than one-third of that of all housing units. Accordingly, an auto ownership rate of 0.338 autos per household was utilized for the 563 proposed affordable rental units, and an auto ownership rate of 0.150 autos per household was utilized for the 114 proposed affordable senior units.

For the proposed incremental 58 owner-occupied (co-op) units, 2014-2018 ACS Vehicles Available data for households in Bronx Census Tracts 16, 20, 38, 42, 74, and 98 was utilized, which indicated an auto ownership rate of 1.35 autos per owner-occupied household. Therefore, the Proposed Project would generate a total overnight demand of approximately 463 vehicles.

Table 8, below, shows the hourly parking accumulations for the Project Area for a typical weekday based on the hourly temporal distributions from the *1965 Lafayette Avenue EAS*, the 2018 *Inwood Rezoning Proposal*, and the 2016 *La Central FEIS*. As shown in **Table 8**, during the weekday midday, the parking demand within the Project Area would drop to 77 vehicles. The greatest incremental accumulation of approximate 463 spaces would occur during the weekday overnight period, which would be fully accommodated within the Project Area. Although the Proposed Project would provide 466 accessory parking spaces, the Proposed Actions would result in a net decrease of 104 spaces as compared to No-Action conditions. As such, a detailed

parking analysis would be required within the Project Area during the overnight period.

CONCLUSIONS

A transportation forecast and assignment has been prepared for the Proposed Action, which would result in an incremental (net) increase of 735 affordable dwelling units (DUs) (including 563 affordable rental units, 58 affordable co-op units, and 114 affordable senior units) and 33,995 gross square feet (gsf) of community facility floor area. According to the 2020 *CEQR Technical Manual* guidelines, if a proposed development is expected to result in fewer than 200 peak hour pedestrian, subway, and bus trips, and fewer than 50 peak hour vehicle trips, further quantified analyses are not warranted.

As shown in **Table 3**, the proposed project would generate 353, 130, 377, and 229 incremental vehicle trips and 590, 219, 633, and 365 incremental pedestrian trips (in and out combined, including transit trips) during the weekday AM, midday, PM, and Saturday midday peak hour periods, respectively. The proposed development would also generate 298, 99, 317, and 183 incremental subway (in and out combined) trips and 486, 1595, 516, and 294 incremental bus trips during the weekday AM, midday, and PM and Saturday peak hours (refer to **Table 3**). As the Proposed Actions would generate more than 200 subway trips during the weekday PM period, more than 200 bus trips during the weekday AM and PM periods, more than 200 pedestrian trips during all peak hours, and more than 50 incremental vehicle trips during all periods, preliminary subway, bus, pedestrian, and traffic analyses were conducted.

Based on the preliminary traffic assignment, it was determined that 13 intersections would exceed the 50-trip *CEQR Technical Manual* analysis threshold during one or more of the weekday AM, midday, and PM and Saturday midday peak hours. Based on the preliminary pedestrian assignment, it was determined that a total of six pedestrian elements would have an increase of 200 or more pedestrians during one or more of the analyzed peak periods and, as such, have been selected for further analysis in the EAS. It was also determined that a parking analysis would be required within the Project Area during the overnight period. As the Parkchester subway station would have an increase of 200 or more person trips during the weekday AM and PM peak hours, a detailed analysis of key subway station circulation elements is warranted. Additionally, as the Bx36 and Bx39 bus routes would exceed the CEQR threshold, detailed bus analyses of the Bx36 and Bx39 routes are warranted for both the weekday AM and PM peak hours.

Table 8: Weekday Parking Accumulation

Time	Existing Uses									Existing Accumulation	Proposed Uses														Total Accumulation	Total Spaces Available
	Residential - Family Rental			Local Retail			Existing Health Center				Residential - Family Rental			Residential - Family Owner			Residential - Senior Rental			Daycare (Staff)			Recreation Center				
	948	DUs		10,648	gsf		36,214	gsf			563	DUs		58	DUs		114	DUs		19,879	gsf		14,116	gsf			
	In	Out	Accum.[1]	In	Out	Accum.	In	Out	Accum.		In	Out	Accum.[2]	In	Out	Accum.[3]	In	Out	Accum.[4]	In	Out	Accum.	In	Out	Accum.		
			178			0							190			78			17								
12-1 AM	3	3	178	0	0	0	0	0	0	178	3	3	190	0	0	78	1	1	17	0	0	0	0	0	0	**463**	3
1-2	3	3	178	0	0	0	0	0	0	178	3	3	190	0	0	78	1	1	17	0	0	0	0	0	0	**463**	3
2-3	3	3	178	0	0	0	0	0	0	178	3	3	190	0	0	78	1	1	17	0	0	0	0	0	0	**463**	3
3-4	3	3	178	0	0	0	0	0	0	178	3	3	190	0	0	78	1	1	17	0	0	0	0	0	0	**463**	3
4-5	3	3	178	0	0	0	0	0	0	178	3	3	190	0	0	78	1	1	17	0	0	0	0	0	0	**463**	3
5-6	7	20	165	0	0	0	0	0	0	165	9	13	186	1	2	77	1	2	16	0	0	0	0	0	0	444	22
6-7	17	38	144	0	0	0	0	0	0	144	20	38	168	2	5	74	2	7	11	1	1	0	0	0	0	397	69
7-8	35	40	139	0	0	0	1	0	1	140	24	39	153	2	5	71	6	7	10	5	5	0	0	0	0	374	92
8-9	41	163	17	1	1	0	2	1	2	19	29	153	29	4	19	56	14	23	1	15	0	15	1	1	0	120	346
9-10	40	43	14	1	1	0	2	3	1	15	33	42	20	3	5	54	10	8	3	3	2	16	1	1	0	108	358
10-11	45	51	8	1	1	0	2	2	1	9	33	44	9	3	5	52	9	10	2	1	1	16	1	1	0	88	378
11-12	42	45	5	2	2	0	2	2	1	6	37	46	0	3	5	50	7	8	1	1	1	16	1	1	0	73	393
12-1 PM	49	45	9	5	5	0	2	2	1	10	45	45	0	5	5	50	9	10	0	1	1	16	1	1	0	76	390
1-2	49	49	9	5	5	0	2	1	2	11	45	45	0	6	6	50	10	10	0	1	1	16	1	1	0	77	389
2-3	52	49	12	2	2	0	2	2	2	14	47	44	3	5	5	50	10	10	0	1	1	16	1	1	0	83	383
3-4	74	65	21	3	2	1	2	2	2	24	60	40	23	7	4	53	10	9	1	2	3	15	1	1	0	116	350
4-5	106	83	44	3	3	1	2	3	1	46	104	65	62	12	7	58	16	15	2	3	4	14	1	1	0	182	284
5-6	143	80	107	3	3	1	1	2	0	108	134	65	131	16	9	65	25	17	10	1	15	0	1	1	0	314	152
6-7	98	70	135	1	2	0	2	2	0	135	84	55	160	10	5	70	13	10	13	1	1	0	0	0	0	378	88
7-8	88	58	165	1	1	0	1	1	0	165	64	44	180	8	3	75	10	7	16	0	0	0	0	0	0	436	30
8-9	51	41	175	0	0	0	1	1	0	175	36	28	188	5	2	78	6	5	17	0	0	0	0	0	0	458	8
9-10	18	18	175	0	0	0	0	0	0	175	16	16	188	2	2	78	3	3	17	0	0	0	0	0	0	458	8
10-11	13	13	175	0	0	0	0	0	0	175	12	12	188	1	1	78	2	2	17	0	0	0	0	0	0	458	8
11-12	12	9	178	0	0	0	0	0	0	178	10	8	190	1	1	78	1	1	17	0	0	0	0	0	0	**463**	3
Total	995	995		28	28		24	24			857	857		96	96		169	169		36	36		10	10			

Notes:

(1) Existing overnight parking is based on August 2020 surveys conducted within the Project Area.

(2) Assumes 0.338 autos / DU for affordable family rental units based on BX Census Tracts 16, 20, 38, 42, 74, and 98.

(3) Assumes 1.35 autos / DU for family owner units based on BX Census Tracts 16, 20, 38, 42, 74, and 98.

(4) Assumes 0.150 autos / DU for affordable senior rental units based on BX Census Tracts 16, 20, 38, 42, 74, and 98.

Appendix 2

Air Quality Analysis Methodology Memorandum

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Memorandum

To:	New York City Department of City Planning
From:	Henry Kearney, AKRF, Inc.
Date:	August 28, 2020
Re:	Stevenson Commons Air Quality Analysis Methodology Memorandum

The purpose of this memorandum is to describe the air quality analysis approach for the Stevenson Commons Environmental Impact Statement (EIS). The Proposed Actions would facilitate new construction on the Stevenson Commons site that would result in an incremental (net) increase compared to No-Action conditions of approximately 735 affordable dwelling units (DUs), including 114 affordable units for seniors, 33,995 gsf of community facility uses, approximately two acres of publicly accessible open space, and a net decrease of approximately 104 parking spaces (the "Proposed Project"). New development would be spread across six new buildings on the Stevenson Commons site. Construction of the Proposed Project is expected to begin in early-2021 with all components complete and operational by mid-2028.

This memorandum presents a summary of the methodology and assumptions to be used for the both the mobile and stationary source air quality analyses of the Proposed Actions.

MOBILE SOURCE ANALYSIS

INTERSECTION SELECTION

The mobile source analysis will evaluate the Proposed Actions for potential impacts from carbon monoxide (CO), and fine particulate matter less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$) due to vehicular traffic anticipated to be generated by the Proposed Actions. Based on a preliminary review of the study area roadway configuration, and the traffic patterns conducted for the No-Action and With-Action conditions, it is anticipated that projected vehicle trips generated by the Proposed Actions may exceed the CO threshold of 170 vehicles in a peak hour at a number of intersections in the study area. For PM_{10} and $PM_{2.5}$, the screening procedure outlined in the *CEQR Technical Manual* is based on determining whether the projected number of vehicle trips at an intersection exceeds thresholds based on heavy-duty diesel vehicle (HDDV) equivalents. The thresholds are as follows:

- 12 or more HDDV for paved roads with average daily traffic fewer than 5,000 vehicles;
- 19 or more HDDV for collector roads;
- 23 or more HDDV for principal and minor arterials; or
- 23 or more HDDV for expressways and limited access roads.

To determine whether any of these thresholds are exceeded, the worksheet referenced in Section 210 of the *CEQR Technical Manual* will be utilized to calculate the equivalent number of HDDV equivalents at intersections in the traffic study area. The worksheet uses vehicle classification information based on the traffic data collected for the project, and assigns these classifications to vehicle categories using a table referenced in the *CEQR Technical Manual*[1]. Roadway classifications will be determined by corridor at each intersection, based on NYCDOT functional class criteria and With-Action traffic volumes.

Based on the current Transportation Planning Factors and Travel Demand Forecast projections[2], it is anticipated that the highest concentration of vehicle trips will be on the streets surrounding the Development Site, which is bounded by Lafayette Avenue to the north, Seward Avenue to the south, White Plains Road to the east, and Thierot Avenue to the west.

If any intersection is determined to exceed the CO and/or PM mobile source screening thresholds, it will be considered for analysis. Selection of specific intersections for analysis will depend on the baseline and No-Action traffic conditions along with the vehicular trip generation and distribution under the Proposed Actions. The selected intersections will be submitted for review and approval to DCP. Overall, no more than two (2) intersections in total would be analyzed for CO and/or PM.

DISPERSION MODELING

Potential impacts from the Proposed Project's mobile sources would be predicted using the American Meteorological Society/EPA Regulated Model (AERMOD) Version 19191[3]. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions. AERMOD has been a recommended model for transportation air quality analyses for several years, and EPA mandated its use for transportation conformity purposes after a three-year transition period.[4]

The analysis would be performed using an area source representation of emission sources in order to simulate traffic-related air pollutant dispersion.[5] In addition, the weighted average release height and initial vertical source parameters would be calculated for each modeled roadway.

For the $PM_{2.5}$ and PM_{10} analyses, 24-hour traffic volumes will be estimated using peak hour volumes as a baseline to determine volumes throughout the day. Off-peak traffic volumes will be determined by adjusting the peak period volumes by the 24-hour distributions from available data at appropriate locations.

METEOROLOGY

The AERMOD model includes the modeling of hourly concentrations based on hourly traffic data and five years of monitored hourly meteorological data. The data would consist of surface data collected at LaGuardia Airport and upper air data collected at Brookhaven, New York for the period 2015–2019. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the five-year period. These data are processed using the EPA AERMET program

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[1] MOBILE6 Input Data Format Reference Tables, August 14, 2003.

[2] Transportation Planning Factors and Travel Demand Forecast Draft Memorandum, Philip Habib & Associates, March 16, 2020.

[3] EPA. *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*. Office of Air Quality Planning and Standards. EPA-454/B-19-027. Research Triangle Park, North Carolina. August 2019.

[4] EPA. Revisions to the Guideline on Air Quality Models: Final rule. Federal Register, Vol. 82, No. 10, January 2017.

[5] EPA. *Project-Level Conformity and Hot-Spot Analyses*, available at: https://www.epa.gov/state-and-local-transportation/project-level-conformity-and-hot-spot-analyses#pmguidance

to develop data in a format which can be readily processed by the AERMOD model. The land uses around the site where meteorological surface data were available will be classified using categories defined in digital United States Geological Survey (USGS) maps. All hours would be modeled, and the highest resulting concentration for each averaging period will be presented.

ANALYSIS YEAR

The microscale analyses would be performed for 2028, the year by which the Proposed Actions is likely to be completed. The future analysis would be performed both without the Proposed Actions (the No-Action condition) and with the Proposed Actions (the With-Action condition).

BACKGROUND CONCENTRATIONS

The background concentrations that would be used in the mobile source analysis are on concentrations recorded at a monitoring station representative of the county or from the nearest available monitoring station and in the statistical format of the NAAQS, as provided in the *CEQR Technical Manual*. These represent the most recent 3-year average for 24-hour average $PM_{2.5}$, the highest value from the three most recent years of data available for PM_{10}, and the highest value from the five most recent years of data available for CO. The background concentrations are presented in **Table 1**.

Table 1
Maximum Background Pollutant Concentrations for Mobile Source Analysis

Pollutant	Average Period	Location	Concentration	NAAQS
CO	1-hour	Botanical Garden	2.0 ppm	35 ppm
	8-hour	Botanical Garden	1.6 ppm	9 ppm
PM_{10}	24-hour	IS 52	30 µg/m3	150 µg/m3
$PM_{2.5}$	24-hour	IS 52	18.0 µg/m3	35 µg/m3
Source: New York State Air Quality Report Ambient Air Monitoring System, NYSDEC, 2015-2019.				

RECEPTOR PLACEMENT

Multiple receptors (i.e., precise locations at which concentrations are predicted) would be modeled at each of the selected sites; receptors will be placed along the approach and departure links at a 25 foot interval out to 200 feet in each direction. Ground-level receptors would be placed at sidewalk or roadside locations near intersections with continuous public access, at a pedestrian height of 1.8 meters. Based on the New York City Department of Environmental Protection (DEP) guidance for neighborhood-scale corridor $PM_{2.5}$ modeling, receptors in that analysis would be placed at a distance of 15 meters, from the nearest moving lane at each analysis location.

EMISSION FACTORS

Vehicular cruise and idle CO and PM emission factors to be utilized in the dispersion modeling would be computed using EPA's mobile source emissions model, Motor Vehicle Emission Simulator, or MOVES.[6] This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway types, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. Project specific traffic data obtained through field studies as well as county-specific hourly temperature and relative humidity data obtained from NYSDEC will be used.

To account for the suspension of fugitive road dust in air from vehicular traffic in the local microscale analysis, $PM_{2.5}$ emission rates will include fugitive road dust. However, since the New York City

[6] EPA, MOVES Model, User Guide for MOVES2014b, December 2015.

Department of Environmental Protection (DEP) considers fugitive road dust to have an insignificant contribution on a neighborhood scale, fugitive road dust will not be included in the neighborhood scale $PM_{2.5}$ microscale analyses. Road dust emission factors will be calculated according to the latest procedure delineated by EPA[7] and the *CEQR Technical Manual*.

If maximum predicted $PM_{2.5}$ concentrations result in a potential impact, refinements to the analysis would be implemented. Seasonal and off-peak emission factors can be prepared using additional runs of the MOVES model to capture the effect of temperature differences as well as changing vehicular classification mixes in off peak hours. If further refinements are necessary, the potential for additional and/or more detailed traffic data to be used within the air quality analysis, or the use of traffic mitigation measures, will be discussed with both DCP and PHA.

PARKING GARAGE ANALYSIS

The Proposed Actions would include up to 466 accessory parking spaces, comprised of 206 below grade spaces and 260 at-grade parking spaces. The below grade spaces would be located within two garages, located below Buildings B2 and B3, and four surface parking lots. Therefore, an analysis of CO and PM emissions will be performed for these parking facilities. The analysis will use the procedures outlined in the *CEQR Technical Manual* for assessing potential impacts from parking facilities. The analysis will consider potential impacts to sensitive receptors on the Proposed Project. Cumulative impacts from on-street sources and emissions from the parking facility will be calculated.

STATIONARY SOURCES

HEATAND HOT WATER SYSTEMS

Each of the six new buildings will have its own natural gas-fired heating and hot water system. While screening studies can be usefully employed for some sites, the number, size, and location of the developments are such that refined modeling will likely be necessary to demonstrate compliance, with potential restrictions applied. Therefore, as per the Draft Scope of Work, the Proposed Actions will be analyzed using a refined air dispersion modeling procedure. The analysis will also include an analysis of air quality impacts on the proposed residential towers from the existing steam plant operated by Stevenson Commons, which has regulated sources of air emissions. A cumulative analysis of emissions from heating and hot water systems from the Proposed Project and the Stevenson Commons existing steam plant on off-site receptors will also be conducted. This analysis will be performed to determine impacts from clusters of developments on the project site.

Dispersion Model

A refined air dispersion analysis will be performed for the Proposed Development using the EPA AERMOD model. The AERMOD analysis of potential impacts from exhaust stacks will be performed assuming stack tip downwash, urban dispersion and surface roughness length, with and without building downwash, and elimination of calms. The AERMOD model also incorporates the algorithms from the PRIME model, which is designed to predict impacts in the "cavity region" (i.e., the area around a structure which under certain conditions may affect an exhaust plume, causing a portion of the plume to become entrained in a recirculation region). The Building Profile Input Program (BPIP) program for the PRIME model (BPIPRM) will be used to determine the projected building dimensions modeling with the building downwash algorithm enabled. The modeling of downwash from sources accounts for all obstructions within a radius equal to five obstruction heights of the stack.

[7] EPA, Compilations of Air Pollutant Emission Factors AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1, NC, http://www.epa.gov/ttn/chief/ap42, January 2011.

Emission Estimates and Stack Parameters

It is assumed that each of the proposed buildings constructed pursuant to the Proposed Actions would have a boiler installation that would generate hot water for building heating and domestic hot water. If design information on the proposed heating and hot water equipment and operations is available, it will be used in the AERMOD analysis. If design information is not available, the following assumptions will be utilized:

Emission factors: Emissions factors would be obtained from the EPA *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources*. PM_{10} and $PM_{2.5}$ emissions would include both the filterable and condensable fractions.

Fuel Usage: Annual fuel consumption rates for the heating and hot water systems of the proposed buildings would be calculated using energy use estimates based on type of development and size of the building as recommended in the *CEQR Technical Manual.* Short-term emissions would be conservatively estimated assuming a 100-day heating season.

Stack Parameters: If design information on the heat and hot water systems' design is not available, it would be assumed that exhaust stacks would be located three feet above roof height (as per the *CEQR Technical Manual*). The exhaust velocity would be calculated based on the exhaust flowrate for the estimated boiler capacity, using the energy use of the proposed building and EPA's fuel factors. Assumptions for stack diameter and exhaust temperature for the proposed systems would be obtained from a survey of boiler exhaust data undertaken and provided by DEP.

Information on equipment and operations for the existing boiler steam plant at Stevenson Commons will be used to estimate emissions and model potential air quality impacts from the facility on the proposed project.

Methodology for Estimating NO_2 Concentrations

Annual NO_2 concentrations from stationary sources will be estimated using a NO_2 to NO_x ratio of 0.75, as described in EPA's Guideline on Air Quality Models at 40 CFR part 51 Appendix W, Section 5.2.4.

The 1-hour average NO_2 concentration increments from the Proposed Action's stationary combustion sources will be estimated using the AERMOD model's Plume Volume Molar Ratio Method (PVMRM) module to analyze chemical transformation within the model. The PVMRM module incorporates hourly background ozone concentrations to estimate NO_x transformation within the source plume. Ozone concentrations will be taken from the NYSDEC IS 52 monitoring station that is the nearest ozone monitoring station and has complete five years of hourly data available. An initial NO_2 to NO_x ratio of 10 percent at the source exhaust stack will be assumed, which is considered representative for boilers.

Meteorological Data

The meteorological data set will consist of five consecutive years of meteorological data provided by NYSDEC: surface data collected at La Guardia Airport (2015–2019), and concurrent upper air data collected at Brookhaven, New York. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the five-year period. These data will be processed using the EPA AERMET program to develop data in a format which can be readily processed by the AERMOD model. The land uses around the site where meteorological surface data are available will be classified using categories defined in digital United States Geological Survey (USGS) maps to determine surface parameters used by the AERMET program.

Receptor Placement

A comprehensive receptor network (i.e., locations with continuous public access) will be developed for the modeling analysis. Discrete receptors (i.e., locations at which concentrations are calculated) will be modeled along the existing and proposed buildings' façades (including No-Action developments) to represent potentially sensitive locations such as operable windows and intake vents. To evaluate project-on-project impacts, receptors will be conservatively placed on the façades of the proposed commercial development. Rows of receptors at spaced intervals on the modeled buildings will be analyzed at multiple elevations. Generally, receptors would be spaced at a three-meter interval vertically to represent individual

floors of a building, while horizontally, receptor spacing would be a minimum of three meters and a maximum of 10 meters. Receptors will also be placed at publicly accessible ground-level locations.

Background Concentrations

To estimate the maximum expected pollutant concentration at a given location (receptor), the predicted impacts must be added to a background value that accounts for existing pollutant concentrations from other sources that are not directly accounted for in the model (see **Table 2**). To develop background levels, concentrations measured at the most representative NYSDEC ambient monitoring station over the latest available five-year period (2015-2019) will be used for annual average NO_2 background (consistent with DEP guidance), while the latest available three-year period will be used for the 24-hour PM_{10} background concentration.

Table 2
Background Pollutant Concentrations for Stationary Souce Analysis

Pollutant	Average Period	Location	Concentration (µg/m³)	NAAQS (µg/m³)
NO_2	Annual[1]	IS 52	37.9	100
	1-hour[2]		111	188
SO_2	1-hour[3]	IS 52	5.6	196
$PM_{2.5}$	24-hour	IS 52	18	35
PM_{10}	24-Hour[4]	IS 52	30	150

Notes:
[1] Annual average NO_2 background concentration is based on the 5-year highest value from 2015-2019.
[2] The One-Hour NO_2 background concentration is based on the maximum 98th percentile One-Hour NO_2 concentration averaged over three years of data, from 2017-2019.
[3] The One-Hour SO_2 background concentration is based on the maximum 99th percentile concentration averaged over three years of data, from 2017-2019.
[4] PM_{10} is based on the 3-year highest second-highest value from 2017-2019.
Source: New York State Air Quality Report Ambient Air Monitoring System, NYSDEC, 2015-2019.

$PM_{2.5}$ annual average impacts are assessed on an incremental basis and compared with the $PM_{2.5}$ *de minimis* criteria, without considering the annual background. Therefore, the annual $PM_{2.5}$ background is not presented in the table. The $PM_{2.5}$ 24-hour average background concentration of 18 µg/m³ (based on the 2017 to 2019 average of 98th percentile concentrations measured at the IS 52 monitoring station) will be used to establish the *de minimis* value for the 24-hour increment, consistent with the guidance provided in the *CEQR Technical Manual.*

Total 1-hour NO_2 concentrations will be calculated following methodologies that are accepted by the EPA and are considered appropriate and conservative. The methodology used to determine the compliance of total 1-hour NO_2 concentrations from the proposed sources with the 1-hour NO_2 NAAQS[8] will be based on adding the monitored background to modeled concentrations, as follows: hourly modeled concentrations from proposed sources will be first added to the seasonal hourly background monitored concentrations; then the highest combined daily 1-hour NO_2 concentration will be determined at each receptor location and the 98th percentile daily 1-hour maximum concentration for each modeled year will calculated within the AERMOD model; finally the 98th percentile concentrations will be averaged over the latest five years.

Determining the Significance of Air Quality Impacts

For the stationary source analysis, the exhaust stacks for the heat and hot water systems will be assumed to be located at the edge of the development massing closest to the receptor, unless the source and receptor were immediately adjacent to each other. In these cases, the stack will be assumed to be located at an initial distance of 10 feet from the nearest receptor. If a source could not meet the NAAQS or $PM_{2.5}$ *de minimis* criteria, the stack would then be set back in 20 foot (or similar) increments, until the source met the respective

[8]http://www.epa.gov/ttn/scram/guidance/clarification/Additional_Clarifications_AppendixW_Hourly-NO2-NAAQS_FINAL_03-01-2011.pdf.

criteria. If necessary, further restrictive measures will be considered, including use of low NO_x burners, increasing stack heights, or a combination of these measures.

Predicted values will be compared with National Ambient Air Quality Standards (NAAQS) for NO_2, SO_2 and PM_{10}, and the City's CEQR *de minimis* criteria for $PM_{2.5}$. In the event that violations of standards are predicted, an air quality E-designation would be proposed for the site, describing the fuel and/or heat and hot water system exhaust stack restrictions that would be required to avoid a significant adverse air quality impact.

LARGE OR MAJOR SOURCES

A review of New York State Department of Environmental Conservation (NYSDEC) Title V permits and the Environmental Protection Agency (EPA) Envirofacts database will be performed to identify any federal or state-permitted facilities. Existing large and major sources of emissions (i.e., sources having a Title V or State Facility Air Permit) within 1,000 feet of the development sites will be identified. An analysis of these sources will be performed to assess their potential effects on the Proposed Project. Cumulative impacts will be determined, if applicable. Predicted criteria pollutant concentrations will be predicted using the AERSCREEN model compared with NAAQS for NO_2, SO_2, and PM_{10}, and $PM_{2.5}$ as well as the *de minimis* criteria for $PM_{2.5}$. In the event that an exceedance of a standard is predicted, a refined modeling analysis using the EPA AERMOD model will be performed.

INDUSTRIAL SOURCES

The rezoning area is primarily zoned residential, with a portion of the 400-foot study area around the Development Site located within a C4-1 zoning district. The remainder of the 400-foot study area is zoned R6 and does not include any commercial businesses. Based on the zoning and land use characteristics of the study area, it is unlikely that any industrial sources of emissions exist that would require analysis. However, a review of DEP and NYSDEC air permits will be performed to determine whether there are any permitted industrial sources of emissions within the commercial zoned portion of the study area. If any permitted industrial sources are identified, an analysis will be performed following the procedures outlined in the *CEQR Technical Manual*. The EPA's AERMOD refined dispersion model would be used to estimate the short-term and annual concentrations of critical pollutants at sensitive receptor locations. Predicted values will be compared with the short-term guideline concentrations (SGC) and annual guideline concentrations (AGC) reported in DEC's DAR-1 AGC/SGC Tables guidance document to determine the potential for significant impacts. Potential cumulative effects of air toxic compounds will be evaluated, if required.

Appendix 3

Noise Analysis Approach Memorandum

Philip Habib & Associates
Engineers and Planners • 102 Madison Avenue • New York, NY 10016 • 212 929 5656 • 212 929 5605 (fax)

TO: **New York City Department of City Planning**

FROM: **Philip Habib & Associates**

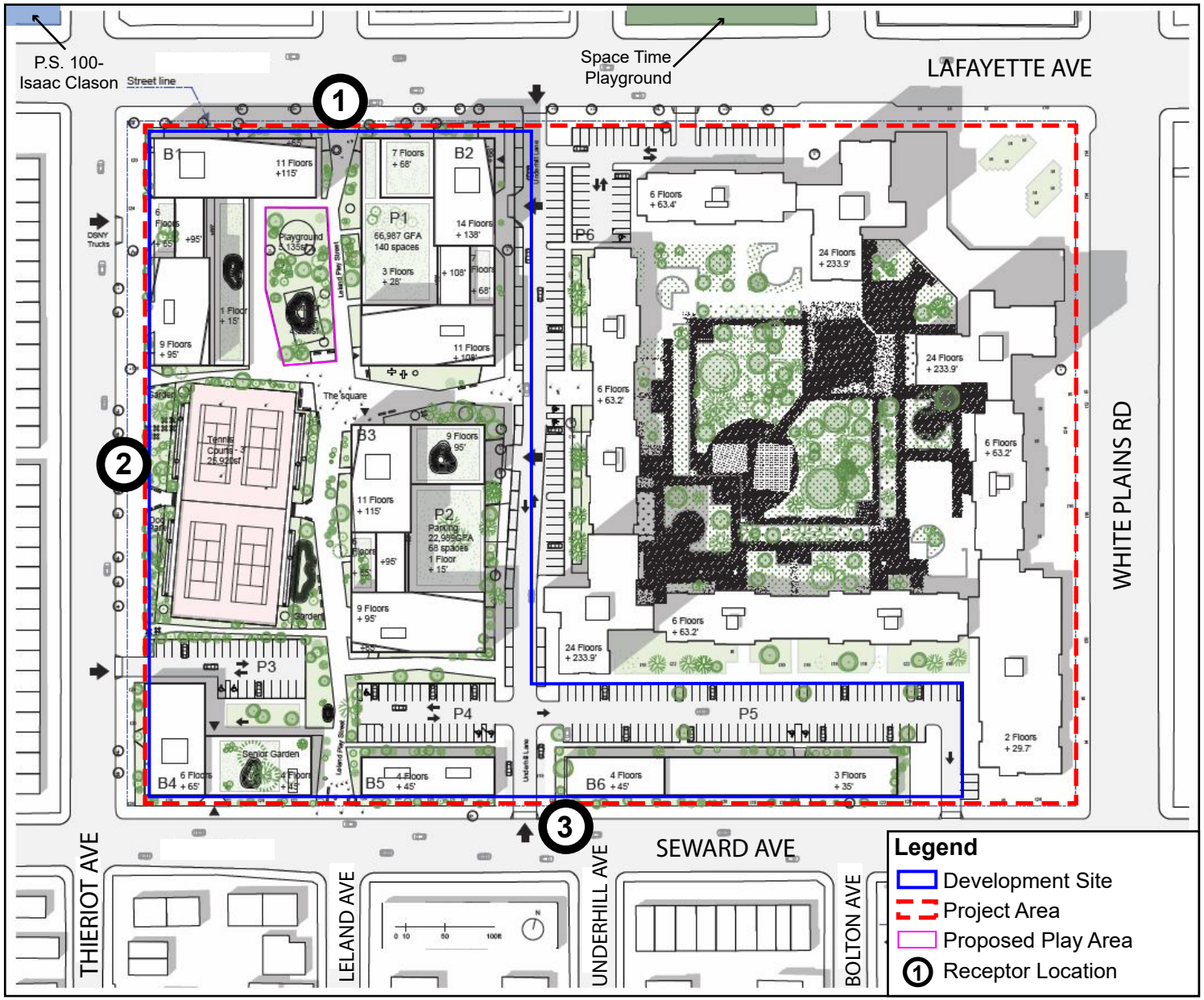
SUBJECT: **Stevenson Commons – Noise Analysis Approach Memorandum for EIS Analysis**

DATE: **August 28, 2020**

The purpose of this memorandum is to describe the noise analysis approach for the Stevenson Commons Environmental Impact Statement (EIS). The Stevenson Commons project entails discretionary actions (the "Proposed Actions") to facilitate new affordable housing and community facility space at one large development site on Bronx Block 3600, Lot 4 (the "Project Area") in the Soundview neighborhood of Bronx Community District 9.

The Project Area is generally bounded by Lafayette Avenue to the north, Seward Avenue to the south, White Plains Road to the east, and Thieriot Avenue to the west. The Applicant proposes to develop the Project Area with new residential and community facility uses at the Stevenson Commons site at 1850 Lafayette Avenue. The Stevenson Commons site comprises a 679,000-sf superblock and is currently occupied by a nine-building Mitchell-Lama housing development containing a total of 990,050 gross square feet (gsf), including approximately 914,634 gsf of residential uses (948 affordable rental dwelling units [DUs]), 10,648 gsf of local retail uses, 36,214 gsf of community facility uses (health care), and 570 at-grade accessory parking spaces (462 of which are currently functional). As shown in Figure 1, the nine buildings are all located on the eastern portion of the block and are oriented around a central private open space. The western portion of the block is occupied by surface accessory parking spaces and private open spaces encompassing private tennis, basketball, and handball courts.

The Proposed Actions comprise minor modification to a previously approved large scale residential development (LSRD) plan, and a modification to the previously approved Stevenson Commons City-aided limited-profit housing project pursuant to Article 2 of the New York State Private Housing Finance Law (CP-22381). The Proposed Actions would facilitate the construction of six new, predominately residential, buildings ranging in height from four- to 14-stories (between 45- and 138-feet in height) and totaling approximately 826,209 gsf in new development (the "Proposed Project"). The Proposed Project would include approximately 704,063 gsf of incremental residential uses (735 DUs) compared to No-Action conditions, 33,995 gsf of additional community facility uses, approximately 1.94 acres of publicly accessible open space and an additional 0.63 acres of private open space, and 466 accessory parking spaces (a net decrease of 104 spaces from No-Action conditions). Construction of the Proposed Project is expected to begin in the second quarter of 2021 with all components complete and fully operational by early 2028.



Stevenson Commons

Figure 1
Proposed Noise Receptor Locations

This memorandum presents a summary of the selection of noise receptor locations and describes the noise monitoring approach to determine existing ambient noise levels at the Project Area. The measured existing noise levels will be used as part of the noise analysis to examine: (1) whether there are any locations where there is potential for the Proposed Project to result in significant adverse noise impacts (i.e. the doubling of Noise Passenger Car Equivalents [PCEs]), using the CEQR PCE analyses and/or TNM analyses; and (2) what level of window/wall attenuation would be necessary to provide acceptable interior noise levels at the Project Area under guidelines contained in the 2014 *CEQR Technical Manual*.

Selection of Noise Monitoring Locations

As the first step in this process, a field visit was performed to develop a list of proposed receptor locations. According to PHA's field observations, motor-vehicle traffic is the dominant noise source throughout the Project Area. Major roadways in the vicinity of the Project Area include White Plains Road located directly to the east, Lafayette Avenue located directly to the north, the Bruckner Expressway located two blocks to the north, and Soundview Avenue located three blocks to the west.

In general, the levels of existing noise at each receptor location are primarily influenced by the amount of traffic on immediately adjacent or nearby roadways; there are no elevated train lines or nearby stationary noise sources in the vicinity of the Project Area that could significantly contribute to the area's ambient noise levels. It is expected that measurements from one monitoring location could apply to an entire façade.

Given that the Proposed Actions affect a single individual lot (Tax Lot 4), the proposed noise receptor locations were selected due to their proximity to the development site and were generally located along the development site's northern (Lafayette Avenue), southern (Seward Avenue), and western (Thieriot Avenue) frontages. As such, three noise receptor sites were selected and are described in Table 1 and shown in Figure 1. These receptors represent the nearby sensitive noise receptors with the greatest potential to experience significant noise increases as a result of the Proposed Actions. Sensitive receptors further from the development site would be less likely to experience significant noise increases as a result of the Proposed Actions.

Table 1: Receptor Locations

Receptor[1]	Receptor Frontages	Receptor Location
1	Lafayette Avenue (midblock)	Approximately 200 feet east of Thieriot Avenue along the development site's Lafayette Avenue frontage.
2	Thieriot Avenue (midblock)	Approximately 350 feet south of Lafayette Avenue along the development site's Thieriot Avenue frontage.
3	Seward Avenue (midblock)	Approximately 430 feet east of Thieriot Avenue along the development site's Seward Avenue frontage.

Notes:

[1] Receptor locations shown in Figure 1.

These three receptor locations shall provide an effective and conservative representation of existing ambient noise levels at the proposed development site.

Noise Monitoring

Given the constraints in performing noise and traffic (e.g., vehicle classification) data collection due to the COVID-19 pandemic, the noise analysis will utilize noise and traffic data from the approved *1965*

Lafayette Avenue Rezoning EAS (2017) (ULURP Nos. C-170392-ZMK; N-170393-ZRX) and the 1755 Watson Avenue Rezoning EAS (2016) (ULURP Nos. 170150ZMX; 170151ZRX). By establishing a baseline noise environment utilizing comparable receptor locations presented in the *1965 Lafayette Avenue Rezoning EAS* and *1755 Watson Avenue Rezoning EAS*, the noise analysis for the Stevenson Commons project can effectively determine the potential for significant adverse noise impacts along the Development Site's frontages, as well as the potential need for attenuation along the Proposed Project's building facades.

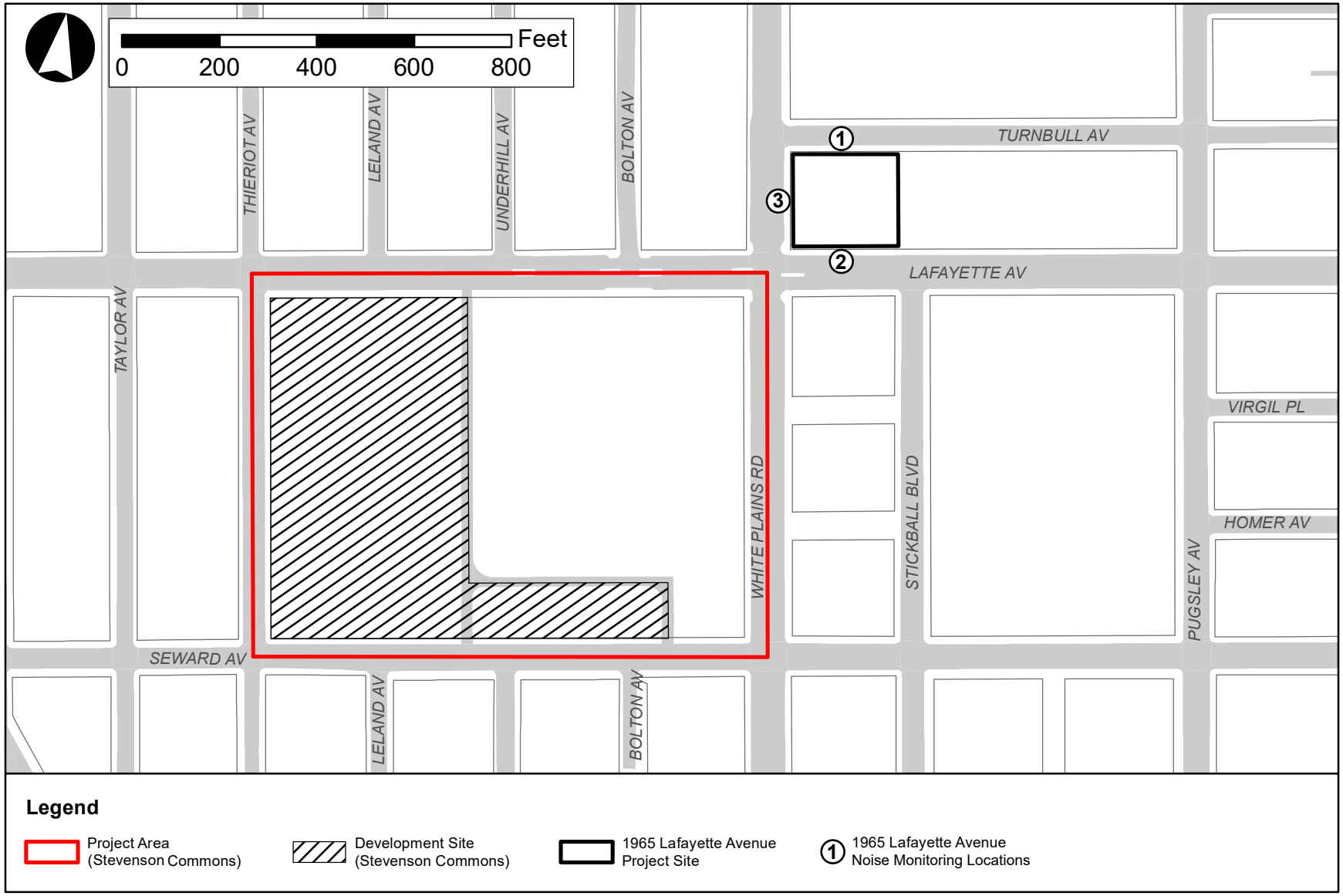
1965 Lafayette Avenue Rezoning EAS (2017)

The 1965 Lafayette Avenue project site (Bronx Block 3672, p/o Lot 1) is located directly northeast of the Project Area and shares several roadways with those fronting the Project Area (i.e., Lafayette Avenue and White Plains Road). As described in Attachment L, "Noise," of the *1965 Lafayette Avenue Rezoning EAS*, noise monitoring was conducted at three nearby receptor locations in relation to the Development Site: receptor location 1 was located on Turnbull Avenue (a 60-foot-wide, two-way local roadway) approximately 115 feet east of White Plaines Road; receptor location 2 was located on Lafayette Avenue approximately 115 feet east of White Plains Road; and receptor location 3 was located on White Plains Road approximately 100 feet north of Lafayette Avenue (refer to Figure 2).

As the 1965 Lafayette Avenue Rezoning's Project Area is located directly adjacent to the Stevenson Commons Project Area, and as the two projects contain street frontage from either the same (Lafayette Avenue) or comparable types of roadways (Lafayette Avenue compared to Seward Avenue), the noise and traffic data collected and utilized for the *1965 Lafayette Avenue Rezoning EAS* would be appropriate in establishing the baseline noise environment within the vicinity of the Stevenson Commons Development Site. Specifically, Receptor Locations 1 (Lafayette Avenue) and 3 (Seward Avenue) would utilize data associated with receptor location 2 (Lafayette Avenue) of the 1965 Lafayette Avenue project. According to the *1965 Lafayette Avenue Rezoning EAS*, 20-minute spot measurements of existing noise levels at the receptor locations were performed for each of the three noise analysis time periods, including the weekday AM peak hour (8:00 AM to 9:00 AM), the weekday midday peak hour (12:00 PM to 1:00 PM), and the weekday PM peak hour (5:00 PM to 6:00 PM). In addition, due to the location of the existing public school (at 1960 Pugsley Avenue; Block 3604, Lot 39), supplemental monitoring was conducted at receptor location 2 (Lafayette Avenue) during the school PM dismissal/bus departure peak hour (2:30 PM to 3:30 PM) to determine whether higher (worst-case) noise levels occurred outside of the identified AM, midday, and PM peak hours. Noise monitoring was performed on Tuesday, September 13, and Thursday, October 13, 2016. The weather on September 13 was partly cloudy with temperatures in the 70s and the weather on October 13 was mostly cloudy with temperatures in the 60s.

1755 Watson Avenue Rezoning EAS (2016)

The 1755 Watson Avenue project site (Bronx Block 3751, Lot 1) is located approximately 0.5-mile northwest of the Project Area and is bordered by several roadways similar to those fronting the Project Area. As described in Attachment M, "Noise," of the *1755 Watson Avenue Rezoning EAS*, noise monitoring was conducted at three nearby receptor locations in relation to the project site: Noise Monitoring Site 1 was located on Rosedale Avenue (an 80-foot-wide, two-way local roadway) approximately 160 feet north of Watson Avenue; Noise Monitoring Site 2 was located on Watson Avenue (an 80-foot-wide, two-way local roadway) approximately 100 feet east of Rosedale Avenue; and



Stevenson Commons

Figure 2
1965 Lafayette Avenue
Noise Monitoring Locations

Noise Monitoring Site 3 was located on Commonwealth Avenue (a 60-foot-wide, one-way local roadway) approximately 100 feet north of Lafayette Avenue (refer to Figure 3).

As the *1755 Watson Avenue Rezoning*'s Proposed Development Site is located within a half-mile from the Stevenson Commons Project Area, and as the two projects contain street frontages that are considered to be comparable types of roadways (Rosedale Avenue compared to Thieriot Avenue), the noise and traffic data collected and utilized for the *1755 Watson Avenue Rezoning EAS* would be appropriate in establishing the baseline noise environment for any western-facing facades at the Stevenson Commons Development Site. Specifically, Receptor Location 2 (Thieriot Avenue) would utilize data associated with Noise Monitoring Site 1 (Rosedale Avenue) of the *1755 Watson Avenue* project.

According to the *1755 Watson Avenue Rezoning EAS*, spot measurements of existing noise levels at the noise receptor locations were performed for each of the three noise analysis time periods, including the weekday AM, midday, and PM peak hours.

Traffic Noise Monitoring and Analysis

As discussed above, spot noise measurements from both the *1965 Lafayette Avenue Rezoning EAS* and the *1755 Watson Avenue Rezoning EAS* will be utilized to represent the baseline noise condition at the Stevenson Commons' three receptor locations, where vehicular traffic is the dominant source of ambient noise. As described above, noise measurements for both the *1965 Lafayette Avenue Rezoning EAS* and the *1755 Watson Avenue Rezoning EAS* were conducted during the typical weekday peak periods (AM, midday, PM); additionally, the *1965 Lafayette Avenue Rezoning EAS* included measurements of the weekday school PM peak period at receptor location 2 (Lafayette Avenue) as well.[1] According to the *1965 Lafayette Avenue Rezoning EAS,* the noise monitors were mounted at a height of approximately five feet above the ground surface on a tripod and approximately six feet or more away from any large sound-reflecting surface to avoid major interference with sound propagation.[2] Additionally, vehicular traffic was counted and classified during each spot noise measurement for the *1965 Lafayette Avenue Rezoning EAS* and *1755 Watson Avenue Rezoning EAS,* which will be used to predict future vehicular traffic in the Stevenson Commons noise analysis.

Pursuant to CEQR guidelines, future noise levels from vehicular traffic will be calculated using the PCE-based proportional modeling technique outlined in Chapter 19, "Noise" of the 2014 *CEQR Technical Manual,* utilizing the Proposed Project's vehicle trip assignment developed as part of the detailed Transportation analysis. Values calculated using this proportional modeling will be used directly, and as adjustment factors accounting for site-specific differences, to determine future noise levels.

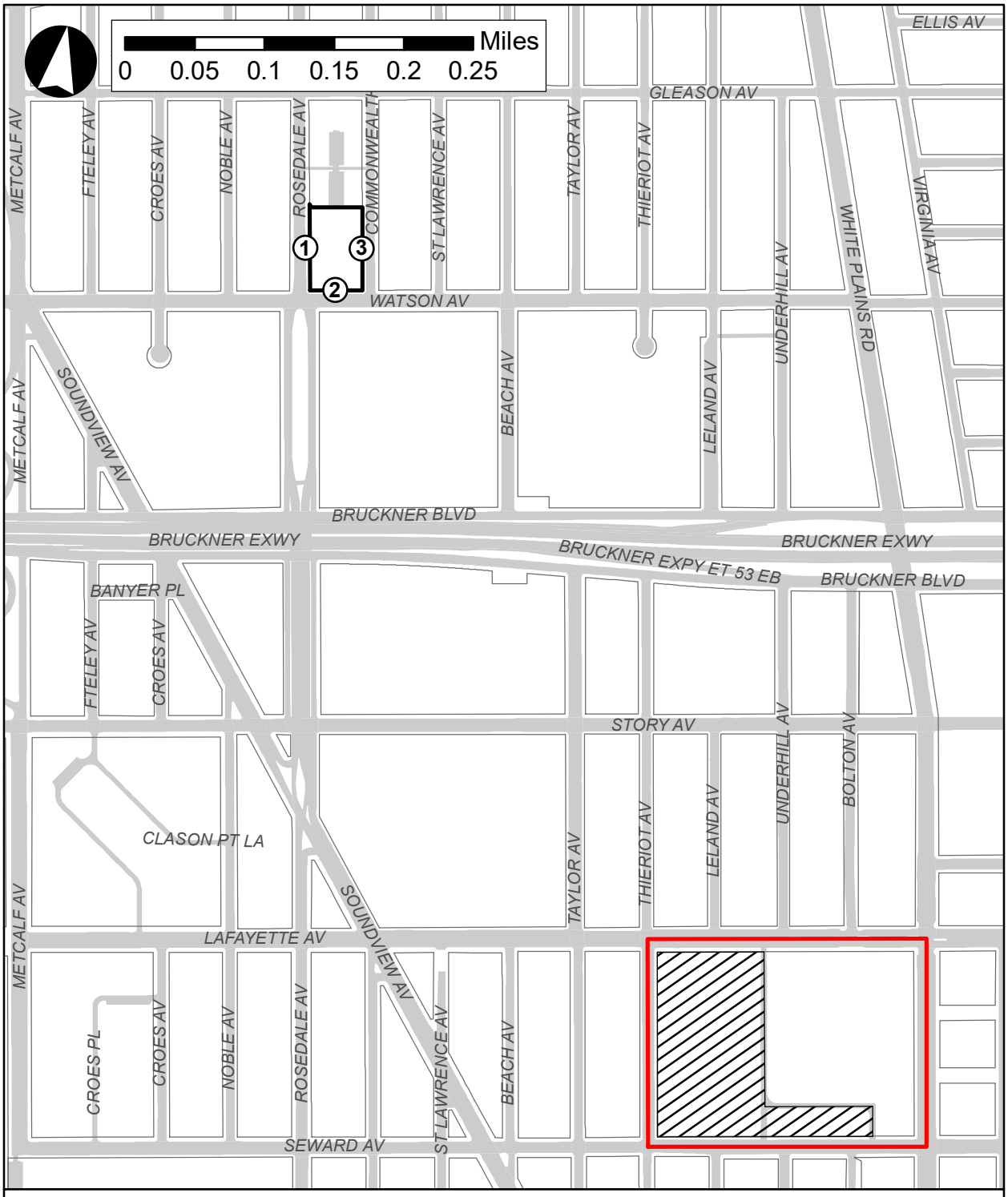
Equipment Used During Noise Monitoring

As a part of the *1965 Lafayette Avenue Rezoning EAS,* noise measurements were performed using a Sound Level Meter (SLM) Type 1 instrument, in accordance with American National Standards Institute (ANSI) Standard S1.4-1983 (R2006); specifically, a Brüel & Kjær Type 4189 ½-inch microphone connected to a Brüel & Kjær Model 2250 SLM. The SLM had a laboratory calibration date within one year of the

[1] Depending on the traffic conditions presented in the Transportation analysis, the noise analysis may be required to include noise level calculations during the Saturday peak period as well, if applicable.

[2] The *1755 Watson Avenue Rezoning EAS* does not provide detailed information of how the noise measurement equipment used for data collection was mounted and/or positioned.

Figure 3
1755 Watson Avenue
Noise Monitoring Locations



Legend

- Project Area (Stevenson Commons)
- Development Site (Stevenson Commons)
- 1755 Watson Avenue Project Site
- ① Noise Monitoring Site (1755 Watson Avenue)

date of the measurements and the SLMs was calibrated before and after readings with a Brüel & Kjær Type 4231 Sound Level Calibrator using the appropriate adaptor. Measured quantities included the L_{eq}, L_1, L_{10}, L_{50}, and L_{90} values and ⅓-octave bands. A windscreen was used during all sound measurements, except for calibration. All measurement procedures were based on the guidelines outlined in ANSI Standard S1.13-2005.[3]

Sound Weighting

Sound is often measured and described in terms of its overall energy, taking all frequencies into account. However, the hearing process is not the same at all frequencies. Therefore, noise measurements are often adjusted or weighted as a function of frequency to account for human perception and sensitivities of sound. The most common weighting networks used are the A- and C-weighted scales (dBA and dBC scales, respectively).

The dBA scale is correlated with annoyance measures and is most responsive to the mid-frequencies (500 Hz to 4,000 Hz), which human ears are most sensitive to. While the dBA scale is typically used for environmental assessments, the dBC scale is largely used for describing and evaluating environmental noise sources that have high values in the lower frequencies (i.e., below 500 Hz), such as stationary industrial and mechanical noise sources (i.e. power substations). The dBC scale is also often used for measuring the peak value of a sound. Since the dBC scale provides a relatively "flat" (or largely unweighted) measurement and does not attenuate frequency levels below 1,000 Hz the way the dBA scale does, the *CEQR Technical Manual* indicates that a comparison of dBA and dBC readings may give a quick estimate of the low frequency contribution of the sound source in question. Measurements at all receptor locations will be made on the dBA scale.

Other Noise Concerns

Play Area Noise

While people are not usually thought of as stationary noise, children in playgrounds or spectators at outdoor sporting events or concerts can introduce additional sources of noise within communities. According to the *CEQR Technical Manual*, noise generated by children in playgrounds or people using parks is considered a stationary source of noise.

As the Space Time Playground is located directly northeast of the development site, and as the Proposed Project intends to both include a play area facility and relocate an existing tennis court within the development site (see Figure 1), a play area noise analysis is warranted to determine (a) the level of impact from the proposed play area and tennis court on existing, nearby sensitive receptors, and (b) the need for additional attenuation requirements for the Proposed Project's building facades with frontages facing the existing playground and/or the proposed play area and tennis court. Space Time Playground, a 1.28-acre playground that is jointly operated by New York City Department of Parks and Recreation (NYCDPR) and Department of Education (NYCDOE), serves the Success Academy Charter School-Bronx 4 (K-4th Grade) during school operating hours; outside of school operating hours, the playground is open to the public. Noise levels associated with the existing and proposed play areas would be calculated at surrounding receptors using data collected in measurements made at a series of New York City school

[3] The *1755 Watson Avenue Rezoning EAS* does not provide any information regarding the type of noise monitoring equipment used; however, it is assumed that all data collected at the noise monitoring sites were conducted in accordance with American National Standards Institute (ANSI) Standard S1.4-1983 (R2006).

playgrounds for the New York City School Construction Authority (SCA).[4] Table 2 shows maximum hourly playground boundary noise levels based upon measurements made at a series of New York City school playgrounds for the SCA.

Table 2: Reference Play Area Boundary Noise L_{eq} Noise Levels (in dBA)

Early Childhood	Elementary Schools	Intermediate Schools	High Schools
71.5	71.4	71.0	68.2

Source: Wu, Weixiong, AKRF Inc. "Development of Noise Assessment Method for School Playground Noise," Inter-Noise 2006, Volume 6.

In determining the level of impact on nearby sensitive receptors, geometric spreading and the consequent dissipation of sound energy with increasing distance from the existing play area will be taken into account. Based upon measurements and acoustical principles, hourly noise levels are assumed to decrease by the following values at the specified distances from a play area boundary: 4.8 dBA at 20 feet, 6.8 dBA at 30 feet, and 9.1 dBA at 40 feet; for all distances between 40 and 300 feet, a 4.5 dBA drop-off per doubling of distances from the proposed play area boundary would be assumed.

Mechanical Equipment

It is assumed that the building mechanical systems (i.e., heating, ventilation, and air conditioning [HVAC] systems) for any/all buildings associated with the Proposed Actions would be designed to meet all applicable noise regulations (i.e., Subchapters 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels.

Aircraft Noise

It is proposed that any air traffic noise would not be removed from the noise measurements. This would ensure that recommended attenuation levels within the study area take the aircraft noise into account in order to determine acceptable interior noise levels.

[4] Wu, Weixiong, AKRF Inc. "Development of Noise Assessment Method for School Playground Noise," Inter-Noise 2006, Volume 6.

Appendix 4

Construction Air Quality and Construction Noise Analysis Methodology Memoranda

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Memorandum

To:	New York City Department of City Planning
From:	Kenny Mui, Teresa Lin (AKRF, Inc.)
Date:	August 26, 2020
Re:	Stevenson Commons EIS – Construction Air Quality Analysis Methodology
cc:	Henry Kearney (AKRF, Inc.); Abir Sabet (Philip Habib & Associates)

The purpose of this memorandum is to summarize the methodology and assumptions to be used for the construction air quality analysis for the Stevenson Commons Environmental Impact Statement (EIS). The Proposed Actions would facilitate a mixed-use development at Stevenson Commons located in the Soundview neighborhood of the Bronx, New York (Block 3600, Lot 4) and would result in new construction on the site that consists of an increase of approximately 735 affordable dwelling units, including 114 affordable units for seniors, 33,995 gross square feet (gsf) of community facility, approximately two acres of publicly accessible open space, and a net decrease of approximately 149 parking spaces, to be spread across six new buildings on the Stevenson Commons site (the "Proposed Project"). Construction of the Proposed Project is expected to begin in 2021 with all components complete and operational by 2028.

CONSTRUCTION AIR QUALITY ANALYSIS METHODOLOGY

Emissions from on-site construction equipment and on-road construction vehicles, as well as dust-generating construction activities, all have the potential to affect air quality. The analysis of potential construction air quality impacts will include an analysis of both on-site and on-road sources of air emissions, and the combined impact of both sources, where applicable.

In general, much of the heavy equipment used in construction is powered by diesel engines that have the potential to produce relatively high levels of nitrogen oxides (NO_x) and particulate matter (PM) emissions. Fugitive dust generated by construction activities is also a source of PM. Gasoline engines produce relatively high levels of carbon monoxide (CO). Since the United States Environmental Protection Agency (EPA) mandates the use of ultra-low sulfur diesel (ULSD) fuel for all highway and non-road diesel engines, sulfur oxides (SO_x) emitted from the Proposed Project' construction activities would be negligible. Therefore, the pollutants to be analyzed for the construction period are nitrogen dioxide (NO_2)—which is a component of NO_x that is a regulated pollutant, particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}), particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), and carbon monoxide (CO). **Table 1** shows the pollutants to be analyzed in the construction air quality analysis and the corresponding averaging periods.

Table 1
Pollutants for Analysis and Averaging Periods

Pollutant	Averaging Period
$PM_{2.5}$	24-hour
	Annual Local and Neighborhood
PM_{10}	24-hour
NO_2	Annual
CO	1-hour
	8-hour

Concentrations will be predicted using dispersion models to determine the potential for air quality impacts during on-site construction activities and due to construction-generated traffic on local roadways. Concentrations for each pollutant of concern due to construction activities at each sensitive receptor will be predicted during the most representative worst-case time period.

The potential for significant adverse impacts will be determined by comparing modeled PM_{10}, NO_2 and CO concentrations to National Ambient Air Quality Standards (NAAQS), and modeled $PM_{2.5}$ and CO increments to applicable *de minimis* thresholds. If the analysis concludes that there is a potential for significant adverse impacts, specific control measures required to reduce the effects of construction and to eliminate any significant adverse air quality impacts will be identified.

The detailed approach for assessing the effect of construction activities resulting from the Proposed Actions on air quality is discussed further below.

DATA SOURCES

A preliminary construction phasing schedule will be developed for the Proposed Project, as well as the construction workforce, truck, and equipment projections, and preliminary construction logistics plans.

ON-SITE CONSTRUCTION ACTIVITY ASSESSMENT

To determine which construction periods constitute the worst-case periods for the pollutants of concern (PM, CO, NO_2), construction-related emissions will be calculated for each calendar year throughout the duration of construction on a rolling annual and peak day basis for $PM_{2.5}$. $PM_{2.5}$ is selected for determining the worst-case periods for all pollutants analyzed, because the ratio of predicted $PM_{2.5}$ incremental concentrations to impact criteria is anticipated to be higher than for other pollutants. Therefore, initial estimates of $PM_{2.5}$ emissions throughout the construction years will be used for determining the worst-case periods for analysis of all pollutants. Generally, emission patterns of PM_{10} and NO_2 would follow $PM_{2.5}$ emissions, since they are related to diesel engines by horsepower. CO emissions may have a somewhat different pattern but would also be anticipated to be highest during periods when the most activity would occur.

Based on the resulting multi-year profiles of annual average and peak day average emissions of $PM_{2.5}$, and the proximity of the construction activities to residences, other sensitive uses, and publicly accessible open spaces, worst-case short-term and annual periods for construction will be identified for dispersion modeling of annual and short-term (i.e., 24-hour, 8-hour, and 1-hour) averaging periods. Dispersion of the relevant air pollutants from the construction sites during these periods will then be analyzed. Broader conclusions regarding potential concentrations during other periods, which will not be modeled, will be presented as well, based on the multi-year emissions profiles and the reasonable worst-case period results.

Engine Emissions

The sizes, types, and number of units of construction equipment will be estimated based on the construction activity schedule developed by the Construction Manager for the Proposed Project. Emission rates for NO_X, CO, PM_{10}, and $PM_{2.5}$ from truck engines will be developed using the EPA Motor Vehicle Emission Simulator (MOVES2014b) emission model. Emission factors for NO_x, CO, PM_{10}, and $PM_{2.5}$ from on-site construction engines will be developed using the NONROAD emission module included in the MOVES2014b emission

model. The emission factor calculations will take into account any emissions reduction measures (i.e., the application of diesel particulate filters, etc.) that is required for the Proposed Project.

On-Site Fugitive Dust

In addition to engine emissions, fugitive dust emissions from operations (e.g., excavation and transferring of excavated materials into dump trucks) will be calculated based on USEPA procedures delineated in AP-42 Table 13.2.3-1. Since construction is required to follow the New York City Air Pollution Control Code regarding construction-related dust emissions, a 50 percent reduction in particulate emissions from fugitive dust will be conservatively assumed in the calculation (dust control methods such as wet suppression would often provide at least a 50 percent reduction in particulate emissions).

Analysis Periods

The construction periods with activities closest to sensitive receptors (see "Receptor Locations" section below for a discussion of the receptor locations to be included in the analysis) as well as the most intense activities and highest emissions will be selected as the worst-case periods for analysis. The dispersion analysis will include modeling of the worst-case annual and worst-case short-term (i.e., 24-hour, 8-hour, and 1-hour) averaging periods, as identified in **Table 1**. The worst-case short-term and annual periods will be selected once the estimated construction activities have been developed and may include overlapping construction activities at different project buildings. These periods will be selected based on the maximum construction intensity predicted and their proximity to nearby sensitive receptors (i.e., residential buildings, P.S. 182, Grand Concourse Academy).

Dispersion Modeling

Potential impacts from the Proposed Project's construction sources will be evaluated using a refined dispersion model, the EPA/AMS AERMOD dispersion model. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain and includes updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and handling of terrain interactions.

Source Simulation

For short-term model scenarios (predicting concentration averages for periods of 24 hours or less), all stationary sources, such as compressors, cranes, or concrete trucks, which idle in a single location while unloading, will be simulated as point sources. Other engines, which would move around the site on any given day, will be simulated as area sources. For periods of 8 hours or less (less than the length of a shift), it will be assumed that all engines would be active simultaneously. All sources with the exception of tower cranes would move around the site throughout the year and will therefore be simulated as area sources in the annual analyses.

Meteorological Data

The meteorological data set will consist of five consecutive years of latest available meteorological data to be provided by the New York State Department of Environmental Conservation (DEC): surface data collected at the nearest representative National Weather Service Station (La Guardia Airport) from 2014 to 2018 and concurrent upper air data collected at Brookhaven, New York. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the five-year period. These data will be processed using the USEPA AERMET program to develop data in a format which can be readily processed by the AERMOD model.

Background Concentrations

To estimate the maximum expected total pollutant concentrations, the calculated impacts from the emission sources must be added to a background value that accounts for existing pollutant concentrations from other sources. The background levels are based on concentrations monitored at the nearest New York State

Department of Environmental Conservation (NYSDEC) ambient air monitoring stations, as shown in **Table 2**.

Table 2
Maximum Background Pollutant Concentrations

Pollutant	Average Period	Location	Concentration	NAAQS
$PM_{2.5}$	24-hour	IS 52	17.3 µg/m^3	35 µg/m^3
	Annual	IS 52	7.6 µg/m^3	12 µg/m^3
PM_{10}	24-hour	IS 52	32 µg/m^3	150 µg/m^3
NO_2	Annual	IS 52	37.9 µg/m^3	100 µg/m^3
CO	1-hour	Botanical Garden	2.2 ppm	35 ppm
	8-hour	Botanical Garden	1.6 ppm	9 ppm
Source: New York State Air Quality Report Ambient Air Monitoring System, NYSDEC, 2014-2018.				

Receptor Locations

Receptors will be placed at locations that would be publicly accessible, at residential and other sensitive uses at both ground-level and elevated locations (e.g., residential windows), at adjacent sidewalk locations, at publically accessible open spaces, at the schools on the adjacent blocks, and at completed portion of the Proposed Project where applicable when occupied. In addition, a ground-level receptor grid will be placed to enable extrapolation of concentrations throughout the study area at locations more distant from construction activities.

On-Road Sources

Since emissions from on-site construction equipment and on-road construction-related vehicles may contribute to concentration increments concurrently, on-road emissions adjacent to the construction sites will be included with the on-site dispersion analysis (in addition to on-site truck and non-road engine activity) to address all local project-related emissions cumulatively.

On-Road Vehicle Emissions

Vehicular engine emission factors will be computed using the EPA mobile source emissions model, MOVES2014b.[1] This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway type and grade, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOVES incorporate the most current guidance available from NYSDEC.

On-Road Fugitive Dust

$PM_{2.5}$ emission rates will be determined with fugitive road dust to account for their impacts. However, fugitive road dust will not be included in the annual average $PM_{2.5}$ microscale analyses, as per current *CEQR Technical Manual* guidance used for mobile source analysis. Road dust emission factors will be calculated according to the latest procedure delineated by EPA[2]. An average weight of 17.5 tons and 2.5 tons will be assumed for construction trucks and worker vehicles in the analyses, respectively.

[1] EPA, Motor Vehicle Emission Simulator (MOVES), User Guide for MOVES2014a, November 2015.

[2] EPA, Compilations of Air Pollutant Emission Factors AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1, NC, http://www.epa.gov/ttn/chief/ap42, January 2011.

Traffic Data

Traffic data for the air quality analysis will be derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the construction traffic analysis for the Proposed Project.

Impact Criteria

The 2014 *CEQR Technical Manual* states that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large or important) should be assessed in connection with its setting (e.g., urban or rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected.[3] In terms of the magnitude of air quality impacts, any action predicted to increase the concentration of a criteria air pollutant to a level that would exceed the concentrations defined by the NAAQS would be deemed to have a potential significant adverse impact. In addition, to maintain concentrations lower than the NAAQS in attainment areas, or to ensure that concentrations will not be significantly increased in non-attainment areas, threshold levels have been defined for certain pollutants; any action predicted to increase the concentrations of these pollutants above these thresholds would be deemed to have a potential significant adverse impact, even in cases where violations of the NAAQS are not predicted. Predicted concentrations from the modeling analysis will be compared with NAAQS for NO_2, SO_2 and PM_{10}, and the City's CEQR *de minimis* criteria for $PM_{2.5}$.

Potential Mitigation Measures

The analysis will assume all emissions reduction measures as required by law which include dust control measures and idling restrictions. In addition, the Proposed Project would receive financing from the City is subject to New York City Local Law 77 (LL77)[4] to further minimize the effects of construction on air quality. LL77 requires the use of ULSD fuel and Best Available Technology (BAT) for equipment at the time of construction. If the analysis concludes that there is a potential for significant adverse impacts, specific control measures required to reduce the effects of construction and to eliminate any significant adverse air quality impacts will be identified, such as locating large emissions sources and activities away from sensitive receptor locations to the extent practicable.

[3] New York City. *CEQR Technical Manual*. Chapter 1, section 222. March 2014; and New York State Environmental Quality Review Regulations, 6 NYCRR § 617.7

[4] Local Law 77, adopted December 22, 2003, applies to all city-owned non-road diesel vehicles and engines and any privately owned diesel vehicles and engines used on construction projects funded by the City.

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Memorandum

To:	New York City Department of City Planning
From:	Dan Abatemarco, AKRF, Inc.
Date:	August 28, 2020
Re:	Stevenson Commons EIS – Construction Noise Analysis Methodology
cc:	Max Bieryla, Kenny Mui (AKRF, Inc.); Abir Sabet (Philip Habib & Associate)

The purpose of this memorandum is to describe the construction noise analysis approach for the Stevenson Commons Environmental Impact Statement (EIS). The Stevenson Commons project entails discretionary actions (the "Proposed Actions") to facilitate new affordable housing and community facility space at one large development site (Block 3600, Lot 4) in the Bronx, New York (the "Project Area"). The Proposed Actions would facilitate the construction of six new, predominately residential, buildings ranging in height from four to fourteen stories (between 45 and 138 feet in height) and totaling approximately 826,209 gsf in new development (the "Proposed Project"). Construction of the Proposed Project is expected to begin in early 2021 with all components complete and fully operational by 2028.

This memorandum presents a summary of the methodology and assumptions to be used for the construction noise analysis of the Proposed Actions.

CONSTRUCTION NOISE ANALYSIS METHODOLOGY

A detailed modeling analysis will be conducted to quantify potential construction noise effects at existing noise receptors (e.g., receptors, schools, etc.) near the proposed development site as well as at completed and occupied proposed buildings.

The construction noise methodology will involve the following process:

1. Select analysis hours for construction mobile source noise analysis. The 6:00 AM to 7:00 AM hour is selected as the analysis hour because this would be the hour when the highest number of construction worker auto and construction truck trips to and from the construction site would simultaneously occur.
2. Conduct construction mobile source noise analysis. At each of the roadway segments analyzed for construction traffic, the construction worker vehicle and construction truck trips during the analysis hour will be converted to Noise PCEs and compared to the existing level of Noise PCEs to determine whether there would be a potential doubling, which would result in an exceedance of CEQR construction noise screening thresholds (i.e., a 3 dBA increase in noise levels).

3. Select analysis hours for cumulative on-site equipment and construction truck noise analysis. The 7:00 AM to 8:00 AM hour is selected as the analysis hour because this would be the hour when the highest number of truck trips to and from the construction site would overlap with on-site equipment operation.
4. Select receptor locations for cumulative on-site equipment and construction truck noise analysis. Selected receptors will represent open space, residential, or other noise-sensitive uses potentially affected by the construction associated with the Proposed Actions during operation of on-site construction equipment and/or along routes taken to and from the development site by construction trucks. Project elements (i.e., buildings) that would be completed and occupied while construction under the Proposed Actions is still ongoing will also be included in the analysis as receptors.
5. Establish existing noise levels at selected receptors. Measured noise levels from the approved *1965 Lafayette Avenue Rezoning EAS (2017)* (ULURP Nos. C-170392-ZMK; N-170393-ZRX) and *1755 Watson Avenue Rezoning EAS (2016)* (ULURP Nos. C-170150-ZMX; N-170151-ZRX) have been used to establish existing noise levels in the operational noise analysis, and will be relied upon for the construction noise analysis as well. A CadnaA model representing the existing conditions (including existing building geometry and existing condition traffic levels) will be validated or calibrated based on the estimated noise levels from the 1965 Lafayette Avenue Rezoning EAS and the 1755 Watson Avenue Rezoning EAS and used to calculate baseline noise levels at the other noise receptor locations included in the analysis.
6. Establish worst-case noise analysis periods under the anticipated construction schedule. The worst-case noise analysis periods are the periods during the construction schedule that are expected to have the greatest potential to result in construction noise effect. The selected time periods are described below in the "Analysis Periods" section.
7. Calculate construction noise levels for each analysis period at each receptor location. Given the on-site equipment and construction truck trips expected during each of the analysis periods, and the location of the equipment, which is based on construction logistics diagrams and construction truck and worker vehicle trip assignments, a CadnaA model file for each analysis period will be created. All model files will include each of the construction noise sources during the analysis period and hour, calculation points representing multiple locations on various façades and floors of the associated receptors previously identified, as well as the noise control measures that would be used on the construction site.
8. Determine total noise levels and noise level increments during construction. For each analysis period and each noise receptor, the calculated level of construction noise will be logarithmically added to the existing noise level to determine the cumulative total noise level. The existing noise level at each receptor will then be arithmetically subtracted from the cumulative noise level in each analysis period to determine the noise level increments.
9. Compare construction noise increments to impact criteria. For each analysis period and each noise receptor, the predicted noise increments due to construction will be compared to CEQR noise impact thresholds and additional incremental noise impact criteria as described below.
10. Establish construction noise duration. For each receptor, the noise level increments in each analysis period will be evaluated to determine the duration during construction that the receptor would experience exceedances of impact criteria.
11. Identify potential construction noise impacts. At each existing receptor where exceedances of construction noise impact criteria are predicted, a determination will be made as to whether the Proposed Actions would have the potential to result in significant adverse construction noise impacts. This determination would take into account estimated interior noise levels determined by subtracting estimated facade attenuation based on observed facade construction and alternate means of ventilation from the projected exterior noise exposure.
12. Evaluate construction noise exposure at completed and occupied project elements. At project elements that would be completed and occupied while construction of the Proposed Project is ongoing, the

predicted level of construction noise exposure as well as the necessary level of window/wall attenuation as established in the operational noise analysis will be used to predict and evaluate interior noise levels during construction. Additionally, noise levels during construction will be compared to non-construction noise levels at the project site. Based on the predicted interior noise levels as compared to CEQR noise exposure guidance and the predicted noise levels during construction as compared to non-construction noise levels, a determination will be made as to whether the Proposed Actions would have the potential to result in significant adverse construction noise impacts.

CONSTRUCTION MOBILE SOURCE ANALYSIS

A Noise Passenger Car Equivalent (PCE) screening will be conducted for noise levels from construction mobile sources. At each of the roadway segments analyzed for construction traffic, the construction worker vehicle and construction truck trips during the analysis hour will be converted to Noise PCEs and compared to the existing level of Noise PCEs to determine whether there would be a potential doubling, which would result in an exceedance of CEQR construction noise screening thresholds (i.e., a 3 dBA increase in noise levels). The 6:00 AM to 7:00 AM hour is selected as the analysis hour because this would be the hour when the highest number of worker vehicle and construction truck trips to and from the construction site would occur. At any receptor locations where a doubling of Noise PCEs would occur as a result of construction trips, baseline noise levels will be estimated using existing noise levels and Noise PCE values from the 1965 Lafayette Avenue EAS (CEQR No. 17DCP172X) and the 1755 Watson Avenue Rezoning EAS (CEQR No. 17DCP075X), and the predicted noise level increment will be added to determine the total future noise level during the construction period.

Construction truck trips that would occur during the construction work day (i.e., after 7:00 AM) will be included in the modeling of construction noise as discussed below.

NOISE RECEPTOR SITES

A noise-sensitive receptor is defined in Chapter 19, "Noise" Section 124 of the 2014 *CEQR Technical Manual* and includes indoor receptors such as residences, hotels, health care facilities, nursing homes, schools, houses of worship, court houses, public meeting facilities, museums, libraries, and theaters. Outdoor sensitive receptors include parks, outdoor theaters, golf courses, zoos, campgrounds, and beaches.

Within the study area, multiple receptor locations close to the development site will be selected for the construction noise analysis to represent buildings or noise-sensitive open space locations that have the potential to experience elevated noise as a result of construction. These receptors will be located adjacent to planned areas of activity or streets where construction trucks would pass. At some buildings, multiple façades will be analyzed as receptors. At high-rise buildings, noise receptors at multiple elevations will be analyzed. Receptors at street level will be used to represent open space locations. The receptor sites selected for detailed analysis will represent locations where maximum project effects due to construction noise would be expected.

CONSTRUCTION NOISE MODELING

Noise effects from construction activities will be evaluated using the CadnaA model, a computerized model developed by DataKustik for noise prediction and assessment. The model can be used for the analysis of a wide variety of noise sources, including stationary sources (e.g., construction equipment, industrial equipment, power generation equipment), transportation sources (e.g., roads, highways, railroad lines, busways, airports), and other specialized sources (e.g., sporting facilities). The model takes into account the reference sound pressure levels of the noise sources at 50 feet, attenuation with distance, ground contours, reflections from barriers and structures, attenuation due to shielding, etc. The CadnaA model is based on the acoustic propagation standards promulgated in International Standard ISO 9613-2. This standard is currently under review for adoption by the American National Standards Institute (ANSI) as an American Standard. The CadnaA model is a state-of-the-art tool for noise analysis and is approved for construction noise level prediction by the *CEQR Technical Manual*.

Geographic input data used with the CadnaA model will include CAD drawings that define site work areas, adjacent building footprints and heights, locations of streets, and locations of sensitive receptors. For each analysis period, the geographic location and operational characteristics—including equipment usage rates (percentage of time operating at full power) for each piece of construction equipment operating at the proposed development site, as well as noise control measures—will be input to the model.

Construction equipment source strength will be determined by the L_{max} levels presented in **Table 22-1** of the 2014 *CEQR Technical Manual.* For construction equipment not included in this table, manufacturer specifications or field measured noise levels will be used.

In addition, reflections and shielding by barriers erected on the construction site and shielding from adjacent buildings will be accounted for in the model. In addition, construction-related vehicles will be assigned to the adjacent roadways. The model will produce A-weighted $L_{eq(1)}$ noise levels at each receptor location for each analysis period, as well as the contribution from each noise source. The $L_{10(1)}$ noise levels will be conservatively estimated by adding 3 dBA to the $L_{eq(1)}$ noise levels, as is standard practice[1].

DETERMINATION OF NON-CONSTRUCTION NOISE LEVELS

Noise generated by construction activities (calculated using the CadnaA model as described above) will be added to baseline (i.e., non-construction) noise levels, including noise generated by non-construction traffic on adjacent roadways, to determine the total noise levels at each receptor location. Baseline noise levels will be calculated using the CadnaA model using existing condition traffic data. The existing condition CadnaA model will include receptors representing the noise measurement locations on Lafayette Avenue, Thieriot Avenue, and Seward Avenue to be used for the purpose of validating or calibrating the existing condition results. If the existing condition CadnaA model results at the measurement locations differ from estimated existing levels by more than 3 dBA (for example because of contribution from noise sources not included in the model such as aircraft overflights), an adjustment factor will be added to analysis receptors nearest that measurement location.

ANALYSIS TIME PERIOD SELECTION

The construction noise analysis will estimate construction noise levels based on projected activity and equipment usage as well as the level of construction traffic for various phases of construction of the Proposed Project. Based on the anticipated construction schedule and preliminary construction estimates to be developed for the Proposed Project, specific time periods during construction will be selected for detailed analysis. These are selected to capture each major construction stage (e.g., excavation/foundation work, superstructure work, interior fit-out work) at the buildings to be constructed under the Proposed Actions, including major overlaps of construction stages between individual sites. These are the time periods with the potential to result in the maximum incremental construction noise at nearby receptors (i.e., time periods when multiple buildings would be under construction using noisy equipment) as well as resulting in the maximum levels of construction noise at the proposed buildings that would be completed and occupied during subsequent construction associated with the Proposed Actions. Each analysis time period conservatively represents 1 to 12 months of time based on the duration of activities that would be underway during the time period.

The selected analysis periods are shown in **Table 1**. The selected analysis periods are subject to change pending receipt of additional information on the construction program.

[1] Federal Highway Administration Roadway Construction Noise Model User's Guide, Page 15. http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf

Table 1
Summary of Construction Noise Analysis Periods

Time (Year / Month)	Construction Activities
2021 / May	B4, B5, B6 – Excavation
2021 / August	B4, B5, B6 - Foundation
2021/ December	B4, B5, B6 – Superstructure and Exteriors
2022 / May	B4, B5, B6 – Exteriors and Interiors
2023 / June	B3 – Foundation
2024 / January	B3 – Superstructure and Exteriors
2024 / June	B3 – Exteriors and Interiors
2025 / October	B2 –Foundation
2026 / April	B1 –Foundation B2 – Superstructure and Exteriors
2027 / January	B1 – Superstructure and Exteriors B2 – Interiors
2027 / March	B1 – Exteriors and Interiors B2 – Interiors

CONSTRUCTION NOISE IMPACT CRITERIA

Chapter 22 of the *CEQR Technical Manual* breaks construction duration into "short-term" and "long-term" and states that construction noise is not likely to require analysis unless it "affects a sensitive receptor over a long period of time." Consequently, the construction noise analysis considers the potential for construction of a project to create high noise levels (the "intensity"), whether construction noise would occur for an extended period of time (the "duration"), and the locations where construction has the potential to produce noise ("receptors") in evaluating potential construction noise effects.

The noise impact criteria described in Chapter 19, Section 410 of the *CEQR Technical Manual* serve as a screening-level threshold for potential construction noise impacts. If construction of the proposed project would not result in any exceedances of these criteria at a given receptor, then that receptor would not have the potential to experience a construction noise impact. The screening level noise impact criteria for mobile and on-site construction activities are as follows:

- If the No Action noise level is less than 60 dBA $L_{eq(1)}$, a 5 dBA $L_{eq(1)}$ or greater increase would require further consideration.
- If the No Action noise level is between 60 dBA $L_{eq(1)}$ and 62 dBA $L_{eq(1)}$, a resultant $L_{eq(1)}$ of 65 dBA or greater would require further consideration.
- If the No Action noise level is equal to or greater than 62 dBA $L_{eq(1)}$, or if the analysis period is a nighttime period (defined in the CEQR criteria as being between 10PM and 7AM), the threshold requiring further consideration would be a 3 dBA $L_{eq(1)}$ or greater increase.

If construction of the proposed project would result in exceedances of these noise impact criteria at a receptor, then further consideration of the intensity and duration of construction noise is warranted at that receptor. Generally, exceedances of these criteria for more than 24 consecutive months are considered to be significant impacts. Noise level increases that would be considered objectionable (i.e., equal to or greater than 15 dBA)

lasting more than 12 consecutive months or more and noise level increases considered very objectionable (i.e., equal to or greater than 20 dBA)[2] would also be considered significant impacts.

EVALUATION OF CONSTRUCTION NOISE LEVELS

Existing Noise-Sensitive Receptors

The predicted exterior noise level increments during construction of the Proposed Project at the analyzed receptor sites will be compared to the construction noise impact thresholds described above. At the noise-sensitive receptors that experience exceedances of these thresholds during the analysis periods as determined above, the duration of exceedance of each impact threshold will be determined. The significance of the exceedances will be determined based on the predicted magnitude and duration of the construction noise at these locations according to the criteria described above. Based on the incremental noise level increase, overall exterior noise levels for each analysis period will also be determined.

Proposed Buildings Completed and Occupied During Subsequent Construction

For analysis time periods during which one or more proposed buildings would be completed and occupied, construction noise would be projected at those occupied buildings. The predicted construction noise levels will be compared to *CEQR Technical Manual* noise exposure guidelines, and exceedances of recommended noise exposure levels will be identified. Additionally, noise levels during construction will be compared to non-construction noise levels at the project site to determine the potential for significant adverse impacts at these receptors resulting from incremental increases in noise level associated with construction. Based on the predicted interior noise levels as compared to CEQR noise exposure guidance and the predicted noise levels during construction as compared to non-construction noise levels, a determination will be made as to whether the Proposed Actions would have the potential to result in significant adverse construction noise impacts at these locations.

[2] Definition of "objectionable" and "very objectionable" noise level increases based on Table B from New York State Department of Environmental Conservation Assessing and Mitigating Noise Impacts policy manual, revised February 2001.

Appendix 5

Response to Comments on Draft Scope of Work

Stevenson Commons
CEQR NO. 21DCP044X

Response to Comments on the Draft Scope of Work for a Draft Environmental Impact Statement

A. INTRODUCTION

This document summarizes and responds to public comments regarding the issues to be addressed in the Draft Environmental Impact Statement (DEIS) as described in the Draft Scope of Work (DSOW), issued on September 4, 2020, for the Stevenson Commons project (the "Proposed Project"). Oral and written comments were received during the remote public scoping meeting held by the New York City Department of City Planning (DCP) on behalf of the New York City Planning Commission (CPC) on October 8, 2020. Written comments were accepted through the close of the public comment period, which ended on October 19, 2020. No written comments we received.

Section B of the Response to Comments, below, lists the elected officials, organizations, and individuals that provided comments on the DSOW. Section C contains a summary of the relevant and substantive comments received by the lead agency and a response to each. These summaries convey the substance of the comments made, but do not necessarily quote the comments verbatim. The organization and/or individual that commented is identified after each comment. Where more than one commenter expressed a similar view, the comments have been grouped and addressed together.

B. LIST OF ELECTED OFFICIALS, ORGANIZATIONS, AND INDIVIDUALS THAT COMMENTED ON THE DRAFT SCOPE OF WORK

1. Jane Arce-Bello, Executive Director of R.A.I.N., Inc.; oral statement at public scoping meeting.
2. Juliana Bernal Guinand, Director of Real Estate Development at Habitat for Humanity; oral statement at public scoping meeting.
3. Billy Toci, Chief Financial Officer of R.A.I.N., Inc.; oral statement at public scoping meeting.

C. COMMENTS AND RESPONSES ON THE DRAFT SCOPE OF WORK

Comment 1: This project is being built on underutilized land and it will provide such a meaningful contribution and address the great need for our housing in the Bronx, particularly for affordable housing for older adults. (1)

Response 1: Comment noted.

Comment 2: R.A.I.N. is very proud and excited to be part of this project as the not-for profit provider of on-site social services for the tenants of the senior building part of the project. (1)

Response 2: Comment noted.

Comment 3: This would be a great project for the community and for the people that live there. This specific project has my 100 percent backing. (3)

Response 3: Comment noted.

Comment 4: Habitat New York City believes that this project, Stevenson Commons will be a fantastic contribution to the community. And we're excited that the homeowners will have access to the extensive community facilities that are included in this project, such as the day care center, recreational space, the tennis courts, playgrounds and fitness areas. (2)

Response 4: Comment noted.

Comment 5: This project will provide 58 affordable home ownership units. [Habitat NYC] are collaborating with Camber to market the home ownership units as per guidelines. We will also provide home buyer education training to first time home buyer, to ensure that the homeowners are set for success and understand what it entails to become a homeowner. And we will provide annual compliance for compliance monitoring after the sales. (2)

Response 5: Comment noted.

Comment 6: [We] are very excited to see more home ownership opportunities in the Bronx -- as we've seen there's great interest in the community. (2)

Response 6: Comment noted.